(c) *Desensitization*. The receiver shall meet the requirements specified in paragraph (a) of this section in the presence of VHF-FM broadcast signals in accord with following tables.

(1) Maximum levels of undesired signals.

Frequency [1]	Maximum level of undesired signal at the receiver input (dBm)
50 kHz up to 88 MHz	−13
88 MHz–107.900 MHz	[see paragraph (c)(2)]
108.000 MHz–117.975 MHz	excluded
118MHz	−44
118.025 MHz	−41
118.050 MHz up to 1660.5 MHz.	−13

[1] The relationship is linear between single adjacent points designated by the above frequencies.

(2) Desensitization frequency and power requirements for the frequencies 108.025 MHz to 111.975 MHz.

Frequency [1]	Maximum level of undesired signal at the receiver input (dBm)
88 MHz ≤f ≤102 MHz	15
104 MHz	10
106 MHz	5
107.9 MHz	−10

[1] The relationship is linear between single adjacent points designated by the above frequencies.

(3) Desensitization frequency and power requirements for the frequencies 112.00 MHz to 117.975 MHz.

Frequency [1]	Maximum level of undesired signal at the receiver input (dBm)
88 MHz ≤f ≤104 MHz	15
106 MHz	10
107 MHz	5
107.9 MHz	0

[1] The relationship is linear between single adjacent points designated by the above frequencies.

(d) *Intermodulation immunity*. The receiver shall meet the requirements specified in paragraph (a) of this section in the presence of interference from two-signal, third order intermodulation products of two VHF-FM broadcast signals having levels in accordance with the following:

(1) $2N_1 + N_2 + 72 \leq 0$ for VHF-FM sound broadcasting signals in the range 107.7–108 MHz; and

(2) $2N_1 + N_2 + 3\ (24 - 20\log \text{delta } f/0.4) \leq 0$ for VHF-FM sound broadcasting signals below 107.7 MHz, where the frequencies of the two VHF-FM sound broadcasting signals produce, within the receiver, a two signal, third-order intermodulation product on the desired VDB frequency.

(3) In the formulas in paragraphs (d)(1) and (d)(2) of this section, N_1 and N_2 are the levels (dBm) of the two VHF FM sound broadcasting signals at the VHF data broadcast (VDB) receiver input. Neither level shall exceed the desensitization criteria set forth in paragraph (c) of this section. Delta $f = 108.1 - f_1$, where f_1 is the frequency of N_1, the VHF FM sound broadcasting signal closer to 108.1 MHz.

[69 FR 32881, June 14, 2004]

Subpart E—Frequencies

§ 87.169 Scope.

This subpart contains class of station symbols and a frequency table which lists assignable frequencies. Frequencies in the Aviation Services will transmit communications for the safe, expeditious, and economic operation of aircraft and the protection of life and property in the air. Each class of land station may communicate in accordance with the particular sections of this part which govern these classes. Land stations in the Aviation Services in Alaska may transmit messages concerning sickness, death, weather, ice conditions or other matters relating to safety of life and property if there is no other established means of communications between the points in question and no charge is made for the communications service.

[69 FR 32882, June 14, 2004]

§ 87.171 Class of station symbols.

The two or three letter symbols for the classes of station in the aviation services are:

Symbol and class of station

AX—Aeronautical fixed
AVW—Audio visual warning systems
AXO—Aeronautical operational fixed
DGP—Differential GPS
DLT—Aircraft data link land test
FA—Aeronautical land (unspecified)
FAC—Airport control tower
FAE—Aeronautical enroute
FAM—Aeronautical multicom

FAR—Aeronautical search and rescue
FAS—Aviation support
FAT—Flight test
FAU—Aeronautical advisory (unicom)
FAW—Automatic weather observation
GCO—Ground Communication Outlet
MA—Aircraft (Air carrier and Private)
MA1—Air carrier aircraft only
MA2—Private aircraft only
MOU—Aeronautical utility mobile
MRT—ELT test
RCO—Remote Communications Outlet
RL—Radionavigation land (unspecified)
RLA—Marker beacon
RLB—Radiobeacon
RLD—RADAR/TEST
RLG—Glide path
RLL—Localizer
RLO—VHF omni-range
RLS—Surveillance radar
RLT—Radionavigation land test
RLW—Microwave landing system
RNV—Radio Navigation Land/DME
RPC—Ramp Control
TJ—Aircraft earth station in the Aeronautical Mobile-Satellite Service
UAT—Universal Access Transceiver

[53 FR 28940, Aug. 1, 1988, as amended at 57 FR 45750, Oct. 5, 1992; 64 FR 27475, May 20, 1999; 69 FR 32882, June 14, 2004; 71 FR 70676, Dec. 6, 2006; 76 FR 17351, Mar. 29, 2011; 78 FR 61206, Oct. 3, 2013]

§ 87.173 Frequencies.

(a) The table in paragraph (b) of this section lists assignable carrier frequencies or frequency bands.

(1) The single letter symbol appearing in the ''Subpart'' column indicates the subpart of this part which contains additional applicable regulations.

(2) The two or three letter symbol appearing in the ''Class of Station'' column indicates the class of station to which the frequency is assignable.

(b) Frequency table:

Frequency or frequency band	Subpart	Class of station	Remarks
90–110 kHz	Q	RL	LORAN ''C''.
190–285 kHz	Q	RLB	Radiobeacons.
200–285 kHz	O	FAC	Air traffic control.
325–405 kHz	O	FAC	Air traffic control.
325–435 kHz	Q	RLB	Radiobeacons.
410.0 kHz	F	MA	International direction-finding for use outside of United States.
457.0 kHz	F	MA	Working frequency for aircraft on over-water flights.
500.0 kHz	F	MA	International calling and distress frequency for ships and aircraft on over-water flights.
510–535 kHz	Q	RLB	Radiobeacons.
2182.0 kHz	F	MA	International distress and calling.
2648.0 kHz	I	AX	Alaska station.
2850.0–3025.0 kHz	I	MA, FAE	International HF.
2851.0 kHz	I, J	MA, FAE, FAT	International HF; Flight Test.
2866.0 kHz	I	MA, FAE	Domestic HF; (Alaska).
2875.0 kHz	I	MA, FAE	Domestic HF.
2878.0 kHz	I	MA1, FAE	Domestic HF; International HF.
2911.0 kHz	I	MA, FAE	Domestic HF.
2956.0 kHz	I	MA, FAE	Domestic HF.
3004.0 kHz	I, J	MA, FAE, FAT	International HF; Flight Test.
3019.0 kHz	I	MA1, FAE	Domestic HF; International HF.
3023.0 kHz	F, M, O	MA1, FAR, FAC	Search and rescue communications.
3281.0 kHz	K	MA, FAS	Lighter-than-air craft and aeronautical stations serving lighter-than-air craft.
3400.0–3500.0 kHz	I	MA, FAE	International HF.
3434.0 kHz	I	MA1, FAE	Domestic HF.
3443.0 kHz	J	MA, FAT	Flight Test.
3449.0 kHz	I	MA, FAE	Domestic HF.
3470.0 kHz	I	MA, FAE	Domestic HF; International HF.
4125.0 kHz	F	MA	Distress and safety with ships and coast stations.
4550.0 kHz	I	AX	Gulf of Mexico.
4645.0 kHz	I	AX	Alaska.
4650.0–4700.0 kHz	I	MA, FAE	International HF.
4672.0 kHz	I	MA1, FAE	Domestic HF.
4947.5 kHz	I	AX	Alaska.
5036.0 kHz	I	AX	Gulf of Mexico.
5122.5 kHz	I	AX	Alaska.
5167.5 kHz	I	FA	Alaska emergency.
5310.0 kHz	I	AX	Alaska.
5450.0–5680.0 kHz	I	MA, FAE	International HF.
5451.0 kHz	J	MA, FAT	Flight Test.
5463.0 kHz	I	MA1, FAE	Domestic HF.
5469.0 kHz	J	MA, FAT	Flight Test.
5472.0 kHz	I	MA, FAE	Domestic HF.