

FCC 74-1150

BEFORE THE

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

In the Matter of AMENDMENT OF PART 73 OF THE COMMISSION'S RULES AND REGULATIONS TO PROVIDE FOR EXTENSION METERING OF BROADCAST TRANS- MITTERS	}	Docket No. 19906 RM-1786
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REPORT AND ORDER

(Proceeding Terminated)

(Adopted October 22, 1974; Released October 30, 1974)

BY THE COMMISSION:

1. In its continuing effort concerning the re-regulation of the broadcasting services the Commission released a Notice of Proposed Rule Making in this proceeding on December 28, 1973. The closing dates for comments and reply comments were March 5, 1974, and March 26, 1974, respectively. Publication was made in the Federal Register on January 4, 1974 (39 Fed. Reg. 1070).

2. Comments were filed by parties listed in Appendix A attached hereto. No reply comments were filed.

3. This proceeding was instituted to consider rule amendments which would permit the use of extension meters. Without exception, the parties filing comments urged favorable consideration of the concept embodied in the proposal but more than two-thirds of the parties recommended that one or more of the conditions be adopted in a revised form. Many of the parties urged that the Commission not require that the transmitter location be confined to the same building as, and within one floor of, the normal operating location and that the path from the normal operating location to the transmitter not be limited to 100 feet. In lieu of these limitations it was urged that the rules should permit locating the transmitter in an adjoining building; locating the transmitter on the same property or on the same premises or within the same complex; locating the transmitter 300-400 feet from the normal operating location; using some time standard rather than a distance standard, *such as*, access in 30 seconds and access in 5 minutes; and that the relative location of the transmitter and normal operating location be determined solely on the basis of operating convenience.

4. A number of parties additionally urged that the Commission not require that modulation monitors and antenna monitors be co-located with extension meters and that extension meters for plate voltage and plate current of the visual transmitter at television stations not be required. The parties suggest that the modulation and antenna monitors are better located at the transmitter for use when testing or performing maintenance on that equipment and that indications provided

by the monitors may reliably be extended to the normal operating location. The parties oppose adoption of a requirement that extension meters for the plate voltage and current of visual transmitters be installed, contending that it would be unnecessarily burdensome since there is no corresponding requirement that these parameters be logged.

5. Some parties suggested that, if extension meters are employed, it should be required that the operating location be equipped with an on-off switch so that the transmitter may be activated and de-activated from that location. It is suggested that: in an emergency situation the output of the transmitter could be interrupted immediately from the operating location without the delay of an operator having to go to the location of the transmitter; it would facilitate interrupting the transmitter carrier in connection with EBS tests and alerts; it would facilitate timely switch-overs in connection with operation of share-time stations; and, it would permit the operator to be at the operating location at all times when the transmitter is supplying power to the antenna.

6. Finally, parties have urged that the Commission not specify that all required meters be extended and indicate continuously. These parties contend that, since the transmitter will be readily accessible it should be sufficient to extend only the meter indicating antenna power, with other parameters set to give a visual or audible alarm to alert the operator if tolerance limits are approached or exceeded. Alternatively, it has been suggested that use of a digital meter to sample specified parameters sequentially or on command would provide adequate surveillance of station performance.

#### DISCUSSION

7. This proceeding was instituted for the very limited purpose of providing relief for those licensees who, pursuant to existing requirements regarding transmitter visibility from the operator's location, have found it necessary to take such measures as installing a window in a studio wall or resorting to mirrors or a closed-circuit TV system. The alternative is to apply for authority to operate by remote control.

8. That aspect of the Commission's proposal which drew the greatest number of comments was its proposal to require that the transmitter be located in the same building as, and no more than one floor above or below, the operator's location and that the path from the operator's location to the transmitter be no greater than 100 feet. Parties variously urged that the rules permit installing the transmitter in a separate building, or on the same premises, or within the same complex, or within the confines of the same building. Additionally, some parties urged that a standard specifying a distance in excess of 100 feet or a standard in terms of time rather than distance be adopted. In developing its proposal the Commission considered, at great length, standards precisely in line with these suggestions and found them unacceptable. It concluded that standards less restrictive than those set out in the Notice would not be in keeping with the limited purpose, for which this proceeding was instituted and would not strike the proper balance between affording greater flexibility in regard to designing station facilities and installing equipment, and retaining the operator's capability to

exercise transmitter control with minimum delay. Upon considering the comments submitted, the Commission is not persuaded that its earlier conclusion should be modified. Accordingly, the pertinent rules will be adopted as proposed.

9. Upon weighing those comments questioning the proposed requirement that antenna monitors be installed at the extension meter location, the Commission is persuaded that its proposal should be modified. Accordingly, the rules adopted herein will not specify that the antenna monitor be installed at the same location as extension meters. The location of such monitors will therefore be governed by Section 73.69, which requires that they be installed at the transmitter. Pursuant to this requirement, operators at a number of stations employing extension meters will be required to visit the transmitter location at intervals not exceeding 3 hours in order to observe and log readings of phase and antenna current ratios. While many licensees may view this as a highly desirable exercise, others may view it as an inconvenience to be avoided, if possible. The rules being adopted will accommodate both viewpoints, in that, while they continue to require that the antenna monitor be installed at the transmitter, they will additionally provide that stations equipped with a type approved antenna monitor may, at the licensee's option, employ external meters installed at the extension meter location if such external meters meet the specifications for accuracy and repeatability prescribed for the monitor itself, and, when connected to the monitor, do not adversely affect its performance.

10. A number of parties urged that the Commission not require that a station's modulation monitor be installed at the extension meter location. The Commission's proposal in this regard was designed to make available to the operator indications provided by the monitor's peak flasher. Because of its response characteristics, the flasher is a better indicator of modulation excesses than the percent modulation meter and is the more useful tool for observing instances of overmodulation. As some parties have noted, most modulation monitors readily adapt to providing indications on an external meter without loss of reliability. The same is not true however, in regard to extending indications of the peak flasher. Since the Commission's concern is that the peak flasher be available to the operator, the rules adopted herein will meet this objective. This can be achieved, however, while still providing a degree of flexibility. Accordingly, the rules will prescribe that stations employing extension meters shall install modulation monitors at the extension meter location, except that, the modulation monitor may be installed at the transmitter if the extension meter location is equipped with a percent modulation meter and peak flasher (for aural transmitters) and apparatus for monitoring visual signals to determine that such signals comply with Commission requirements (for video transmitters), and such equipment provides continuous and accurate indications of pertinent modulation characteristics.

11. The Commission concurs in the view expressed by some parties concerning the proposed requirement that extension meters for the plate voltage and current of visual transmitters be installed. Accordingly, the rules adopted will not require extension meters for these parameters.

12. The Commission is not persuaded that the rule amendments adopted herein should include a requirement that the extension meter location be equipped with a transmitter on-off switch. The thrust of this proceeding is to develop standards which provide for the use of extension meters while retaining an adequate monitoring capability. On-off control of the transmitter involves an activity distinctly apart from the monitoring function and inclusion of the suggested requirement is not necessary to satisfactory resolution of this proceeding. The Commission is further persuaded that a substantial plus factor accrues to having the operator at the transmitter controls when the "on" switch is activated so that any necessary adjustments can be made without delay.

13. In its consideration of comments urging that the rules not specify that all required meters be extended and indicate continuously, the Commission again directs attention to the limited purpose for which this proceeding was instituted, i.e., to relax the "transmitter visibility" requirement. In keeping with that purpose, proposals to modify existing monitoring capabilities must be regarded as beyond the scope of this proceeding. This becomes even more apparent when one considers that the question of what constitutes adequate surveillance of station performance has application for all modes of station operation and is not confined to operations employing extension meters. Under these circumstances, the Commission is persuaded that the rules set out in its Notice should be adopted, essentially in the form proposed. The one respect in which the final rules reflect a change is in regard to installing extension meters to monitor base currents of each antenna element. As adopted, the rules will substitute therefore a requirement that the antenna current for nondirectional operations be monitored.

14. As a final matter, the rules adopted include several editorial revisions required to conform related rules sections with changes effected herein.

15. Having considered all of the information before it, and in accordance with the foregoing discussion, IT IS ORDERED, That effective February 5, 1975, Part 73 of the Commission's Rules and Regulations IS AMENDED as set forth in the attached Appendix.

16. Authority for the action taken herein is contained in Sections 4(i), and 303 (j) and (r) of the Communications Act of 1934, as amended.

17. IT IS FURTHER ORDERED, That this proceeding IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION,  
VINCENT J. MULLINS, *Secretary*.

Attachments: Appendix A, Appendix B.

#### APPENDIX A

American Broadcasting Companies, Inc.  
Association for Broadcast Engineering Standards, Inc.  
Association of Federal Communications Consulting Engineers.  
Charles River Broadcasting Co.  
Clay Broadcasting Corporation of Virginia.  
Collier Broadcasting Co.  
Davidson County Broadcasting Co.

Gateway Broadcasters, Inc.  
 Gilmore Broadcasting Group.  
 Heart O'Wisconsin Broadcasters, Inc.  
 Lohnes and Culver.  
 National Association of Broadcasters.  
 National Broadcasting Co., Inc.  
 Nationwide Communications, Inc.  
 Rowland Broadcasting Co., Inc. and Sun-Coast Radio, Inc.  
 S & S Broadcasting Co.  
 Station WFNC.  
 Station WHTG.  
 Station WYLS.  
 Station KONL.  
 Westinghouse Broadcasting Co., Inc.

APPENDIX B

1. In § 73.56, Par. (a) is amended to read as follows :

§ 73.56 MODULATION MONITORS.

(a) Each station shall have in operation, either at the transmitter or the extension meter location, or the place the transmitter is controlled, a modulation monitor of a type approved by the Commission.

NOTE.—Approved modulation monitors are included on the Commission's "Radio Equipment List". Copies of this list are available for inspection at the Commission's offices in Washington, D.C., and at each of its field offices.

2. The undesignated heading "Remote Control" preceding the line, 73.66 Remote Control Authorizations, is deleted.

3. Section 73.70 is added new to read as follows :

§ 73.70 EXTENSION METERS.

The extension of specified meters and monitoring devices is permitted, without prior authorization of the Commission, upon compliance with each of the following :

(a) That the transmitter is in the same building as the normal operating location of the station's licensed operator and is no more than one floor above or below the normal operating location.

(b) That the path from the normal operating location to the transmitter is no longer than 100 feet and provides the operator with ready access to the transmitter.

(c) That the required extension meters and monitoring devices are sufficiently close to the operator's normal operating location that deviations from normal indications of such instruments can be observed from that location.

(d) That extension meters shall be installed for monitoring the DC plate circuit current and voltage of the last radio frequency amplified stage, and the antenna current for non-directional operation or common point current for directional operation. The installation and operation of these meters shall be in accordance with requirements prescribed for their corresponding regular meters.

(e) That each of the extension meters required in paragraph (d) of this section shall continuously sample the parameter for which it is installed and constantly indicate that parameter.

(f) That, for each mode of operation, the extension meters required pursuant to paragraph (d) of this section are calibrated against their corresponding regular meters as often as necessary to insure their accuracy, but in no event less than once a week and :

(1) The results of such calibration shall be entered in the station's maintenance log.

(2) In no event shall an extension meter be calibrated against another extension or remote meter.

(3) Each extension meter shall be accurate within 2% of the value read on its corresponding regular meter.

(g) That the station's modulation monitor is installed at the extension meter location: Provided that, the modulation monitor may be installed at the trans-

mitter if the extension meter location is equipped with a percentage modulation meter and peak indicating device which provide continuous and accurate indications of pertinent modulation levels.

(h) That, if the station is equipped with a type approved antenna monitor, external meters meeting the specifications for accuracy and repeatability prescribed for the monitor itself may be installed at the extension meter location.

(i) That in the event a malfunction of any component of the extension meter system causes inaccurate readings, the pertinent entries required in the station's operating log must be read and logged at the specified intervals from the meters located at the transmitter. If a malfunction results in inaccurate extended indications of the antenna monitor, the pertinent entries required in the station's operating log must be read and logged at the specified intervals from the meters incorporated in the antenna monitor. If a malfunction affects extended indications of the modulation monitor, the licensee shall, pending repair or replacement, employ a cathode ray oscilloscope or other suitable means for monitoring modulation at the extension meter location. When a malfunction is detected, an appropriate entry shall be made in the station's maintenance log, showing the date of occurrence and identifying the indicating device(s) affected. An entry, appropriately dated, shall also be made when repair or replacement is completed. If a malfunctioning component cannot be repaired or replaced within 60 days from the date faulty operation is detected, the Engineer in Charge of the radio district in which the station is located shall be notified and request shall be made for such additional time as is needed to complete the necessary repair or replacement.

(j) That the transmitter is so installed and protected that it is not accessible to persons other than those duly authorized by the licensee.

4. Section 73.92(b) is amended to read as follows:

§ 73.92 STATION AND OPERATOR LICENSES; POSTING OF.

\* \* \* \* \*

(b) The operator license, or Form 759 (Verification of Operator License or Permit), of each station operator employed full-time, part-time or via contract, shall be permanently posted and shall remain posted so long as the operator is employed by the licensee.

(1) The operator licenses shall be posted:

(i) Either at the transmitter or extension meter location; or

(ii) At the principal remote control point, if the station license authorizes operation by remote control.

(2) Posting of operator licenses shall be accomplished by affixing the license to the wall at the posting location, or enclosing in a binder, or inserting in folder and retaining at the posting location so that the licenses will be readily available and easily accessible at that location.

5. Section 73.93(a) is amended to read as follows:

§ 73.93 OPERATOR REQUIREMENTS.

(a) One or more operators holding a radio operator license or permit of a grade specified in this section shall be in actual charge of the transmitting system, and shall be on duty at the transmitter location, or at an authorized remote control point, or the position at which extension meters, as authorized pursuant to § 73.70 of this Subpart are located. The transmitter and required monitors and metering equipment, or the required extension meters and monitoring equipment and other required metering equipment, or the controls and required monitoring and metering equipment in an authorized remote control operation, shall be readily accessible to the licensed operator and located sufficiently close to the normal operating location that deviations from normal indications of required instruments can be observed from that location.

\* \* \* \* \*

6. Section 73.114(a)(1) is amended by adding a new subsection (vii) to read as follows:

§ 73.114 MAINTENANCE LOG.

(a) \* \* \*

(1) \* \* \*

(vii) A notation of the results of calibration of each extension meter against its corresponding regular meter, as required by § 73.70. The entry

shall include a showing of each meter reading observed prior to recalibration of the extension meters.

\* \* \* \* \*  
7. Section 73.253(a) is amended to read as follows:

§ 73.253 MODULATION MONITORS.

(a) Each station shall have in operation either at the transmitter or the extension meter location, or at the place where the transmitter is controlled, a modulation monitor of a type approved by the Commission for non-multiplex operation: Provided, That: (1) if the station is engaged in stereophonic operation as contemplated by § 73.297, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring stereophonic operation, and (2) if the station is engaged in operation with a Subsidiary Communications Authorization, as contemplated by § 73.295, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring SCA operation.

NOTE.—Approved modulation monitors (non-multiplex, stereophonic, and SCA) are included on the Commission's "Radio Equipment List". Copies of this list are available for inspection at the Commission's offices in Washington, D.C., and at each of its field offices.

\* \* \* \* \*  
8. Section 73.264(b) is amended to read as follows:

§ 73.264 STATION AND OPERATOR LICENSES; POSTING OF.

(b) The operator license, or Form 759 (Verification of Operator License or Permit), of each station operator employed full-time, part-time or via contract, shall be permanently posted and shall remain posted so long as the operator is employed by the licensee.

(1) The operator licenses shall be posted:

(i) Either at the transmitter or extension meter location; or

(ii) At the principal remote control point, if the station license authorizes operation by remote control.

(2) Posting of operator licenses shall be accomplished by affixing the license to the wall at the posting location, or enclosing in a binder, or inserting in folder and retaining at the posting location so that the licenses will be readily available and easily accessible at that location.

9. Section 73.265(a) is amended to read as follows:

§ 73.265 OPERATOR REQUIREMENTS.

(a) One or more operators holding a radio operator license or permit of a grade specified in this section shall be in actual charge of the transmitting system, and shall be on duty at the transmitter location, or at an authorized remote control point, or the position at which extension meters, as authorized pursuant to § 73.276 of this Subpart, are located. The transmitter and required monitors and metering equipment, or the required extension meters and monitoring equipment, or the controls and required monitoring and metering equipment in an authorized remote control operation, shall be readily accessible to the licensed operator and located sufficiently close to the normal operating location that deviations from normal indications of required instruments can be observed from that location.

\* \* \* \* \*  
10. Section 73.276 is redesignated Section 73.277 and a new Section 73.276 is added to read as follows:

§ 73.276 EXTENSION METERS.

The extension of required meters is permitted, without prior authorization of the Commission, upon compliance with each of the following:

(a) That the transmitter is in the same building as the normal operating location of the station's licensed operator and is no more than one floor above or below the normal operating location.

(b) That the path from the normal operating location to the transmitter is no longer than 100 feet and provides the operator with ready access to the transmitter.

(c) That the required extension meters and monitoring devices are sufficiently close to the operator's normal operating location that deviations from normal indications of such instruments can be observed from that location.

(d) That extension meters shall be installed for monitoring the direct plate voltage and current of the last radio stage and the transmission line radio frequency current, voltage, or power. The installation and operation thereof must comply with the same requirements prescribed by the rules for their corresponding regular meters.

(e) That each of the extension meters required in paragraph (d) of this section shall continuously sample the parameter for which it was installed and constantly indicate that parameter.

(f) That the extension meters required pursuant to paragraph (d) of this section are calibrated against their corresponding regular meters as often as necessary to insure their accuracy, but in no event less than once a week and :

(1) The results of such calibration shall be entered in the station's maintenance log.

(2) In no event shall an extension meter be calibrated against another extension or remote meter.

(3) Each extension meter shall be accurate within 2% of the value read on its corresponding regular meter.

(g) That the station's modulation monitor is installed at the same location as the extension meters: Provided that, the modulation monitor may be installed at the transmitter if the extension meter location is equipped with a percentage modulation meter and peak indicating device which provide continuous and accurate indications of pertinent levels of total modulation.

(h) That in the event a malfunction of any component of the extension meter system causes inaccurate readings, the pertinent entries required in the station's operating log must be read and logged at the specified intervals from the meters located at the transmitter. If a malfunction affects extended indications of the modulation monitor, the licensee shall, pending repair or replacement, provide other suitable means for monitoring modulation at the extension meter location. When a malfunction is detected, an appropriate entry shall be made in the station's maintenance log, showing the date of occurrence and identifying the indicating device(s) affected. An entry, appropriately dated, shall also be made when repair or replacement is completed. If a malfunctioning component cannot be repaired or replaced within 60 days from the date faulty operation is detected, the Engineer in Charge of the radio district in which the station is located shall be notified and request made for such additional time as is needed to complete the necessary repair or replacement.

(i) That the transmitter is so installed and protected that it is not accessible to persons other than those duly authorized by the licensee.

11. Section 73.284(a) is amended by inserting a new subparagraph (4) and renumbering the present subparagraphs (4), (5), (6) and (7) as (5), (6), (7) and (8), to read as follows :

#### § 73.284 MAINTENANCE LOG.

(a) \* \* \*

(4) A notation of the results of calibration of each extension meter against its corresponding regular meter, as required by § 73.276. The entry shall include a showing of each meter reading observed prior to recalibration of the extension meters.

\* \* \* \* \*

12. Section 73.553(a) is amended to read as follows :

#### § 73.553 MODULATION MONITORS.

(a) The licensee of each station licensed for transmitter power output above 10 watts shall have in operation, either at the transmitter or the extension meter location, or at the place the transmitter is controlled, a modulation monitor of a type approved by the Commission for non-multiplex operation: Provided, That: (1) if the station is engaged in stereophonic operation, as contemplated by § 73.596, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring stereophonic operation, and (2) if the station is engaged in operation with a Subsidiary Communications Authoriza-

tion, as contemplated by § 73.595, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring SCA operation.

NOTE.—Approved modulation monitors (non-multiplex, stereophonic, and SCA) are included on the Commission's "Radio Equipment List". Copies of this list are available for inspection at the Commission's offices in Washington, D.C., and at its field offices.

\* \* \* \* \*  
13. Section 73.564 (b) is amended to read as follows:

§ 73.564 STATION AND OPERATOR LICENSES; POSTING OF.

\* \* \* \* \*  
(b) The operator license, or Form 759 (Verification of Operator License or Permit), of each station operator employed full-time, part-time or via contract, shall be permanently posted and shall remain posted so long as the operator is employed by the licensee.

(1) The operator licenses shall be posted:

- (i) Either at the transmitter or extension meter location; or
- (ii) At the principal remote control point, if the station license authorizes operation by remote control.

(2) Posting of operator licenses shall be accomplished by affixing the license to the wall at the posting location, or enclosing in a binder, or inserting in folder and retaining at the posting location so that the licenses will be readily available and easily accessible at that location.

14. Section 73.565 (a) is amended to read as follows:

§ 73.565 OPERATOR REQUIREMENTS.

(a) One or more operators holding a radio operator license or permit of a grade specified in this section shall be in actual charge of the transmitting system, and shall be on duty at the transmitter location, or at an authorized remote control point, or the position at which extension meters, as authorized pursuant to § 73.574 of this Subpart, are located. The transmitter and required monitors and metering equipment, or the required extension meters and monitoring equipment or the controls and required monitoring and metering equipment in an authorized remote control operation, shall be readily accessible to the licensed operator and located sufficiently close to the normal operating location that deviations from normal indications of required instruments can be observed from that location.

\* \* \* \* \*  
15. Section 73.574 is added new to read as follows:

§ 73.574 EXTENSION METERS.

The extension of required meters is permitted, without prior authorization of the Commission, upon compliance with each of the following:

(a) That the transmitter is in the same building as the normal operating location of the station's licensed operator and is no more than one floor above or below the normal operating location.

(b) That the path from the normal operating location to the transmitter is no longer than 100 feet and provides the operator with ready access to the transmitter.

(c) That the required extension meters and monitoring devices are sufficiently close to the operator's normal operating location that deviations from normal indications of such instruments can be observed from that location.

(d) That, for stations licensed for transmitter power output greater than 10 watts, extension meters shall be installed for monitoring the direct plate voltage and current of the last radio stage and the transmission line radio frequency current, voltage, or power. The installation and operation thereof must comply with the same requirements prescribed by the rules for their corresponding regular meters.

(e) That each of the extension meters required in paragraph (d) of this section shall continuously sample the parameter for which it was installed and constantly indicate that parameter.

(f) That the extension meters required pursuant to paragraph (d) of this section are calibrated against their corresponding regular meters as often

as necessary to insure their accuracy, but in no event less than once a week and:

(1) The results of such calibration shall be entered in the station's maintenance log.

(2) In no event shall an extension meter be calibrated against another extension or remote meter.

(3) Each extension meter shall be accurate within 2% of the value read on its corresponding regular meter.

(g) That, for stations licensed for transmitter output greater than 10 watts, the station's modulation monitor is installed at the same location as the extension meters: Provided, that, the modulation monitor may be installed at the transmitter if the extension meter location is equipped with a percentage modulation meter and peak indicating device which provide continuous and accurate indications of pertinent levels of total modulation. Stations licensed for transmitter power output of 10 watts or less shall have in operation at the extended operating location, a percent modulation indicator or a calibrated program level meter from which a satisfactory indication of the percentage of modulation of the transmitter can be determined.

(h) That in the event a malfunction of any component of the extension meter system causes inaccurate readings, the pertinent entries required in the station's operating log must be read and logged at the specified intervals from the meters located at the transmitter. If a malfunction affects extended indications of the modulation monitor, the licensee shall, pending repair or replacement, provide other suitable means for monitoring modulation at the extension meter location. When a malfunction is detected, an appropriate entry shall be made in the station's maintenance log, showing the date of occurrence and identifying the indicating device(s) affected. An entry, appropriately dated, shall also be made when repair or replacement is completed. If a malfunctioning component cannot be repaired or replaced within 60 days from the date faulty operation is detected, the Engineer in Charge of the radio district in which the station is located shall be notified and request made for such additional time as is needed to complete the necessary repair or replacement.

(i) That the transmitter is so installed and protected that it is not accessible to persons other than those duly authorized by the licensee.

16. Section 74.584(a) is amended by inserting a new subparagraph (4) and renumbering present subparagraphs (4), (5), (6) and (7) as (5), (6), (7) and (8) to read as follows:

§ 73.584 MAINTENANCE LOG.

(a) \* \* \*

(4) A notation of the results of calibration of each extension meter against its corresponding regular meter, as required by § 73.574. The entry shall include a showing of each meter reading observed prior to recalibration of the extension meters.

\* \* \* \* \*

17. Section 73.660(b) is amended to read as follows:

§ 73.660 STATION AND OPERATOR LICENSES; POSTING OF.

\* \* \* \* \*

(b) The operator license, or Form 759 (Verification of Operator License or Permit), of each station operator employed full-time, part-time or via contract, shall be permanently posted and shall remain posted so long as the operator is employed by the licensee.

(1) The operator licenses shall be posted:

(i) Either at the transmitter or extension meter location; or

(ii) At the principal remote control point, if the station license authorizes operation by remote control.

(2) Posting of operator licenses shall be accomplished by affixing the license to the wall at the posting location, or enclosing in a binder, or inserting in a folder and retaining at the posting location so that the licenses will be readily available and easily accessible at that location.

18. Section 73.661 is amended to read as follows:

§ 73.661 OPERATOR REQUIREMENTS.

One or more operators holding a valid radiotelephone first-class operator license shall be on duty at the place where the transmitting apparatus is located; or where extension meters and monitoring devices for monitoring critical parameters of the transmitter are located, as provided by § 73.678 of this Subpart; or at an authorized remote control point established pursuant to the provisions of § 73.677 of this Subpart; and shall be in actual charge thereof whenever the transmitter is delivering power to the transmitting antenna. The licensed operator on duty and in charge of the television broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for operation of another station or stations in accordance with the class of license which he holds and the rules and regulations governing such other stations. However, such other duties shall in nowise impair or impede the required supervision of the television broadcast transmitter. The transmitter and required monitors and metering equipment, or the required extension meters and monitoring equipment and other required metering equipment, or the controls and required monitoring and metering equipment in an authorized remote control operation, shall be readily accessible to the licensed operator and located sufficiently close to the normal operating location that deviations from normal indications of required instruments can be observed from that location.

19. Section 73.672(a) is amended by inserting a new subparagraph (3) and renumbering present subparagraphs (3), (4), (5), (6), (7) and (8) as (4), (5), (6), (7), (8) and (9), and as amended, will read as follows:

§ 73.672 MAINTENANCE LOG.

(a) \* \* \*

(3) A notation once each week indicating results of calibration of each extension meter against its corresponding regular meter, as required by § 73.678. The entry shall include a showing of each meter reading observed prior to recalibration of the extension meters.

\* \* \* \* \*

20. Section 73.678 is redesignated Section 73.633 and a new Section 73.678 is added to read as follows:

§ 73.678 EXTENSION METERS.

The extension of required meters is permitted, without prior authorization of the Commission, upon compliance with each of the following:

(a) That the transmitter is in the same building as the normal operating location of the station's licensed operator and is no more than one floor above or below the normal operating location.

(b) That the path from the normal operating location to the transmitter is no longer than 100 feet and provides the operator with ready access to the transmitter.

(c) That the required extension meters and monitoring devices are sufficiently close to the operator's normal operating location that deviations from normal indications of such instruments can be observed from that location.

(d) That extension meters shall be installed for monitoring the direct plate voltage and current of the last radio stage of the aural transmitter and the transmission line radio frequency current, voltage, or power of both the aural and the visual transmitters. The installation and operation thereof must comply with the same requirements prescribed by the rules for their corresponding regular meters.

(e) That each of the extension meters required in paragraph (d) of this section shall continuously sample the parameter for which it was installed and constantly indicate that parameter.

(f) That the extension meters required pursuant to paragraph (d) of this section are calibrated against their corresponding regular meters as often as necessary to insure their accuracy, but in no event less than once a week and:

(1) The results of such calibration shall be entered in the station's maintenance log.

(2) In no event shall an extension meter be calibrated against another extension meter or remote meter.

(3) Each extension meter shall be accurate within 2% of the value read on its corresponding regular meter.

(g) That the station's modulation monitor for the aural transmitter and visual monitoring equipment used to determine that the visual signal is maintained in accordance with the requirements of this subpart are installed at the same location as the extension meters: Provided, that, these monitoring devices may be installed at the transmitter if the extension meter location is equipped with: (1) percentage modulation meter and peaking indicating devices which provide continuous and accurate indications of pertinent levels of aural modulation, and (2) suitable equipment for monitoring the visual signal so that it may be maintained in accordance with Commission requirements.

(h) That in the event a malfunction of any component of the extension meter system causes inaccurate readings, the pertinent entries required in the station's operating log must be read and logged at the specified intervals from the meters located at the transmitter. If a malfunction affects extended indications of the aural modulation monitor or the visual monitoring equipment, the licensee shall, pending repair or replacement, provide other suitable means for monitoring modulation at the extension meter location. When a malfunction is detected, an appropriate entry shall be made in the station's maintenance log, showing the date of occurrence and identifying the indicating device(s) affected. An entry, appropriately dated, shall also be made when repair or replacement is completed. If a malfunctioning component cannot be repaired or replaced within 60 days from the date faulty operation is detected, the Engineer in Charge of the radio district in which the station is located shall be notified and request made for such additional time as is needed to complete the necessary repair or replacement.

(i) That the transmitter is so installed and protected that it is not accessible to persons other than those duly authorized by the licensee.

21. Section 73.691(a) is amended to read:

§ 73.691 MODULATION MONITORS.

(a) The licensee of each television broadcasting station shall have in operation, at the transmitter or extension meter location, an approved modulation monitor for the aural transmitter and sufficient monitoring equipment for the visual signal to determine that the signal complies with the requirements of this subpart.

NOTE.—Approved aural modulation monitors are included on the Commission's "Radio Equipment List". Copies of this list are available for inspection at the Commission's offices in Washington, D.C., and at each of its field offices.

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