

# FEDERAL COMMUNICATIONS COMMISSION



WASHINGTON, D. C. 20554

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PUBLIC NOTICE

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## POLICY TO GOVERN THE CHANGE OF FM CHANNELS TO AVOID INTERFERENCE TO TELEVISION RECEPTION

By the Commission: Commissioners Hyde, Lee and Wadsworth absent.

The Commission is becoming increasingly concerned over petitions for rule making which ask that FM channels be changed or deleted to avoid actual or potential interference to the reception of VHF TV stations operating between 174 and 216 Mc/s (Channels 7-13). This interference can occur whenever the second harmonic of the FM signal (twice the FM frequency) falls within the channel of the TV signal or is generated within the TV receiver.

In an Information Bulletin entitled "Potential Interference to Television Reception from the Operation of FM Broadcast Stations on Certain Frequencies" issued on February 19, 1965 (FCC 65-130) we explained how this type of interference originates, and what could be done to eliminate or alleviate it and we called upon FM stations, TV receiver manufacturers, and the general public to take whatever measures are needed to insure that both of these important services could exist without adverse effect upon each other.

We pointed out that the problem frequently involves TV receiver design and is one which ordinarily is not taken into account in assigning FM or TV channels. We also stated that we had made some frequency changes for FM stations where a simple solution agreeable to all parties concerned was sought but warned that as the number of FM stations increases this type of solution might not be possible.

Our experience since the issuance of the bulletin has confirmed our views that FM channel changes are not a satisfactory solution to the problem. There are several reasons for this conclusion. Deleting the FM channel which is harmonically related to the TV channel receiving the interference, and refraining from assigning it to another community which might have the same potential problem, makes for an inefficient allocation plan and reduces the assignments available to the FM service. Often, moving an offending assignment or making changes in assignments will shift the interference to another area or to another high band VHF TV station.

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In the past, the Commission has approached the problem from the point of view that, although most of the problems stem from inadequacies in TV receiver design, the overall public interest would be benefited where changes in FM channels could be made conveniently. The situation is however changing in that channel reallocations are becoming more difficult to make with the increasing number of FM stations, and it appears only a matter of time before it will become impossible in many areas to make changes without adverse effect upon the public.

In view of the foregoing, the Commission is adopting the following policy to become effective on March 1, 1966. Petitions for FM channel changes will not receive favorable consideration unless:

1. Where actual interference to TV reception is being caused:
  - (a) Engineering showings are included which give evidence of the interference claimed and indicate the efforts made to eliminate the problem.
  - (b) A showing is included that no FM channels are deleted, no Class A channels are substituted for Class B or C channels, and the proposed reallocation will not result in a potential second harmonic problem being shifted to another city or TV station.
2. In situations involving potential interference only, petitions for rule making include an analysis of the nature and extent of the expected problem, and a showing that the proposal will not result in any loss of potential FM service or would not shift the problem to another community or another TV station.

The Commission wishes to emphasize that, in the electromagnetic environment in which receivers must operate currently and in the future, the allocation of frequencies to meet receiver inadequacies is not justified. The spectrum is simply too valuable to afford this luxury.

We expect receiver manufacturers to design receivers reflecting the state of the art. Where design inadequacies in various situations result in interference being received, we feel that the installation of suitable receiver filters is the appropriate remedy. If cooperative effort by all concerned is not adequate to achieve solutions to interference cases caused by receiver design problems, the public interest may require a request for legislation looking toward the protection of the general public by adequate regulatory authority over receiver design.

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Adopted: February 2, 1966