<delta>$J_1 = 12.5 \log_{10}(H_T/492)$ dB;

where <delta>J_1 is the quantity in decibels that must be algebraically added to the measured SEL noise level to correct for an off-reference flight path, H_T is the height, in feet, of the test helicopter when directly over the noise measurement point, and the constant (12.5) accounts for the effects on spherical spreading and duration from the off-reference altitude.

(c) The adjustment for the difference between reference airspeed and adjusted reference airspeed is calculated from:

<delta>$J_3 = 10 \log_{10}(V_{RA}/V_R)$ dB;

Where <delta>J_3 is the quantity in decibels that must be algebraically added to the measured SEL noise level to correct for the influence of the adjustment of the reference airspeed on the duration of the measured flyover event as perceived at the noise measurement station, V_R is the reference airspeed as prescribed under section J36.3.(c) of this appendix, and V_{RA} is the adjusted reference airspeed as prescribed under section J36.105(c) of this appendix.

(d) No correction for source noise during the flyover other than the variation of source noise accounted for by the adjustment of the reference airspeed prescribed for under section J36.105(c) of this appendix need be applied.

(e) No correction for the difference between the reference ground speed and the actual ground speed need be applied.

(f) No correction for off-reference atmospheric attenuation need be applied.

(g) The SEL adjustments must be less than 2.0 dB(A) for differences between test and reference flight procedures prescribed under section J36.105 of this appendix unless a larger adjustment value is approved by the FAA.

(h) All data used and calculations performed under this section must be documented and provided under the reporting requirements specified under section J36.111 of this appendix.

PART D—NOISE LIMITS PROCEDURE UNDER § 36.805

Section J36.301 Noise Measurement, Evaluation, and Calculation.

Compliance with this part of this appendix must be shown with noise levels measured, evaluated, and calculated as prescribed under parts B and C of this appendix.

Section J36.303 [Reserved]

Section J36.305 Noise Limits.

For compliance with this appendix, the calculated noise levels of the helicopter, at the measuring point described in section J36.101 of this appendix, must be shown to not exceed the following (with appropriate interpolation between weights):

(a) For primary, normal, transport, and restricted category helicopters having a maximum certificated takeoff weight of not more than 7,000 pounds that are noise tested under this appendix:

(1) Stage 2 noise limit is constant at 82 decibels SEL for helicopters up to 1,737 pounds (787 kg) maximum certificated takeoff weight (mass) and increases linearly with the logarithm of the helicopter weight at a rate of 3.0 decibels SEL per the doubling of weight thereafter. The limit may be calculated by the equation:

$L_{AE}(\text{limit}) = 82 + 3.0\ [\log_{10}(\text{MTOW}/1737)/\log_{10}(2)]$ dB,

where MTOW is the maximum takeoff weight, in pounds, for which certification under this appendix is requested.

(2) Stage 3 noise limit is constant at 82 decibels SEL for helicopters up to 3,125 pounds (1,417 kg) maximum certificated takeoff weight (mass) and increases linearly with the logarithm of the helicopter weight at a rate of 3.0 decibels SEL per the doubling of weight thereafter. The limit may be calculated using the equation:

$L_{AE}(\text{limit}) = 82 + 3.0\ [\log10(\text{MTOW}/3125)/\log10(2)]$ dB,

where MTOW is the maximum takeoff weight, in pounds.

(b) The procedures required in this amendment shall be done in accordance with the International Electrotechnical Commission IEC Publication No. 804, entitled ''Integrating-averaging Sound Level Meters,'' First Edition, dated 1985. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the Bureau Central de la Commission Electrotechnique Internationale, 1, rue de Varembe, Geneva, Switzerland or the American National Standard Institute, 1430 Broadway, New York City, New York 10018, or 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/code__of__federal__regulations/ibr__locations.html.*

[Doc. No. 26910, 57 FR 42855, Sept. 16, 1992, as amended by Amdt. 36–20, 57 FR 46243, Oct. 7, 1992; 69 FR 18803, Apr. 9, 2004; Amdt. 36–25, 69 FR 31234, June 2, 2004; Amdt. 36–30, 79 FR 12045, Mar. 4, 2014; FAA Doc. No. FAA–2015–3782, Amdt. No. 36–31, 82 FR 46131, Oct. 4, 2017]