

Federal Communications Commission

§ 68.317

(A3) EIA Standard RS-470, Telephone Instruments with Loop Signaling for Voiceband Applications.

(A4) EIA Project Number PN-1361, Environmental and Safety Considerations for Voice Telephone Terminals.

(A5) Federal Communications Commission Rules and Regulations, part 68, Connection of Terminal Equipment to the Telephone Network.

(A6) IEEE Standard, Method for Measuring the Magnetic Field around a Telephone Receiver. (to be published)

[49 FR 1363, Jan. 11, 1984, as amended at 61 FR 42187, Aug. 14, 1996]

§ 68.317 Hearing aid compatibility volume control: technical standards.

(a)(1) A telephone manufactured in the United States or imported for use in the United States prior to February 28, 2020, complies with the volume control requirements of this section if it complies with:

(i) The applicable provisions of paragraphs (b) through (g) of this section; or

(ii) Paragraph (h) of this section.

(2) A telephone manufactured in the United States or imported for use in the United States on or after February 28, 2020, complies with the volume control requirements of this section if it complies with paragraph (h) of this section.

(b) An analog telephone complies with the Commission's volume control requirements if the telephone is equipped with a receive volume control that provides, through the receiver in the handset or headset of the telephone, 12 dB of gain minimum and up to 18 dB of gain maximum, when measured in terms of Receive Objective Loudness Rating (ROLR), as defined in paragraph 4.1.2 of ANSI/EIA-470-A-1987 (Telephone Instruments With Loop Signaling). The 12 dB of gain minimum must be achieved without significant clipping of the test signal. The telephone also shall comply with the upper and lower limits for ROLR given in table 4.4 of ANSI/EIA-470-A-1987 when the receive volume control is set to its normal unamplified level.

NOTE 1 TO PARAGRAPH (b): Paragraph 4.1.2 of ANSI/EIA-470-A-1987 identifies several characteristics related to the receive response of a telephone. It is only the normal

unamplified ROLR level and the change in ROLR as a function of the volume control setting that are relevant to the specification of volume control as required by this section.

(c) The ROLR of an analog telephone shall be determined over the frequency range from 300 to 3300 HZ for short, average, and long loop conditions represented by 0, 2.7, and 4.6 km of 26 AWG nonloaded cable, respectively. The specified length of cable will be simulated by a complex impedance. (See Figure A.) The input level to the cable simulator shall be -10 dB with respect to 1 V open circuit from a 900 ohm source.

(d) A digital telephone complies with the Commission's volume control requirements if the telephone is equipped with a receive volume control that provides, through the receiver of the handset or headset of the telephone, 12 dB of gain minimum and up to 18 dB of gain maximum, when measured in terms of Receive Objective Loudness Rating (ROLR), as defined in paragraph 4.3.2 of ANSI/EIA/TIA-579-1991 (Acoustic-To-Digital and Digital-To-Acoustic Transmission Requirements for ISDN Terminals). The 12 dB of gain minimum must be achieved without significant clipping of the test signal. The telephone also shall comply with the limits on the range for ROLR given in paragraph 4.3.2.2 of ANSI/EIA/TIA-579-1991 when the receive volume control is set to its normal unamplified level.

(e) The ROLR of a digital telephone shall be determined over the frequency range from 300 to 3300 Hz using the method described in paragraph 4.3.2.1 of ANSI/EIA/TIA-579-1991. No variation in loop conditions is required for this measurement since the receive level of a digital telephone is independent of loop length.

(f) The ROLR for either an analog or digital telephone shall first be determined with the receive volume control at its normal unamplified level. The minimum volume control setting shall be used for this measurement unless the manufacturer identifies a different setting for the nominal volume level. The ROLR shall then be determined with the receive volume control at its maximum volume setting. Since ROLR is a loudness rating value expressed in

dB of loss, more positive values of ROLR represent lower receive levels. Therefore, the ROLR value determined for the maximum volume control setting should be subtracted from that determined for the nominal volume control setting to determine compliance with the gain requirement.

(g) The 18 dB of receive gain may be exceeded provided that the amplified receive capability automatically resets to nominal gain when the telephone is caused to pass through a proper on-hook transition in order to minimize the likelihood of damage to individuals with normal hearing.

(h) A telephone complies with the Commission's volume control requirements if it is equipped with a receive volume control that provides, through the receiver in the handset of the telephone, at the loudest volume setting, a conversational gain greater than or equal to 18 dB and less than or equal to 24 dB Conversational Gain when measured as described in ANSI/TIA-4965-2012 (Telecommunications—Telephone Terminal Equipment—Receive Volume Control Requirements for Digital and Analog Wireline Telephones). A minimum of 18 dB Conversational Gain must be achieved without significant clipping of the speech signal used for testing. The maximum 24 dB Conversational Gain may be exceeded if the amplified receive capability automatically resets to a level of not more than 24 dB Conversational Gain when the telephone is caused to pass through a proper on-hook transition, in order to minimize the likelihood of damage to individuals with normal hearing.

(i) The standards required in this section are incorporated by reference with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection at the Federal Communications Commission (FCC), 445 12th St. SW, Reference Information Center, Room CY-A257, Washington, DC 20554, (202) 418-0270, and is available from the source indicated below. They are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

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(1) The following standards are available from the Telecommunications Industry Association (TIA), 1320 North Courthouse Road, Suite 200, Arlington, VA 22201, (877) 413-5184, email to smontgomery@tiaonline.org, and <http://www.tiaonline.org/standards/catalog>.

(i) Paragraph 4.1.2 (including table 4.4) of American National Standards Institute (ANSI) Standard ANSI/EIA-470-A-1987, Telephone Instruments with Loop Signaling, July 1987.

(ii) Paragraph 4.3.2 of ANSI/EIA/TIA-579-1991, Acoustic-to-Digital and Digital-to-Acoustic Transmission Requirements for ISDN Terminals, February 1991.

(iii) ANSI/TIA-4965-2012, Telecommunications; Telephone Terminal Equipment; Receive Volume Control Requirements for Digital and Analog Wireline Handset Terminals, approved October 19, 2012.

(2) [Reserved]

[61 FR 42187, Aug. 14, 1996, as amended at 64 FR 60726, Nov. 8, 1999; 67 FR 13229, Mar. 21, 2002; 69 FR 18803, Apr. 9, 2004; 83 FR 8632, Feb. 28, 2018]

§ 68.318 Additional limitations.

(a) *General.* Registered terminal equipment for connection to those services discussed below must incorporate the specified features.

(b) *Registered terminal equipment with automatic dialing capability.* (1) Automatic dialing to any individual number is limited to two successive attempts. Automatic dialing equipment which employ means for detecting both busy and reorder signals shall be permitted an additional 13 attempts if a busy or reorder signal is encountered on each attempt. The dialer shall be unable to re-attempt a call to the same number for at least 60 minutes following either the second or fifteenth successive attempt, whichever applies, unless the dialer is reactivated by either manual or external means. This rule does not apply to manually activated dialers that dial a number once following each activation.

NOTE TO PARAGRAPH (b)(1): Emergency alarm dialers and dialers under external computer control are exempt from these requirements.