

**Maintaining Compliance
With the
FCC Rules in
Radio Broadcast Stations**

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Abstract

While compliance with the FCC's rules and regulations that pertain to the operation of radio broadcast stations has long been incumbent upon the licensees of such facilities, in today's enforcement environment, broadcasters have more at risk than ever before. For this, our industry can thank the few whose irresponsible actions have precipitated much closer regulatory scrutiny than we have had in the past. Some, however, is also due to this age of deregulation. The purpose of this paper is to assist radio station managers in understanding and insuring compliance with all the applicable regulations.

1.0 Administrative and Non-Technical

While broadcast radio is a technical industry, much of the compliance burden is of a non-technical nature.

1.1 Authorizations¹

Every radio station has an "instrument of authorization" issued by the FCC. This document gives the station authority to operate and is arguably the most important piece of paper in the station.

The instrument of authorization can take any number of forms. Typically, it is a station license consisting of multiple pages that contain the technical particulars of the operation. If the station is operating pursuant to program test authority following completion of the construction permit (CP), the actual instrument of authorization may be the CP document itself plus copies of subsequent required paperwork filings (FCC Form 302, for example) and any faxes/communications from the FCC. In the case of directional AM or FM stations, specific authority to begin program tests will come in the form of a letter from the FCC. This document is the station's instrument of authorization until a license is granted and issued.

The FCC does not normally issue a new license document when the license is renewed. Rather, it issues a "postcard" with details of the renewal. This postcard becomes part of the station instrument of authorization; without it, the license itself will show to be expired.

Similarly, the FCC does not issue a new license document when a station's callsign is changed. The callsign change is authorized by means of a postcard. Like the renewal postcard, this becomes part of the station instrument of authorization.

In the same way, the FCC does not issue a new license document when a station transfers ownership. A consent to

¹ See 73.1230(a), 73.1635, 73.1670, 73.3533, 73.3536, 73.3537 and 73.3539

assignment document is issued, and this becomes part of the station authorization.

Occasionally, and usually for technical reasons, a station may operate for a time under a Special Temporary Authorization (STA). This document, which will have a specific expiration date, becomes part of the station instrument of authorization.

The instrument of authorization, whatever form it may take, must be readily available and easily accessible at the station's principal control point. While some licensees post their instrument of authorization in the control room, a better, more secure way is to put each page in a separate protective sleeve and place them all in a three-ring binder that is kept at the control point. Other mission-critical documents, such as EAS handbook and chief operator designation, can also be kept in this binder. The binder should be clearly marked on its spine and cover, and all operations personnel should be trained in its location, purpose and importance.

In addition to the main station authorization, *auxiliary* licenses must also be posted or otherwise kept readily available at the control point. These would include the STL license as well as any remote pickup (RPU) licenses.

1.2 Station Logs and Records²

In years past, the FCC required stations to retain original program logs for a period of time. At license renewal time, these documents were used to compile a "composite week" of programming to demonstrate how well the station served its community.

That requirement is long gone,

² See 73.61(a), 73.1225, 73.1226, 73.1590, 73.1800, 73.1820 and 73.1840

and with the exception of the Quarterly Community Issues/Programs List (discussed later in this paper), there is no duty to retain program logs.

The duty remains, however, to generate and retain "operating logs," or what those in the industry once called "transmitter logs". The operating log includes entries pertaining to equipment status, equipment calibration and the recording of tower light outages.

The requirements for what must go into the operating log are few, but those items tend to be compliance hot-buttons for FCC inspectors. Specifically, the operating log must contain a record of any tower light *failures* along with FAA notifications and notations regarding repairs, and a record of EAS activations and tests. It must also contain a record of the removal or reinstallation of certain required equipment (such as EAS encoder/decoder, antenna monitor, etc.).

Operating logs must be checked and signed at least once each week by the *chief operator* (discussed later in this paper). They must be maintained for a period of *two years*.

Other station records which must be maintained include chief operator designations, equipment performance measurements and AM directional antenna field strength measurements (the most recent "proof"). The chief operator designation should be kept with the instrument of authorization. Technical records can be kept with the operating log or separately, just so long as they are readily accessible.

1.3 Chief Operators³

The FCC requires the licensee of each station to designate a *chief operator*

³ See 73.1870

for that station. This designation is to be made in writing with a copy posted with the instrument of authorization.

The chief operator can be the station's full-time chief engineer (or, in the case of non-directional AMs of less than 10 kW power, the station's contract or part-time engineer). However, in many cases, it may be more desirable to designate someone on the operations staff, preferably the supervisor or operations manager, as the chief operator.

The chief operator must review the operating log at least once each week to determine if required entries are being made correctly. He must sign and date the log upon completion of the review.

The chief operator is also responsible for seeing to it that the required inspections and calibrations of the transmission system, monitors, metering and control systems in addition to any equipment performance measurements or other tests as specified in the FCC rules or instrument of authorization are made in a timely manner. While these duties are specifically those of the chief engineer or contract engineer, the chief operator has the responsibility to liaise with the engineer to insure that they have been carried out properly and on time.

1.4 Station Identification⁴

The rules for station identification are simple, but sometimes seem to be a source of confusion. Station identification must be made at the beginning of each period of operation (sign-on and sign-off), and hourly, as close to the top of the hour as feasible, at a natural break in program offerings.

While the FCC's rules don't

specifically give an acceptable window for the hourly station ID, the "natural break in program offerings" language should not be taken as a license to unreasonably delay the ID. A good policy is to air the ID no more than three minutes either side of the top of the hour. This is sometimes a problem where hour-long block programs start on the half hour and span the top of the hour without a break. Nevertheless, the ID must be run, so a break, however brief, must be forced for the ID.

The top-of-the-hour "legal ID" must contain the station's call letters immediately followed by the community of license. Any reference to additional communities must be made *after* the community of license. The name of the licensee or the station's frequency, channel number or both, may be inserted between the call letters and community of license; no other insertion is permissible. Simulcast AM and FM stations may identify jointly.

These ID content requirements do not apply to other than top-of-the-hour "legal IDs". Station IDs run at other times may take other forms.

1.5 Telephone Access to Station⁵

In large metropolitan areas, it is not uncommon for a station's studios to be located in a different local calling area than the community of license. In such cases, a call to the radio station may be a long-distance call for those living in the community of license.

The FCC rules require each station to maintain a *local* or toll-free telephone number within its community of license. This number must be published in the local telephone directory or be available from directory

⁴ See 73.1201

⁵ See 73.1125

assistance.

1.6 Public Inspection File⁶

An important regulatory area in the broadcast industry is that of the *public file*. This is also one of the most misunderstood and most often overlooked items and as such, it generates more violation notices than perhaps any other single requirement.

The purpose of the public file is to provide members of the public a window into the performance of the radio station. The FCC requires the licensee of each station to maintain a public inspection file at the main studio of the station. It must be available for public inspection at any time during normal business hours, which are generally defined as any eight-hour period between 8:00 AM and 6:00 PM, Monday through Friday. It may be in either paper or electronic format.

The contents of the file must be made available within a reasonable time for copying upon request made in person, provided that the requesting party pays the reasonable cost of copying. The licensee must also mail photocopies of documents from the file upon request made in person, by mail, by e-mail or telephone, with all postage paid by the station.

No member of the public or any employee other than the person designated to be responsible for the public file should be allowed unsupervised access to the file. The designated person should search the file and produce the requested document(s), then immediately replace the document in the proper place within the file. Many public file violations have been generated because a member of the

public or an employee removed documents from the file and did not return them.

There are specific requirements for the contents of the public file. These requirements are outlined below. Most items have specific retention times. Periodically (at least once each quarter), the public file should be carefully examined to insure both that all required items have been properly placed in the file and that unnecessary or expired material has been removed. A clean and well-organized public file is essential.

1.601 Authorizations⁷

A copy of the current station instrument of authorization must be maintained in the file. In cases where there have been renewals, call sign changes or ownership changes, those authorizing documents must also be placed in the file.

1.602 Applications⁸

The file must contain copies of all applications, exhibits, letters, initial and final decisions in hearing cases, and other documents pertaining to the station which were filed with the FCC and which are open for public inspection at the FCC. Such documents must be maintained until granted and the appeal period has expired; they should be removed at that point, and the resulting instrument of authorization (CP or license) should be placed in the file.

1.603 Citizen Agreements⁹

A citizen agreement is defined by

⁷ See 73.3526(e)(1)

⁸ See 73.3526(e)(2)

⁹ See 73.3526(e)(3)

⁶ See 73.3526

the FCC rules as a written agreement and a broadcast station licensee or applicant and one or more citizens or a citizen group entered into primarily for non-commercial purposes. It would include those agreements that deal with goals or proposed practices directly or indirectly affecting station operations in the public interest (such as programming and employment).

Commercial stations must maintain copies of all citizen agreements in the file for the term of the agreement.

1.604 Contour Maps¹⁰

A copy of any service contour maps submitted with any application tendered for filing with the FCC, together with any other information in the application showing service contours and/or main studio and transmitter locations, must be maintained in the public file. Contour maps must be maintained for as long as they reflect current, accurate information regarding the station.

1.605 Ownership Reports¹¹

The public file must contain copies of ownership reports and supplemental ownership reports filed with the FCC, including all exhibits, letters and other documents associated with those filings. Such reports must be maintained until a new, complete ownership report is filed with the FCC, at which time a copy of the new report placed in the public file. Currently, ownership reports are filed biennially.

1.606 Political¹²

The licensee of a radio station must place in the public file a complete record of all requests for broadcast time made by or on behalf of legally-qualified candidates for public office, requests for broadcast time that communicates a message relating to any political matter of national political importance, including a legally-qualified candidate, any election to Federal office or a national legislative issue of public importance. The record must include an appropriate notation showing the disposition made by the licensee of such requests, and the charges made (whether or not the request was accepted or rejected), if any, if the request was granted; the date/time the message aired; the class of time that was purchased; and the name of the candidate to which the communication refers. In the case of a request made by or on behalf of a candidate, the record must include the name of the candidate, the authorized committee of the candidate, and the treasurer of the committee. In the case of any other request, the record must include the name of the person purchasing the time, the name, address and phone number of the contact person, and a list of chief executive officers or members of the executive committee or board of directors.

All political requests must be maintained for a period of two years.

If free time was provided for use by or on behalf of such candidates, a record of the free time that was provided must be placed in the file.

¹⁰ See 73.3526(e)(4)

¹¹ See 73.3526(e)(5)

¹² See 73.1943 and 73.3526(e)(6)

1.607 EEO Annual Employment Report Listings¹³

Annually, by the anniversary of the radio station's license renewal application filing deadline, each station or Employment Unit (two or more commonly owned stations in the same market that share at least one employee) with more than 4 full time (at least 30 hours per week) employees must place the following data on its website, if it has one, and in its Local Public Inspection File:

(i) a list of all full time vacancies filled during the preceding year, identified by job title;

(ii) the name, contact person, address and telephone number of each recruitment source used to fill each full-time vacancy, highlighting each source which has requested job vacancy notices;

(iii) a compilation of the total number of persons interviewed for each full-time vacancy during the preceding year and the total number of interviewees referred by each recruitment source;

(iv) a list of the recruitment source that referred the hiree for each full time vacancy; and

(v) a list and brief description of each supplemental EEO recruitment initiative completed during the preceding year.

Several CBC stations have elected the "religious exception" to the EEO rules for some or all of their employees. When a full time hire is subject to a religious qualification, the EEO public file report must contain only (i) and (ii) above, along with information

concerning the recruitment sources that referred the person(s) hired.

All EEO Public File Reports are retained in the public file until the next license renewal application is granted and no longer subject to appeal or reconsideration. The most current report posted to the website replaces the prior report.

Every station files Form 396 with its license renewal application. The Form 396 must be retained in the public file until final action is taken on the next license renewal application.

1.608 The Public and Broadcasting Procedure Manual¹⁴

The FCC publishes a booklet, *The Public and Broadcasting Procedure Manual*, which explains the rights of the public and responsibilities of the broadcaster. A copy of the current edition of this booklet must be maintained at all times in the public file.

The current version of this booklet is dated June 1999. It is available for download from the FCC's website.

1.609 Letters from the Public¹⁵

Licenses of commercial stations must retain all written comments and suggestions received from the public, *including e-mail*, regarding operation of their station unless the writer requested that the correspondence not be made public or the licensee felt that it must be excluded because of the nature of its content (such as a defamatory or obscene letter). E-mail copies may be kept either on the computer or on paper, but may only be kept in electronic form if a

¹³ See 73.2080, 73.3526(e)(7) and 73.3612

¹⁴ See 73.3526(e)(8)

¹⁵ See 73.1202 and 73.3526(e)(9)

means is provided for the public to view them in that form. The station may exclude personal email sent to employees or to an unpublicized email address. Letters must be retained for three years from the date received.

1.610 Investigative Material¹⁶

Any material having a substantial bearing on a matter which is the subject of an FCC investigation or complaint to the FCC of which the licensee has been advised must be placed in the public file.

An example of such material would be correspondence, documents, transcripts, tapes and the like pertaining to an indecency/obscenity complaint.

Such material must be retained until the licensee is notified in writing that the material may be discarded.

1.611 Quarterly Issues/Programs Lists¹⁷

The licensee of each broadcast station must maintain a list of programs that have provided the station's most significant treatment of community issues during the *preceding* calendar quarter. Issues-program lists must be filed by the tenth day of the succeeding calendar quarter (e.g. January 10, April 10, July 10, & October 10).

The issues-programs lists must cover 5 to 10 separate issues quarterly and include a brief narrative describing what issues were given significant treatment and the programming that provided this treatment.

The description of the programs must include at a minimum the time, date, duration and title of each program in which the issue was treated.

Issues-programs lists must be retained until the next license renewal application has been granted and is no longer subject to appeal.

1.612 Time Brokerage Agreements¹⁸

The public file must contain a copy of every agreement or contract involving time brokerage of the licensee's station, or of another station by the licensee. Confidential or proprietary information may be removed. Time brokerage agreements must be retained in the public inspection file as long as the agreement is in force.

1.613 Joint Sales Agreements¹⁹

If they exist, the licensee of each broadcast station must place in the public file a copy of the agreement for the joint sale of advertising time involving the station, whether the agreement involves stations in the same markets or in differing markets, with confidential or proprietary information redacted where appropriate.

1.7 Main Studio²⁰

Each station must maintain a *main studio*. There are specific requirements that must be met for a location to be defined as a station's main studio. A main studio must be located within the community of license *or* within 25 miles of the center of the community of license *or* within the city-grade contour of the station or any station licensed to the community.

In additions to these defining requirements, there are additional

¹⁶ See 73.3526(e)(10)

¹⁷ See 73.3526(e)(12)

¹⁸ See 73.3526(e)(14)

¹⁹ See 73.3526(e)(16)

²⁰ See 73.1125 and 73.1225(a)

requirements. Each station must maintain a presence at the main studio during normal business hours so that members of the public can reach responsible station personnel and access the public file. This “presence” has been defined in FCC policy and case law to include at least two full-time (or *full-time equivalent*) personnel, at least one of whom must be management level.

A main studio presence makes the station available for FCC inspection at any time during normal business hours (as defined above).

2.0 Antenna Structures

The FCC maintains an Antenna Survey Branch that registers and tracks antenna structures used to support broadcast and other antennas. While any antenna structure *can* be registered (and there are good reasons to register a structure), only those that are greater than 200 feet in height or that may interfere with the flight path of a nearby airport are required to be studied by the FAA and registered with the FCC.

2.1 Antenna Registration²¹

Tower owners are required to register their non-exempt tower structures with the FCC. All proposed and altered antenna structures must be registered prior to construction or alteration. For licensees this means that the tower must be registered before a new construction permit or license modification involving the tower or antenna is granted.

Licensees should be familiar with the painting and lighting specifications shown on their station authorization. In the event that the structure owner is

unable to maintain the prescribed painting and lighting, e.g. in cases including but not limited to abandonment, negligence, or bankruptcy, the FCC would require that each tenant licensee on the structure undertake efforts to maintain painting and/or lighting. Additionally, if the licensee has reason to believe that the structure is not in compliance or that the owner is not carrying out its responsibility to maintain the structure, the licensee must immediately notify the owner, notify the site management company (if applicable), notify the FCC, and make a diligent effort to ensure that the antenna structure is brought into compliance.

Once a tower (or towers in the case of an AM directional station) is registered, then the registration number for each tower is to be displayed in a conspicuous place that is readily visible near the base of the tower. Materials used to display the registration number must be weather-resistant and of sufficient size to be easily seen.

The tower owner must provide each tenant on the tower a copy of the Antenna Structure Registration document.

2.2 Antenna Specifics

The construction permit, station license, or other instrument of authorization provides authority for the station to operate under a specific set of operating parameters. The licensee must thoroughly review the current station authorization, and where applicable the structure registration, to compare the listed specifications to the location, height, etc. that is actually used by this station. Local management should be familiar with the operating parameters.

²¹ See 17.4

2.3 Tower Light Observations²²

The FCC rules require that the lighting on tower structures be observed at least once every 24 hours either visually or by observing an automatic indicating device. As an alternative, the licensee or tower owner may provide and maintain an automatic alarm system to constantly monitor the lighting on a structure.

All automatic or mechanical control devices, indicators and alarm systems must be inspected at intervals not to exceed three months. The results of these inspections must be entered into the operating log.

2.4 Painting/Lighting²³

The licensee must make certain that the number and placement of paint bands and lighting match exactly with that shown on the station authorization and/or tower registration. The licensee/tower owner should also be aware of the requirement to clean or repaint tower structures as often as necessary to maintain good visibility to aircraft.

2.5 FAA Notifications²⁴

The tower owner/licensee is to notify the nearest Federal Aviation Administration (FAA) Flight Service Station within 30 minutes of the observation of an improper functioning or extinguished top steady burning light or any flashing obstruction light regardless of its position on the structure. Such improper functioning

beacons include non-lighted beacons as well as those that are lighted, but non-flashing. Notification is to also be made immediately to the FAA once the beacon or steady burning top light is returned to service. Notification is not required when side light outages are observed.

2.6 Station Logs²⁵

For all stations operating from a tower owned by the licensee and which have authorizations that specify tower lighting, the licensee/tower owner is to make entries in the station operating log concerning any observed or otherwise known extinguishment or improper functioning of any tower light regardless of its position on the tower. This notation should include the particulars of any FAA NOTAMs issued.

2.7 Fencing²⁶

For stations utilizing antenna towers having radio frequency (RF) potential at the base (AM series fed, folded unipole, and insulated base antennas), all towers are to be enclosed within an effective locked fence or other enclosure. Fencing must be capable of preventing access to small children or livestock. The design of the fence must be such that a concerted effort is made to gain access to the tower.

This is an area of particular concern to the FCC, since it involves safety of life. As such, it is an area of frequent enforcement action. Broadcasters must maintain their base fences and see to it that they remain secure and locked.

While there is no duty to fence the bases of FM towers (unless the RF

²² See 17.47

²³ See Part 17

²⁴ See 17.48

²⁵ See 17.49, 73.1213 and 73.1820(a)(1)(i)

²⁶ See 73.49

power density in the vicinity of the base exceeds the uncontrolled/public limit), it is nevertheless wise to do so. Towers present what is known in legal circles as an “attractive nuisance”. Failure to secure the base of any such tower could, in the event that some unauthorized person climbs the tower and is hurt or killed, be construed as negligence on the part of the tower owner,

3.0 Emergency Alert System (EAS)

In 1994, the Emergency Broadcast System (EBS –which some would argue was a relic of the cold war) was replaced with the Emergency Alert System (EAS). The new system offered a much wider range of options than EBS, and with its two-source monitoring, eliminated the “broken chain” phenomenon that so often caused EBS to fail.

While EAS is a “voluntary” system, stations that do not participate must go off the air during an activation. The rationale here is to force listeners to a station that does participate. Even non-participating stations must install and maintain EAS equipment, so there is little to be gained by being non-participating.

3.1 Participating vs. Non-Participating²⁷

All CBC stations are *participating* and as such must follow normal procedures for Emergency Activation Notification (EAN) events.

²⁷ See 11.19, 11.54, 11.55

3.2 Handbook²⁸

All stations are to maintain at *each* control point a copy of the *EAS Operating Handbook* and a copy of the *State EAS Plan*.

One of the best places to keep the handbook and state plan is in the same binder as the instrument of authorization, chief operator designation et al.

3.3 EAS Decoder/Monitor and Encoder/Generator²⁹

All AM and FM stations must have equipment installed and capable of decoding, either manually or automatically, the digitally-encoded EAS protocol while monitoring at least two assigned EAS stations according to the state plan. Stations must also have equipment capable of generating the EAS protocol so that the EAS signal may be broadcast to other receiving stations.

This equipment must be operational during all hours of broadcast operation. Manually operated equipment must be located so that operators, at their normal duty stations, can be alerted immediately when EAS messages are received. Only one EAS decoder/encoder is required for combined facilities operating from one common location, such as a co-owned and co-located AM and FM studio.

3.4 EAS Tests³⁰

All stations are to conduct required weekly tests (RWT) of the EAS header and End of Message (EOM) codes a minimum of once a week at

²⁸ See 11.15

²⁹ See 11.31, 11.33, 11.34, 11.35 and 11.52

³⁰ See 11.61

random days and times, which can include any time of the day or night.

Since all stations must monitor at least two sources, an RWT should be received each week from *each* of the two sources. If the station is not operating at the time an RMT is scheduled, then the licensee shall log that they were off the air and an RWT should be aired some time during the week after operation of the station resumes. This is often the case with daytime-only AM stations.

Operators should know how to generate a test or otherwise perform in the event of an actual emergency. FCC inspectors often ask for a demonstration. It is perfectly acceptable for operators to refer to a readily-available checklist or instruction sheet in this process, but they must otherwise be generally proficient in the proper operation of the equipment.

3.5 Station Logs³¹

All stations are to maintain a station log containing entries pertaining to each test of the Emergency Alert System that is received or initiated by the station. EAS test entries must be made in the station log either manually by responsible broadcast station staff, or by an automatic device.

Stations may keep EAS test data in a special EAS log which can be maintained at any convenient location; however, such log must be considered a part of the official station log. The easiest way to keep the EAS log is to staple the tape printouts from the EAS encoder/decoder to the respective page in the operating log. A separate notation should also be made in the operating log of the test or activation in case the paper tape becomes detached and lost.

The EAS log is also to contain entries which adequately describe the reason why any test activation was not received and any corrective action taken. Since monthly tests conducted on even numbered months are to occur between local sunset and 8:30 AM, then daytime only AM stations may not receive some of the tests. In this case the station will still be required to determine when the test was sent and log the reason why the station did not received the test.

Finally, the log must contain notations when EAS equipment is removed from or returned to service, with a brief notation for the reason for such removal.

4.0 Technical

The radio broadcast industry is a technical business. Transmitters, antennas and towers are the means by which we convey our product.

The FCC's technical rules for radio were written for the purpose of preventing interference between stations and between broadcast radio stations and other communications services. International treaties are also involved, because radio signals do not observe borders. Because of the potential for interference, the FCC pays close attention to the technical parameters of radio stations.

While most items in this section are taken care of by the engineering department, managers should nevertheless be generally familiar with the requirements and periodically require engineers to produce evidence or other written documentation of compliance.

³¹ See 11.35(a), 11.51(j), 11.52(e), 11.61(b) and 73.1820(a)(1)(iii)

4.1 Power³²

All stations are to maintain antenna input power between 90% and 105% of that authorized. The power is to be maintained as near as practicable to the station's authorized power.

4.2 Frequency³³

AM stations must maintain their carrier frequencies within 20 Hz of the assigned value. FM stations must maintain their carrier frequencies within 2 kHz of the assigned value. FM pilot frequencies must be maintained within 2 Hz of the nominal 19 kHz value.

4.3 Modulation³⁴

AM stations must maintain their modulation at or below 100% on negative peaks and at or below 125% on positive peaks. FM stations must maintain their modulation at or below 100% at all times, unless subcarriers are employed.

4.4 Transmitter Metering & Control³⁵

All stations are to maintain sufficient metering to determine compliance with power, modulation and mode of operation. In addition, where applicable, stations may need monitoring devices to determine compliance with antenna tower lighting. AM directional stations have the further requirement to maintain sufficient metering to monitor parameters of the AM directional antenna system. All stations must have

personnel which maintain the ability to turn off the transmitter.

The licensee must establish monitoring procedures and schedules for the station. Monitoring procedures and schedules must enable the licensee to determine compliance with operating power, modulation levels, AM modes of operation, and where applicable with antenna tower lighting and AM directional antenna parameters. Licensees should be able to provide upon request made by the FCC, the monitoring procedures and schedules they have established for each station.

Operators must know how to control the transmitter and take readings of metered parameters. FCC inspectors often insist on a demonstration.

4.5 Calibration³⁶

The licensee must conduct periodic complete inspections of the transmitting system, all required monitors and automatic logging devices to ensure proper station operation. Monitors and automatic logging devices must be periodically calibrated so as to provide reliable indications of transmitter operating parameters with a known degree of accuracy. The determination as to how frequent the complete inspection and calibrations are to occur is up to the licensee. The licensee should make certain that the date of calibration of each device is entered in the station log along with any other resulting actions associated with the calibration, such as replacement of a meter or other device. The licensee may keep calibration data in a special calibration log, however, such log must be considered a part of the official station log and as such must be made

³² See 73.51 and 73.1560

³³ See 73.1545

³⁴ See 73.1570

³⁵ See 73.1350

³⁶ See 73.1350(c), 73.1580 and 73.1820(a)(2)(iii)

available upon request.

4.6 AM Directional Tolerances³⁷

The FCC has set specific tolerances for AM directional patterns. When parameters are allowed to drift outside those limits, it is likely that interference to one or more co- or adjacent-channel stations will occur.

Relative amplitudes (“ratios”) must be maintained within $\pm 5\%$, and relative phases must be maintained within $\pm 3^\circ$ of the values specified in the instrument of authorization.

In addition to these tolerances, each directional AM station has one or more specified *monitoring points* with an absolute field intensity limit specified in the instrument of authorization.

All monitoring point field strength measurements must be made during daytime hours so that skywave signals do not distort the measured values. As such, it will be necessary from time to time to switch to the nighttime pattern and power for the purpose of measuring the nighttime monitoring point field strengths and making any required nighttime pattern adjustments.

As with calibration (discussed above), no specific interval is specified for the checking of AM directional pattern parameters or monitoring point field strengths. Rather, the interval is left up to the licensee, who must check the parameters *as often as necessary* to maintain compliance. It is up to the engineer in charge of each directional array to know the array’s “character,” whether it is stable or prone to drift, and what effect environmental changes have on the parameters and monitoring point field strengths. He can then anticipate

changes and make adjustments as necessary to maintain compliance.

4.7 Occupied Bandwidth³⁸

Once each year at intervals not to exceed 14 months, the occupied bandwidth of each AM station must be measured. This can be done with a spectrum analyzer or using a “splatter monitor” specially made for this purpose. The results of the measurements can be kept separately or entered into the station log.

This is one of the most often overlooked technical requirements for AM stations. As such, it should be given special attention.

4.8 Directional Proofs³⁹

Each AM station employing a directional antenna system must “prove” that the proper pattern is produced by the directional antenna parameters submitted (and specified in the instrument of authorization). This is achieved by means of a *directional proof-of-performance*.

A *full proof* is required when a directional antenna system is originally constructed. A copy of the documentation of the most recent full proof must be retained and made available at the station. It is most common to maintain this proof copy at the transmitter site, but it is wise to maintain another copy at the studio as well.

4.9 Modes of Operation

The instrument of authorization for an AM station may specify different

³⁷ See 73.61 and 73.62

³⁸ See 73.44

³⁹ See 73.151 and 73.154

modes of operation for day and night. The instrument will contain a table of sunrise and sunset times along with the operating parameters for both the day and night modes.

The station licensee is responsible for insuring that the correct mode of operation is employed at the correct time. That would include monitoring by some means to verify that the day or night mode of operation has been selected at the appropriate time.

With the proliferation of automated remote control systems which perform mode switches automatically, licensees more and more rely completely on such systems to make the required changes. Such systems do, however, fail from time to time, and the failure notwithstanding, the licensee remains responsible for proper pattern switching.

Because this is an area of great potential for interference, it is also an area of elevated enforcement activity. Skywave signals can travel thousands of miles, and a station's failure to switch to its nighttime mode at the proper time can seriously degrade a distant co-channel station's coverage area. The licensee of the distant station will often complain to the FCC, initiating an investigation and enforcement action against the offending station.

It is most prudent to have station personnel confirm, on a daily basis, mode changes.

5.0 Conclusion

The burden of compliance with

the FCC's many rules rests squarely on the shoulders of each licensee. As a public trustee, no licensee can plead ignorance when he is caught violating a published FCC rule (and *all* FCC rules are published).

Further, license renewal and other applications require certain unqualified certifications of blanket compliance with certain sections of the FCC rules. Even inadvertent violations that were caught and corrected must trigger a negative response to those certifications, requiring further documentation and explanation. It is better by far to maintain compliance as a matter of daily business than to have to own up to such violations at renewal time.

In the event that a licensee is caught in a violation, the forfeiture is often mitigated if the licensee can demonstrate a pattern of compliance. Evidence of *proactive* compliance (rather than the *prima facie* evidence of compliance produced by not being caught) carries much more weight with regulators. To that end, document, document, document.

Proactive compliance includes being aware of deficiencies and taking prompt steps to comply before the inspection, not after.

In the end, we are public trustees. By making compliance a habit, we show ourselves trustworthy. Beyond that, protecting the license protects our livelihood.