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To  
The Secretary  
Federal Communications Commission  
445 12th Street, NW Room TW204  
Washington, DC 20554

MM Docket No. 99-25  
In the Matter of

Creation of a Low Power Radio Service

Comments of  
James Dorrence

From  
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Before the  
Federal Communications Commission  
Washington, D.C.

In the Matter of )  
Creation of a Low ) MM Docket No. 99-25  
Power Radio Service )  
)

To: THE COMMISSION

COMMENTS OF JAMES DORRENCE

These comments are in support of a new Low Power FM service, so long as certain reasonable conditions apply.

My thoughts and some from qualified friends are respectfully submitted as the Commission begins deliberations.

1. For a new service to be satisfactorily accommodated in the present FM band, it is necessary to consider modulation swing, its present situation, and the future situation, once new assignments are on the air. It appears that some stations are exceeding the  $\pm 75$  kHz specification for 100% modulation. Supporting that, a competent engineer has stated that a station in his area<sup>s</sup> over-modulating such that he can not listen to a favorite station in another area. Both stations are Class B stations, and are on adjacent channels.

Considering that and another factor, I recommend changing the modulation swing 100% specification for all FM stations.

The other factor is the PERCEPTION of sound level. A trained musician can discern a level change of 1.0 dB or more with steady tone, but not on program material. With program material, that same musician discerns a level change of 2.0 dB or more. Most listeners would not be able to notice a level change of 2.0 dB or less.

Considering the foregoing, it is reasonable to change the 100% modulation specification from  $\pm 75$  kHz to  $\pm 65$  kHz, a change of less than 2.0 dB. This would give more protection to all stations equally and would assure that Class B and C stations would continue to serve their present service areas without any perceived change in level. Also, the guard band would increase 10 kHz to 35 kHz on each side of each channel.

2. Another recommendation would be for an independent modulation measuring service to be formed to monitor every station on the band. This would work to everybody's benefit.

3. On another pertinent subject, it appears that the present 600 kHz spacing between nearby stations is too restrictive, and that current receivers are able to separate stations spaced 400 kHz apart. A separation of 400 kHz or more, combined with a dedication to modulating within the Rules would, in my opinion, be reasonable.

4. About a maximum effective radiated power (ERP) rating for the proposed service, I suggest that it be set at about 1.0 kW for the larger Standard Metropolitan Statistical Areas (SMSAs) and somewhat lower for the smaller markets.

5. For the larger SMSAs, I urge the Commission to allow lower powered synchronous stations (copies of the main LPFM station) in order to fully serve their natural markets. The power could be set at about 0.1 kW, ERP. This would enable a station to serve their market without extending coverage beyond what would be reasonable for a low power station.

6. Considering that a transmitting antenna at a high elevation above average terrain (AAT) could considerably extend coverage beyond the intentions of this proceeding, I suggest a maximum elevation AAT of about 100 to 150 feet.

7. Regarding transmitting antennas for the proposed LPFM service, I recommend that the antenna use some earthward beam tilt so that predicted coverage is met but not exceeded. This would assist in meeting an objection by another engineer. He is concerned that, if the current proposal is implemented, that the future overall FM service would resemble the current situation found on the Local AM Class A channels during the night-time hours.

8. I believe that, if we are careful with the specifications for a new low power FM service, we can introduce a number of valuable stations serving audiences and still have the existing service.