

In the Matter of

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MM Docket No. 99-25

Creation of a Low
Power Radio Service

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RM-9208
RM-9242

MAIL ROOM

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Comments of
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7 May 1999

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I. INTRODUCTION

Comment

The Proposed creation of a low power FM system to provide additional outlets for the public and opportunity for those interested in Broadcasting is a tremendous step in the evolution of the broadcasting system in the United States. Like all great strides however, it is fraught with dangers. These dangers include the damage to the existing system's usefulness, the interference to the broadcasters that bring so many listeners the type of radio they desire, the potential disappointments for new LPFM broadcasters that the system might create, and the tremendous burden this system could place upon the FCC in terms of licensing, enforcement, and litigation of the problems that will be created.

Taking each item in the commissions notice one by one. References are to the FCC paragraph in the proposal;

FCC para 1.

The proposals as listed include a new class of full power radio station at the 1000 watt level, LP1000, which would differ only slightly from the current class A radio stations in existence. It should not be included with any proposed rule making for a low power radio station. If the commission wishes to inject a new class of full power radio station, it should address this as a separate issue and not try to tag it onto a LPFM ruling. Costs and potential impact to the community and spectrum are virtually the same whether at 1000 watts, 3000 watts or 6000 watts. Calling it Low power doesn't make it so. The desires for entry level radio and the needs for TRUE community radio can be filled within the existing systems and by TRUE low power stations at the Micropower and No more than 100 watt levels. The need for such systems however should not be met at the expense of existing systems. Destroying the currently established radio systems would reduce the total availability of radio to the full general public. You do not solve a shortage of brain surgeons by lowering the qualifications below acceptable levels and letting incompetents cut into your brain.

The new services must not come into existence at the expense of the presently licensed stations. Free over the air broadcasting has been successful in the United States for a great many years. I'm proud to be part of the system that gives the public what they want at no charge.

Legislation will not remove the interference potential of all of these new stations. Particularly in the urban areas, problems already exist with interference between stations despite present spacing, caused by receiver front-end overload. Placing many more stations in these urban areas will only result in considerable additional interference. The technical standards now in existence are minimal at best. Reducing them will result in the same mess on the FM bands that the commission is currently trying to fix on the AM bands. Those that don't learn from history are doomed to make the same mistakes. This proposal as written would be such a mistake.

The FCC is not the only one who gets requests about starting a radio station. I doubt a month has gone by in the last 30 years that I have been a practicing broadcast engineer, that I have not received a call from someone wanting to start a radio station. The vast majority of those calls are from people who do not have a clue about the technical needs, legal requirements, or financial obligations that running a radio station would entail. Most have no conception of the interference problems that can be created, the difficulties in finding feasible transmission sites, or the problems involved in maintaining a transmission system in proper and legal condition. A large number just seem to think they can hook a tower to their CD player and make like a real radio station. I have heard otherwise successful businessmen comment that they should just throw up a tower at their business, and start running all their own commercials for FREE! A significant number of those wanting LPFM are High School or college students desiring a very local type service just in their schools immediate area. (I began in broadcasting at a college carrier current AM station. When I suggest carrier current, they aren't interested because it's "JUST AM") When I suggest that it will cost quite a bit of money, I often get told not to worry because they are willing to spend a couple of hundred dollars to do it. A Micropower station might be possible at that kind of investment, but nothing approaching LP100 or LP1000. Many seem to think that the government will pay them to operate a radio station. There is a significant number of people in the general public who've no idea where a radio station gets it's operating money. In all this time, I know of 2 people who contacted me regarding the startup of a radio station who actually did. They were both well financed, successful, legal and committed. I know of others who just went ahead and put some kind of Pirate station on the air, and were closed down by the FCC or just got bored and shut it off. In one instance, the pirate station at 107.9 MHz in Modesto California, interfered with the Airport services in the area . (That young man went on to become a legal and respected broadcast engineer after the FCC shut him down)

Despite the "thousands" of request about a new low power FM service, there are millions of listeners to the established services. They should not be sacrificed to allow a few to blow their own horns. The new service must be established with technological standards that do not destroy the existing system.

FCC Para 13.

The idea that a properly operating LP1000 station would be significantly less expensive to run is folly. Except for slightly decreased front end costs, and lower power bills, it would cost as much to run the LP1000 station as the higher power existing stations IF THE LP1000 MAINTAIN THE SAME STANDARDS AS THE EXISTING STATIONS. If the LP1000 do not, the result would be even worse, with technical nightmares, interference galore, and a major enforcement problem for the already overloaded resources of the FCC. LP1000 Must be as strictly controlled as Full power stations, since that proposal is a full power proposal and has no legitimate place in this ruling.

FCC para 14.

Combine the proposals for the LP100 and Micropower class with rulings such as Time sharing and type acceptance of equipment and you might achieve what the petitioners are actually after. This will serve the minority communities and general public radio listener in much more realistic fashion.

FCC para 17.

The commission's attempts to clean up the AM band are commendable. The very same things that have occurred on the AM band can occur on the FM band as well. The lessons of 80-90 need to be studied. This proposal could result in the same problems in the FM bands, that occurred on the AM band with overcrowding and stations running at power levels which result in the interference. Even the Pirate broadcasters have given up on the AM standard broadcast band!

FCC para 18.

Maintaining the integrity of the Non-commercial portion of the band is important. This should be maintained. In no way however can this be thought of as the "educational" portion of the band, since a significant portion of it's use is for religious proselytizing rather than educational purposes.

FCC para 19.

If there is a strong community desire for more Commercial radio stations the new service should not be restricted to non-commercial.. However; non-commercial true low power FM should be permitted in the "educational" band, channels 201-220. This should be true low power at power levels at or below 100 watts.

FCC para 20

The true low power FM's might have little need for Remote broadcast RPU frequencies, however Studio Transmitter Links would tend to defeat the purpose by placing studios outside the area to be served. There is adequate short range techniques for studio transmitter linking without recourse to the already crowded part 74 Frequencies. Additionally, unconditional use of the part 74 auxiliary services could lead to abuse of the system, whereby the "link" could become the Primary, such as was done on the East Coast with a supposed Relay in the band above the AM broadcast band. Encouraging the use of low power spread spectrum relays and Part 15 devices for these LPFM stations would be a better use of the spectrum since the existing part 74 spectrum is already overcrowded in many areas.

C. Technical Overview of LPFM Services

FCC para 22

The LP1000 station is in no way a LOW POWER FM service. The coverage areas are close to those of existing class A stations, and the protections described are such that this is nothing more than a thinly disguised attempt to add another full power broadcast service. The idea that elimination of the rules against second and third adjacencies would eliminate the interference is ridiculous on its face. Any existing broadcaster can tell horror stories of fully legal interference caused by adjacencies, overloading by close in transmitters, images, receiver front end induced Intermodulation and other problems that exist now. It would be doing a disservice both to existing broadcasters and to the new LPFM broadcasters to permit this added source of interference. 1000 watts is a lot of energy and will be expected to cause problems, since it will be operating in close proximity to the listeners of all of the stations. Translator and booster stations in the LPFM service would be extreme abuse of the intent of the system. Existing established translators, boosters and stations MUST be protected from the new service. Blanketing rules must be applied to this service to protect the listeners in the close proximity to the LP1000 stations should the commission still choose to adopt this class of license.

FCC para 30.defining LP100

The LP100 proposed service is more like a true LPFM service, actually giving a chance for reasonable coverage without sacrificing the protections afforded existing broadcasters and the general public. Grandfather protection to all existing part 73 or part 74 stations is a must. Translators or boosters for these LP100 stations would invite abuse. Additional low power stations could produce the same results, with less probability of abuse.

FCC para 34.....defining Micro-power stations

Micropower class, 1-10 watts is the very best solution to the actual needs of the public for more access to the airwaves. Broadcast radio is not a game, and many of those who desire to operate community radio stations have neither the knowledge, dedication and means to do it properly. LPFM is NOT as simple as CB. Severe distress to existing established radio stations, and to the public that has made them successful would result from many of the higher powered proposals. A carefully controlled Micropower system with stations allowed up to 10 Watts if they can justify that need, but normally limited to 1 to 5 watts for local neighborhood coverage and special event coverage is more logical.

D. Interference Protection Criteria

If the FCC rushes into this we will all regret it. While I do not wish to place a heavier burden on the small LPFM applicants, I still feel that the public would be best served by making certain that any new stations fit carefully into a well planned, technically feasible and reality based interference criteria. Otherwise the result will be less service to the public rather than more.

The distance separations based upon good adjacency protections are the most logical to use if the aim is to provide a low cost, user friendly and low burden system. There might be other ways of producing theoretically better locations, but the aim of this proposal is to produce simple low cost solutions without damaging any existing services. The system that uses distance with adjacency protection produces the most reasonable compromise. Extreme conditions could be treated with a waiver system later on when the initial in rush of applications has slowed.

FCC para 42. Types of interference protection standards

Attempting to legislate interference out of existence won't work.

Elimination of the standards will not eliminate the interference. That's like trying to legislate the mathematical concept of PI to be equal to 3.0 just because that would be simpler to calculate than the 3.1428 etc that it is in the real world. The interference doesn't go away just because the law has been changed.

Elimination of the protection standards would doom the system to failure and assure that there would be a repetition of the conditions that have made such a mess of the AM bands.

The present day commission is having to clean up the mess left to it in the AM bands, and I'm sure doesn't want to create a new mess in the FM band. The FCC quoted 1.4 Km distance for the interference seems like it's not that much, until one realizes that the majority of these LPFM stations are probably going to be located in the center of the community they serve and a radius of 1.4 Km, or .9 miles can include large significant populations. If the interference is created it will make both the new and old stations involved less than useful to the entire population in that area. This will hurt the limited coverage LPFM more than the Higher powered more distant station. It would be cruel to give these new broadcasters expectations of coverage that they would not be able to achieve due to interference. This would be most felt by the lower income listeners who would have less sophisticated radio receiving equipment.

FCC para 44.

"Relaxed interference standards for low power FM stations may be the only way to "find" sufficient spectrum in medium and larger markets to create any new viable service of 100 watts or more."

This argument is as senseless as saying that we can get more cars on the highway by increasing speed limits. That's true, but we would pay for it heavily in deaths. Increasing the number of radio stations by reducing the protections for these radio stations would be counter productive. Why have a large number of stations interfering with each other making them all useless when a lesser number of useful stations can co-exist. You can't legislate new spectrum or eliminate interference by passing a law that says it isn't so!

FCC para 45. "...Creating opportunities outweighs the small risk...."

The risks are not small especially when LP1000 is considered a Low Powered service. Advising LPFM applicants to take into consideration favorable locations, would have little affect since they want to serve specific areas. They will put the stations where they will best serve their area, rather than where they are best technically.

The currently existing receivers have been built for the current situation. Most are not able to handle 2nd adjacent interference. While it is technically possible to build receivers that can handle the interference it isn't cheap. The market doesn't support the added costs of these radios. Permitting 2nd adjacent interference to go up would penalize those of low income who would be the last people able to buy better radios.

FCC para 47.

The degree of interference to the IBOC plans is difficult to assess with the limited knowledge of IBOC standards. Others will provide detailed technical answers to this, however since we still don't know exactly what the IBOC signal will be in detail, I doubt we can get guarantees of no interference at this time.

FCC para 50

Lowering interference standards in any way will create Chaos, interference run rampant and will produce a disservice to the very people you are attempting to serve. The current interference standards are barely adequate and only so because of the enforced limits. The fact that there are few places to insert stations now is significant in that the markets are probably already being heavily served with a variety of stations. In this case, more stations could easily equal less listenable stations.

E. LPFM Emissions and Bandwidth

Certification of equipment, is a must. In order to keep the regulation of the LPFM stations to reasonable limits, some controls must be maintained. Some form of type acceptance or type certification is essential to the integrity of the LPFM system. Home built equipment should not be permitted. Those desiring to experiment technically have other services in which to experiment. Since it is presumed that these LPFM operators will not have the technical sophistication or access to the test equipment necessary to check standards, some form of relatively foolproof modulation limiting must be a part of the certification process.

Defeating that circuitry should be declared and publicized as a serious violation.

External modulation monitors should not be required as long as the transmitters have built in, non-defeatable modulation limiters. Where the Transmitters are certified as self limiting, that would reduce the costs to the operators.

FCC para 52. *Emission Limits.*

Tighter emissions standards are not needed, however strict adherence to the existing rules is necessary. This will require more FCC enforcement action to observe and correct problems.

FCC para 54.

"Could a strict emission mask for LPFM stations significantly reduce the potential for interference to IBOC signals, presuming we did not impose 2nd-adjacent channel spacing requirements on LPFM stations?"

NO. The problem is not in the emissions, but in the inability of the receivers to handle the front end overload.

FCC para 55. *Bandwidth Limits.*

Reduced bandwidth is not an effective way of doing anything except making the LPFM incompatible with the rest of the FM broadcast world. Sub-carriers are usually not needed for the basic operation for the station except in rare instances. They provide a convenience in some circumstances but usually are only another source of income. With the new channels, they can not even be argued as a source of additional programming. That's what the station itself is supposed to be doing. At LPFM levels, the SCA's are not going to be that useful anyway. Not permitting Sub Carriers other than the 19 kHz and 38 kHz necessary for stereo will help reduce potential interference to conventional and IBOC systems. Eliminating the SCA's will also prevent abuse by those who would use the LPFM only as a method of delivering the SCA contents.

F. Ownership and Eligibility

FCC para 57. "local and cross ownership"

I generally support the proposal as written here, however feel that AM only owners, particularly those with low power or no night power be permitted to enter the LPFM arena strictly on a simulcast basis as a means of maintaining their community involvement. This ability to simulcast on LPFM should apply to AM stations with ridiculously low night time powers , i.e. 5 - 10 watts.

Failure to do so would be to give the new "Low power" operators advantages over the existing licensees.

Market definitions are difficult and I have no suggestions or expertise on this.

FCC para 58. "cross media ownership's"

Except as noted above for Low/No night Power AM's I believe that there should be no cross ownership with newspapers, cable systems or other mass media.

FCC para 59. "cooperative agreements"

I agree in full with the Commissions ideas on this. The only form of cooperative arrangements permitted should be News networks with strict controls to prevent abuse by commercial or non-commercial organizations.

FCC para 60. *National Ownership.*

The "Grouping" of LP1000 stations would be no different than the existing Group owners and would provide none of the benefits this low power proposal is trying to achieve. It would be just another full service FM. If this is truly a method for introducing new players, then national group ownership is not acceptable. Local ownership for even the true LPFM LP100 and Micropower stations would be the best system, with a minimum of 51% of the controlling interest being local.

FCC para 61. *Residency Requirements.*

I strongly disagree with the commission on this one. There is a basic conflict here between the local aspects of LPFM and the concept of multiple ownership. While not wanting to totally eliminate multiple ownership, I believe that the LPFM concept requires local residency to prevent abuse. At least one principal, or a majority of the ownership of the LPFM should reside within no less than 50 Miles of the transmitter. Any other system would produce mini empires of LPFM stations that had no relation to local needs.

FCC Para 63.

As noted above, a 50 mile residency requirement would be desired, and the same rules as apply to current full power stations in regards to foreign ownership/ control should apply.

FCC para 64. *Character Qualifications and Unauthorized Broadcasters.*

"We propose to apply the same standards for character qualifications requirements to all LPFM broadcasters as we do to full power broadcasters."

I AM IN ABSOLUTE AGREEMENT

FCC para 65. "... unauthorized broadcasters"

The commission should evaluate on an individual basis whether the formerly illegal Pirate operator had dealt in good faith with the commission. Operators who did not heed commission notices, repeatedly broke the rules, or assisted others in breaking the rules have proven themselves unlikely to be willing to comply with further rules. They should be denied LPFM licenses for a period of at least 5 years from the last infraction.

On a related note, however, the presence of a large number of Legal LPFM stations is going to make a lot more work for the commission in enforcing the rules against the pirates. The eventual outcome will however be less pirates and more legitimate operators, **AS LONG AS THE COMMISSION DOESN'T LET THE FM BAND BECOME ANOTHER CITIZENS BAND.**

Station ID's by the new LPFM stations would be very helpful to commission Field agents in identifying legitimate stations and helping to track illegal stations.

G. Service Characteristics

FCC para 68. *Local Programming.*

Absolutely no use of the LPFM as a translator or repeater of a full power station with the exception of the proposal I noted above for AM stations with little or no nighttime power. I propose a minimum of 30 minutes per hour, each hour, of locally produced or originated programming. Recorded music with a live local DJ would be considered local.

FCC para 69. *Commercial Programming.*

LPFM stations should be permitted commercial operation if in the commercial part of the band, and restricted to the same rules as existing educational's in that part of the band. A station in the commercial part of the band could choose to be either commercial or non-commercial depending on it's decision as long as all regulations that apply to the class of station are followed. The intent to operate Non-commercial or commercial must be declared at the time of application, and could be changed at any time thereafter. Some minimum time in each category, i.e. 1 year, should be required to prevent numerous switches back and forth.

THIS MAY OF COURSE DO SERIOUS HARM TO THE EXISTING SMALLER FULL POWER LICENSED STATIONS AND SOME HARM TO ALL EXISTING STATIONS. IT IS THE LITTLE GUY WHO HAS BUILT A LEGAL, PROFESSIONAL SYSTEM THAT WILL BE MOST HURT BY THE COMMERCIAL NATURE OF THE NEW LPFM STATIONS, PARTICULARLY LP1000 CLASS STATIONS. If the new guys are given tremendous concessions to the rules to make it cheaper for them to operate they will have a grossly unfair advantage over the existing small operators. A significant number of these small operators may just go under, thus serving the public less.