

Comments regarding FCC NPRM 99-25, Low Power FM Proposal

Dear Sirs:

First, let me take this opportunity to thank the FCC for your attention in this matter. It is obvious to me after reading this NPRM that the FCC has written it in such a way that it is clearly understandable to anyone with a moderate technical background, if not specifically a background in radio. The NPRM did an excellent job of explaining the decisions that would have to be made in order to implement such a service as well as the constraints under which the FCC must operate. I know that there are many broadcast and other corporate interests, as well as the U.S. congress that are very unhappy that this issue has been given this much attention. I firmly believe that opposition to this proposal is due more to fear of competition and stepping on the toes of powerful business interests than any technical issues.

I am a software/electronics engineer by trade. In my job, I am called upon to create products and systems that fill a specific need. In doing so, I must consider many things such as how the product will be used, how the product might be misused and how the needs of the user may change in the future. I must also consider the resources I have to work with and the desired result that I need to achieve with them. I view the goals of the law as much the same. You, the commission, have the goal of creating a low power radio service. There are certain things that you can and cannot do. In addition, you must consider how this service will be used and how it might be misused. A few carefully chosen words written into law could make the difference between a viable service and a regulatory disaster. It is up to you, with the aid of public comment, to ensure that this service is chartered properly. Excess influence by corporate interests seeking only to protect their own bottom line must be minimized.

By my comments, I wish to assist the FCC with the implementation of a low power FM service with the following characteristics:

1. Provide multiple classes of low power radio to allow communities, small businesses, organizations, and individuals a local voice.
2. Provide sufficient protection to ensure that licenses go to and are maintained by the appropriate individuals or organizations to make the best use of them.

3. Ensure that new licensees have sufficient resources to create a viable service within their communities.
4. Provide sufficient protection to ensure that this new service is used in the spirit that it is intended and that it is not taken over by big business.
5. Impose a minimum administrative burden on the FCC.

With the above goals in mind, here are my comments. I believe that the LP1000 license, as proposed, would do little to further the cause of community radio and I recommend that it be scrapped. I believe that the proposed LP100 and 1-10 watt microradio classes are the answers to the problem. I would also like to take the radical step of proposing unlicensed operation below 500 milliwatts.

Need for Low Power Radio

I believe that there is a need for low power radio. This need is demonstrated by the 13,000 requests the commission says it has received. We have seen an unprecedented consolidation of station ownership in the last few years. This has led to a flood of bland “cookie cutter” type radio, almost everywhere. I know that much of the relaxation of the ownership rules was not the choice of the FCC, but was imposed upon the commission by congress. There may be nothing that can be done about that, however, the commission can seek to create a new radio service to compensate for the problems that have been created.

I was shocked to learn that we used to have low power radio. I was even more shocked to learn that it was the likes of NPR that got it killed. Now, they are trying to do it again. In talking to people about the history of radio, I was led to believe that it was decided that large stations were more efficient. This was because the cost of construction, in the early days was high and because a larger station served a large area. This allowed less populated areas within that large area to be served that would not have been, otherwise. I submit that this model has changed and that our laws must now change to reflect this. All transmitters used to be tube type and require careful tuning, as well as the constant watchful eye of an engineer. Today, a type accepted solid state, stereo transmitter can be purchased for a few hundred dollars. Once properly installed, it can provide reliable service with

minimal attention. Today, there is no shortage of information outlets. Even the small town that I currently live in now has local internet access. I can receive over the air television from several markets. Cable brings in stations from even further away. Several satellite television systems offer me my choice of programming from all over the country. Of course, my town like almost every other town in this country has a newspaper. Actually, we have two of them. What we don't have is a radio station. Why is that? I could operate a small radio station in this town for less than it costs to publish the paper. The best part is that the same frequency that I use in this town can be used just a few towns over. Now that is what I call efficient use of a public resource.

Many people feel strongly enough about this issue that they have taken to the air even without FCC approval. The commission has attempted to demonstrate a show of force in closing down these operations. Thousands of operations have continued despite these shutdowns. I maintain that this demonstrates the "need" for this service.

I see the creation of a low power radio service as an important new step in rediscovering some old values. I believe that this endeavor is far more important than digital conversion and must not be sidetracked for the sake of digital. Tell me, how many tens of thousands of comments has the commission received demanding digital radio? How many people have put digital stations on the air and claimed "This is important. You cannot stop me. I demand my right to go digital!"

Technical Issues

Paragraph 15-18: I support the commission's view that the best place for this new service is in the current FM band on those same channels currently used for full power stations

Paragraph 18-19: I support use of these low power channels for commercial operations. I believe that the section of the band already reserved for education and non-profit use adequately ensures that these interests will continue to be served by the new service.

Paragraph 20: I support making auxiliary link facilities available to low power stations.

Paragraph 30: I support the creation of a 100 watt low power license, however, I suggest that it be reclassified as 25-100 watt. I have several reasons for this. Allowing lower power levels would let stations run the most appropriate power for the coverage area desired. This flexibility would allow stations to be “fit” where they might not otherwise be able to go. Special circumstances such as those that arise near the Canadian and Mexican borders could be more easily accommodated. Additional flexibility will be realized in antenna location. Many of these operations will use antennas located on simple structures on top of a small building. Some operations will use antennas located on much higher structures such as water towers. Allowing power flexibility allows both of these situations to be met with the power level being matched to the available resources and desired coverage area. The cost difference between a 25 watt transmitter and a 100 watt transmitter is also not insignificant.

Paragraph 31 : I do not believe that these proposed new stations should have to be relegated to a secondary status. A smaller station has a smaller protected area. Beyond that, I believe that these stations should operate on a level playing field with that of a higher powered station. The higher powered station already has a “louder” voice. Do we now also suggest that it has a more important voice or should somehow carry more weight? This seems to be to be counter to how (I am told) our system of government works. “Secondary” status comes into play when we are talking about a radio station versus a booster or auxiliary link, not when we are talking about two radio stations, even if one is 1 watt and the other is 1kw.

Paragraph 34: I support the creation of the “micro radio” class of license as outlined. While the 1mv contour of these stations would be only 1-2 miles, I firmly believe that it is still well worth doing! Unlicensed operators have obtained excellent results with one watt power levels. Ten watts is a usable power level for a small community. I also remind the commission that just because you travel outside the range of a station’s 1mv signal contour doesn’t mean that the signal drops off the face of the earth. Usable signal is still present far beyond that point. I would also like to see a provision for temporary operation in order to facilitate a “special even station” as requested in the Skinner Petition.

Paragraph 35: I am not familiar with the FCC procedures regarding obtaining type acceptance certification for a transmitter. My research indicates that reasonably priced units are currently available. I reason that if this proposal moves ahead that more would become available and prices would be kept down. Obviously, the equipment used MUST be clean. I am an experimenter and Amateur Radio license holder. While I do not currently have the knowledge to build a transmitter of this type, I do know people who do. I would urge that the commission make some mechanism available for people who wish to construct their own equipment to be able to do so. I believe that this type thing is very important. It is the driving force behind the improvement of the state of the art and development of new technologies.

Paragraph 40-41: Here you tackle the difficult issue of separation distance between stations. Clearly, locating stations based strictly on distance is the easiest thing to do. The wide spread availability of GPS receivers also makes for a solid determination of actual transmitter location. The problem comes in when you begin to consider the station's actual facilities. This is further complicated by my request that the LP100 class license be reclassified as 25-100 watts. It is my intention to encourage use of less than maximum allowable facilities, where appropriate. The question is, should channels be allocated based on actual facilities or maximum facilities? Does a station that elects to use less than maximum facilities lock itself at that level? What about the situation I proposed earlier where someone constructs a station at less than maximum facilities to fit it where it would not otherwise be able to go? Given these multiple concerns, I recommend that licenses be granted based on minimal spacing guidelines, which meet a specified field strength, based on maximum facilities, even if the station in question chooses to run at less than maximum facilities. If someone comes along later and wishes to "squeeze in" a station using less than maximum facilities to achieve the same field strength standards provided by the minimum spacing guidelines at maximum facilities, I believe they should be able to do so. I see this as allowing for a couple of things. The first station constructed can use less than maximum facilities, if desired, and still not lose the right to upgrade to maximum facilities later. Later stations can take advantage of less than maximum facilities to "fit in." The commission will be able to allocate most stations based on a simple and easy to implement criteria. Stations that wish to "fit in" at less than the established guidelines would bear the cost of figuring out how this could be done.

Paragraph 42-48: Here the issue of adjacent channel interference is discussed. I believe that good arguments have been made for the elimination of 2nd and 3rd adjacent channel interference. These standards are based on older receiver technology. We are also talking about far less power with these new stations than the higher powered stations, to which the standards would still apply. In addition, the comment was made that the potential gain of this service far outweighs the minimal interference that might be caused due to eliminating these criteria. We also have the statement from USADR that they do not believe elimination of 2nd adjacent channel protection proposes a danger to their IBOC digital system.

Paragraph 49: As mentioned earlier, it has been stated that USADR sees no problem with elimination of 2nd adjacent channel interference standards to their proposed IBOC signals. I also have some additional thoughts on this matter. First of all, it has not been demonstrated that anyone (except equipment manufacturers) is eagerly awaiting the translation to digital. The commission has posed the question of whether proposed LPFM stations would interfere with proposed digital service. Perhaps that is not the correct way to ask the question. Perhaps the question should be rephrased as “What is the range of digital IBOC signals?” The commission recognizes the 1mv contour area of an analog signal as that area in which a strong signal can be received. It is quite possible that the digital signals will not be able to cover that entire area. It is also possible that usable digital signals will extend beyond that area. In either case, I believe that the burden of proof as to whether these systems work and what their range will be rests with those who are pushing the technology. I do not believe that additional protection for these stations to make digital work beyond the point where the analog does is warranted.

I have some additional concerns with respect to a conversion to digital technology. This digital service, as summarized in appendix C of the NPRM, would initially allow for two channels of digital information to be transmitted along with the analog information. My first question is “What will these channels be used for?” The summary states that the proposed digital service COULD allow a station to transmit their signal in digital. It doesn't say that they are obligated to. The fact is, these digital channels could be used for anything. They could just as easily become 2nd and 3rd auxiliary services to the primary channel audio. They could even be subscription services such as background music or wide spread distribution of data. This type of use would generate additional revenue for the station. I

have no problem with this type of operation UNTIL it is put up against LPFM. In that event, I think we need to start asking whether digital operation is in the public interest and EXACTLY what they intend to do with it.

Paragraph 51-54: The commission asks whether LPFM stations should have to maintain a tighter emission mask than higher power stations. I believe that they should not. These smaller operations should not have to adhere to more strict guidelines than higher power stations. My reasons for this are the costs involved, and the low power nature of the proposed new stations. In addition, as mentioned earlier, I do not believe that additional protection to higher powered station's potential digital services is appropriate as I view these as "auxillary" services.

Paragraph 55-56: The commission asks if LPFM stations should operate with a decreased bandwidth. I say "no." This would cause these stations to be "quieter" than other stations on the band. It would also impair the station's ability to run stereo, sub-carrier audio services and digital services. My goal is that these new stations have the same status and technical advantages of higher powered stations, but at lower power levels.

Paragraph 57-58: I believe that the concerns of the commission voiced here are very important. I support the position that any individual or business with a current media interest (radio or otherwise) should be prevented from owning one of these stations. This proposal is for community radio, not to strengthen the voice of those who already have one. I also contend that the proposal to allow AM stations to use this as a vehicle to upgrade is without merit. I believe that those individuals who currently work in broadcasting should not be able to own one of these stations, even if it is located in a different community. These people would still be able to consult to and provide assistance to these stations.

Paragraph 59-62: I am for strict ownership limits. Let us be mindful of mistakes of the past and ensure that they are not repeated. The main reason for this proposal is the growing feeling that ownership consolidations are hurting the FM radio service. Failing to take this into account now could cause even more stations to be created and still not solve the problem. It is also far easier to relax ownership limits in the future than to attempt to tighten them later. Since this is supposed to be community radio, I don't have a problem with a limit of ONE station per owner. This would also

eliminate all need to decide what constitutes a “market” for the purpose of ownership restrictions. I point out that this limit would not keep stations from being constructed, sponsored, aided or, managed by outside concerns. I do believe, however, that the stations should be LICENSED to a local individual or business interest. I am mindful that a potential licensee may not be able to obtain a license in the community in which they actually reside. I propose that a sensible guideline might be that the individual live within 100 miles of the station.

Paragraph 62: With regard to the authority of the commission to require any sort of integration requirement, I submit that this service is being chartered as “community radio.” I believe that requiring the LICENSEE to be local to the station offers a great measure of protection towards this goal. It is perfectly consistent with what the commission says it believes is going to happen with this service, anyway. This provision simply ensures that it will be so. A station could still be constructed and even managed by outside interests. Requiring that the licensee be local would ensure that the station would ultimately be responsible to the community.

Paragraph 65-67: I understand the commission’s position that those who have engaged in unlicensed broadcasting have broken the law and as such may have disqualified themselves from holding a license now. The point has also been made that SOME operations have caused harmful interference. The point should be made that most of these operations HAVE NOT caused harmful interference. Part of the reason we even have this NPRM is due to the thousands of people who have determined to take to the air, even knowing the consequences. Many of these operations are providing local entertainment, community service, and a community voice, despite the lack of a section of Part 73 authorizing them to do so. Some stations are being run just for the fun of the people doing it, some have a specific mission, and some are a protest statement against the lack of existence of this type of service. There are plenty of transmitters out there that are clean. While I agree that the worst of the offenders have martyred themselves for the cause, I cannot accept a broad statement that anyone who has ever engaged in unlicensed operation is not eligible for a license now.

Paragraph 68: I agree with the commissions suggestions outlined in this paragraph. Station management should be free to determine content and local to network programming ratio. Stations should not be contracted to act as booster stations or repeater stations for other higher power stations,

however, I note that there may be times when picking up and relaying a distant station or programming taped from that station might be appropriate. I suggest that an outright ban on this might not be appropriate.

Paragraph 69: I believe that these stations should have the flexibility to be commercial or non-commercial at their discretion. This paragraph hints that it might be possible for low power commercial stations to exist even in the part of the band normally reserved for non-commercial stations. Given the low power levels, the desire to place as many stations on the air as possible, and the tendency to find more available channels in this part of the band, I would support opening the non-commercial part of the band to commercial service if it is possible. A sensible precaution might be to give priority to non-commercial stations requesting allocations in the non-commercial part of the band.

Paragraph 73: I am unfamiliar with the exact content of the part 73 rules cited, however, I would summarize my position as follows. I believe that station owners should have great flexibility in customizing their offerings. I believe that stations should be operated IN THE PUBLIC INTEREST. I think that this is especially important since we are talking about stations that will be inexpensive to construct and can be owned and operated by a [local] commercial interest. I am concerned, therefore, that one of these stations not become a 24 hour infomercial for some companies real estate development. I have seen nothing in the rules that would prevent this from happening. The simple addition of the above 4 capitalized words would ensure that it doesn't happen. I also support a renewable license with public filings on whether it should be renewed.

Paragraph 76: I suggest the flexibility to assign more than one station to the same frequency with different operating hours.

Paragraph 79: I suggest a SHORT (6 months), non-extendable, non-transferable construction permit. Let's get the licenses out there and in the hands of those who are going to do something with them. If they don't, let's get the allocation back to the pool as soon as possible.

Paragraph 84: I am for a short term renewable license. If a licensee is making good use of their license and the community is pleased with what they are doing, it should be renewable with minimal effort. I see no reason to go to a non-renewable license of any term. If there are problems or a

license needs to be pulled and reassigned, short licensing allow them to be dealt with promptly. I suggest the period be 3 years.

Paragraph 87: I do not believe that LP100 and microradio class stations should be required to have EAS receivers. I would, however, like to see stations have the ability to pick and relay these signals from the higher powered station that serves their area, if they so choose.

Paragraph 88: I support the issuing of a unique call sign that identifies a low power station as such. I justify this by saying that I believe that an important part of this endeavor is public education. The public should be made aware of the existence and purpose of these stations. I believe that this is one way to do this. I also believe that higher powered stations would appreciate the destination. The call sign should still be something prestigious. Call signs are a matter of pride among all types of radio license holders. I have heard it suggested that we have access to an "N" prefix. I do not know for sure if this is true. It would seem to make sense in view of the W, K and N prefixes in use in Amateur Radio licensing. I submit that this would be ideal for this service.

Paragraph 91-103: I support electronic filing by use of the internet. Internet access is now widely available. In addition, the government has made a commitment to seeing that schools and libraries are wired for internet access. We all currently pay fees on our phone bills that are supposed to be going to this endeavor. If the commission had the proper resources, I would not have a problem with a first come, first served system. Because of the initial crush of applications mentioned and the quick processing of applications that would be required I believe this is not the way to go. The second choice is the time window method. This would spread things out and distribute the application processing load over time. The filing process should still offer the applicant a quick answer as to whether the request can be granted. Kicking out invalid or mutually exclusive applications up front is the best way to avoid a backlog.

Paragraph 104-107: I believe that auctions are totally inappropriate for this service and technical guidelines should be used to whatever extent possible. I support the commission's position that even a first come, first served system would be better than allowing these licenses to be auctioned.

Final thoughts / Summary

I believe that establishment of this service is long over-due. Many people feel strongly enough about it that they have taken to the air, even knowing what could happen to them. More and more, we find that people are becoming disenchanted with the stations currently on the air. Rampant consolidation has led to bland programming. At the same time station prices have skyrocketed to the point where only the very rich can be involved in radio anywhere but the smallest markets. Something is drastically wrong when the selling price of a radio station far exceeds the value of the land, building and equipment involved.

As I mentioned earlier, every small town has a newspaper. I believe that every small town should also have a radio station. There is no technical reason why this cannot be done. Radio has the potential to be the ultimate local resource. Many in the unlicensed broadcasting community have already discovered this (no, I am not one of them). We are just waiting for the government to figure it out. I see moving ahead with this service as a great experiment to see if radio can be returned to the people. What I am asking from the commission is MINIMAL. I am asking for 1-10 watt and 100 watt stations. This is because I am confident that these will fill the need that I see. I submit that in view of the way the world has changed, it is time to rethink our current licensing structure. The first step is to give communities a CHANCE to see what we can make of it.

There is just one more little thing. Many people (myself included) use small FM transmitters to broadcast (or should I say "narrowcast") to their neighborhood. Common uses are the relay of talk radio from satellite systems so that everyone can enjoy it. Many people do this under the pretence of following Part 15 rules. While these rules do provide some provision for "broadcasting," they are quite restrictive. Power output is stated in the form of difficult to measure field strength rating. In addition, by strict adherence to the rules, the antenna must be attached to the transmitter. The rules also state that you basically can't possibly cause any interference to anyone anywhere. This means that if you choose a channel that has a small public radio station on it that is 90 miles away and someone near you wants to listen to that station, you are supposed to discontinue operation. Somehow, this community has concluded that the field strength specified in Part 15 works out to 100mw. Many 100mw kits are being sold for "part 15 operation." I have heard several stories of people who run these

transmitters being visited by the FCC. Apparently, the FCC doesn't seem to have a problem with it. I am grateful for the selective enforcement. While we are visiting this issue, I wish to propose an addition to the 1-10 watt and 100 watt licenses. I wish to propose unlicensed operation at or below 500mw with the ability to use an external antenna. Typical height would be the roof of a private home. These "stations" should not be required to shut down unless they are causing interference to higher powered station within its 1mv contour. I propose that these operations receive no interference protection, as they would not be licensed stations. I know that many people snicker at the thought of even 1-10 watt stations. They might be wondering what good allowing operation at ½ watt could do. I promise you that it would. I believe that those filing reply comments will back me up on this. I also feel that allowing this would fill part of the desire to have "special even stations" as requested by the Skinner Petition.

Blair Alper

<Comments filed electronically>