(ii) The ratio in dB of the field strength of the low power TV, TV translator or TV booster station to that of the digital Class A TV station must meet the requirements specified in paragraph (d) of §74.706, calculated using the propagation methods specified in paragraph (c) of that section.

[65 FR 30012, May 10, 2000]

§74.709 Land mobile station protection.

(a) Stations in the Land Mobile Radio Service, using the following channels in the indicated cities will be protected from interference caused by low power TV or TV translator stations, and low power TV and TV translator stations must accept any interference from stations in the land mobile service operating on the following channels:

City	Channels	Coordinates	
		Latitude	Longitude
Boston, MA	14, 16	42°21′24″	071°03′24″
Chicago, IL	14, 15	41°52′28″	087°38′22″
Cleveland, OH	14, 15	41°29′51″	081°41′50″
Dallas, TX	16	32°47′09″	096°47′37″
Detroit, MI	15, 16	42°19′48″	083°02′57″
Houston, TX	17	29°45′26″	095°21′37″
Los Angeles, CA	14, 16, 20	34°03′15″	118°18′28″
Miami, FL	14	25°46′37″	080°11′32″
New York, NY	14, 15, 16	40°45′06″	073°59′39″
Philadelphia, PA	19, 20	39°56′58″	075°09′21″
Pittsburgh, PA	14, 18	40°26′19″	080°00′00″
San Francisco, CA	16, 17	37°46′39″	122°24′40″
Washington, DC	17, 18	38°53′51″	077°00′33″
San Diego, CA	15	32°41′48″	116°56′10″
Waterbury, CT	20	41°31′02″	073°01′00″
Washington, DC	14	38°57′17″	077°00′17″
Washington, DC	20	38°57′49″	077°06′18″
Champaign, IL	15	40°04′11″	087°54′45″
Jacksonville, IL	14	39°45′52″	090°30′29″
Ft. Wayne, IN	15	41°05′35″	085°10′42″
South Bend, IN	16	41°36′20″	086°12′44″
Salisbury, MD	16	38°24′15″	075°34′45″
Mt. Pleasant, MI	14	43°34′24″	084°46′21″
Hanover, NH	15	43°42′30″	072°09′16″
Canton, OH	17	40°51′04″	081°16′37″
Cleveland, OH	19	41°21′19″	081°44′24″
Oxford, OH	14	39°30′26″	084°44′09″
Zanesville, OH	18	39°55′42″	081°59′06″
Elmira-Corning, NY	18	42°06′20″	076°52′17″
Harrisburg, PA	21	40°20′44″	076°52′09″
Johnstown, PA	19	40°19′47″	078°53′45″
Lancaster, PA	15	40°15′45″	076°27′49″
Philadelphia, PA	17	40°02′30″	075°14′24″
Pittsburgh, PA	16	40°26′46″	079°57′51″
Scranton, PA	16	41°10′58″	075°52′21″
Parkersburg, WV	15	39°20′50″	081°33′56″
Madison, WI	15	43°03′01″	089°29′15″

(b) The protected contours for the land mobile radio service are 130 kilometers from the above coordinates, except where limited by the following:

(1) If the land mobile channel is the same as the channel in the following list, the land mobile protected contour excludes the area within 145 kilometers of the corresponding coordinates from list below. Except if the land mobile channel is 15 in New York or Cleveland or 16 in Detroit, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

(2) If the land mobile channel is one channel above or below the channel in the following list, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

(c) A low power TV or TV translator station application will not be accepted if it specifies a site that is within the protected contour of a co-channel or first adjacent channel land mobile assignment.

(d) The low power TV or TV translator station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) The field strength is calculated using Figure 10c of §73.699 (F(50, 10) charts) of Part 73 of this chapter.

(2) A low power TV or TV translator station application will not be accepted if it specifies the same channel as one of the land mobile assignments and its field strength at the land mobile protected contour exceeds 52 dBu.

(3) A low power TV or TV translator station application will not be accepted if it specifies a channel that is one channel above or below one of the land mobile assignments and its field strength at the land mobile protected contour exceeds 76 dBu.

(e) To protect stations in the Offshore Radio Service, a low power TV or TV translator station construction permit application will not be accepted if it specifies operation on channels 15, 16, 17 or 18 in the following areas. West Longitude and North Latitude are abbreviated as W.L. and N.L. respectively.

(1) On Channel 15: west of 92°00′ W.L.; east of 98°30′ W.L.; and south of a line extending due west from 30°30′ N.L., 92°00′ W.L. to 30°30′ N.L., 96°00′ W.L.; and then due southwest to 28°00′ N.L., 98°30′ W.L.

(2) On Channel 16: west of 86°40′ W.L.; east of 96°30′ W.L.; and south of a line extending due west from 31°00′ N.L., 86°40′ W.L. to 31°00′ N.L., 95°00′ W.L. and then due southwest to 29°30′ N.L., 96°30′ W.L.

(3) On Channel 17: west of 86°30′ W.L.; east of 96°00′ W.L.; and south of a line extending due west from 31°00′ N.L., 86°30′ W.L. to 31°30′ N.L., 94°00′ W.L. and then due southwest to 29°30′ N.L., 96°00′ W.L.

(4) On Channel 18: west of 87°00′ W.L.; east of 95°00′ W.L.; and south of 31°00′ N.L.

[47 FR 21499, May 18, 1982, as amended at 50 FR 12027, Mar. 27, 1985; 50 FR 33942, Aug. 22, 1985; 69 FR 31906, June 8, 2004]

§ 74.731 Purpose and permissible service.

(a) Television broadcast translator stations and television broadcast booster stations provide a means whereby the signals of television broadcast stations may be retransmitted to areas in which direct reception of such television broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraph (f) of this section, a television broadcast translator station or television broadcast booster station may be used only to receive the signals of a television broadcast station, another television broadcast translator station, a television translator relay station, a television intercity relay station, a television STL station, or other suitable source such as a CARS or common carrier microwave station, for the simultaneous retransmission of the programs and signals of a television broadcast station. Such retransmissions may be accomplished by either:

(1) Reception of the television programs and signals of a television broadcast station directly through space, conversion to a different channel by simple heterodyne frequency conversion and suitable amplification; or,

(2) Modulation and amplification of a video and audio feed, in which case modulating equipment meeting the requirements of § 74.750(d) shall be used.

(c) The transmissions of each television broadcast translator station shall be intended for direct reception by the general public and any other use shall be incidental thereto. A television broadcast translator station shall not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution, or further relaying.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional television broadcast receivers.

(e) A television broadcast translator station shall not deliberately retransmit the signals of any station other than the station it is authorized by license to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of a TV broadcast station and modulated with visual and aural information may be connected to the input terminals of a television broadcast translator or low power station for the purposes of transmitting still photographs, slides and voice announcements. The radio frequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast. When transmitting originations concerning financial support or public service announcements, connection of the locally generated signals shall be made automatically either by means of a time switch or upon receipt of a control signal from the TV station being rebroadcast designed to actuate the switching circuit. The switching circuit will be so designed that the input circuit will be returned to the off-the-air signal within 30 seconds. The connection for emergency transmissions may be made manually. The apparatus used to generate the local signal which is used to modulate the translator or low power station must be capable of producing a visual or aural signal or both which will provide acceptable reception on television receivers designed for the