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Federal Communications Commission
Washington, DC 20554

In the matter of the Creation of a Low Power Radio Service
MM Docket # 99-25
RM-9208
RM-9242

Comments of:
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1. Need for LPFM/alternatives:

Before creating a low-power radio service (ALPFM), it must first be determined that there is a need for such a service, and no existing alternative method of serving that need. While not condoning illegal behavior, I believe the recent rash of unlicensed FM broadcasters (and the widespread support many of these stations had in their communities) is adequate evidence of demand.

The Commission proposed three alternatives to LPFM. Internet broadcasting is certainly feasible and growing in popularity. However, an expensive computer system is necessary to receive Internet Aradio, and mobile/portable reception is essentially impossible. ATransmitting is also relatively expensive, especially due to the need for a permanent Internet connection - the popular dial-up connections are not adequate.

Purchase of an existing station is suggested as an alternative. As others have stated, the prices of existing commercial FM stations have been Abid up by the relaxation of multiple-ownership regulations. The lack of multiple-ownership regulations for non-commercial stations has made these difficult to acquire as well. (especially since the Class D license was phased out in the early 1980s.) Small AM stations can occasionally be purchased for reasonable prices, but the high cost of land and real-estate taxes makes AM impractical in most cases.

Leasing of time on existing stations is a viable alternative in some larger cities. Smaller markets, however, usually have no stations that will lease large blocks of airtime. The number of large-market stations leasing time is also declining, as many of these stations switch to regular formats.

The Commission has tentatively concluded there is no comparable alternative to LPFM, and I must concur.

2. Non-commercial & other ownership limits:

Several questions are asked about non-commercial operation and other ownership limits. Should LPFMs operating in 88-92MHz be required to operate non-commercially? Should this restriction extend across the entire 88-108MHz band? Due to their relatively poor coverage, it is unlikely LPFM stations will pose serious competition to existing stations. It would probably be a good idea to continue to reserve 88-92MHz, to ensure spectrum is available for non-commercial applicants. The remainder of the band should be available for commercial operation. Smaller advertisers in small towns or ethnic communities have complained of being unable to afford airtime on larger existing stations; it would be in the public interest to provide them the ability to advertise on LPFMs. However...

The FCC also states it believes that it is required to resolve mutually exclusive applications for commercial service by auction. The laws cited certainly back up this belief. Unfortunately, resolving mutual exclusivities in LPFM by auction is contrary to the purpose of the service. Especially with no restrictions on out-of-market owners or programming, resolving exclusivities by auction is likely to freeze individuals and community groups out of the process. We are likely to end up with chains of satellite-fed religious and specialty stations with little or no local programming.

Thus, I must conclude the LPFM service must be completely non-commercial. This would allow mutual exclusivities to be resolved by lottery. A lottery scheme is actually less work for Commission staff than auctions, yet is more likely to preserve the intent of the service.

Other questions about ownership are also asked. Should those with attributable interest in full-power stations be permitted to own LPFMs? Should LPFMs be allowed to enter "LMA"s or other joint marketing agreements? How many LPFMs should one entity be allowed to own in one "community"? In the U.S. as a whole? What about local ownership?

If the purpose of LPFM is to allow the creation of a community voice in places where local full-power stations are not practical (either due to dial congestion or proximity of a larger city), there really is no need to allow one entity to own more than one LPFM. If an applicant is limited to one station nationally, the question of how many are permitted in a "community" goes away...

If the Commission feels it must allow ownership of multiple LPFMs across the country, it should indeed limit owners to one per "community". In this case, I would define "community" in the same way it's defined for purposes of the multiple-ownership regulations for full-power stations. Hopefully, this would prevent the creation of a "defacto regular station" in geographically-smaller markets by linking multiple LPFMs with barely-touching coverage areas. In this situation, I would recommend a national limit as small as possible.

I see no particular reason to prohibit anyone with an attributable interest in a full-power station from owning an LPFM, provided that LPFM is in a different market from any

commonly-owned full-power station and it is prohibited from rebroadcasting the full-power station. In any case, it should not be permissible for any LPFM station, regardless of ownership, to rebroadcast any other station.

It is suggested that regulations requiring LPFM owners to live within the station=s coverage area are not necessary. If regulations can be formulated to require programming to originate within the station=s coverage area, this is probably true.

Also asked is whether owners of existing AM stations with limited nighttime coverage should receive preference in issuance of LPFM licenses. The Commission suggests no preference be given, but that AM owners be allowed to receive LPFM licenses contingent on surrender of the AM license. This is the right course to take. It allows entities with a demonstrated interest and ability to broadcast to participate in LPFM, while simultaneously reducing interference in the AM band.

Finally, it=s asked whether those found to have participated in illegal Apirate≅ broadcasting in the past should be disqualified from LPFM ownership. The well-known Dunifer case in Berkeley, California is specifically cited. In the Dunifer case, the operator of an unlicensed station argued that the 100-watt minimum ERP for licensed operation was an unnecessary restriction on Constitutionally-protected free speech. In at least one hearing, a Federal judge concurred, and to my knowledge her ruling was never overturned. Dunifer seemed to believe, with some justification, that his operation was in fact justified under the Constitution, as did many other unlicensed operators who came on the air in the last few years.

On the other hand, LPFM brings forth the possibility that legal broadcasting could be possible at all power levels. (either unlicensed operation under Part 15 at extremely low power; licensed LPFM operation up to 100 or 1000 watts; and licensed Class A/B/C operation at higher powers) If LPFM is approved, the Constitutional basis for low-power unlicensed operation is gone.

I propose that those found to have operated without a license before the date that adoption of LPFM is announced should not be disqualified from operation of LPFM stations. Those who are found to have operated illegally after this date may or may not be licensed, at the Commission=s discretion.

3. Other non-technical regulations

No minimum local programming requirement is proposed. I feel this is a mistake. While LPFMs would not be permitted to rebroadcast full-power stations, there is nothing in this proposal to prohibit them from carrying a satellite feed. If there are also no regulations requiring LPFM owners to reside within the station=s coverage area, we could easily end up with distant owners tying up all available channels to broadcast their viewpoint into someone else=s community.

I believe it would be reasonable to require all programming on LPFM stations to originate in studios within the coverage area of the station. An exception might be made for up to 5 minutes per hour of outside programming, to accommodate regional and national news and sports broadcasts.

The public-file rule is not overly burdensome, and would be even less so for LPFM stations whose limited coverage area would reduce the amount of public input that would need to be filed. Periodic ownership reporting would not be a particular burden for LPFM operators, but might be a serious burden for Commission staff. It would probably be better to only require a report if there=s a significant change.

Minimum operating hours regulations were an expensive (though necessary) burden for full-power stations for many years. Licensed operators were required whenever the transmitter was on the air, and there was no inexpensive way of automatically providing programming if no operator was present.

Modern technology has changed this. Modern transmitters (especially the relatively low-powered solid-state units most suitable for LPFM) can be operated unattended for long periods without serious risk of interference. Inexpensive remote control systems are available to ensure transmitters can be shut down quickly in case interference does occur. In fact, the Commission has already authorized unattended operation for full-power stations, and virtually no inadvertent interference is known to have resulted. Computer sound cards and storage and compact-disc changers have also made it inexpensive to provide programming without human intervention.

As a result, it would not be excessively expensive for a LPFM operator to automate their station during hours when no operator can be present. I see no need to exempt LPFM operators from the minimum-hours regulations.

It has been proposed to make certain types of LPFM license unrenewable, to ensure turnover in ownership. I believe such a move is unnecessary. AMicroradio@ stations are most likely to be operated by individuals -- who move frequently. The station will move with them. (It will, of course, require relicensing in the new location, if possible. The old facility will become available for a new applicant.) ALP100" stations are likely to be owned by community groups, whose leadership will rotate as people move in and out of the community.

The Commission suggests that LP1000 stations face the same Emergency Alerting System (EAS) requirements that apply to full-power stations, while Amicroradio@ stations would be exempt from EAS. Apparently both options are under consideration for LP100 stations. On the one hand, the EAS is an important source of emergency information. (as the Commission seems to recognize in its strict enforcement of EAS regulations) On the other hand, equipment to originate EAS codes is a significant investment. For a LP100 or microradio station, the EAS encoder might be more expensive than the transmitter.

Equipment to <u>detect</u> EAS codes originated by the National Weather Service is available at

modest cost, less than $100. Such equipment could be easily modified to monitor broadcast stations, if required by the local EAS plan. It would probably not be excessively burdensome to require LPFMs to monitor their area=s Local Primary station for EAN, and to go off the air if it is received, returning only after EAT is issued. LPFM stations should have the option of full participation in EAS if they, and their state=s EAS officials, agree. It should be noted that there is an existing class of station (FM translators) that do not necessarily provide EAS alerts for the areas they serve. While visiting Meridian, Mississippi recently, I heard translator W209AS broadcast an EAS alert for severe weather -- in Marin County, California!

If for no other reason, LPFM stations will require call letters for record-keeping purposes. I see no need to assign distinctive calls to these stations; if distinctive calls are assigned, the stations are likely to de-emphasize the distinctive part as much as possible anyway. (as has happened with the >-LP= suffixes on LPTV stations with four-letter calls) On the other hand, assigning regular four-letter calls to LPFM stations is likely to result in a serious burden on FCC staff. LPFM stations should be assigned call letters from the Apool@ of FM translator calls. A LPFM station operating on 88.1MHz might be assigned AW201CQ@. As with other classes of broadcast stations, LPFMs could select any other callsign as a Aslogan@, provided there=s no confusion with existing stations in the same area, and their legal calls are used for hourly identification announcements.

4. Priorities of types of station

The question of the relative priorities of LPFM and existing stations is of critical importance. LPFM cannot be permitted to interfere with existing service or limit the expansion of stations that have made the investment necessary to obtain full-power licenses. On the other hand, allowing LPFM stations to be Abumped@ for stations that do nothing more than rebroadcast out-of-town signals is contrary to the public interest.

Priority vs. Class A/B/C/D:
LPFM should be secondary to these existing full-power stations. The proceeding which resulted in the end of new Class D stations found that higher-power operations were a more efficient use of the FM band. The current LPFM proceedings suggest that, after maximum use of the band has been made by high-power stations, some additional low-power operations can be accommodated. But efficiency still requires that a LPFM station not be allowed to prevent the creation, upgrade, or move of an existing full-power station.

Priority vs. FM translators:
There has been enormous growth in the number of FM translators in the last ten years or so. Some serve to fill in gaps in the coverage area of local full-power stations, but others serve only to provide nation-wide coverage for non-commercial stations, with absolutely no content of local interest. I fear that commercial stations may seek translators for the sole reason of preventing competition from LPFM, while LPFMs operating in the non-commercial band may be forced off the air, to be replaced by a satellite-fed signal from hundreds of miles away.

On the other hand, existing FM translators have been installed at considerable expense. In many cases, they do fill important gaps in the coverage area of full-power commercial stations. Existing translators should be Agrandfathered≅, protected from interference from LPFM. It may also be advisable to protect translators located within the protected contours of their primary stations. (i.e., Agap fillers≅ in rough terrain or places where Ablanketing≅ interference is a problem)

New translators should be secondary to LPFM. It will probably be necessary to freeze new-translator applications, starting with the adoption of LPFM and ending some reasonable period -- maybe 6-12 months -- later, in order to prevent a Astampede≅ of translator applications that would preclude LPFM service.

Priority vs. other LPFMs:
If only one class of LPFM is created, there is no issue of priority among LPFMs -- first come, first served. I am concerned about a system that provides higher priority for higher-powered LPFMs. Several smaller voices could be displaced by one larger LPFM station.

5. Spectrum usage

Several issues about spectrum usage are presented. The Commission rightly rules out the use of the 530-1710KHz AM band for low-power broadcasting. Interference is already excessive in this band; it needs fewer stations, not more! Interference is also additive in the AM band; an interfering signal 20dB weaker than the desired station can still cause noticeable interference. Finally, the extensive ground systems and tall towers necessary to limit skywave radiation at AM are not practical for a low-budget station.

Some suggestions have been made for the use of TV channel 6 or the 1700-1800KHz band for low-power broadcasting. These suggestions seem rooted in the mistaken belief that these bands are unoccupied or will become unoccupied after analog TV is shut down. In any case, no receivers currently exist for these bands.

The Commission proposes to allow LPFM stations to operate on the 2nd and 3rd adjacent channels to existing stations in the same area. (separations of 400 and 600KHz. The current minimum separation for stations in the same area is 800KHz.) This relaxation would greatly increase the number of LPFM stations possible. A common argument against this move is the suggestion that adjacent-channel interference will result on inexpensive receivers.

Receivers of reasonable quality have no problem separating stations 400-600KHz apart. In fact, in many markets stations at these separations are already serving the same areas from different outlying areas. For example, Nashville is targeted by stations on 88.1/88.7/89.1/89.5MHz; stations on 93.7/94.1MHz; on 99.7/100.1; and on 102.5/102.9/103.3. Due to their low power, and greater proximity to the towers of the full-power stations, LPFMs will generate even less interference.

It may be interesting to note an action taken last year in Toronto, Canada=s largest radio market. The Canadian government authorized a low-power FM station there on 101.3MHz, 600KHz from existing station CHIN-FM and within 10 miles of the CHIN-FM transmitter. No interference has been reported -- in fact, the new station is owned by CHIN-FM, who presumably would not be interested in interfering with their own signal! (The 101.3 station carries a separate program, that of CHIN-AM)

Possible interference to in-band on-carrier (AIBOC@) digital radio broadcasting is discussed. From what this writer has read of the technical details of IBOC radio, 2nd-adjacent LPFM stations should have little or no energy within the channels of existing stations, even the outer edges of those channels used for the digital signal. Furthermore, as the IBOC signal is digital, it can tolerate small amounts of adjacent-channel interference.

The Commission suggests limits on the peak deviation and use of subcarriers by LPFM stations may be helpful in reducing the chances of adjacent-channel interference. A modest reduction in peak deviation (say, from 75KHz to 50KHz) could provide some reduction in interference potential without unduly limiting the utility of LPFM broadcasts. A modest reduction in the permitted maximum modulating frequency (say, to 10 or 12KHz) would also be helpful. Due to the limited power authorized, I suspect subcarrier operation on LPFMs will not be practical in any case, so I don=t see any problem with the Commission prohibiting it.

It was suggested that changes might be made to the stereo system (such as changing the pilot tone or the center frequency of the L-R subcarrier) to reduce bandwidth. Such changes would yield a signal that could not be decoded by existing receivers. If it=s felt that changes to the stereo system are necessary, it might be more productive to simply prohibit stereo operation of LPFMs.

It is proposed to use specific distance separations, rather than actual coverage contours, for determining whether a particular type of LPFM station can be permitted at a given location. This is an important concept. LPFM applicants will not have extensive resources for hiring consulting engineers. Distance separations can be easily calculated by computer, without extensive technical skills. Such separation are also easily verified, which is important for reducing the workload on Commission staff processing applications.

6. Power classes

The Commission proposes to create at least two types of LPFM station: ALP1000" and ALP100". A third type, Amicroradio@, is also suggested. These stations would have maximum effective powers of 1,000; 100; and 1 or 10 watts respectively. I do not believe three types of LPFM are necessary.

The ALP1000" stations are not necessary at all. Stations of 100 watts ERP or more can be licensed as Class A stations under existing rules. If LP1000 stations are allowed, relatively

few can be accommodated - and each one will preclude several LPFMs of lower power. It will be considerably more difficult to find acceptable transmitter sites for these stations, and to comply with RF exposure regulations.

"LP100" stations should be the backbone of the LPFM service. Such stations provide more than adequate coverage for the type of community proposed to be served by LPFM. At the same time, they cannot be licensed at the present time due to the minimum ERP regulation. If LP100 is created with no minimum power limit, or a relatively low limit (say, 1 watt), it can also accommodate the "microradio" stations.

I propose creating only one type of LPFM, with a maximum ERP of 100 watts at a reference HAAT of 30 meters, and a minimum ERP of 1 watt. It should be possible to allow unlicensed broadcasting at lower powers, provided no interference results.

Conclusion

While illegal operation is not to be encouraged, the large number of unlicensed stations recently operated illustrate a substantial demand for a low-power, local, radio service. Other countries, including Canada, have had success with similar low-power FM services. They have also had success with frequency separations less than those currently used in the U.S.. The framework proposed by the Commission for legal fulfillment of this demand is basically sound. However, a few modifications to ownership limitations and qualifications, and methods for resolving mutually-exclusive applications, are important for providing a LPFM service that fulfills its goals without creating an excessive burden for FCC staff.

Respectfully submitted,

(Signed)
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