

**Before The  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of )  
 )  
Amendment of Part 74 ) MB Docket No. 18-119  
Of the Commission's Rules )  
Regarding Translator Interference )  
 )

To: The Commission

**PETITION FOR RECONSIDERATION**

Comes now Charles M. Anderson, broadcast engineering consultant and licensee of both full power FM stations and FM translators to petition the Commission to reconsider its action in MB Docket No. 18-119. Specifically, it is requested that the interference limit contour of 45 dBu be reset to the 54 dBu specified in the original NPRM, that translators' and LPFM's interference complaint limiting contour be set at 60 dBu, and that the number of complaints required for an LPFM license be six.

The FCC's final order provides for non-adjacent channel changes for FM translators that are experiencing interference issues caused or received. This will be very helpful in smaller markets to resolve interference complaints and where excessive incoming interference seriously limits coverage. We support this portion of the order and commend the Commission for implementing it.

**The Commission failed to consider the full impact of a 45 dBu limiting contour on existing FM translators.**

In its original Notice of Proposed Rule-making, the Commission presented a very well-reasoned and balanced proposal to limit interference complaints to the 54 dBu contour which appeared to recognize the changed role of FM translators in the modern broadcast radio landscape where 8,126 FM translators are operating or authorized at last report, many serving to sustain local service of AM stations.

The Commission stated in that proposal that its goal was to "provide translator licensees [with] additional investment clarity ...". The Commission asserted that it was (emphasis added):

[c]larifying the process and ***balancing*** the interests of the various services involved ... we must not only ***balance*** the needs of translator, low power FM and full-service licensees, but also [the technical integrity of the FM band]. We believe that the measures adopted herein ***strike a balance*** between managing FM band spectrum, providing greater certainty for translator operators, and preserving existing protections for full-service stations ... .

However, in its final order the Commission appears to have yielded to the pressures of Big Radio who, like the cattle barons of the old west defending grazing rights on the open range and opposing homesteads, once again came forward in full turf protection mode opposing the Commission's 54 dBu proposal (just as they have opposed and stalled the FCC's very reasonable and rational proposed modifications of AM daytime allocations which were supported by some of the industry's most respected consulting engineers). They advocated an incredible, some would say absurd, 39 dBu contour limit citing interference concerns, subtext "competition", for audiences well beyond their protected contours with purported radio listening data.

It is noteworthy that their audience data was based on "cume" (only 5 minutes listening per week) and zip code centroids for "panelists home addresses" (see Beasley Media Corporation, et al Comments at footnote 13). Such data is at best exaggerated and misleading given the size of zip code areas, many extending across a 6 dB contour span, and the presumption that the home address represented the location of a substantial portion of their listening. Since these data are from the larger PPM markets it seems reasonable to expect that much of the 5 minute "cume" listening is spent in transit to those markets at contours far greater than 45 dBu.

For instance, I examined the relation of zip codes to the 45 dBu, 48 dBu and 51 dBu (F50,50) contours for stations WSM-FM in Nashville, TN and WAMZ(FM) in Louisville, KY. Many of those zip code boundaries spanned 6 dB of predicted (50:50) contours. It seems reasonable to expect similar results elsewhere and casts doubt upon using zip code centroids as an indication of where radio listening is occurring.

The Commission clearly relied heavily on this data and in doing so failed to achieve its stated goal of balancing the interests of translator audiences. To actually effectuate the balancing that the final order proclaimed was taking place between the interests of FM translator listeners and other station listeners, it would have been necessary for the Commission to do an engineering study of a substantial representative sampling of all authorized FM translators to determine the impact of limiting their interference contours (25 dBu co-channel and 39 dBu 1<sup>st</sup> adjacent channel) to the new 45 dBu protected contours for FM stations. That data could have informed a fair and balanced evaluation of the alternatives weighing the relative impacts on translators and FM stations, something the current FCC decision failed to do.

For example, I studied the potential impact of the new rules on the Louisville, KY market (included herein). The 45 dBu limit would put into jeopardy the continued,

viable service from nine of the ten currently-authorized Louisville market FM translator stations. If interference complaints were pursued under the FCC's strict, no-recourse procedures six translators would be ordered to discontinue operations. Three translators would be forced to power levels ranging from five to twenty-one watts ERP. Only one translator would not be in jeopardy from a full-service station interference complaint. An identical study for a much smaller market, Cookeville, TN, shows that none of the four non-reserved band translators there would survive. I have also since evaluated more than twenty individual translators in several states at the request of clients in small and large markets. Those evaluations also indicate a high level of risks to translators.

**The Commission failed to carry out the balancing it purported to do and therefore its 45 dBμ contour limit determination is not supported by facts.**

As shown above, the acceptance of interference complaints out to an existing station's 45 dBμ contour would have substantial and deleterious effects upon 90% of the FM translators authorized to the Louisville, KY area, and 100% of the FM translators authorized to the Cookeville, TN area. This cessation or almost whole loss of service from the FM translators to the entire service area of the translators must be compared with the potential sporadic or intermittent interference twice a month to at most twenty-five listeners to an existing station. As shown in both these studies, the FCC's decision to accept the 45 dBμ limit at the behest of existing stations provides neither its purported "balancing", nor "certainty" to FM translators.

Rather, for the FCC to reach a reasoned decision, it would have had to show an apples-to-apples comparison – possibly balance the number of existing listeners impacted by FM translator interference with the number of listeners that will lose service from an impacted FM translator; balance the service area impacted by FM translator interference to the existing station compared with the service area that the public will lose from the impacted FM translator; or at a minimum balance the number of existing stations potentially affected by FM translator interference with the number of FM translators that would be subject to virtual facility destruction through the FCC's new interference complaint procedures.

The FCC rather compared apples to nothing by only noting that there were some nebulous number of purported listeners to existing stations far beyond an existing station's legally protected contour, keeping an interference sword hanging over most FM translators to be used at any time by any existing station. To make a reasoned decision, the FCC at a minimum had to consider how many FM translators were impacted by the FCC's choice of the 45 dBμ contour, and then "balance" that against the claimed harms that interference may cause to existing stations.

The Commission simply relied on questionable audience data purported to exist beyond stations' 54 dBu with no analysis or evidence as to what portion of that audience might be impacted by the more than 8,000 authorized translators. There is really no cogent argument for the 45 dBu limit.

**The Commission's Process is in conflict with 307(b) of the Communications Act and the entire history of FM allocations.**

Allocated service areas have been clearly differentiated in the long-standing processes developing the mature FM allocations system. The dramatic extension of those service areas out to 45 dBu is clearly inconsistent with the dictates of §307(b) of the Communications Act which requires that the FCC "...provide a fair, efficient, and equitable distribution of radio service to each of the..." states and communities. In today's radio environment, FM translators also represent an efficient use of the spectrum for communities using the unallocated, open grazing areas of the FM band.

**Extending 45 dBu protection to LPFMS is in conflict with the Local Community Radio Act of 2010.**

*SEC. 5. ENSURING AVAILABILITY OF SPECTRUM FOR LOW-POWER FM STATIONS. The Federal Communications Commission, when licensing new FM translator stations, FM booster stations, and low-power FM stations, shall ensure that— (1) licenses are available to FM translator stations, FM booster stations, and low-power FM stations; (2) such decisions are made based on the needs of the local community; and (3) **FM translator stations, FM booster stations, and low power FM stations remain equal in status** (emphasis added) and secondary to existing and modified full-service FM stations*

Affording 45 dBu interference protection to LPFMs is clearly in violation of the LCRA. After all, authorized LPFMs only subject to interference complaints within full power stations' 70 dBu contour or in some cases the 60 dBu contour, and are, therefore, effectively immune from complaints. Under the provisions of MB Docket 18-119, LPFMs may defend their 45 dBu contour from translator interference but are themselves *de jure* exempt from complaints from translators. FCC rules provide no opportunity for translators to lodge interference complaints against LPFMs while in this proceeding the LPFM contour requiring translator protection in the case of interference complaints has been set at 45 dBu or 13.4 km more than doubling the 60 dBu protected contour of 5.6 km. This violates the Local Community Radio Act which requires equal status and treatment of translators and LPFMs. Since translators are clearly not intended to be "secondary" to LPFMs, it is not defensible to extend 45 dBu protection to them or currently operating translators for that matter. In fact, it seems reasonable to limit LPFM interference complaints to their defined service contours - 60 dBu since they are clearly intended to serve small local areas.

Another area of inequity manifests itself in the limit of three complaints required by an LPFM to challenge a translator. Such a small limit invites abuse by overzealous LPFMs. That limit should be reset to six.


The Commission only considered a relatively small number of radio listeners well outside the allocated coverage contours of existing stations in its decision. It wholly ignored FM translator radio listeners. Perhaps there was a compromise contour that was fair and balanced. 45 dBu is neither, nor supportable as such as the Commission

lacked the data with which to make a reasoned decision. As shown with the Louisville and Cookeville examples above, the new interference rules have the potential for dramatic and unintended consequences.

Therefore, it is requested that the Commission reconsider and reset the 45 dBu limiting contour to 54 dBu as originally proposed until such time as a full and complete analysis of the 45 dBu or any alternative contour can be completed. Furthermore, the report should be modified to set 60 dBu as the limiting interference complaint contour for LPFMs and translators, and the number of complaints required for an LPFM should be set at six.

July 11, 2019

Respectfully submitted,

A handwritten signature in blue ink that reads "Charles M. Anderson". The signature is written in a cursive style and is positioned above a horizontal line.

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## LOUISVILLE, KY TRANSLATOR ANALYSIS

FM translators in the non-reserved band serving the core Louisville market (within 25 km) were analyzed FM translators were analyzed to determine the reduction in ERP required to their existing facilities to disprove an interference complaint based on U/D ratio lodged by their closest co-channel or first adjacent facility's (station, LPFM or translator) 45 dBu (50:50) contour.

<b>Translator</b>	<b>Closest relevant facility</b>	<b>45 dBu contour protection limited ERP<sup>1</sup></b>
W222CD-CP <sup>2</sup> (250W-DA)	WTTS (co)	250 Watts
W236AN (200W)	WIKI (1 <sup>st</sup> adj)	0 Watts
W241CK (250W)	WSTO (co)	18 Watts
W250BD (250W DA)	WSLM (co)	21 Watts
W257EM-CP (250W-DA)	WKMO (co)	0 Watts
W261CO (250W DA)	WNGT(CP) (co)	0 Watts
W270CR (150W)	WKRQ (co)	5 Watts
W274AM (55 W)	WOKH (1 <sup>st</sup> adj)	0 Watts
W284AD (99 Watts)	WITZ-FM (co)	0 Watts
W297BV (220W-DA)	WRZI (co)	0 Watts

.At the proposed 45 dBu contour limit, six (6) could not survive at their existing sites, three would survive with extremely diminished facilities insufficient to serve the core Louisville market and one would be unchanged

<sup>1</sup> Facilities were evaluated using their authorized site and antenna system, FCC U/D interference ratios (-20 dB co-channel and -6 dB 1<sup>st</sup> adjacent) and the Globe 30 second terrain database. Indicated ERP is that required to prevent overlap with the protected facility's 45 dBu contour.

<sup>2</sup> Also at risk to first adjacent translator CP W223DK.

**COOKEVILLE, TN  
TRANSLATOR ANALYSIS**

FM translators in the non-reserved band serving the Cookeville market were analyzed to determine the reduction in ERP required to their existing facilities to disprove an interference complaint based on U/D ratio lodged by their closest co-channel or first adjacent facility's (station, LPFM or translator) 45 dBu (50:50) contour.

<b>Translator</b>	<b>Closest relevant facility</b>	<b>45 dBu contour protection limited ERP<sup>3</sup></b>
W231DG (250W-DA)	WLYE-FM (co)	1 Watt
W265BC (250W-ND)	WANY-FM (co)	0 Watts
W291CA (250W-ND)	WNRQ (1 <sup>st</sup> adjacent)	0 Watts
W299BY (250W-DA)	WIVK-FM (co) WRVW (1 <sup>st</sup> adjacent)	4 Watts 0 Watts

At the proposed 45 dBu contour limit, all four translators currently licensed to Cookeville, TN in the non-reserved band would be eliminated on their current channels antenna systems. Clearly, none could establish an alternate, viable service for this city of 30,435. Furthermore, a preliminary evaluation of the four apparent alternate frequencies reveal the same vulnerability to the 45 dBu contour yielding 0 to 1 Watt.

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<sup>3</sup> Facilities were evaluated using their authorized site and antenna system, FCC U/D interference ratios (-20 dB co-channel and -6 dB 1<sup>st</sup> adjacent) and the Globe 30 second terrain database. Indicated ERP is that required to prevent overlap with the protected facility's 45 dBu contour.