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APPENDIX A TO PART 23—INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

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§ 23.1457 Cockpit voice recorders.

(a) Each cockpit voice recorder required by the operating rules of this chapter must be approved and must be installed so that it will record the following:

- (1) Voice communications transmitted from or received in the airplane by radio.
- (2) Voice communications of flightcrew members on the flight deck.
- (3) Voice communications of flightcrew members on the flight deck, using the airplane's interphone system.
- (4) Voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.
- (5) Voice communications of flightcrew members using the passenger loudspeaker system, if there is such a system and if the fourth channel is available in accordance with the requirements of paragraph (c)(4)(ii) of this section.

(6) If datalink communication equipment is installed, all datalink communications, using an approved data message set. Datalink messages must be recorded as the output signal from the communications unit that translates the signal into usable data.

(b) The recording requirements of paragraph (a)(2) of this section must be met by installing a cockpit-mounted area microphone, located in the best position for recording voice communications originating at the first and second pilot stations and voice communications of other crewmembers on the flight deck when directed to those stations. The microphone must be so located and, if necessary, the preamplifiers and filters of the recorder must be so adjusted or supplemented, so that the intelligibility of the recorded communications is as high as practicable when recorded under flight cockpit noise conditions and played back. Repeated aural or visual playback of the record may be used in evaluating intelligibility.

(c) Each cockpit voice recorder must be installed so that the part of the communication or audio signals specified in paragraph (a) of this section obtained from each of the following sources is recorded on a separate channel:

- (1) For the first channel, from each boom, mask, or handheld microphone, headset, or speaker used at the first pilot station.
- (2) For the second channel from each boom, mask, or handheld microphone, headset, or speaker used at the second pilot station.
- (3) For the third channel—from the cockpit-mounted area microphone.
- (4) For the fourth channel from:
 - (i) Each boom, mask, or handheld microphone, headset, or speaker used at the station for the third and fourth crewmembers.
 - (ii) If the stations specified in paragraph (c)(4)(i) of this section are not required or if the signal at such a station is picked up by another channel, each microphone on the flight deck that is used with the passenger loudspeaker system, if its signals are not picked up by another channel.
- (5) And that as far as is practicable all sounds received by the microphone