

§ 22.853

COMMERCIAL AVIATION AIR-GROUND SYSTEMS

§ 22.853 Eligibility to hold interest in licenses limited to 3 MHz of spectrum.

No individual or entity may hold, directly or indirectly, a controlling interest in licenses authorizing the use of more than three megahertz of spectrum (either shared or exclusive) in the 800 MHz commercial aviation Air-Ground Radiotelephone Service frequency bands (see § 22.857). Individuals and entities with either *de jure* or *de facto* control of a licensee in these bands will be considered to have a controlling interest in its license(s). For purposes of this rule, the definitions of “controlling interests” and “affiliate” set forth in paragraphs (c)(2) and (c)(5) of § 1.2110 of this chapter shall apply.

[70 FR 19310, Apr. 13, 2005]

§ 22.857 Channel plan for commercial aviation air-ground systems.

The 849–851 MHz and 894–896 MHz frequency bands are designated for paired nationwide exclusive assignment to the licensee or licensees of systems providing radio telecommunications service, including voice and/or data service, to persons on board aircraft. Air-ground systems operating in these frequency bands are referred to in this part as “commercial aviation” systems.

[70 FR 19310, Apr. 13, 2005]

§ 22.859 Incumbent commercial aviation air-ground systems.

This section contains rules concerning continued operation of commercial aviation air-ground systems that were originally authorized prior to January 1, 2004 to provide radiotelephone service using narrowband (6 kHz) channels, and that have been providing service continuously since the original commencement of service (hereinafter “incumbent systems”).

(a) An incumbent system may continue to operate under its authorization, for the remaining term of such authorization, subject to the terms and conditions attached thereto. Wherever such technical and operational conditions differ from technical and oper-

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ational rules in this subpart, those conditions shall govern its operations.

(b) Notwithstanding any other provision in this chapter, the licensee of an incumbent system shall not be entitled to an expectation of renewal of said authorization.

(c) During the period that an incumbent system continues to operate and provide service pursuant to paragraph (a) of this section, air-ground systems of licensees holding a new authorization for the spectrum within which the incumbent system operates must not cause interference to the incumbent system. Protection from interference requires that the signals of the new systems must not exceed a ground station received power of –130 dBm within a 6 kHz receive bandwidth, calculated assuming a 0 dBi vertically polarized receive antenna.

[70 FR 19310, Apr. 13, 2005]

§ 22.861 Emission limitations.

The rules in this section govern the spectral characteristics of emissions for commercial aviation systems in the Air-Ground Radiotelephone Service. Commercial aviation air-ground systems may use any type of emission or technology that complies with the technical rules in this subpart.

(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.*, 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency

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and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) *Alternative out of band emission limit.* The licensee(s) of commercial aviation air-ground systems, together with affected licensees of Cellular Radiotelephone Service systems operating in the spectrum immediately below and adjacent to the commercial aviation air-ground bands, may establish an alternative out of band emission limit to be used at the 849 MHz and 894 MHz band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) *Interference caused by out of band emissions.* If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

[70 FR 19310, Apr. 13, 2005]

§ 22.863 Frequency stability.

The frequency stability of equipment used under this subpart shall be sufficient to ensure that, after accounting for Doppler frequency shifts, the occupied bandwidth of the fundamental emissions remains within the authorized frequency bands of operation.

[70 FR 19310, Apr. 13, 2005]

§ 22.867 Effective radiated power limits.

The effective radiated power (ERP) of ground and airborne stations operating on the frequency ranges listed in § 22.857 must not exceed the limits in this section.

(a) The peak ERP of airborne mobile station transmitters must not exceed 12 Watts.

(b) The peak ERP of ground station transmitters must not exceed 500 Watts.

[70 FR 19310, Apr. 13, 2005]

§ 22.873 Construction requirements for commercial aviation air-ground systems.

Licensees authorized to use more than one megahertz (1 MHz) of the 800 MHz commercial aviation air-ground spectrum allocation (see § 22.857) must make a showing of “substantial service” as set forth in this section. Failure by any such licensee to meet this requirement will result in forfeiture of the license and the licensee will be ineligible to regain it. Licensees authorized to use one megahertz or less of the 800 MHz commercial aviation air-ground spectrum allocation are not subject to the requirements in this section.

(a) “Substantial service” is defined as service that is sound, favorable, and substantially above a level of mediocre service that just might minimally warrant renewal.

(b) Each commercial aviation air-ground system subject to the requirements of this section must demonstrate substantial service within 5 years after grant of the authorization. Substantial service may be demonstrated by, but is not limited to, either of the following “safe harbor” provisions:

(1) Construction and operation of 20 ground stations, with at least one ground station located in each of the 10 Federal Aviation Administration regions; or,

(2) Provision of service to the airspace of 25 of the 50 busiest airports (as measured by annual passenger boardings).

[70 FR 19310, Apr. 13, 2005]

§ 22.877 Unacceptable interference to part 90 non-cellular 800 MHz licensees from commercial aviation air-ground systems.

The definition of unacceptable interference to non-cellular part 90 licensees in the 800 MHz band from commercial aviation air-ground systems is the same as the definition set forth in § 22.970 which is applicable to Cellular Radiotelephone Service systems.

[70 FR 19311, Apr. 13, 2005]