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FR date 12/6/84

Remote  
Control

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

MM  
FCC 84-549  
35123

In the Matter of )  
)  
Amendment of Part 73 ) MM Docket No. 84-110  
concerning remote control ) RM-3046  
operation of AM, FM, and TV )  
broadcast transmitters. )

REPORT AND ORDER  
Proceeding Terminated

Adopted: November 19, 1984

Released: November 21, 1984

Introduction

1. This proceeding was initiated by a Notice of Proposed Rule Making adopted February 3, 1984, and published in the Federal Register at 49 F.R. 3221. The Notice was in response to a petition filed by George E. Molnar, Jr., supported by eight other parties of interest, seeking amendments that would modify the procedures under which AM, FM, and TV broadcast stations operate their transmitting systems by remote control.

Comments

2. The Notice proposed and invited comments on rule amendments which, if adopted, would make substantive changes in both the equipment requirements and operating procedures applicable to broadcast remote control operation. Eleven formal and two informal comments were filed. One reply comment was filed. A list of the parties filing pleadings is contained in Appendix A. All parties except Mr. Alvin C. Saltzman favored the deregulatory objective of the proposed rule amendments. Many, however, objected to one or more of the specific provisions of the proposed rules.

3. Nearly all respondents stated that the primary difficulty with remote control operation under the present rules is the fail-safe requirement. Currently, remote control operation of the transmitter must immediately cease if the control circuit is interrupted. Stations apparently experience occasional loss of service due to short term disruptions in control circuits.

4. While many comments were made suggesting adjustments or clarifications of certain specific provisions in the proposed rules, two significant new issues were raised in the comments. The National Association of Broadcasters (NAB) stated that the current remote control rules are unnecessarily complex and suggested that revised rules need only contain two regulatory provisions: 1) permit the use of remote control for broadcast facilities, and 2) restrict required control functions to those mandated by law, national security, or public safety. The Association of Federal Communications Consulting Engineers (AFCCE) suggested that termination of operation is not necessary if an AM station fails to switch operating modes and does not cause interference. A nondirectional station that operates at

its authorized reduced nighttime power during daytime hours is an example of this type of situation.

#### Discussion

5. The present remote control rules were derived from the transmitter duty operator rules which are, in turn, based upon Section 318 of the Communications Act of 1934, as amended. That statute requires that all broadcast stations be operated under the control of a licensed operator. The Act does not specify the duty location of the operator nor the necessary degree of control of either the transmitter or other station technical functions. However, the Commission's rules now require a licensed operator to be on duty at the transmitter site or at a control point shown on the station license. Also, each remote control point used must: 1) have equipment permitting the operator to determine the station's operating power and other transmitter conditions, 2) permit certain adjustments, 3) be inaccessible to unauthorized persons, and 4) not permit the transmitter to turn on inadvertently without operator supervision. The existing rules also require stations to have an operator in attendance at the actual transmitter site whenever the control or metering circuits between the transmitter and remote control location are disrupted or do not function correctly.

6. The present rules were written at a time when the available broadcast technology required that the duty operator make frequent observations and transmitter adjustments. Also, the Commission considered it essential to be able to immediately contact the duty operator during all hours of operation. Revision of the remote control rules must address the current validity of these concepts.

7. The Commission shares the concern of the licensees in that short-term losses of control or telemetry should not be cause for immediate termination of operation. Accordingly, the new rules will permit continued operation following a loss of transmitter control, pending repair of the control circuits, as long as the station continues to operate properly. Loss of telemetry, on the other hand, means that the transmitter parameters cannot be monitored remotely. Therefore, the amended rules will require termination of use of remote control within three hours after detection of the telemetry failure. Although CBS recommended six hours, the majority of the commenters on this subject concurred with the proposed three hour period.

8. The considerable variation in the several classes of broadcast stations leads to difficulty in writing technical rules that would be practical for every licensee. Indeed, a review of the comments clearly indicates that the simplest approach is the best in the interest of both broadcasters and the public. Remote control technology has far outstripped the simplistic "on-off, raise-lower, read meter" concept upon which the original remote control rules were based, and the rules should reflect those advances, as well as permit use of future developments.

### Conclusions

9. The Communications Act requires that a licensed operator have supervisory control over the station's transmitter during all periods of operation. However, that operator need only be able to terminate the station's operation should it be the source of harmful interference or be operating inconsistently with law or treaty. Meters, alarms or automatic controls could be used to facilitate this supervisory control. Therefore, the amended rules are devoid of "how to" or methodology provisions. Rather, the rules place responsibility on each licensee to assure compliance with the station authorization. The existing rules already provide tolerances for those operating parameters considered necessary for correct broadcast station operation.

10. The Commission continues to believe that it must be able to contact stations during operation. Therefore, the use of remote control at sites other than at the main studio or transmitter address must be identified to the Commission if the station cannot be contacted during operation at either the studio or transmitter locations.

11. We agree with AFCCE's comments that a station need not terminate operation in cases where an inability to change operating modes will not cause impermissible interference. The amended rules will permit continued operation in a mode having lesser radiation at all bearings and elevations than that authorized following a temporary failure in mode switching functions.

12. The Commission has consistently held in previous proceedings that licensees should have flexibility in operating their stations. <sup>1/</sup> Consequently, we have chosen an approach that meets the basic requirements of the Communications Act while allowing licensees maximum flexibility in meeting those requirements. In general, licensees may operate their stations by remote control using any method that assures that: 1) an operator is on duty, 2) the transmitting system operates properly, and 3) the Commission can contact station personnel during hours of operation.

13. Accordingly, IT IS ORDERED That Part 73 of the Commission's rules IS AMENDED as set forth in the attached Appendix B effective December 1, 1984.

14. It is FURTHER ORDERED That the Secretary shall cause a copy of this Report and Order to be furnished to the Small Business Administration.

15. It is FURTHER ORDERED That this proceeding is TERMINATED.

16. Regulatory Flexibility Analysis.

I. Need and purpose of the rule.

The amended rules remove separate and diverse rules for AM, FM, educational

<sup>1/</sup> Refer to the deregulation of the licensing requirements for radio operators, (See Report and Order in Docket 20817 at 46 F.R. 35450) and deletion of the technical log keeping requirements (See Report and Order in Docket 82-536, at 48 F.R. 28457).

The amended rules remove separate and diverse rules for AM, FM, educational FM, and TV broadcast stations, and replace the removed rules with a common rule applicable to all classes of broadcast stations. Licensees will have complete freedom to choose remote control equipment that meets their individual needs.

II. Legal basis.

The Rule amendments made by this Report and Order are authorized under Sections 303(f) and 303(r) of the Communications Act of 1934, as amended, in order that stations operate in a manner consistent with the terms of their authorizations and without causing harmful interference to other radio communications services.

III. Description, potential impact, and number of small entities affected.

This action would simplify the technical equipment and operating requirements for all AM, FM, and TV broadcast stations that operate their transmitting facilities by remote control. Nearly 6,000 stations will be affected. Further, approximately twenty manufacturers of broadcast transmitting equipment will be able to market remote control devices using advanced technology that the present rules constrain or prohibit.

IV. Recording, record keeping, and other compliance requirements.

The amended rules impose no record keeping requirements, nor do they require any additional application or notification procedures.

V. Federal rules which overlap, duplicate, or conflict with this rule.

None.

VI. Significant alternatives not adopted.

The rules hereby amended incorporate all significant suggestions submitted in response to the Notice of Proposed Rule Making and resolve all issues of concern.

FEDERAL COMMUNICATIONS COMMISSION

William J. Tricarico  
Secretary

Attachments: Listing parties filing comments  
Amended rules

A P P E N D I X A

## Commenters:

Association of Federal Communications Consulting Engineers  
Broadcast Licensees

CBS. Inc.

John Davis, Broadcast Consulting Engineer

National Association of Broadcasters

National Radio Broadcasters Association

Nebraska Educational Television System

Jim Paffenbarger, Station WUOM

Practical Engineering

Alvin C. Saltzman

Sterling Recreation Organization Co.

Arthur Vrooman, Stations WJAC-AM-FM-TV

Edward Y. Wright, Station WRVO

## Reply commenters:

National Association of Broadcasters

## A P P E N D I X B

The following amendments are made to Title 47, Part 73 of the Code of Federal Regulations:

1. 47 CFR 73.66 is removed in its entirety.
2. 47 CFR 73.67 is removed in its entirety.
3. 47 CFR 73.274 is removed in its entirety.
4. 47 CFR 73.275 is removed in its entirety.
5. 47 CFR 73.574 is removed in its entirety.
6. 47 CFR 73.575 is removed in its entirety.
7. 47 CFR 73.676 is removed in its entirety.
8. 47 CFR 73.677 is removed in its entirety.
9. 47 CFR 73.3548 is removed in its entirety.
10. In 47 CFR, new Section 73.1400 is added to read as follows:  
§73.1400 Remote control authorizations.

(a) An AM, FM, or TV station transmission system may be operated by remote control using the procedures described in §73.1410.

(b) No authorization from the FCC is required to operate the transmission system of an AM station operating with a nondirectional antenna, FM station, or TV station by remote control. Authority to operate an AM station using a directional antenna system by remote control is obtained using the following procedures:

(1) An application for a construction permit to erect a new directional antenna or make modifications in an existing directional antenna, subject to the sampling system requirements of §73.68, may request remote control authorization on the permit application FCC Form 301 (FCC Form 340 for noncommercial educational stations).

(2) A licensee or permittee having a sampling system in compliance

with the provisions of §73.68(a) must request remote control authorization on FCC Form 301-A, and submit information showing that the directional antenna sampling system has been constructed according to the specifications of §73.68(a).

(3) A licensee or permittee of a station not having an approved directional sampling system in compliance with the provisions of §73.68(a) must request remote control authorization on FCC Form 301-A, and submit information showing that the directional antenna is in proper adjustment and further showing the stability of the antenna system during the 1-year period specified in Section II of Form 301-A.

(c) Whenever a remote control point is established at a location other than at the main studio or transmitter, notification of that remote location must be sent to the FCC in Washington, D.C., within 3 days of initial use of that point. This notification is not required if responsible station personnel may be contacted at the transmitter or studio site during hours of operation when the remote control operator is elsewhere.

11. In 47 CFR, new Section 73.1410 is added to read as follows:

§73.1410 Remote control operation.

(a) Broadcast stations operated by remote control must provide at remote control points sufficient control and operating parameter monitoring capability to allow technical operation in compliance with the Rules applicable to that station and the terms of the station authorization. AM stations that are required to change modes of operation during the broadcast day must provide sufficient redundancy to assure that such mode changes actually occur.

(b) The remote control system must be designed, installed, and protected so that the transmitter can be activated or controlled only by licensed transmitter operators authorized by the licensee.

(c) The remote control and monitoring equipment must be calibrated and tested as often as necessary to ensure proper operation.

(d) The remote control system must be designed so that malfunctions in the circuits between the control point and transmitter will not cause the transmitter to be inadvertently activated or to change operating modes or output power.

(e) Whenever a malfunction causes loss of accurate indications of the transmitter operating parameters, use of remote control must be discontinued within 3 hours after the malfunction is first detected. If the station is found to be operating beyond the terms of the station authorization and such malfunction cannot be corrected by remote control, station operation must be immediately terminated.

(f) AM stations may use amplitude or phase modulation of the carrier wave for remote control telemetry and alarm purposes. FM stations may use aural subcarriers and TV stations may use either aural subcarriers or signals

within the vertical blanking interval for telemetry and alarm purposes. Use of such remote control signals must be in accordance with the technical standards for the particular class of station.

12. 47 CFR 73.51 is amended by changing the reference to rule "73.57" in subparagraph (d)(5) to read "73.1410."
13. 47 CFR 73.68 is amended by removing subparagraph (b)(4) and redesignating subparagraph (b)(5) as (b)(4).
14. 47 CFR 73.1225 is amended by removing sub-subparagraph (c)(1)(iv)(A) and redesignating sub-subparagraphs (B) through (D) as (A) through (C).
15. 47 CFR 73.1560 is amended by revising the headnote, redesignating existing paragraph (a) as subparagraph (a)(1), and adding new subparagraph (a)(2) to read as follows:

§ 73.1560 Operating power and mode tolerances.

(a) AM stations.

(1) \* \* \*

(2) Whenever the transmitter of an AM station cannot be placed into the specified operating mode at the time required, transmissions of the station must be immediately terminated. However, if the radiated field at any bearing or elevation does not exceed that permitted for that time of day, operation in the mode with the lesser radiated field may continue under the notification procedures of paragraph (d) of this section.

\* \* \* \* \*

16. 74 CFR 73.1570 is amended by removing the words "\$73.67(b) or" from subparagraph (b)(1)(ii).

17. 74 CFR 1690 is amended by revising the words "See 73.3548" in subparagraph (d)(2) to read "See 73.1400."

18. The alphabetical index to 47 CFR Part 73 is amended removing all references to rule sections numbered 73.66, 73.67, 73.274, 73.275, 73.574, 73.575, 73.676, 73.677, and 73.3548; and the following listings are added in alphabetical sequence:

Authorization, Remote control.....	73.1400
Mode tolerances, Operating power and.....	73.1560
Operating power and mode tolerances.....	73.1560
Power and mode tolerances, Operating.....	73.1560
Remote control authorization.....	73.1400
Remote control operation.....	73.1410