§ 90.221 Adjacent channel power limits.

(a) For the frequency bands indicated below, operations using equipment designed to operate with a 25 kHz channel bandwidth may be authorized up to a 22 kHz bandwidth if the equipment meets the adjacent channel power (ACP) limits below. The table specifies a value for the ACP as a function of the displacement from the channel center frequency and a measurement bandwidth of 18 kHz.

(b)(1) Maximum adjacent power levels for frequencies in the 450–470 MHz band:

<table>
<thead>
<tr>
<th>Frequency offset</th>
<th>Maximum ACP (dBc) for devices less than 15 watts</th>
<th>Maximum ACP (dBc) for devices 15 watts and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 kHz</td>
<td>-55 dBc</td>
<td>-60 dBc</td>
</tr>
<tr>
<td>50 kHz</td>
<td>-70 dBc</td>
<td>-70 dBc</td>
</tr>
<tr>
<td>75 kHz</td>
<td>-70 dBc</td>
<td>-70 dBc</td>
</tr>
</tbody>
</table>

(2) In any case, no requirement in excess of -36 dBm shall apply.

(c)(1) Maximum adjacent power levels for frequencies in the 809–824/854–869 MHz band:

<table>
<thead>
<tr>
<th>Frequency offset</th>
<th>Maximum ACP (dBc) for devices less than 15 watts</th>
<th>Maximum ACP (dBc) for devices 15 watts and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 kHz</td>
<td>-55 dBc</td>
<td>-55 dBc</td>
</tr>
<tr>
<td>50 kHz</td>
<td>-65 dBc</td>
<td>-65 dBc</td>
</tr>
<tr>
<td>75 kHz</td>
<td>-65 dBc</td>
<td>-70 dBc</td>
</tr>
</tbody>
</table>

(2) In any case, no requirement in excess of -36 dBm shall apply.

(d) On any frequency removed from the assigned frequency by more than 75 kHz, the attenuation of any emission must be at least 43 + 10 log (P_{watts}) dB.

[77 FR 61538, Oct. 10, 2012]

Subpart J—Non-Voice and Other Specialized Operations

§ 90.231 Scope.

This subpart sets forth requirements and standards for licensing and operation of non-voice and other specialized radio uses (other than radio-location). Such uses include secondary signaling, telemetry, radioteleprinter, radiofacsimile, automatic vehicle monitoring (AVM), radio call box, relay, vehicular repeater, and control station operations.

§ 90.233 Base/mobile non-voice operations.

The use of A1D, A2D, F1D, F2D, G1D, or G2D emission may be authorized to base/mobile operations in accordance with the following limitations and requirements.

(a) Licensees employing non-voice communications are not relieved of their responsibility to cooperate in the
§ 90.235 Secondary fixed signaling operations.

Fixed operations may, subject to the following conditions, be authorized on a secondary basis for voice, tone or impulse signaling on a licensee’s mobile service frequency(ies) above 25 MHz within the area normally covered by the licensee’s mobile system. Voice signaling will be permitted only in the Public Safety Pool.

(a) The bandwidth shall not exceed that authorized to the licensee for the primary operations on the frequency concerned.

(b) The output power shall not exceed 30 watts at the remote site.

(c) A1D, A2D, F1D, F2D, G1D and G2D emissions may be authorized. In the Police Radio Service, A3E, F1E, F2E, F3E, G1E, G2E, or G3E emissions may also be authorized.

(d) Except for those systems covered under paragraph (e) of this section, the maximum duration of any non-voice signaling transmission shall not exceed 2 seconds and shall not be repeated more than 3 times. Signaling transmissions may be staggered at any interval or may be continuous. In the Public Safety Pool, the maximum duration of any voice signaling transmission shall not exceed 6 seconds and shall not be repeated more than 3 times.

(e) Until December 31, 1999, for systems in the Public Safety Pool authorized prior to June 20, 1975, and Power and Petroleum licensees as defined in §90.7 authorized prior to June 1, 1976, the maximum duration of any signaling transmission shall not exceed 6 seconds and shall not be repeated more than 5 times. For Power licensees authorized between June 1, 1976, and August 14, 1989, signaling duration shall not exceed 2 seconds and shall not be repeated more than 5 times. Such systems include existing facilities and additional facilities which may be authorized as a clear and direct expansion of existing facilities. After December 31, 1999, all signaling systems shall be required to comply with the 2 second message duration and 3 message repetition requirements.

(f) Systems employing automatic interrogation shall be limited to non-voice techniques and shall not be activated for this purpose more than 10 seconds out of any 60 second period. This 10 second timeframe includes both transmit and response times.

(g) Automatic means shall be provided to deactivate the transmitter in the event the r.f. carrier remains on for a period in excess of 3 minutes or if a transmission for the same signaling function is repeated consecutively more than five times.

(h) Fixed stations authorized pursuant to the provisions of this section are exempt from the requirements of §§90.137(b), 90.425, and 90.429.

(i) Base, mobile, or mobile relay stations may transmit secondary signaling transmissions to receivers at fixed locations subject to the conditions set forth in this section.

(j) Under the provisions of this section, a mobile service frequency may not be used exclusively for secondary signaling.

(k) The use of secondary signaling will not be considered in whole or in part as a justification for authorizing additional frequencies in a licensee’s land mobile radio system.

(l) Secondary fixed signaling operations conducted in accordance with the provisions of §90.317(a) or §90.637