flown for the number of occupants of the airplane.

[Doc. No. 6258, 29 FR 19205, Dec. 31, 1964, as amended by Amdt. 121–79, 36 FR 18724, Sept. 21, 1971; Amdt. 121–106, 38 FR 22378 Aug. 20, 1973; Amdt. 121–158, 45 FR 38348, June 9, 1980; Amdt. 121–239, 59 FR 32057, June 21, 1994; Amdt. 121–251, 60 FR 65932, Dec. 20, 1995]

§ 121.354 Terrain awareness and warning system.

(a) *Airplanes manufactured after March 29, 2002*. No person may operate a turbine-powered airplane unless that airplane is equipped with an approved terrain awareness and warning system that meets the requirements for Class A equipment in Technical Standard Order (TSO)–C151. The airplane must also include an approved terrain situational awareness display.

(b) *Airplanes manufactured on or before March 29, 2002*. No person may operate a turbine-powered airplane after March 29, 2005, unless that airplane is equipped with an approved terrain awareness and warning system that meets the requirements for Class A equipment in Technical Standard Order (TSO)–C151. The airplane must also include an approved terrain situational awareness display.

(Approved by the Office of Management and Budget under control number 2120–0631)

(c) *Airplane Flight Manual*. The Airplane Flight Manual shall contain appropriate procedures for—

(1) The use of the terrain awareness and warning system; and

(2) Proper flight crew reaction in response to the terrain awareness and warning system audio and visual warnings.

[Doc. No. 29312, 65 FR 16755, Mar. 29, 2000]

§ 121.355 Equipment for operations on which specialized means of navigation are used.

(a) No certificate holder may conduct an operation—

(1) Using Doppler Radar or an Inertial Navigation System outside the 48 contiguous States and the District of Columbia, unless such systems have been approved in accordance with appendix G to this part; or

(2) Using Doppler Radar or an Inertial Navigation System within the 48 contiguous States and the District of Columbia, or any other specialized means of navigation, unless it shows that an adequate airborne system is provided for the specialized navigation authorized for the particular operation.

(b) Notwithstanding paragraph (a) of this section, Doppler Radar and Inertial Navigation Systems, and the training programs, maintenance programs, relevant operations manual material, and minimum equipment lists prepared in accordance therewith, approved before April 29, 1972, are not required to be approved in accordance with that paragraph.

[Doc. No. 10204, 37 FR 6464, Mar. 30, 1972]

§ 121.356 Collision avoidance system.

Effective January 1, 2005, any airplane you operate under this part must be equipped and operated according to the following table:

COLLISION AVOIDANCE SYSTEMS

If you operate any—	Then you must operate that airplane with—
(a) Turbine-powered airplane of more than 33,000 pounds maximum certificated takeoff weight.	(1) An appropriate class of Mode S transponder that meets Technical Standard Order (TSO) C–112, or a later version, and one of the following approved units: (i) TCAS II that meets TSO C–119b (version 7.0), or takeoff weight a later version. (ii) TCAS II that meets TSO C–119a (version 6.04A Enhanced) that was installed in that airplane before May 1, 2003. If that TCAS II version 6.04A Enhanced no longer can be repaired to TSO C–119a standards, it must be replaced with a TCAS II that meets TSO C–119b (version 7.0), or a later version. (iii) A collision avoidance system equivalent to TSO C–119b (version 7.0), or a later version, capable of coordinating with units that meet TSO C–119a (version 6.04A Enhanced), or a later version.
(b) Passenger or combination cargo/passenger (combi) airplane that has a passenger seat configuration of 10–30 seats.	(1) TCAS I that meets TSO C–118, or a later version, or (2) A collision avoidance system equivalent to has a TSO C–118, or a later version, or (3) A collision avoidance system and Mode S transponder that meet paragraph (a)(1) of this section.
(c) Piston-powered airplane of more than 33,000 pounds maximum certificated takeoff weight.	(1) TCAS I that meets TSO C–118, or a later version, or (2) A collision avoidance system equivalent to maximum TSO C–118, or a later version, or (3) A collision avoidance system and Mode S transponder that meet paragraph (a)(1) of this section.