

F.C.C. 73-680

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

<p>In the Matter of AMENDMENT OF PART 73 OF THE COMMISSION'S RULES AND REGULATIONS TO RESTRICT TRANSMISSION OF THE STEREOPHONIC PILOT SUBCARRIER BY FM STATIONS DURING PERIODS OF MONOPHONIC PROGRAM TRANSMISSION</p>	}	Docket No. 19571
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REPORT AND ORDER

(Adopted June 21, 1973; Released: June 25, 1973)

BY THE COMMISSION: COMMISSIONER H. REX LEE CONCURRING IN THE RESULT; COMMISSIONER HOOKS ABSENT.

1. In a Notice of Proposed Rule Making in this proceeding, adopted August 9, 1972 (FCC 72-721) the Commission proposed an amendment to Section 73.297 of its Rules and Regulations, which, with respect to those FM broadcast stations equipped for stereophonic broadcasting would prohibit transmission of the pilot subcarrier by such stations for continuous periods of operation with monophonic program material in excess of five minutes. It was suggested that interspersed segments of monophonic material, such as voice announcements, presented no problem, whereas long periods of monophonic programming in the stereo transmission mode could be misleading to the listener, and constituted less than full use of the broadcaster's facilities, since the coverage of the station, with monophonic programming, is reduced to that obtainable with stereo transmission.

2. As extended by our Order of September 19, 1972, the deadlines for filing comments and reply comments in this proceeding were October 13, 1972, and October 24, 1972, respectively. Thirty-nine parties filed timely comments. PSA Broadcasting, Inc., and California Broadcasters Association filed late comments accompanied by petitions requesting their acceptance. Their petitions are granted and the comments have been considered in arriving at this decision. While the filings of Nassau Broadcasting Company and Harvard Radio Broadcasting Company, Inc., were also tardy, in this particular instance their acceptance and consideration have been feasible without the introduction of additional delay in the progress of the proceeding. One reply comment was filed.

3. The parties who filed comments and reply comments are as follows:

Peninsula Broadcasting Corp. (KPEN (FM)).  
 Cosmopolitan Broadcasting Corp. (WHBI).  
 Southern Broadcasting Co.  
 222 Corporation (WCKW).  
 WCLV.  
 FM Broadcasting Corp. (WHLI-FM).  
 Wake Forest University (WFDD-FM).  
 Rice County Broadcasting Co., Inc. (KLOQ).  
 The Pueblo Stereo Broadcasting Corp. (KVMN-FM).  
 WMRY Radio.  
 Paul F. Burns.  
 Carter Publications, Inc. (WBAP-FM).  
 National Association of Broadcasters (NAB).  
 Manhattan Broadcasting Co., Inc. (KMKF).  
 Metromedia, Inc.  
 Charlottesville Broadcasting Corp. (WQMC).  
 University of Missouri.  
 Columbia Broadcasting System, Inc. (CBS).  
 Lunde Corp. (KLEFM).  
 Temple University (WRTI (FM)).  
 National Public Radio (NPR).  
 Carroll County Broadcasting Corp. (WTTR-FM).  
 Brown Broadcasting Service, Inc. (WBRU (FM)).  
 Charles River Broadcasting Co. (WCRB (FM)).  
 Pacific and Southern Co., Inc.  
 Iowa State University of Science and Technology (WOI-FM).  
 National Association of FM Broadcasters (NAFMB).  
 National Broadcasting Co., Inc. (NBC).  
 VIP Broadcasting Corp. (WVIP-FM).  
 Multimedia, Inc. and Newhouse Broadcasting Corp.  
 Texas Coast Broadcasters, Inc. (KQUE/KAYD).  
 Rust Communications Group, Inc.  
 WTFM, Inc.  
 Chronicle Broadcasting Co. (KRON-FM).  
 Wometco Skyway Broadcasting Co. (WLOS-FM).  
 Darrell K. Burns.  
 Great Northern Broadcasting System, Inc. (WLDR (FM)).  
 Broadcast-Plaza, Inc. (WTIC-FM).  
 Fetzer Broadcasting Co. (WJFM (FM)).  
 Nassau Broadcasting Co.  
 PSA Broadcasting, Inc.  
 Harvard Radio Broadcasting Co., Inc. (WHRB-FM).  
 California Broadcasters Association.  
 Nationwide Communications, Inc. (WNCI (FM)) (Reply Comment).

All comments have been fully considered in arriving at a decision in this proceeding.

#### SUMMARY OF COMMENTS

4. With a very few exceptions, the parties are opposed to the adoption of the rule, amended as proposed. A number would find it acceptable if the period of permissible monophonic programming in the stereo mode were extended—suggested periods are ten minutes, fifteen minutes, or one-half hour—or if the restriction were applied only with respect to musical programs. It is contended that the five minute limitation on monophonic programming in the stereo transmission

mode is insufficient to accommodate many of the<sup>1</sup> monophonic (usually speech) program segments normally included in the broadcast of stations whose programming is predominantly stereophonic, and that inadequate flexibility is afforded for unscheduled programs such as special newscasts. There were several suggestions that, in lieu of a rule in the form proposed, we require an announcement periodically that certain of the programs or selections broadcast over the preceding period were in monophonic sound.

5. Generally, however, the consensus is that the rule is not only unnecessary, but its implementation would create annoyance and dissatisfaction on the part of the listener outweighing any benefit he might obtain from the identification of monophonic programming and impose a burden on the broadcaster so substantial that, in net effect, it will tend to discourage the news, public affairs, and other non-entertainment programming which the Commission has found to be in the public interest, or, alternatively, to engender undesirable operating practices.

6. The rule is held to be unnecessary because listeners are sufficiently sophisticated that they do not expect speech, which is the obvious and predominant source of monophonic programming, "in stereo", even though transmitted and received in the stereo mode. It is maintained that there has been a complete absence of listener complaints to the many stations which adhere to this practice. On the other hand, listeners do object when stations change intermittently between stereophonic and monophonic transmission. It is pointed out that each time the station reverts to monophonic transmission, at least with many stereo generators, an undesirable increase in the volume of the received program results. Of more serious consequence, is the effect on the many receivers which can be switched to operate in a "stereo only" mode. These receivers, when operated in this manner, will reject any monophonic signal. Thus, each time a stereo station changes to monophonic transmission, such a receiver, tuned to this station is muted. Not only can this be highly annoying to the listener and detrimental to the station, whose transmissions will be rejected, but, some of the parties contend, on occasion may be dangerous—for instance, listeners may fail to receive an urgent weather warning.

7. The burden on the station operator in complying with such a rule, it is claimed, is substantial. He is already charged with the responsibility of monitoring various operating parameters, and is usually engaged in programming duties of various kinds, and must remember to switch between stereo and monophonic operation at the proper times. He may forget to switch to mono, when required, thus subjecting the station to Commission sanction, or he may fail to restore stereo transmission when the program material is stereophonic. The switching itself may involve difficulties if the station is automated or operated by remote control. Furthermore, the operator may have difficulty in determining which of various selections included in program material prerecorded by others are stereophonic.

<sup>1</sup> The pilot subcarrier is transmitted, of course, only when the station is switched for stereophonic transmission. In the review of the comments and in the subsequent discussion it is found convenient to compare operation in the "stereophonic transmission mode" with operation in the "monophonic transmission mode", rather than to consider conditions with the pilot subcarrier "on" or "off".

8. In the latter connection, National Public Radio is of the opinion that before the Commission can equitably and intelligently undertake to enforce a rule such as it has proposed, it will be necessary for it to define in the rules just what is meant by stereophonic programming—noting the availability and use of program material originally monophonically recorded, which has been rerecorded with reverberation, frequency separation and phase shift techniques to produce pseudo-stereo effects.

9. It is suggested that some broadcasters might find compliance with such a rule so onerous that they would seek to mitigate its impact by increasing the percentage of stereo programming at the expense of news and public affairs programs, which are almost entirely talk programs, and are accordingly, monophonic. This may be true particularly of public service programs such as church services which are obtained "live" by remote pickup. These programs, although they might be susceptible to stereophonic transmission, are relayed to the station monophonically for reasons of convenience and economy. Alternatively, at least with respect to locally produced programs of this nature, they might seek technical compliance with the rule by, for instance, using two microphones, for a single announcer and feeding the output of each into the left and right channel inputs, respectively. This expedient is held to be undesirable on two counts—received in stereo a movement of the speaker's head toward one or the other microphone causes an annoying shift in his apparent position at the receiving location and, when the program is received monophonically, partial phase cancellation occurs which can reduce the intelligibility of the program material.

10. Finally, it is contended that the more extensive coverage which the station sacrifices when it provides monophonic programming in the stereo mode as compared to monophonic transmission is not an important consideration. The gain during monophonic transmission is apparent only in fringe areas, and the better service to listeners in these areas is not reliable, since it deteriorates each time the station reverts to its predominantly stereo mode of operation.

#### DISCUSSION AND DECISION

11. The informal policy which the Commission established a number of years ago concerning the transmission of stereo pilot subcarrier during periods of monophonic programming, which we have sought to formalize by the rule amendment proposed in this proceeding, when viewed in the light of the rather comprehensive exposition of the present operating practices and problems of FM stereo broadcasting presented in the comments herein, must be considered as an unnecessarily restrictive means for reaching our principal objective—to preclude extensive periods of monophonic programming in the stereo transmission mode by a station without adequate notice to the listener that the programming is in fact monophonic.

12. We are persuaded to this view, even though we are of the opinion that a number of adverse effects cited by the parties as eventuating should the rule be adopted would not, in fact, be as severe as

they predict. For instance, the most frequently mentioned impediment to its effective implementation is the use by the general public of many receivers which may be operated in a "stereo only" mode. When utilized in this mode, such a receiver delivers no sound if tuned to a monophonic transmission. Accordingly, if a station programming and transmitting normally in stereo were required to change to monophonic transmission for each period of monophonic programming a receiver tuned to its signal would be periodically muted—obviously an undesirable situation both for the listener and for the station. However, it should be noted that the "stereo only" mode of operation is offered as an additional feature on the more elaborate receivers. All of these receivers, it is believed are capable of operating in the normal stereo mode, in which each station's programs are reproduced whether its transmissions are stereophonic or monophonic. Should it become the universal and required practice for all stereo stations to utilize monophonic transmission during periods of monophonic programming, we believe that listeners would soon learn that they must avoid the "stereo only" settings of their receivers if they wished to receive uninterrupted service from each FM station.

13. Also, we are convinced that the operating problems which are cited as burdening the station licensee could be alleviated through the employment of comparatively simple systems for automatic or semi-automatic stereo/mono switching, should the need arise.<sup>2</sup>

14. Therefore, we are not convinced that the effects of the rule which has been proposed would be so burdensome and otherwise undesirable as to lessen substantially the incentive and capability of the broadcaster to present the kinds of programs, such as public affairs and news usually monophonic in nature, whose broadcast we have held to be in the public interest. Nevertheless, while we believe the parties in the interest of vigorous advocacy, may have over emphasized the problems which adoption of the rule would engender, their presentations have caused us to review the basic premises on which the rule was formulated, and to question whether there are positive benefits to be gained through its implementation are sufficient to outweigh such limitations on the broadcaster and may be imposed.

15. Assuming that the comments received are from parties who are a representative cross section of FM licensees whose stations are equipped for stereophonic transmission, the picture presented is of a group who value and promote their stations as "stereo" stations, and who utilize stereo program material to the extent that it is available. Thus, a high percentage of all musical programming is stereophonic; monophonic recordings (usually of an earlier era) are employed only when stereo versions are not available, and the airing

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<sup>2</sup> Such a system, of course, could not be expected to differentiate between monophonic or stereophonic program material where the nature of the material was not obvious. However, as many of those commenting note, musical programming is predominantly stereo, while voice transmissions are almost entirely monophonic. A gross differentiation on this basis by automatic means, should easily be possible. Manual switching would become necessary only for extended periods of monophonic musical programming, or for those occasional talk programs (such as round table discussions) which would benefit from a stereophonic presentation.

of the monophonic material will provide listeners with a kind of musical fare they might otherwise be unable to enjoy. Speech, which includes newscasts, sports, and many public affairs programs, is, by its very nature, monophonic, and attempts to simulate stereophonic effects have been found to destroy its realism, or sometimes adversely affect its intelligibility. It is the practice of the majority of stereo stations, except for extended periods of monophonic programming, to broadcast all programs in the stereophonic transmission mode, not only because it is more convenient for them to do so, but, more importantly, because experience had demonstrated that this is the kind of operation which is most acceptable to the average listener. Many others, however, revert to monophonic transmission when monophonic programming is utilized for extended periods of time. It is the consensus that the frequent changing between monophonic and stereophonic transmission modes in accordance with the nature of the program material would cause far more audience dissatisfaction than is occasioned by present modes of operation. We will accept this evaluation of the situation, and, accordingly, will not adopt the rule, as proposed.

16. There remains the question of whether sufficient public benefit would accrue to justify the adoption of a modified rule intended to require monophonic transmission during continuous monophonic programming extending over considerable periods of time, such as a half hour, or more. After full consideration of the matter in the light of the comments received, we have concluded that this approach should be rejected. While we have adverted to the greater useful coverage of a station when operating in the monophonic mode, we recognize that, in practice, the gain is quite small, if it is assumed that, regardless of the mode of transmission, the receivers of listeners in fringe areas will be switched manually or automatically to receive the station's signals in the monophonic reception mode, in which the signal to noise ratio is optimum. Weighed against the comparatively small increase in coverage achieved through monophonic transmission (which, as the comments point out, would, in any event, be realized only intermittently, and could not be regarded as reliable service) is the possibility that some broadcasters, rather than reverting to monophonic operation for periods of nominally monophonic programming, may be encouraged to adopt various expedients to produce pseudo-stereo effects, a procedure which, while it might, on occasion, produce acceptable results, seems to us to be generally undesirable. In this connection, we recognize that, as the comments suggest, any rule of the nature proposed, if it is to be enforced effectively and equitably, must be supported by other rules specifically defining monophonic and stereophonic programming. We do not reject this task as being unduly difficult; rather, we feel that our rules can do without the resulting complication.

17. While, therefore, we believe that good operating practice normally would dictate operation in the monophonic transmission mode for extended periods of monophonic programming, we will rely on

each licensee to choose the mode of operation which its experience indicates will be the more acceptable to its listening audience. Thus, we will not establish a specific restriction on transmission of the stereophonic pilot subcarrier during periods of monophonic programming.

18. Accordingly, neither the amendment of the rules proposed in this proceeding, nor any modification thereof, will be adopted.

19. IT IS ORDERED, that this proceeding IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION,  
BEN F. WAPLE, *Secretary.*

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