

UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

Authorization Of )  
In Band On Channel ) FCC Docket No. 99-325  
(IBOC) Digital Radio )

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WRITTEN COMMENTS  
OF THE AMHERST ALLIANCE

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*APPENDIX A:* RADIO WORLD Article On AM IBOC Interference

*APPENDIX B:* List Of Signatories To Various Unaddressed Petitions On IBOC

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**WRITTEN COMMENTS**  
**OF THE AMHERST ALLIANCE**

THE AMHERST ALLIANCE is a Net-based, nationwide citizens' advocacy group for Low Power Radio in particular and more openly accessible airwaves in general. We were founded at a meeting in Amherst, Massachusetts on September 17, 1998. As champions of greater diversity in media ownership and programming, we have fought to:

Establish, preserve and expand the current Low Power FM Radio Service  
Establish a new Low Power AM Radio Service  
Restrain, and in time reverse, today's massive concentrations of media ownership  
*And*  
Prevent, or at least mitigate, ruinous interference with radio communications

In pursuit of the latter goal, we have submitted numerous filings to the FCC in Dockets concerning Broadband Over Powerlines (BPL) technologies, the Presidential Spectrum Policy Initiative (PSPI) and authorization of In Band On Channel (IBOC) Digital Radio.

**Amherst's Record In FCC Docket 99-325**

Amherst's activities have included the drafting and submission of its own Written and Reply Comments, as well as leadership in the following multi-party initiatives:

- 11/14/03: Multi-Party Petition For Expedited Relief Through Rulemaking, filed with the FCC's Office of the Secretary and the FCC's Localism Task Force (FCC Docket RM-10803), as well as in FCC Docket 99-325 [The Petition seeks immediate FCC action to establish Primary Service Status for all Low Power Radio stations ... restrain and reverse proliferation of satellite-fed translators (aka "satellators") by establishing a new *Tertiary* Service Status for satellators and other long distance translators ... *and* authorization of case-by-case tower height and/or wattage adjustments for any radio station, or at least any Low Power Radio station, which can show that such an adjustment is *demonstrably necessary* to offset the erosion of its originally authorized service area by IBOC-induced interference]
- 10/25/02: Multi-Party Petition For Reconsideration of the FCC's 10/11/02 Order in FCC Docket 99-325, providing "interim" authorization of FM broadcasts, and *daytime* AM broadcasts, with IBOC
- 7/18/02: Multi-Party Request For Preparation Of An Environmental Impact Statement Regarding The Then-Proposed Authorization Of IBOC Digital Radio In FCC Docket 99-325
- 4/12/02: Multi-Party Petition For Rulemaking To Require A *Competitive Comparison*, Through Testing And Evaluation, Between IBOC Digital Radio And Alternative Technologies filed with the FCC's Office of the Secretary and also in FCC Docket 99-325

Only the EIS Request has received a response from the FCC -- and that response ("No") was legally inadequate, since it was not based on a formal Environmental Assessment and was unduly brief, taking only 1 paragraph of the IBOC approval Order.

In addition to assuming leadership in the preparation and submission of these 4 initiatives, THE AMHERST ALLIANCE also led more than a dozen parties into recording themselves -- in FCC Docket 99-325 -- as retroactive signatories of the April 5, 2003 Petition For Rulemaking by Leonard Kahn, P.E. of KAHN COMMUNICATIONS in New York State. The retroactive signatories playfully dubbed themselves "Kahn's Crusaders".

The Kahn Petition asks the Commission to initiate comparative testing and evaluation of IBOC Digital Radio and KAHN COMMUNICATIONS' newly developed COMPATIBLE AM (CAM-D) DIGITAL RADIO. The latter technology, according to Leonard Kahn and his company, is designed for the AM Band and avoids the demonstrated interference problems caused by IBOC Digital Radio on AM frequencies.

THE AMHERST ALLIANCE is in no position to confirm or deny the claims made by KAHN COMMUNICATIONS about its CAM-D technology. We contend only that the claims are worthy of investigation by the FCC -- and, if they are validated, should prompt the FCC to seriously reconsider its choice of IBOC for the AM Band.

*Appendix B* of these Written Comments contains a relevant Chart, listing the parties to each of the multi-party filings we have mentioned.

### **QUESTIONS BEFORE THE FCC**

In these Written Comments, THE AMHERST ALLIANCE addresses 4 basic questions which are now before the FCC -- in its reopened deliberations in FCC Docket 99-325.

These 4 questions are as follows:

1. Should the FCC move from “interim” authorization of IBOC broadcasts to permanent authorization of IBOC broadcasts?
2. Should the FCC allow *nighttime* IBOC broadcasts on the AM Band?
3. *If* the answer to the first 2 questions is “Yes”: Should the FCC *require* all radio receivers to become “Digital Only” at some point?

*And*

4. Can Low Power Radio stations accommodate a total shift to Digital Radio broadcasting -- and, if so, how?

### **The FCC Should Not Make IBOC Authorization Permanent**

(A) *Making IBOC authorization permanent would be procedurally premature.* As we have noted, above, the Commission has to date made no determination at all regarding:

A November 14, 2003 Multi-Party Petition For Expedited Relief Through Rulemaking

An April 5, 2003 Petition For Rulemaking by Leonard Kahn, P.E. of New York

An October 25, 2002 Multi-Party Petition For Reconsideration of “interim” IBOC authorization

An April 12, 2002 Multi-Party Petition For Rulemaking To Mandate Comprehensive Testing And Evaluation Of IBOC Digital Radio  
*In Comparison With Competing Technologies*

In addition, only a minimal, legally inadequate response has been made to the July 18, 2002 Multi-Party Request For An Environmental Statement on the authorization and implementation of IBOC Digital Radio.

In citing this long list of Motions and requests which remain unaddressed, we add 3 unaddressed Motions in this Docket by John Pavlica, Jr. of Ohio: a January 13, 2003 Motion To Dismiss ... an August 21, 2003 Motion To Enlarge The Issue ... and a February 11, 2004 Counterproposal on nighttime AM IBOC broadcasts. The FCC has also never addressed a May 19, 2003 Petition -- by W. Lee McVey, P.E. of Florida -- For Reconsideration of the FCC’s related April 29, 2003 Order in Docket 02-98.

*(B) Making IBOC authorization permanent would be substantively unjustified.* Far from providing “real world” evidence that concerns about IBOC interference have been overstated, 17 months of actual experience since October of 2002 have shown that IBOC interference is indeed a problem -- especially on the AM Band.

The FCC’s conscious decision to select IBOC un-competitively, *without* testing and evaluating *any* of the other technologies, now looks more and more like a wrong turn on the road. Continuing down the same road, at higher speed, will not correct the error.

In this regard, *Appendix A* of our Written Comments contains the text of a May 19, 2004 article in RADIO WORLD. This article -- entitled "Antenna, Power Issues Emerge From AM IBOC" -- was written by Leslie Stimson, who serves as the Editor of RADIO WORLD. It reports that "several" AM stations have voluntarily stopped broadcasting with IBOC because of interference with other stations on adjacent channels.

The FCC should bear in mind that the article mentions "*several*" stations that have suspended AM IBOC broadcasts -- not one. This fact greatly reduces the possibility of a scattered "glitch" that is easily fixed, pointing instead to *a deeply embedded flaw* in the IBOC broadcasting technology, at least when it operates on the AM Band.

We also remind the Commission that this report of problems with "several" stations has been made at a time when: (a) most AM stations have still not started to use IBOC; *and* (b) only *daytime* use of AM IBOC is permitted.

Think of the reports that might appear in RADIO WORLD, and even in the "mainstream" press, if *most* AM stations become willing and able to broadcast with IBOC *at night*.

**The FCC Should Not Lift The Ban On AM IBOC Broadcasts At Night**

Based on the evidence of “real world” interference caused by *limited* AM IBOC broadcasts *during the day*, it should go without saying that authorizing *permanent and expanded* AM IBOC broadcasts *at night* is a terrible idea.

To quote Jeff Goldblum’s philosophical scientist character in *Jurassic Park*:

This is one of the worst ideas in the history of bad ideas.

Paul W. Smith, P.E. of Florida has filed May 8, 2004 Written Comments which predict, on the basis of Ibiqity Corporation’s own data, catastrophic results from authorizing *nighttime* IBOC broadcasts on the AM Band.

*Ibiqity’s own testing* submitted to you under this docket indicates that after full implementation of digital IBOC on medium wave, *all secondary [radio] service will be lost.* [Emphasis supplied.]

Paul Smith goes on to note that -- during the recent multi-state, multi-hour blackout which paralyzed much of the Midwest, most of the Northeast and parts of eastern Canada -- the *only* radio stations with the backup generators to stay On The Air were generally the same small, local radio stations whose signals would be blocked by AM IBOC broadcasts at night.

In his May 27, 2004 Written Comments in this Docket, Timothy Cutforth, P.E. of VIR JAMES ENGINEERS in Colorado -- who describes himself as “an applicant for [licenses to operate] several AM stations” -- also opposes nighttime AM IBOC broadcasts, at least with the current state of AM IBOC technology. He adds that:

Nighttime interference *already* severely limits coverage of most AM stations nationwide. [Emphasis supplied.]

Timothy Cutforth raises the possibility of “hybrid” radio receivers that could generally receive FM IBOC signals but would be able to receive Analog Radio on the AM Band.

Meanwhile, the previously referenced John Pavlica has presented a similar option for the FCC’s consideration. In his February 11, 2004 “Counterproposal”, filed in FCC Docket 99-325, John Pavlica urges the FCC to defer authorization of nighttime AM IBOC *until and unless* the FCC has developed separate, and more stringent, interference prevention and mitigation standards -- *and/or* has selected a different Digital Radio technology for use on the AM Band.

We note, once again, that the Commission has still not granted, denied or otherwise acknowledged the April 5, 2003 Petition For Rulemaking by Leonard Kahn, P.E. of KAHN COMMUNICATIONS. This Petition urges the Commission to test and evaluate KAHN COMMUNICATIONS’ newly developed Compatible AM (CAM-D) Digital Radio technology.

We further note, as we have stressed in numerous other filings with the FCC, that THE AMHERST ALLIANCE is unable to confirm or deny KAHN COMMUNICATIONS' claim that its CAM-D technology avoids the interference problems which have clearly surfaced when IBOC operates on the AM Band.

There is one way to find out, however, and that is through the very same independent testing and evaluation -- conducted by impartial technical experts on the FCC's staff -- which Leonard Kahn has requested in his Petition.

*If* the validity of KAHN COMMUNICATIONS' claim is confirmed, this would open up for the Commission the option of a "dual Digital" system: IBOC on the FM Band, CAM-D on the AM Band. Surely this *possibility* is worth investigating.

In any event:

For its own sake, as well as for the protection of the citizen listeners it serves, the FCC should keep firmly in place the ban on *nighttime* AM IBOC broadcasts. This is a time when the Commission should be *re-evaluating* IBOC Digital Radio, and considering whether to climb out of the hole it has dug, rather than digging the hole deeper at an accelerated pace.

Caution at this time will also protect the interests of radio broadcasters. If *nighttime* AM IBOC broadcasts are authorized, and radio stations are thereby encouraged to *invest* in such broadcasts, this investment decision should be buttressed by *virtual certainty* at

the Commission that those broadcasts will not be a disaster. Should the results feared by Paul W. Smith, THE AMHERST ALLIANCE and many others come to pass, the political backlash, from silenced radio stations and their angry listeners, could indeed be a disaster for the supposed “beneficiaries” of nighttime AM IBOC: a *public relations* disaster, at a minimum, and possibly more. Ultimately, the backlash might even compel the FCC to compel the IBOC stations to walk away from their major capital investments in AM IBOC broadcasts at night. This would not make Wall Street happy.

Would those who urged the lifting of the ban then bravely assume responsibility for the disaster -- or would they decide that “misery loves company” and point to the Commission’s role as the agency that had to say “Yes” before it could happen?

### **The FCC Should Not Require All Radio Receivers To Become “Digital Only”**

We have already advised the Commission not to make permanent its “interim” authorization of IBOC, nor expand even its “interim” authorization into nighttime AM operations, *until and unless* several pending Petitions and Motions have been decided *and* substantive questions have been explored more fully.

Even if the FCC ultimately decides to make IBOC permanent, on both the FM and AM Bands, the FCC should not make Digital Radio receivers mandatory *until and unless* their price becomes affordable for even the poorest Americans. Today, even the poorest of

the poor can afford basic, unsophisticated Analog Radio receivers in America. Digital Radio receivers, if they are made legally and/or functionally mandatory, should be no less available to all.

In this regard, we refer the Commission to our June 2, 2004 Reply Comments in this Docket, addressing the May 24, 2004 Written Comments of Nickolaus Leggett.

Also:

Even if IBOC comes to dominate both the FM and AM Bands, and even if Digital Radio receivers are made mandatory at some point, those Digital Radio receivers should be designed to operate on at least a few Analog Radio channels as well.

This latter recommendation is based on the financial reality that Low Power Radio broadcasters -- and perhaps some other radio broadcasters as well -- will be unable to afford the transition to IBOC broadcasting *until and unless* their capital costs are *heavily* subsidized.

If the FCC is interested in this option, one financing mechanism might be a surcharge on Digital Radio equipment and/or services. The volumes could be so large that even a tiny surcharge might yield huge sums, at least by Low Power Radio standards.

We also remind the Commission of Amherst's standing call for the FCC to initiate small Research, Development & Demonstration Grants for "spectrum expansion" projects by individuals and/or very small institutions (such as a 5-person Low Power Radio station).

In the past, we have recommended RD&D grants of \$50,000 to \$100,000 annually -- adding that their points of focus could include infrared broadcasts, millimeter wave broadcasts and/or longwave AM broadcasts. Success on such research frontiers might in time permit Low Power Radio stations, and perhaps others, to "migrate" away from conventional FM and AM frequencies completely.

Of course, developing *low cost* Digital Radio technologies for today's Low Power FM stations, and tomorrow's Low Power AM stations, could be another focus of research.

Barring such capital investment subsidies, and/or use of RD&D grants for successful "spectrum expansion", the preservation of selected Analog Radio channels appears to be the only way that most Low Power Radio stations could survive the planned transition to nearly total use of IBOC broadcasting.

### **It Will Be Difficult For Low Power Radio Stations To Engage In IBOC Broadcasts**

As we have indicated above, Low Power Radio stations, in considering a shift to Digital Radio broadcasts, face a capital cost barrier that most Low Power Radio stations would find insurmountable.

To the best of our knowledge, vendors are currently asking at least \$75,000 for installation of IBOC Digital Radio transmitters at a Low Power FM station.

Frankly, at least at present, \$75,000 is more revenue than some Low Power Radio stations can *gross* over several years.

We suspect that some relatively small NCE stations, and even some Class A commercial stations, may also find that the transition to IBOC Digital Radio broadcasts would require more capital than they can raise (or at least more than they can pay back).

Preservation of *some* Analog Radio channels may be the *only* way, or at least the primary way, to carry small, locally focused radio stations into a hypothetical IBOC Era.

As we have indicated, we can presently envision only 2 alternatives to this “endangered species” approach: *heavily* subsidized capital investments and/or an energetic program of RD&D grants for “spectrum expansion” projects by individuals and/or very small institutions. One way to finance either alternative, or both of them, could be a small -- even tiny -- surcharge on Digital Radio equipment and/or services.

**CONCLUSIONS**

For the reasons set forth herein, *and* in our other filings in this Docket, THE AMHERST ALLIANCE urges the FCC to adopt our recommendations and proceed accordingly.

Respectfully submitted,

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Dated: \_\_\_\_\_  
June 2, 2004

## **APPENDIX A**

*This is the full text of a May 19, 2004 news article in RADIO WORLD:*

## **ANTENNA, POWER ISSUES EMERGE FROM AM IBOC**

**By Leslie Stimson  
Editor, RADIO WORLD**

**A handful of AM stations reportedly have turned off their HD Radio signals out of concern for analog interference to neighbors on adjacent channels.**

**Of these cases, Ibiquity's Bob Struble said, "Are we already aware of it? Yes." In many cases, when an Ibiquity team goes to a site to help with an IBOC install, a station may already have antenna problems, he said.**

**"We're seeing arrays not pointed in the right direction and power levels that vary. This is to be expected," he said, as Ibiquity helps stations work through AM digital implementation issues.**

**Ibiquity Vice President of Marketing Dave Salemi said some of these stations are short-spaced. "We're finding manufacturers step in and solve the problems," he said.**

## **APPENDIX B**

**PETITIONS AFFECTING IN BAND ON CHANNEL  
(IBOC) DIGITAL RADIO  
AUTHORIZATION AND IMPLEMENTATION --  
IN FCC DOCKET 99-325 --  
THAT HAVE BEEN FILED BY, OR ENDORSED BY,  
THE AMHERST ALLIANCE**

*Prepared by DON SCHELLHARDT, ESQUIRE  
President, THE AMHERST ALLIANCE  
May 30, 2004*

**[Only The EIS Request Has Been Granted, Denied Or Otherwise Addressed  
As Of This Date]**

*R = Not an original party to the filing. Added retroactively.*

<u>PARTY</u>	<u>11/14/03: Petition For Expedited Relief Rulemaking</u>	<u>4/05/03: L. Kahn Petition To Consider CAM-D Technol.</u>	<u>10/25/02: Petition To Reconsider IBOC Approval</u>	<u>7/18/02: Request To FCC For Environ. Assessment/ Impact Statement</u>	<u>4/15/02: Petition For Competitive Comparison Of IBOC With The Alternatives *</u>
Amherst Alliance <i>CT</i>	X	R	X	X	X
WKJCE <i>PA</i>	X	R	X	X	X
N. Leggett <i>VA</i>	X	R	X	X	X
WRIR-LP/ VCP <i>VA</i>	X		X	X	X
Prov. Commun. Radio/ W. Dymoke <i>RI</i>	X	R	X		X
KWAQ-AM/ WILW <i>KS</i>	X	R	X		X
WVJW-LP <i>WV</i>	X		X		X

	<u>Exped. Relief</u>	<u>CAM-D Technol.</u>	<u>IBOC Recon.</u>	<u>EA/EIS Request</u>	<u>Compet. Compar.</u>
<b>KZQX-LP</b> <i>TX</i>	X	<i>R</i>	X		
<b>WNJO-AM/</b> <b>T. Lawler</b> <i>NJ</i>	<i>R</i>	<i>R</i>	<i>R</i>		
<b>JAMRAG</b> <i>MI</i>	X		X		X
<b>DIYMEDIA</b> <i>WI</i>	X		X		X
<b>Citizens Media</b> <i>MA</i>			X	X	X
<b>Rogue Commun.</b> <i>WA</i>			X	X	<i>R</i>
<b>M. Hayes</b> <i>OR</i>			X	X	X
<b>CBBDG/</b> <b>K. Drake</b> <i>MN</i>	X	<i>R</i>	X		
<b>Auricle Comm.:</b> <b>WFMU-FM</b> <i>NJ</i>	X		X		
<b>WXHD-FM</b> <i>NY</i>	X		X		
<b>WSJL-AM</b> <i>NJ</i>	X		<i>R</i>		
<b>KPIB-LP</b> <i>TX</i>	<i>R</i>		X		
<b>BEAT RADIO</b> <i>MN</i>	X		X		
<b>Greenhouse News</b> <i>MI</i>			X		X
<b>Universal Life Ch.</b> <b>Of W. Visalia</b> <i>CA</i>	X		<i>R</i>		
<b>J. J. Wentworth</b> <i>AK</i>		<i>R</i>	X		
<b>J. Rogers</b> <i>RI</i>		<i>R</i>	<i>R</i>		

	<u>Exped. Relief</u>	<u>CAM-D Technol.</u>	<u>IBOC Recon.</u>	<u>EA/EIS Request</u>	<u>Compet. Compar.</u>
T. Devlin <i>NY</i>		<i>R</i>	<i>R</i>		
K. Johnston <i>NY</i>		<i>R</i>	<i>R</i>		
Rev. R. Chrysafis <i>NJ</i>	<i>R</i>		<i>R</i>		
S. Bringhurst <i>AL</i>	<i>X</i>		<i>X</i>		
P. Walker, Jr. <i>MS</i>	<i>R</i>		<i>R</i>		
J. Grant <i>IN</i>	<i>X</i>		<i>X</i>		
C. Bydalek <i>AK</i>	<i>R</i>		<i>X</i>		
WLYC-AM <i>PA</i>				<i>X</i>	
WADA-AM <i>NC</i>		<i>R</i>			
KBKH-FM <i>TX</i>			<i>X</i>		
KRXI-FM <i>TX</i>	<i>X</i>				
KYQX-FM <i>TX</i>	<i>X</i>				
KSQX-FM <i>TX</i>	<i>X</i>				
KMQX-FM <i>TX</i>	<i>X</i>				
KYDX-LP <i>TX</i>	<i>X</i>				
KWSK-LP <i>TX</i>	<i>X</i>				
KXVI-LP <i>TX</i>	<i>X</i>				
WALW-LP <i>AL</i>	<i>X</i>				
WSHG-LP <i>GA</i>	<i>X</i>				

	<u>Exped. Relief</u>	<u>CAM-D Technol.</u>	<u>IBOC Recon.</u>	<u>EA/EIS Request</u>	<u>Compet. Compar.</u>
WFBP-LP <i>SC</i>	X				
WJUK-LP <i>IN</i>	X				
WPCA-LP <i>WI</i>	X				
East Hill Radio <i>WA</i>	R				
Commonwealth Broadband Collaborative <i>MA</i>	X				
Clark Communica. <i>VA</i>	X				
REC Networks <i>AZ</i>			X		
MBC Consulting <i>TX</i>	X				
CSSI <i>TX</i>	X				
Midwest Christian Media <i>MO</i>	X				
Christian Community Broadcasting <i>GA</i>	X				
Digital Signal Group <i>SC</i>	R				
Spryex Communica. <i>OH</i>			X		
Tune Tracker Systems <i>WI</i>	X				
Cognitive Research & Design <i>CA</i>	X				
Michigan Music Is World Class! <i>MI</i>	X				

	<u>Exped. Relief</u>	<u>CAM-D Technol.</u>	<u>IBOC Recon.</u>	<u>EA/EIS Request</u>	<u>Compet. Compar.</u>
Progressive Coalition <i>MI</i>	<i>R</i>				
Green Party of Michigan <i>MI</i>	<i>R</i>				
Green Party of Ferndale <i>MI</i>	<i>R</i>				
R. Callebs <i>OH</i>	<i>R</i>				
W. Doerner <i>TX</i>	<i>R</i>				
E.B. Stevenson <i>MO</i>	<i>X</i>				
F. Baumgartner <i>CO</i>	<i>X</i>				
A. Maynard <i>CO</i>	<i>X</i>				
R. Bird Bear <i>CO</i>	<i>X</i>				
J. Davies <i>CO</i>	<i>X</i>				
M. Lear <i>NY</i>	<i>X</i>				
P. Zumkehr <i>NC</i>	<i>X</i>				
C. Hutton <i>WA</i>			<i>X</i>		
J. Davidson <i>CA</i>			<i>X</i>		
R. Sego <i>UT</i>			<i>X</i>		
E. Loepke <i>TX</i>			<i>X</i>		
R. Chaney <i>LA</i>			<i>X</i>		
W. Hebbert <i>WI</i>			<i>X</i>		

	<u>Exped. Relief</u>	<u>CAM-D Technol.</u>	<u>IBOC Recon.</u>	<u>EA/EIS Request</u>	<u>Compet. Compar.</u>
<b>B. Beyrer</b> <i>PA</i>			X		
<b>W.R. Newton</b> <i>PA</i>			X		
<b>R.H. Shivers</b> <i>PA</i>			X		
<b>G.J. Mehrab</b> <i>NY</i>			X		
<b>L. Kahn</b> <i>NY</i>		X			
<b>J. Flanagan</b> <i>MA</i>			X		