

**§ 73.1690 Modification of transmission systems.**

The following procedures and restrictions apply to licensee modifications of authorized broadcast transmission system facilities.

(a) The following changes are prohibited:

(1) Those that would result in the emission of signals outside of the authorized channel exceeding limits prescribed for the class of service.

(2) Those that would cause the transmission system to exceed the equipment performance measurements prescribed for the class of service (AM, § 73.44; FM, §§ 73.317, 73.319, and 73.322; TV and Class A TV, §§ 73.682 and 73.687).

(b) The following changes may be made only after the grant of a construction permit application on FCC Form 301 for commercial stations or Form 340 for noncommercial educational stations:

(1) Any construction of a new tower structure for broadcast purposes, except for replacement of an existing tower with a new tower of identical height and geographic coordinates.

(2) Any change in station geographic coordinates, including coordinate corrections of more than 3 seconds latitude and/or 3 seconds longitude. FM and TV directional stations must also file a construction permit application for any move of the antenna to another tower structure located at the same coordinates.

(3) Any change which would require an increase along any azimuth in the composite directional antenna pattern of an FM station from the composite directional antenna pattern authorized (see § 73.316), or any increase from the authorized directional antenna pattern for a TV broadcast (see § 73.685) or Class A TV station (see § 73.6025).

(4) Any change in the directional radiation characteristics of an AM directional antenna system. *See* § 73.45 and § 73.150.

(5) Any decrease in the authorized power of an AM station or the ERP of a TV or Class A TV station, or any decrease or increase in the ERP of an FM commercial station, which is intended for compliance with the multiple ownership rules in § 73.3555.

(6) For FM noncommercial educational stations, any of the following:

(i) Any increase in the authorized maximum ERP, whether horizontally or vertically polarized, for a noncommercial educational FM station operating on Channels 201 through 220, or a Class D FM station operating on Channel 200.

(ii) For those FM noncommercial educational stations on Channels 201 to 220, or a Class D FM station operating on Channel 200, which are within the separation distances specified in Table A of § 73.525 with respect to a Channel 6 television station, any increase in the horizontally or vertically polarized ERP from the presently authorized ERP.

(iii) For those FM noncommercial educational stations on Channels 201 through 220 which are located within the separation distances in § 73.525 with respect to a Channel 6 television station, or a Class D FM station operating on Channel 200, any decrease in the presently authorized horizontal effective radiated power which would eliminate the horizontal ERP to result in use of vertical ERP only.

(iv) For those FM noncommercial educational stations which employ separate antennas for the horizontal ERP and the vertical ERP, mounted at different heights, the station may not increase or decrease either the horizontal ERP or the vertical ERP without a construction permit.

(7) Any increase in the authorized ERP of a television station, Class A television station, FM commercial station, or noncommercial educational FM station, except as provided for in § 73.1690(c)(4), (c)(5), or (c)(7), or in § 73.1675(c)(1) in the case of auxiliary facilities.

(8) A commercial TV or noncommercial educational TV station operating on Channels 14 or Channel 69 or a Class A TV station on Channel 14 may increase its horizontally or vertically polarized ERP only after the grant of a construction permit. A television or Class A television station on Channels 15 through 21 within 341 km of a co-channel land mobile operation, or 225 km of a first-adjacent channel land mobile operation, must also obtain a construction permit before increasing

the horizontally or vertically polarized ERP (see part 74, §74.709(a) and (b) for tables of urban areas and corresponding reference coordinates of potentially affected land mobile operations).

(9) Any change in the community of license, where the proposed new facilities are the same as, or would be mutually exclusive with, the licensee's or permittee's present assignment.

(c) The following FM, TV and Class A TV station modifications may be made without prior authorization from the Commission. A modification of license application must be submitted to the Commission within 10 days of commencing program test operations pursuant to §73.1620. With the exception of applications filed solely pursuant to paragraphs (c)(6), (c)(9), or (c)(10) of this section, the modification of license application must contain an exhibit demonstrating compliance with the Commission's radio frequency radiation guidelines. In addition, except for applications solely filed pursuant to paragraphs (c)(6) or (c)(9) of this section, where the installation is located within 3.2 km of an AM tower or is located on an AM tower, an exhibit demonstrating compliance with §73.1692 is also required.

(1) Replacement of an omnidirectional antenna with one of the same or different number of antenna bays, provided that the height of the antenna radiation center is not more than 2 meters above or 4 meters below the authorized values. Any concurrent change in ERP must comply with §73.1675(c)(1), 73.1690(4), (c)(5), or (c)(7). Program test operations at the full authorized ERP may commence immediately upon installation pursuant to §73.1620(a)(1).

(2) Replacement of a directional FM antenna, where the measured composite directional antenna pattern does not exceed the licensed composite directional pattern at any azimuth, where no change in effective radiated power will result, and where compliance with the principal coverage requirements of §73.315(a) will be maintained by the measured directional pattern. The antenna must be mounted not more than 2 meters above or 4 meters below the authorized values. The

modification of license application on Form 302-FM to cover the antenna replacement must contain all of the data in the following sections (i) through (v). Program test operations at one half (50%) power may commence immediately upon installation pursuant to §73.1620(a)(3). However, if the replacement directional antenna is an exact replacement (*i.e.*, no change in manufacturer, antenna model number, AND measured composite antenna pattern), program test operations may commence immediately upon installation at the full authorized power.

(i) A measured directional antenna pattern and tabulation on the antenna manufacturer's letterhead showing both the horizontally and vertically polarized radiation components and demonstrating that neither of the components exceeds the authorized composite antenna pattern along any azimuth.

(ii) Contour protection stations authorized pursuant to §73.215 or §73.509 must attach a showing that the RMS (root mean square) of the composite measured directional antenna pattern is 85% or more of the RMS of the authorized composite antenna pattern. See §73.316(c)(9). If this requirement cannot be met, the licensee may include new relative field values with the license application to reduce the authorized composite antenna pattern so as to bring the measured composite antenna pattern into compliance with the 85 percent requirement.

(iii) A description from the manufacturer as to the procedures used to measure the directional antenna pattern. The antenna measurements must be performed with the antenna mounted on a tower, tower section, or scale model equivalent to that on which the antenna will be permanently mounted, and the tower or tower section must include transmission lines, ladders, conduits, other antennas, and any other installations which may affect the measured directional pattern.

(iv) A certification from a licensed surveyor that the antenna has been oriented to the proper azimuth.

(v) A certification from a qualified engineer who oversaw installation of

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the directional antenna that the antenna was installed pursuant to the manufacturer's instructions.

(3) A directional TV on Channels 2 through 13 or 22 through 68 or a directional Class A TV on Channels 2 through 13 or 22 through 51, or a directional TV or Class A TV station on Channels 15 through 21 which is in excess of 341 km (212 miles) from a co-channel land mobile operation or in excess of 225 km (140 miles) from a first-adjacent channel land mobile operation (see part 74, § 74.709(a) and (b) for tables of urban areas and reference coordinates of potentially affected land mobile operations), may replace a directional TV or Class A TV antenna by a license modification application, if the proposed horizontal theoretical directional antenna pattern does not exceed the licensed horizontal directional antenna pattern at any azimuth and where no change in effective radiated power will result. The modification of license application on Form 302-TV or Form 302-CA must contain all of the data set forth in § 73.685(f) or § 73.6025(a), as applicable.

(4) Commercial and noncommercial educational FM stations operating on Channels 221 through 300 (except Class D), NTSC TV stations operating on Channels 2 through 13 and 22 through 68, Class A TV stations operating on Channels 2 through 13 and 22 through 51, and TV and Class A TV stations operating on Channels 15 through 21 that are in excess of 341 km (212 miles) from a cochannel land mobile operation or in excess of 225 km (140 miles) from a first-adjacent channel land mobile operation (see part 74, § 74.709(a) and (b) for tables of urban areas and reference coordinates of potentially affected land mobile operations), which operate omnidirectionally, may increase the vertically polarized effective radiated power up to the authorized horizontally polarized effective radiated power in a license modification application. Noncommercial educational FM licensees and permittees on Channels 201 through 220, that do not use separate antennas mounted at different heights for the horizontally polarized ERP and the vertically polarized ERP, and are located in excess of the separations from a Channel 6 television sta-

tion listed in Table A of § 73.525(a)(1), may also increase the vertical ERP, up to (but not exceeding) the authorized horizontally polarized ERP via a license modification application. Program test operations may commence at full power pursuant to § 73.1620(a)(1).

(5) Those Class A FM commercial stations which were permitted to increase ERP pursuant to MM Docket No. 88-375 by a modification of license application remain eligible to do so, provided that the station meets the requirements of § 73.1690 (c)(1) and is listed on one of the Public Notices as authorized to increase ERP, or by a letter from the Commission's staff authorizing the change. These Public Notices were released on November 3, 1989; November 17, 1989; December 8, 1989; March 2, 1990; and February 11, 1991. The increased ERP must comply with the multiple ownership requirements of § 73.3555. Program test operations may commence at full power pursuant to § 73.1620(a)(1).

(6) FM contour protection stations authorized pursuant to § 73.215 which have become fully spaced under § 73.207 may file a modification of license application to delete the § 73.215 contour protection designation with an exhibit to demonstrate that the station is fully spaced in accordance with § 73.207. The contour protection designation will be removed upon grant of the license application. Applications filed under this rule section will be processed on a first come / first served basis with respect to conflicting FM commercial minor change applications and modification of license applications (including those filed pursuant to § 73.1690 (b) and (c)(6) and (c)(7)).

(7) FM omnidirectional commercial stations, and omnidirectional non-commercial educational FM stations operating on Channels 221 through 300 (except Class D), which are not designated as contour protection stations pursuant to § 73.215 and which meet the spacing requirements of § 73.207, may file a license modification application to increase ERP to the maximum permitted for the station class, provided that any change in the height of the antenna radiation center remains in accordance with § 73.1690(c)(1). Program test operations may commence at full

power pursuant to § 73.1620(a)(1). All of the following conditions also must be met before a station may apply pursuant to this section:

(i) The station may not be a “grandfathered” short-spaced station authorized pursuant to § 73.213 or short-spaced by a granted waiver of § 73.207;

(ii) If the station is located in or near a radio quiet zone, radio coordination zone, or a Commission monitoring station (see § 73.1030 and § 0.121(c)), the licensee or permittee must have secured written concurrence from the affected radio quiet zone, radio coordination zone, or the Commission’s Compliance and Information Bureau in the case of a monitoring station, to increase effective radiated power PRIOR to implementation. A copy of that concurrence must be submitted with the license application to document that concurrence has been received;

(iii) The station does not require international coordination as the station does not lie within the border zones, or clearance has been obtained from Canada or Mexico for the higher power operation within the station’s specified domestic class and the station complies with § 73.207(b)(2) and (3) with respect to foreign allotments and allocations;

(iv) The increased ERP will not cause the station to violate the multiple ownership requirements of § 73.3555.

(8) FM commercial stations and FM noncommercial educational stations may decrease ERP on a modification of license application provided that exhibits are included to demonstrate that all six of the following requirements are met:

(i) Commercial FM stations must continue to provide a 70 dBU principal community contour over the community of license, as required by § 73.315(a). Noncommercial educational FM stations must continue to provide a 60 dBU contour over at least a portion of the community of license. The 60 and 70 dBU contours must be predicted by use of the standard contour prediction method in § 73.313(b), (c), and (d).

(ii) For both commercial FM and noncommercial educational FM stations, the location of the main studio remains within the 70 dBU principal

community contour, as required by § 73.1125, or otherwise complies with that rule. The 70 dBU contour must be predicted by use of the standard contour prediction method in § 73.313(b), (c), and (d).

(iii) For commercial FM stations only, there is no change in the authorized station class as defined in § 73.211.

(iv) For commercial FM stations only, the power decrease is not necessary to achieve compliance with the multiple ownership rule, § 73.3555.

(v) Commercial FM stations, noncommercial educational FM stations on Channels 221 through 300, and noncommercial educational FM stations on Channels 200 through 220 which are located in excess of the distances in Table A of § 73.525 with respect to a Channel 6 TV station, may not use this rule to decrease the horizontally polarized ERP below the value of the vertically polarized ERP.

(vi) Noncommercial educational FM stations on Channels 201 through 220 which are within the Table A distance separations of § 73.525, or Class D stations on Channel 200, may not use the license modification process to eliminate an authorized horizontally polarized component in favor of vertically polarized-only operation. In addition, noncommercial educational stations operating on Channels 201 through 220, or Class D stations on Channel 200, which employ separate horizontally and vertically polarized antennas mounted at different heights, may not use the license modification process to increase or decrease either the horizontal ERP or vertical ERP without a construction permit.

(9) The licensee of an AM, FM, or TV commercial station may propose to change from commercial to noncommercial educational on a modification of license application, provided that the application contains completed Sections II and IV of FCC Form 340. In addition, a noncommercial educational AM licensee, a TV licensee on a channel not reserved for noncommercial educational use, or an FM licensee on Channels 221 to 300 (except Class D FM) on a channel not reserved for noncommercial educational use, may apply to change from educational to

commercial via a modification of license application, and no exhibits are required with the application. The change will become effective upon grant of the license application.

(10) Replacement of a transmission line with one of a different type or length which changes the transmitter operating power (TPO) from the authorized value, but not the ERP, must be reported in a license modification application to the Commission.

(11) Correction of geographic coordinates where the change is 3 seconds or fewer in latitude and/or 3 seconds or fewer in longitude, provided there is no physical change in location and no other licensed parameters are changed. The correction of coordinates may not result in any new short spacings or increases in existing short spacings.

(d) The following changes may be made without authorization from the FCC, however informal notification of the changes must be made according to the rule sections specified:

(1) Change in studio location within the principal community contour. See § 73.1125.

(2) Commencement of remote control operation pursuant to §§ 73.1400 and 73.1410.

(3) Modification of an AM directional antenna sampling system. See § 73.68.

(e) Any electrical and mechanical modification to authorized transmitting equipment that is not otherwise restricted by the preceding provisions of this section, may be made without FCC notification or authorization. Equipment performance measurements must be made within ten days after completing the modifications (See § 73.1590). An informal statement, diagram, etc., describing the modification must be retained at the transmitter site for as long as the equipment is in use.

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EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 73.1690, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.fdsys.gov](http://www.fdsys.gov).

**§ 73.1692 Broadcast station construction near or installation on an AM broadcast tower.**

Where a broadcast licensee or permittee proposes to mount a broadcast antenna on an AM station tower, or where construction is proposed within 0.8 km of an AM nondirectional tower or within 3.2 km of an AM directional station, the broadcast licensee or permittee is responsible for ensuring that the construction does not adversely affect the AM station, as follows:

(a) *Installations on an AM nondirectional tower.* During installation of the broadcast antenna and related equipment, the AM station shall determine operating power by the indirect method (see § 73.51). Upon the completion of the installation, antenna impedance measurements on the AM antenna shall be made, and, prior to or simultaneously with the filing of the license application covering the broadcast station installation, an application on FCC Form 302-AM (including a tower sketch of the installation) shall be filed with the Commission for the AM station to return to direct power measurement.

(b) *Installations on an AM directional array.* Prior to commencing construction, the broadcast permittee or licensee shall notify the AM station so that, if necessary, the AM station may determine operating power by the indirect method (see § 73.51) and request special temporary authority pursuant to § 73.1635 to operate with parameters at variance in order to maintain monitoring point field strengths within authorized limits. Both prior to the commencement of construction and upon completion of construction, a partial proof of performance (as defined by § 73.154) shall be conducted to establish that the AM array has not been adversely affected. Prior to or simultaneously with filing of the license application to cover the broadcast station construction, the results of the partial proof of performance shall be filed with the Commission on Form 302-AM.

(c) *Tower erections or modifications within 0.8 km of an AM nondirectional tower.* Prior to commencing the construction of tower modifications, or the erection of a new tower, within 0.8 km of an AM nondirectional tower, the