

Before the
Federal Communications Commission
Washington, D.C. 20554

MM Docket No. 88-140

In the Matter of

Amendment of Part 74 of the FM
Commission's Rules Concerning
Translator Stations

RM-5416

RM-5472

Antennas 110
Interference criteria 116
TV channel six interference 132

Other matters

Grandfathering criteria 38
for existing translators
Revised rule section 45

Administrative matters

Appendix A: Commenters

Appendix B: Rule Section

REPORT AND ORDER Proceeding Terminated

Adopted: November 8, 1990; Released: December 4, 1990

By the Commission: Commissioners Marshall and
Duggan issuing separate statements.

TABLE OF CONTENTS

Paragraph

INTRODUCTION

BACKGROUND

DISCUSSION

Service issues

Coverage area	9
Ownership restrictions	15
Financial support	24
Fundraising by translator	33
Local program origination authority	44
Local service obligations	53
Signal delivery	56
Use of auxiliary frequencies	63
Conditional relaying	67
Need requirements for translators	0
Method for selecting among applicants	6
Definition of major change	79
Multiple ownership limits	84
Cross-service translating	87

Technical issues

Frequencies available to FM translators	90
Maximum power output	95

INTRODUCTION

1. By this *Report and Order*, the Commission is amending the rules governing the FM translator service. The Commission is restructuring the FM translator rules consistent with the intended purpose of this service, which is to provide supplementary service to areas in which direct reception of radio broadcast stations is unsatisfactory due to distance or intervening terrain barriers. In particular, we revise and clarify the FM translator rules, including new rules for: ownership and financial support of translators; methods for selecting among translator applications; the definition of "major change" in translator coverage areas; use of commercial and auxiliary band frequencies; interference criteria; and technical requirements for translators.

BACKGROUND

2. FM translators are stations that receive the signals of FM radio broadcast stations and simultaneously retransmit those signals on another frequency.¹ In general, the signal of the FM radio broadcast station being rebroadcast² must be received directly over-the-air at the translator site.³ FM translators were first authorized in 1970⁴ as a means of providing FM service to areas and populations that were unable to receive satisfactory FM signals due to distance or intervening terrain obstructions.⁵ While the Commission recognized the benefits of authorizing FM translator service, it also expressed concern regarding the possible competitive impact such translators could have on FM radio broadcast stations and the effect their authorization could have on the licensing of those stations.⁶ Thus, the Commission elected to authorize FM translators on a secondary basis only and imposed rules that restrict their service, ownership, financial support and program origination.⁷ The FM translator rules currently in effect are essentially the same as those adopted in 1970.

3. The Commission commenced this proceeding with a *Notice of Inquiry (NOI)*⁸ to study the role of FM translators in the radio broadcast service. This *NOI* responded to seven parties who petitioned the Commission for rule making seeking various, sometimes conflicting changes to our FM translator rules. Rule making petitions were filed by the National Association of Broadcasters (NAB), AGK Communications, Inc. (AGK), John Davidson Craver (Craver), John S. La Tour (La Tour), Communications General Corp., Bruce Quinn (Quinn), and Robert Jacoby (Jacoby).⁹ In its petition, the NAB re-

104. NAB suggests that FM translators operating with 75 watts ERP or less should remain categorically exempt from the FCC regulations concerning the potential environmental impact from RF radiation as it relates to human exposure. AFCCE supports amendment of Section 1.1307(b) requiring translator stations employing 10 watts ERP or more to consider the potential of RF exposure effects on the environment. Jones suggests requiring statements regarding the potential impact of RF radiation. St. Clair believes the calculation of exposure to RF radiation is another requirement which is completely beyond the knowledge of rural translator operators, and suggests the requirement be limited to proposals where the transmitter power exceeds 100 watts.

105. *Rule.* In making our decision, we have sought to reconcile the role of translators as delivering broadcast signals to small service areas with the minimum necessary power, and the fact that a significant number of existing translators have been constructed more than 16 km from the area they are serving. We have decided to reduce our proposed maximum ERP standard and to provide criteria for the extent to service which, when combined with grandfathering discussed later in this document, should promote the primary purpose of the service while accommodating most existing authorized facilities.

106. The Commission is not persuaded by the comments that power levels above the current standard must result in increased interference. We continue to believe that the protection criteria we are adopting today will effectively control interference. The new standards create an equal probability of interference from translator stations operating at different powers by requiring higher power stations to be farther away from potentially affected stations. Having concluded that interference is not a factor in selecting the new maximum power limit, we have allowed for sufficient facilities to cover the locations traditionally served by translators. At the same time, we have incorporated a measure of flexibility with respect to ERP and distance to service contour to permit translator stations to meet the particular needs of individual areas while conforming to our rules.

107. We are setting 250 watts as the maximum ERP at which any FM translator may operate. The overwhelming majority of translators authorized under the 1 watt/10 watt TPO limits have ERP's of less than 250 watts. Very high gain transmitting antennas are needed to achieve an ERP of 250 watts from a TPO of 10 watts at the FM band frequencies. Therefore, we expect that virtually all operations with greater ERP would use higher transmitter powers than currently permitted. In that way, a higher maximum ERP limit would clearly represent an expansion of the traditional translator role. With the interference criteria we are adopting, we also have decided that it is reasonable to apply a 250 watt maximum ERP limit in all parts of the country, except for the border areas subject to bilateral agreements with Mexico and Canada.⁹⁸ Upon review of the comments and our own decisions establishing Commission requirements for environmental consideration of RF radiation, we have decided that the proper course in this area is to categorically exclude from the requirements for environmental assessment all applications requesting 100 watts ERP or less.⁹⁹ The modified environmental rule on RF radiation will apply to FM boosters as well as FM translators. In the *Notice*, we proposed to modify §1.1307 of our rules so that it covers both FM boosters and FM translators and it expresses the

environmental consideration standard in terms of ERP instead of TPO. The 100 watts ERP standard we are adopting imposes less of a burden on applicants than the proposed 10 watts ERP standard.¹⁰⁰

108. With respect to the coverage distance or HAAT limits, we will reduce the proposed limits by a small amount for areas west of the Mississippi River and by a large amount for areas in the east and southern California previously allowed 1 watt TPO. In order to enhance the distinction between maximum ERP determinations and protection calculations, we also are adopting a simplified procedure using tables instead of distance calculations. The tables allow ERP and HAAT combinations that produce 1 mV/m contour distances of 12.7 to 13.3 kilometers (km) in the west and 6.7 to 7.3 km in the east and southern California. An FM translator is allowed at least 10 watts ERP at any HAAT. This permits some extended coverage for stations at very high HAAT's (for example, at an HAAT of 800 meters, 1 mV/m coverage would extend 15.6 km). To illustrate, part of the table we are adopting for areas west of the Mississippi River, excluding southern California, follows:

Radial HAAT (meters)	Maximum ERP (MERP in watts)
less than or equal to 107	250
108 to 118	205
119 to 130	170
131 to 144	140
145 to 157	115
...	...
426 to 480	13
481 to 540	11
greater than or equal to 541	10

We recognize that situations exist where service to a greater distance would clearly serve the public interest without harm to any party. To address the most critical of such situations, we will be favorably disposed toward waiving this rule to permit higher power, up to 250 watts ERP at any HAAT, if an applicant demonstrates that the 1 mV/m coverage in the pertinent direction reaches only a white area (i.e., beyond the protected contours of any full time aural service). For purposes of applying this waiver standard to NCE-FM translator applications, the Commission will consider any area that is not served by a full-service public radio station to be a white area (even if there is a full-service commercial station serving the area).

109. Our intention in specifying use of 12 radials to determine maximum ERP is to have an administratively workable determination that still provides for consideration of terrain variations. By choosing 12 radials for this purpose, the HAAT's determined for the calculations can also be used in coverage contour and protection requirement determinations, and the maximum power authorized will be based on a fairly broad sample of the terrain surrounding the transmitter site. In the preceding paragraph, we have identified an alternate method of determining maximum ERP and our rules will require this method to be used at the proposed 12 evenly spaced radials starting from True North. For azimuths that are not on one of the radials, the maximum ERP limit will be the MERP of the closest radial. We will not require or accept showings of higher or lower MERP values based on the terrain along intermediate radials. The adopted method, with its 12 required calculations should provide