

AD-A012 372

COMMERCIAL AIRCRAFT NOISE DEFINITION - L-1011 TRISTAR.
VOLUME II-L-1011-1 DATA

Nathan Shapiro

Lockheed-California Company

Prepared for:

Federal Aviation Administration

September 1974

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206047

Report No. FAA-EQ-73-6,II

COMMERCIAL AIRCRAFT NOISE DEFINITION

L-1011 TRISTAR

Volume II-L-1011-1 DATA

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ADA012372



SEPTEMBER 1974

FINAL REPORT

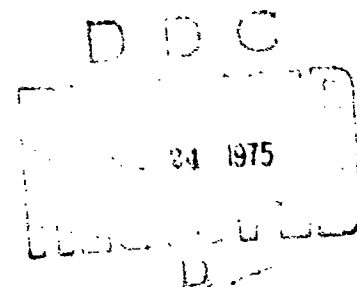
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1. Report No. FAA-EQ-73-6,II		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Commercial Aircraft Noise Definition - L-1011 Tristar. Volume II L-1011-1 Data				5. Report Date September 1974	
				6. Performing Organization Code	
7. Author(s) Nathan Shapiro, et al				8. Performing Organization Report No. LR 26075	
9. Performing Organization Name and Address Lockheed-California Company A Division of Lockheed Aircraft Corporation P.O. Box 551 Burbank, California 91520				10. Work Unit No. (TRAIS)	
				11. Contract or Grant No. DOT-FA73WA-3300	
12. Sponsoring Agency Name and Address Department of Transportation Federal Aviation Administration Office of Environmental Quality Washington, D.C. 20591				13. Type of Report and Period Covered Final Report June 1973 - Sept. 1974	
				14. Sponsoring Agency Code	
15. Supplementary Notes					
16. Abstract Calculation procedures to describe airplane noise during takeoff and approach have been programmed for batch operation on a large digital computer. Three routines are included. The first normalizes far-field noise spectra to reference conditions and then determines spectra at various distances from the airplane, for airport elevations between sea level and 6000 feet and ambient temperatures between 30°F and 100°F. Overall sound pressure levels, A-weighted noise levels, perceived noise levels, and effective perceived noise levels are calculated. The second routine uses aerodynamic and engine thrust data to produce takeoff and approach flight path description. The basic takeoff is at constant equivalent airspeed, with thrust reduction or acceleration option after gear-up. The approach is along any constant glide slope between 3 and 6 degrees at constant airspeed, with a two-segment option. The last routine combines noise propagation and flight path information to produce constant noise contour "footprints." The program has been exercised on Lockheed L-1011-1 Tristar/Rolls-Royce RB.211-22 data, providing results in EPNdB and dBA. - o Volume I contains detailed discussion of the calculation procedures. - o Volume II includes L-1011-1 noise propagation and airplane performance and samples of contours. - o Volume III presents the logic behind the calculations and outlines the computational procedures. - o Volumes IV and V describe the computer program and give instructions for its operation.					
17. Key Words Acoustics Aircraft Noise Aircraft Performance Noise Propagation			18. Distribution Statement Noise Contours Noise Footprints		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 302	
				22. Price 9.25	

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SECTION I

INTRODUCTION

This is Volume II of the five-volume report on the development of procedures for computing the flyover noise of the Lockheed L-1011 TriStar for a variety of conditions. Volume I presents the technical background and describes the study leading to a computer program for airplane performance and noise calculations. Both the performance and the noise results are based on flight test development and certification measurements. The computer program has been exercised to generate the data presented in this volume in graphical form. These data, with appropriate interpolations, can be used for many noise studies where the detailed output of a computer run is not considered necessary.

The noise definition results are arranged in four sections:

- o Noise Characteristics - This includes plots of effective perceived noise levels (EPNL) and A-noise levels (L_A) versus distance, from 200 to 12,800 feet, at a number of thrust settings. These thrust settings are expressed in terms of corrected fan speed ($N_1/\sqrt{\theta}$). The corrected fan speeds are related to airplane operational weights to facilitate correlation of the noise data with the airplane performance data. The noise characteristics apply to both the RB.211-22C and RB.211-22B ratings of the engine, requiring only proper selection of thrust settings. Flyover noise propagation is shown for six temperatures, between 30°F and 100°F, at sea level, including FAR Part 36 reference day conditions (77°F, 70% relative humidity). At 3000 and 6000 feet elevation propagation is shown for 77°F, 70% relative humidity only. Temperature and elevation correction curves are included to permit calculation of noise propagation characteristics at other temperatures and elevations. A table lists the one-third octave-band sound pressure levels, at 200 feet distance on a FAR Part 36 reference day, from which the propagation data were computed. These spectra were derived from the L-1011 measurements made to demonstrate compliance with FAR Part 36. The remaining tabular data show EPNL and L_A versus distance, at various corrected fan speeds, with and without excess ground

attenuation. Spherical spreading and atmospheric attenuation are used in all cases. Listings are given for each of the temperatures and elevations for which propagation curves are provided. These noise values with and without ground attenuation are needed for the calculations leading to the constant noise contours, referred to as footprints, discussed below.

- o Takeoff Performance - The aerodynamic characteristics of the L-1011 have been applied to produce takeoff performance data required to define airplane flyover distances for determining noise under the flight path. The results are integrated into takeoff nomographs which provide takeoff profiles for normal operating procedures, and which permit the determination of approximate noise levels, EPNL or L_A , below the airplane. More exact noise levels for any given takeoff profile may be obtained from the noise propagation characteristics of Section II. Since airplane performance is affected by engine rating, separate charts are provided for RB.211-22C and for RB.211-22B powered airplanes. Charts are included for each takeoff flap angle certified with each of the two engine ratings. The performance charts are for engine-bleed-on operation which results in slightly lower takeoff profiles and conservative noise level values. Bleed-off results, corresponding to the condition used for FAR Part 36 certification, may be obtained from the computer program.
- o Approach Performance - At part power there is no difference between -22B and -22C engines, so only one set of approach nomographs is necessary. One EPNL chart and one L_A chart contain all necessary information for normal landing approaches with either of the two certified flaps (42° and 33°), with or without direct lift control (DLC), and along a glide slope between 3° and 6° .
- o Noise Footprints - Sets of machine plotted constant noise contours, EPNL and L_A , have been prepared for representative takeoff and approach procedures. These were selected to indicate the influence of operational weights and flap angles on noise exposure areas. An

example of a takeoff thrust cutback and of a two-segment approach have also been included, to illustrate noise abatement procedures. Contours shown are in 10 dB steps starting with 80 EPNdB or 70 dBA. Computer output tabulation of the contour coordinates are provided for each footprint set.

Additional discussion of the data presented in this volume and of the methods by which they were obtained will be found in Volume I.

SECTION II NOISE CHARACTERISTICS

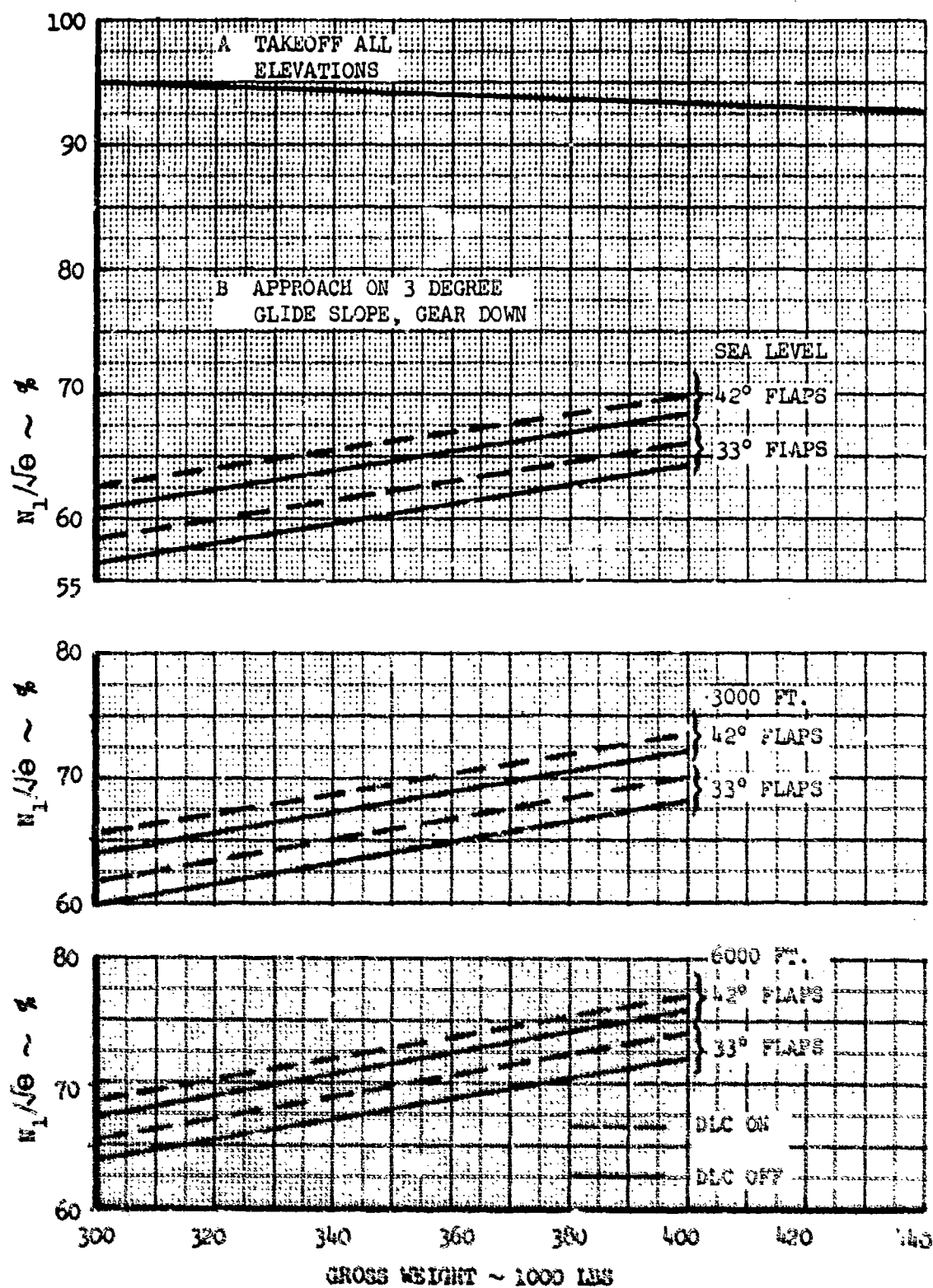


FIGURE 2-1 CORRECTED FAN SPEED FOR L-1011-1 NOISE CALCULATIONS

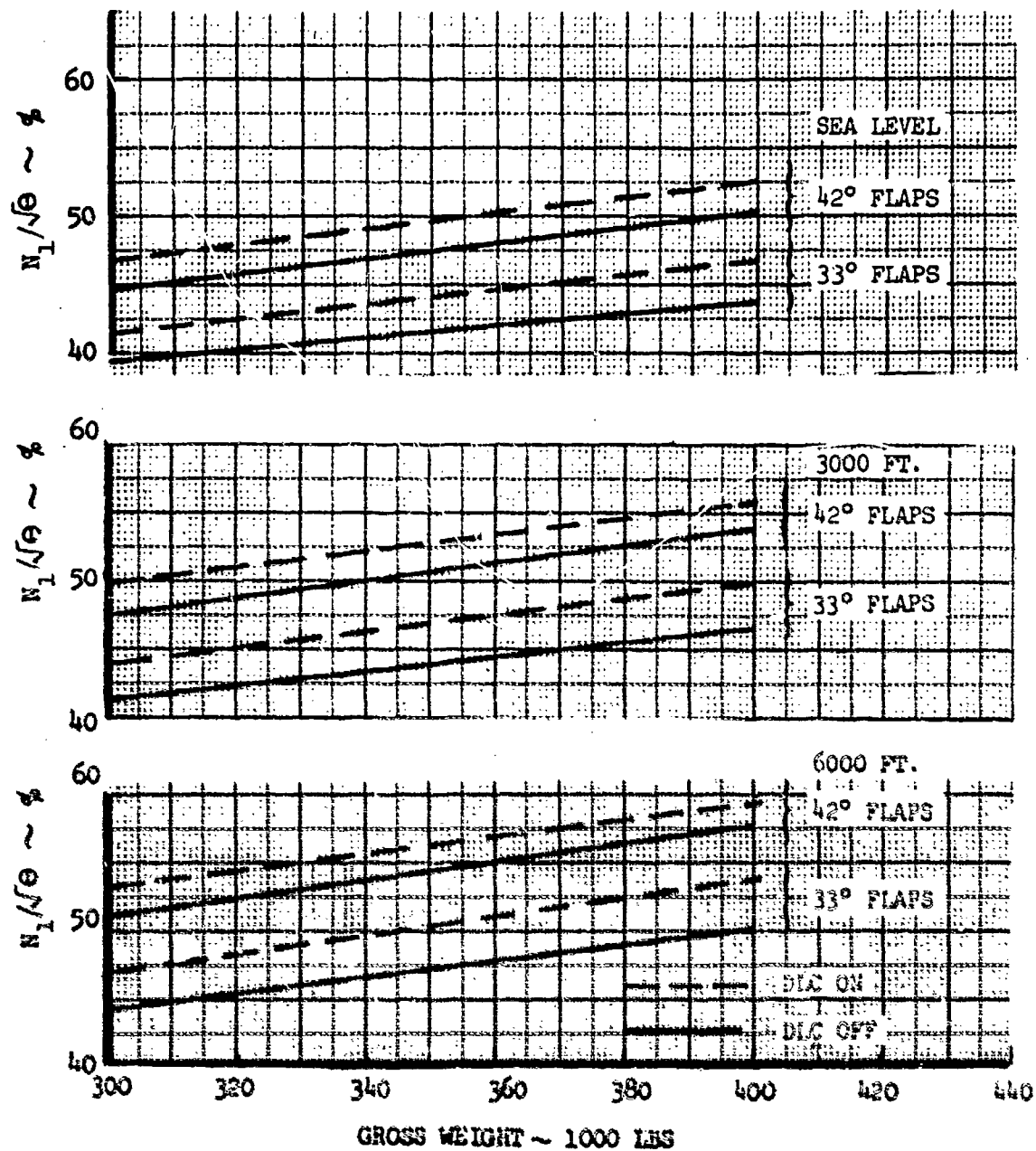


FIGURE 2-2 CORRECTED FAN SPEEDS FOR L-1011-1
NOISE CALCULATIONS - APPROACH ON
6 DEGREE GLIDE SLOPE, GEAR DOWN

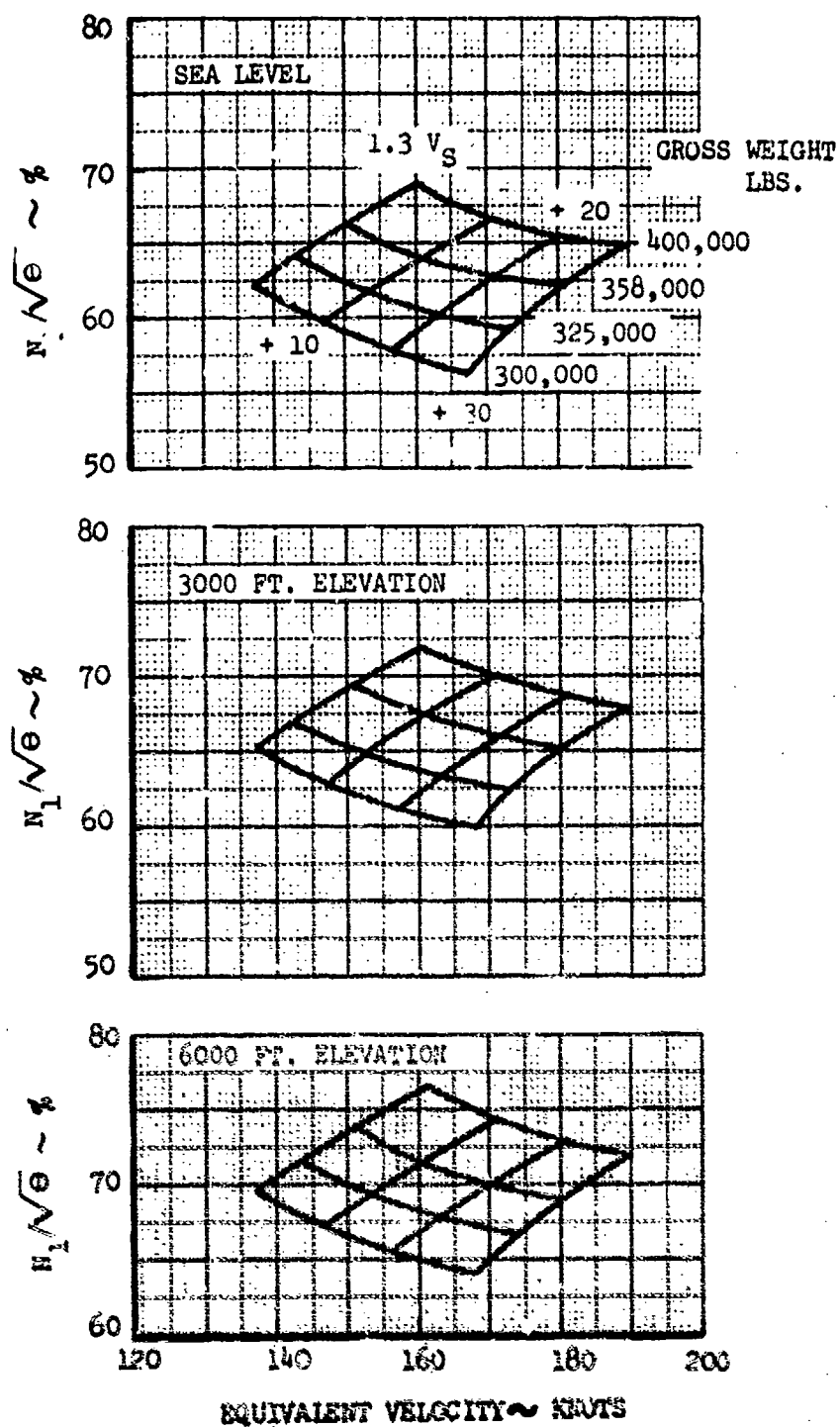


FIGURE 2-3 CORRECTED FAN SPEEDS FOR L-1011-1
NOISE CALCULATION, LEVEL FLIGHT
10 DEGREE FLAPS, GEAR UP

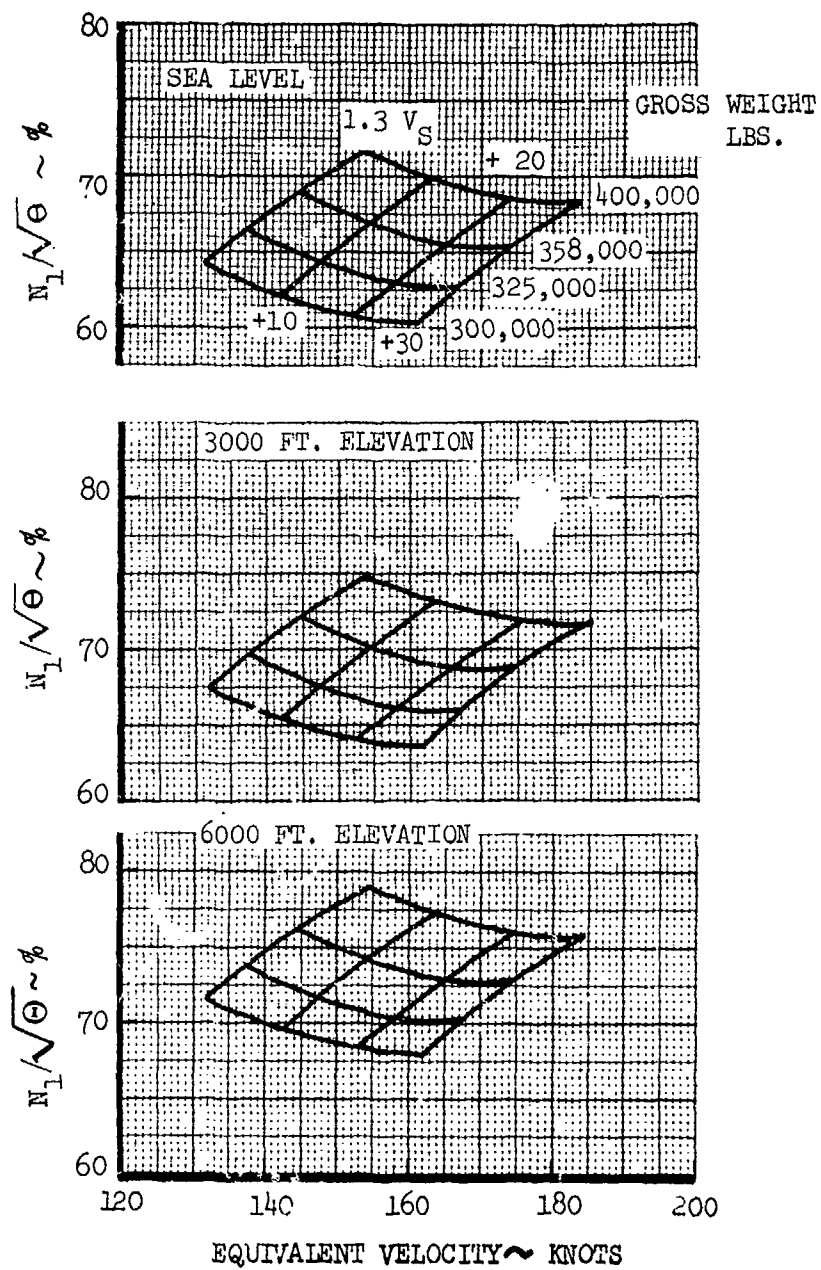


FIGURE 2-4 CORRECTED FAN SPEEDS FOR L-1011-1
NOISE CALCULATION, LEVEL FLIGHT
22° FLAPS, GEAR UP

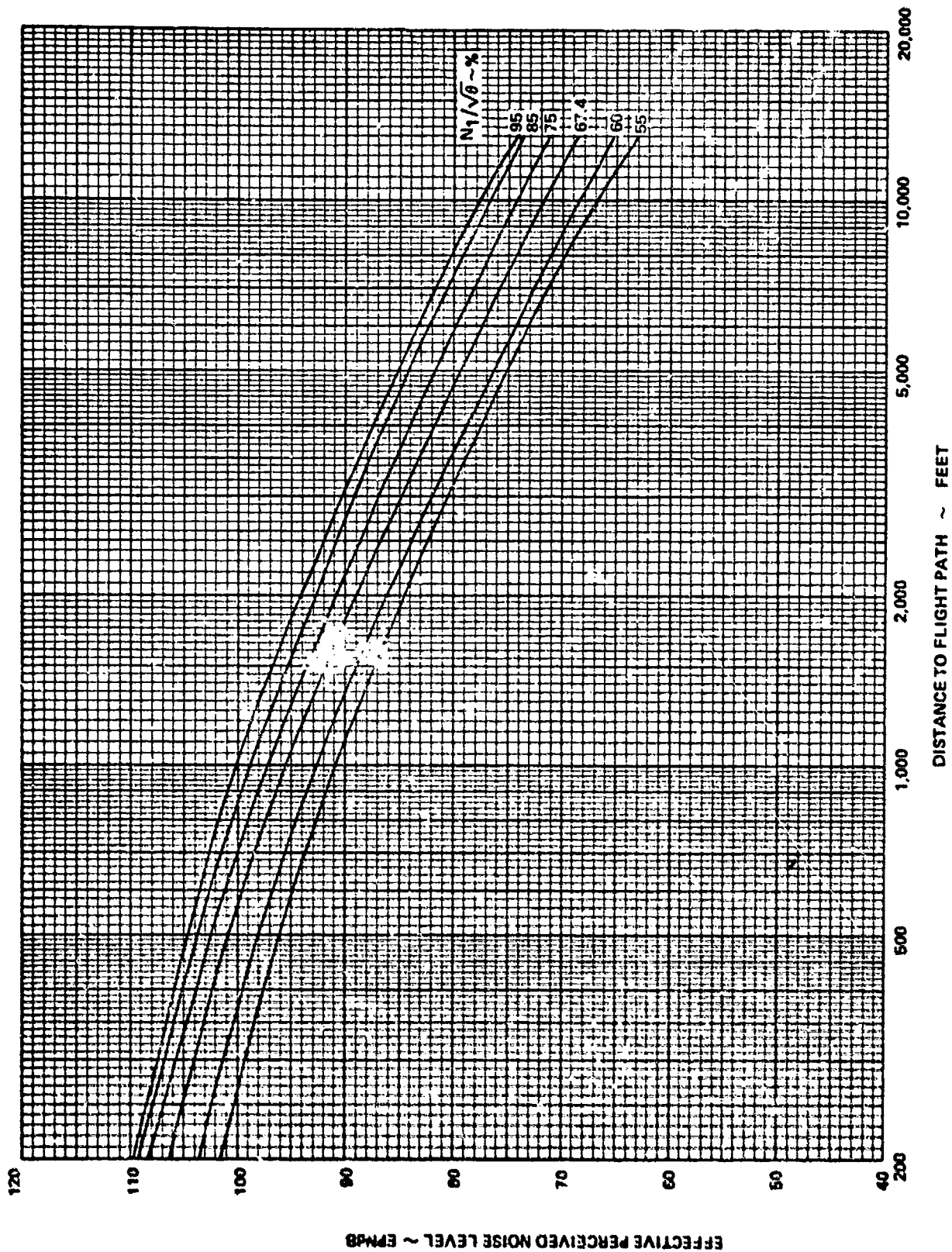


FIGURE 25 L-1011-1/RB.211-228 NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
SEA LEVEL 77°F 70% RELATIVE HUMIDITY

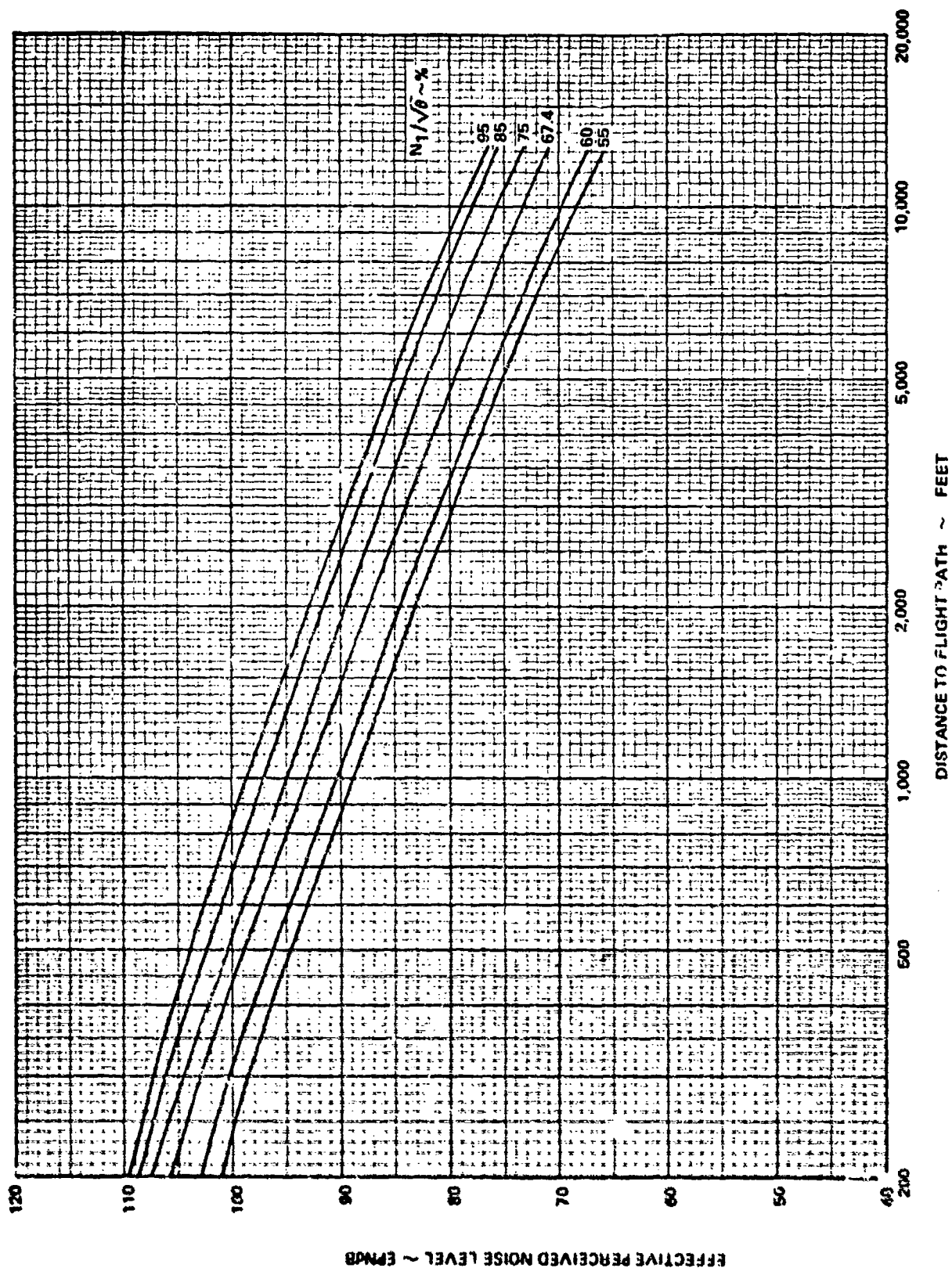


FIGURE 2-6 L-1011-1/RR-211-22B NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
SEA LEVEL 30°F, 70% RELATIVE HUMIDITY

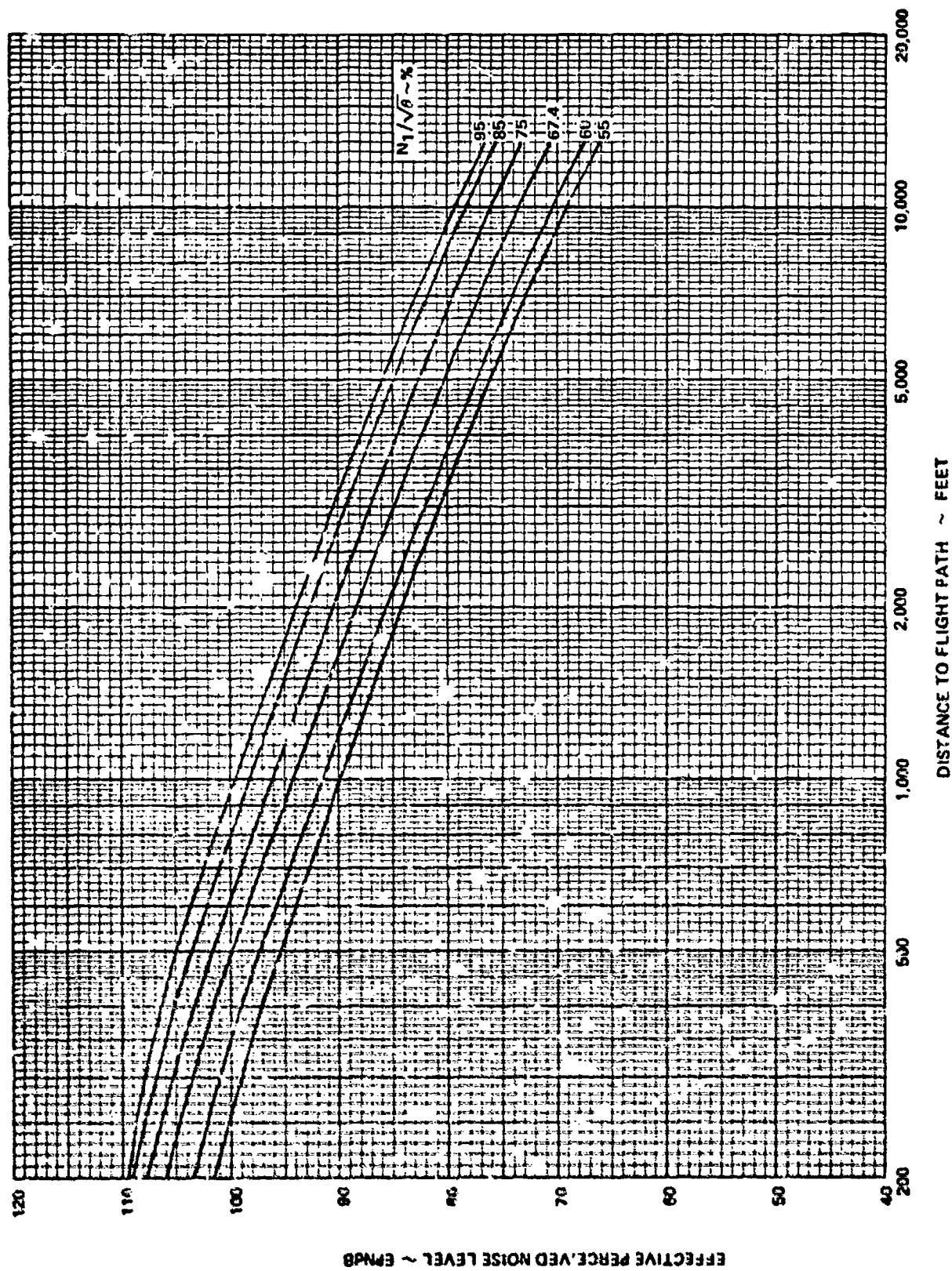


FIGURE 2-7 L-1011-1/RB-211-22B NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
SEA LEVEL 41°F 70% RELATIVE HUMIDITY

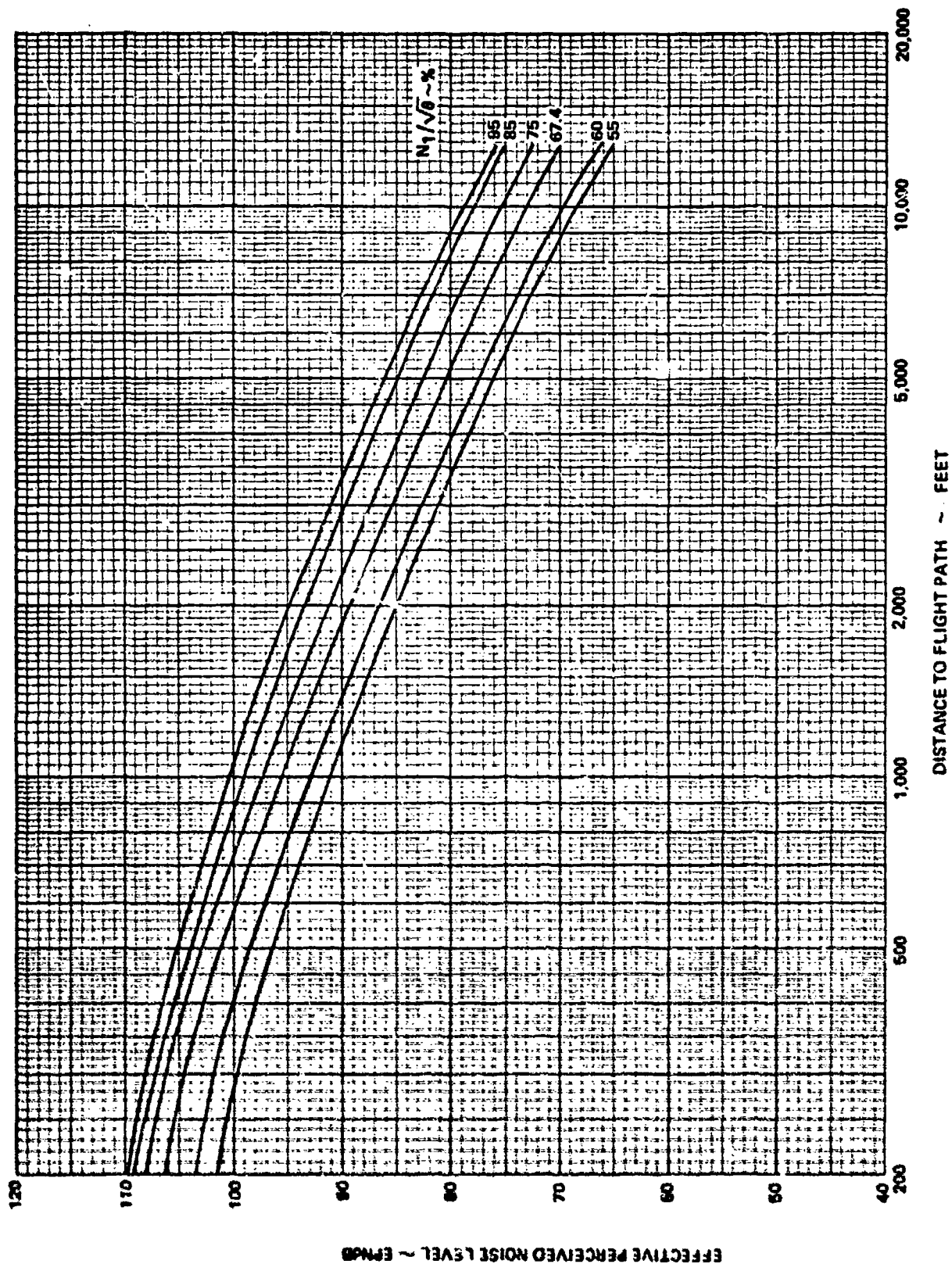


FIGURE 2-8 L-1011-1/RE-211-22B NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
SEA LEVEL 59°F 70% RELATIVE HUMIDITY

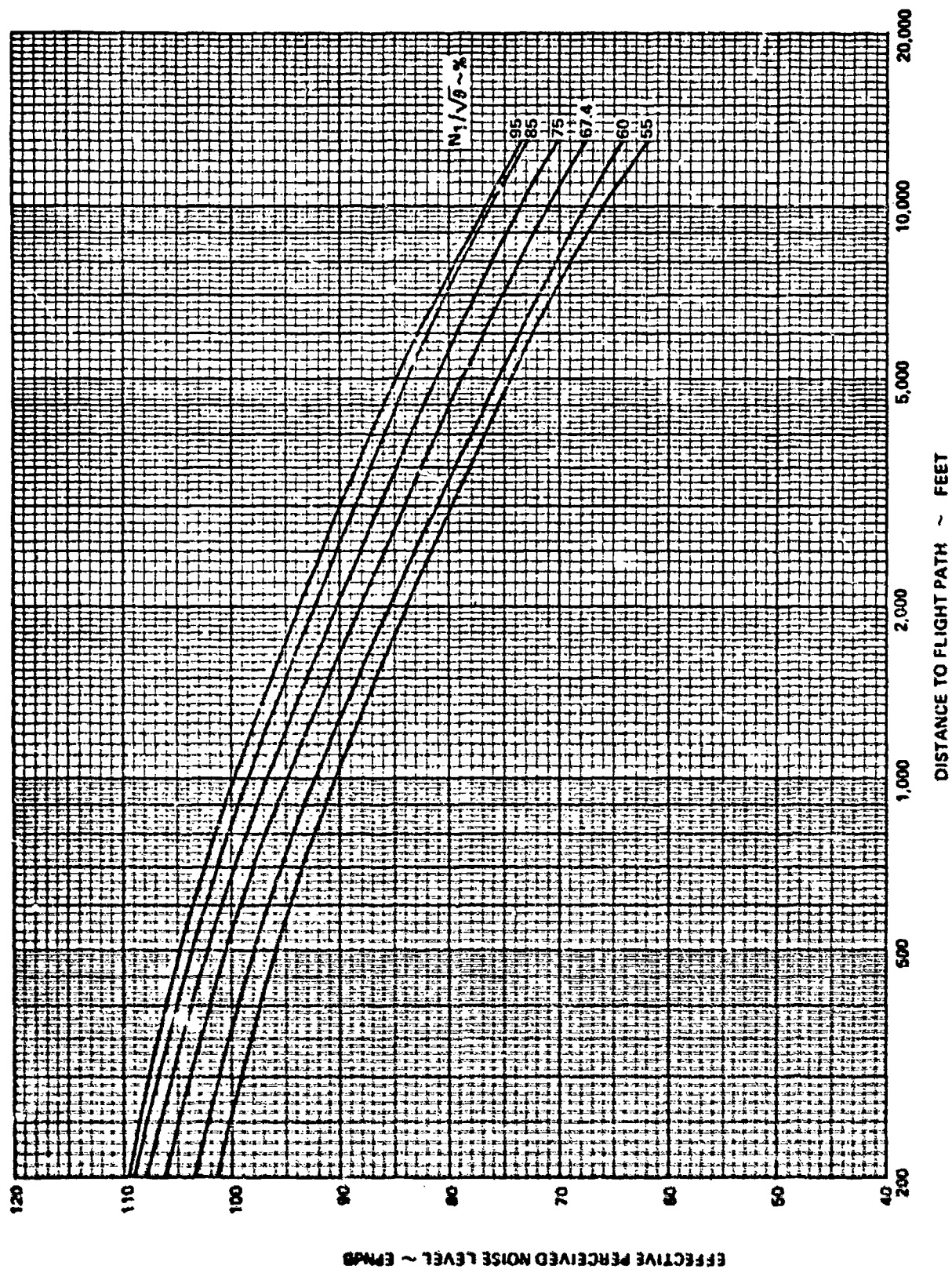


FIGURE 2-9 L-1011-1/RB-211-228 NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
SEA LEVEL 86°F 70% RELATIVE HUMIDITY

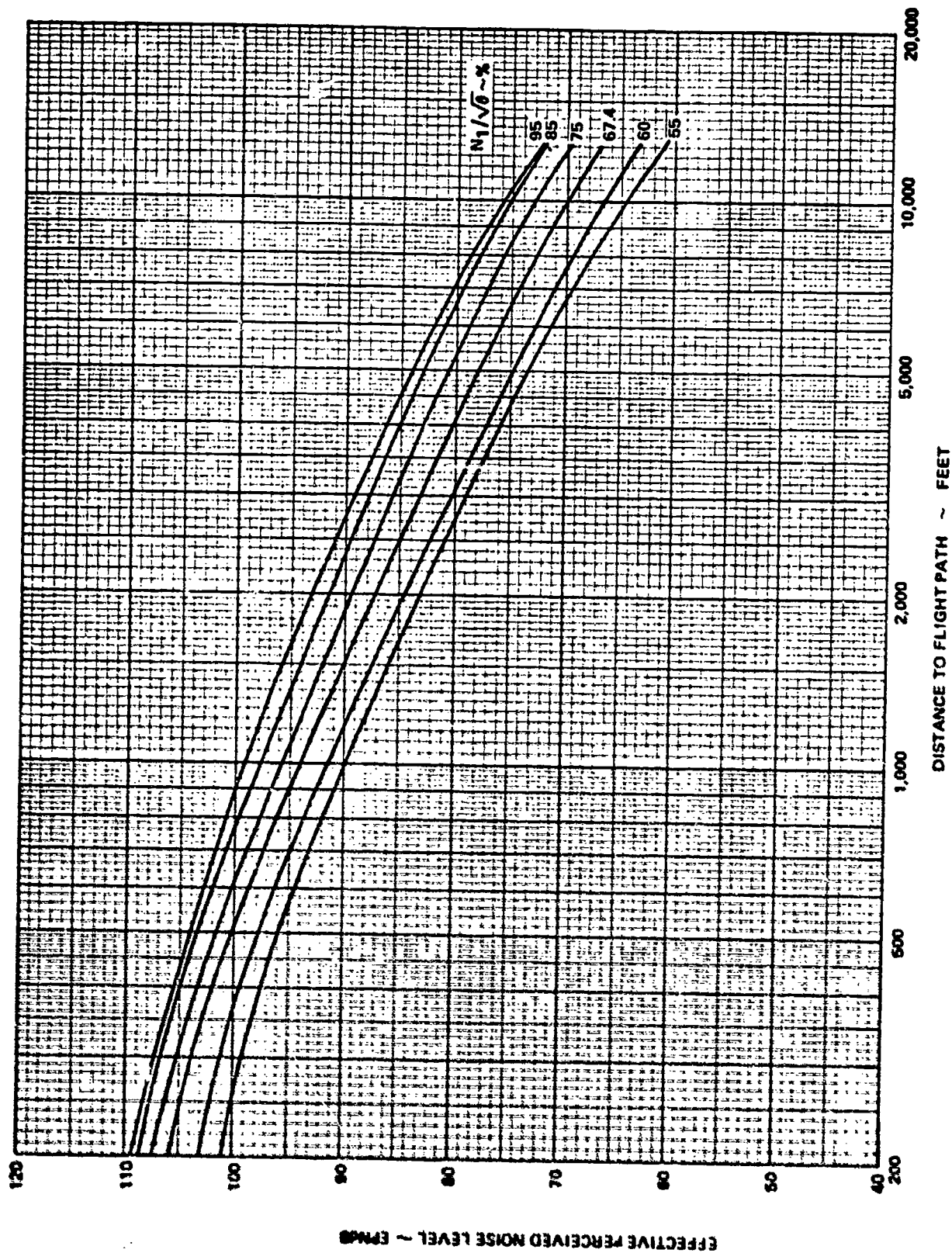


FIGURE 2-10 L-1011-1/RB-211-228 NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
SEA LEVEL 100°F 70% RELATIVE HUMIDITY

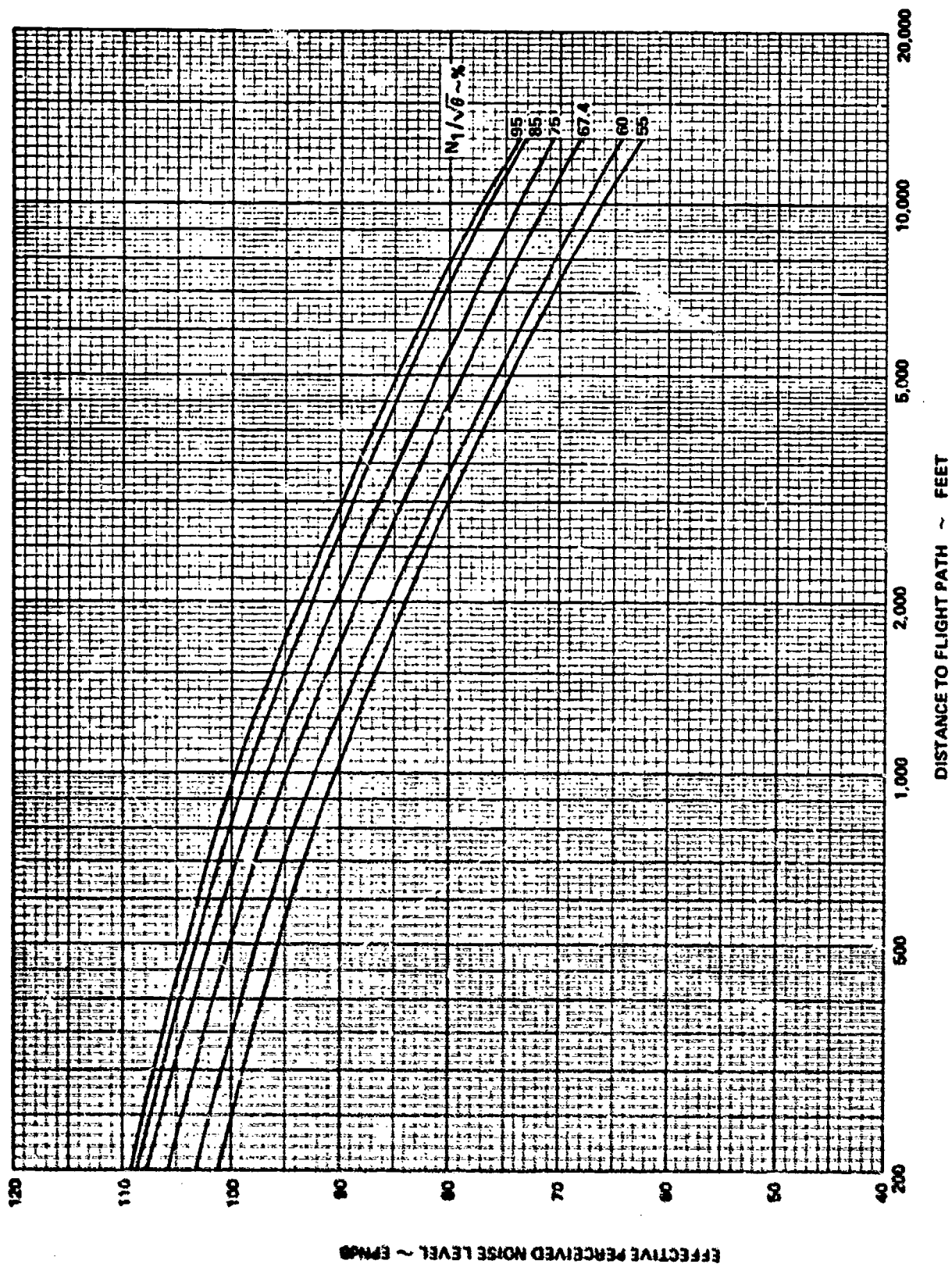


FIGURE 2-11 L-1011-1/RB-211-22B NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 160 KTS
3000 FT. 77°F 70% RELATIVE HUMIDITY

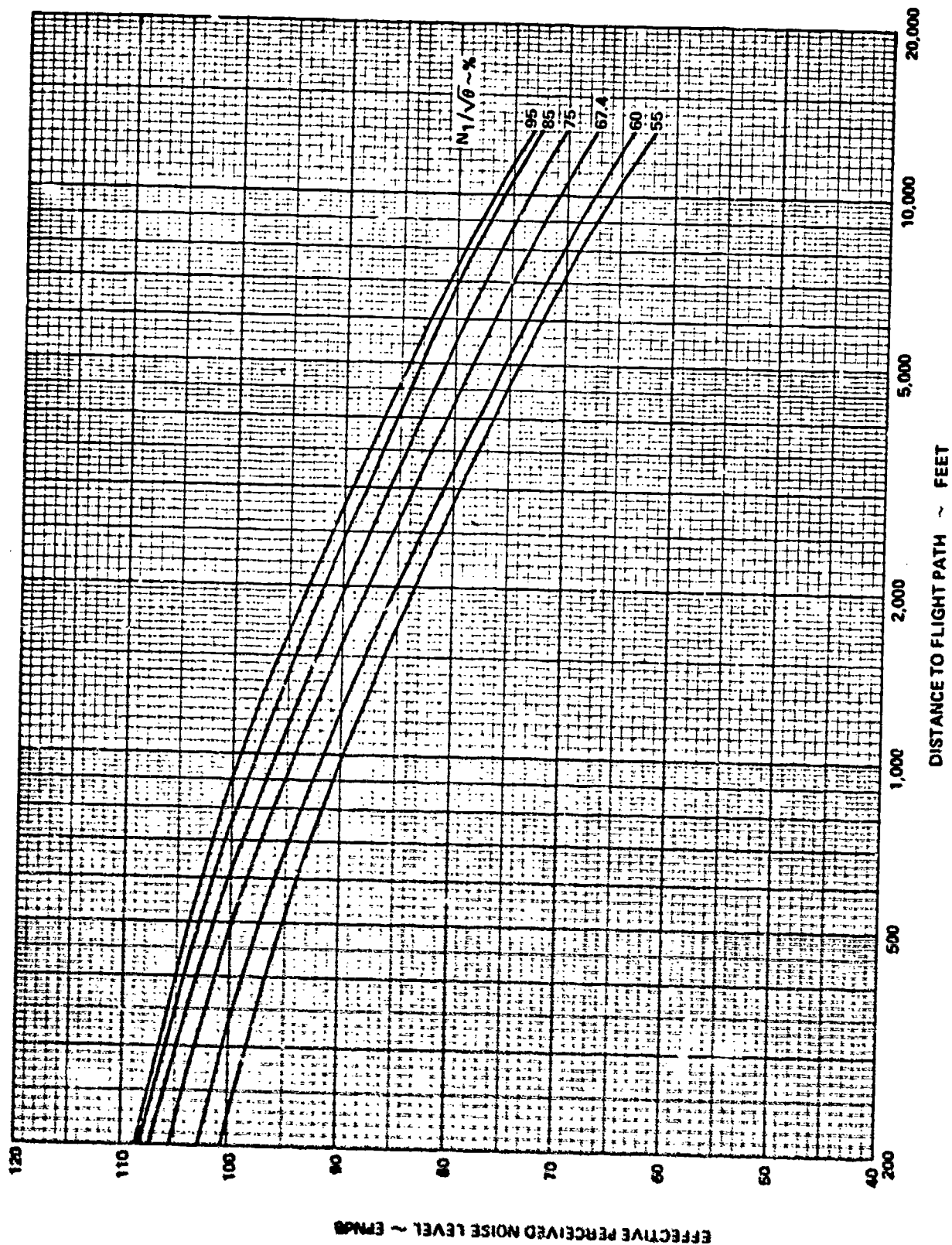


FIGURE 2-12 L-1011-1/RB-211-228 NOISE PROPAGATION
EFFECTIVE PERCEIVED NOISE LEVEL AT 180 KTS
6000 FT. 77°F 70% RELATIVE HUMIDITY

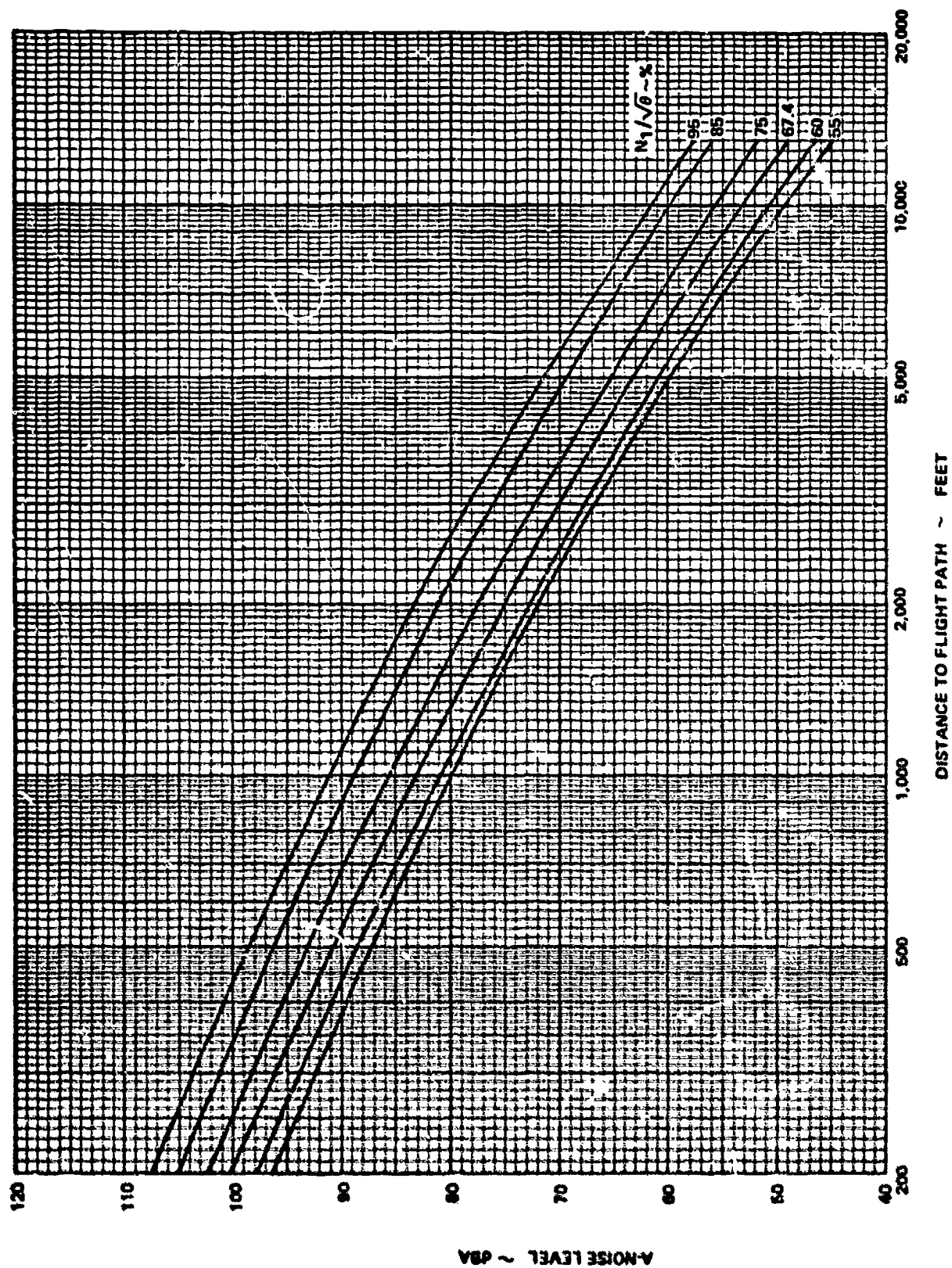


FIGURE 2-13 L-1011-1/RB.211-228 NOISE PROPAGATION
A-NOISE LEVEL
SEA LEVEL 77°F 70% RELATIVE HUMIDITY

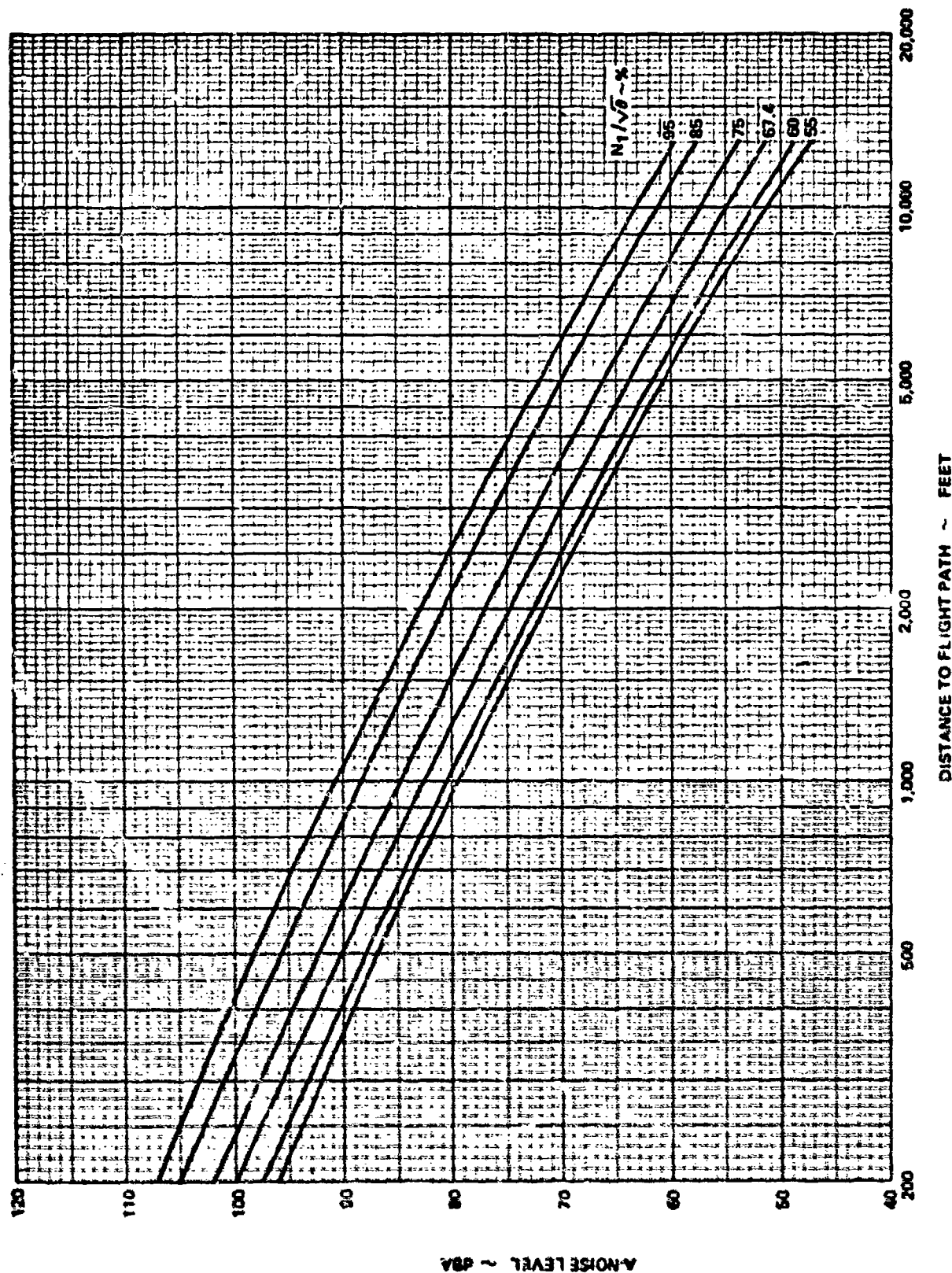


FIGURE 2-14 L-1011-1/R8-211-228 NOISE PROPAGATION
A-NOISE LEVEL
SEA LEVEL 30°F 70% RELATIVE HUMIDITY

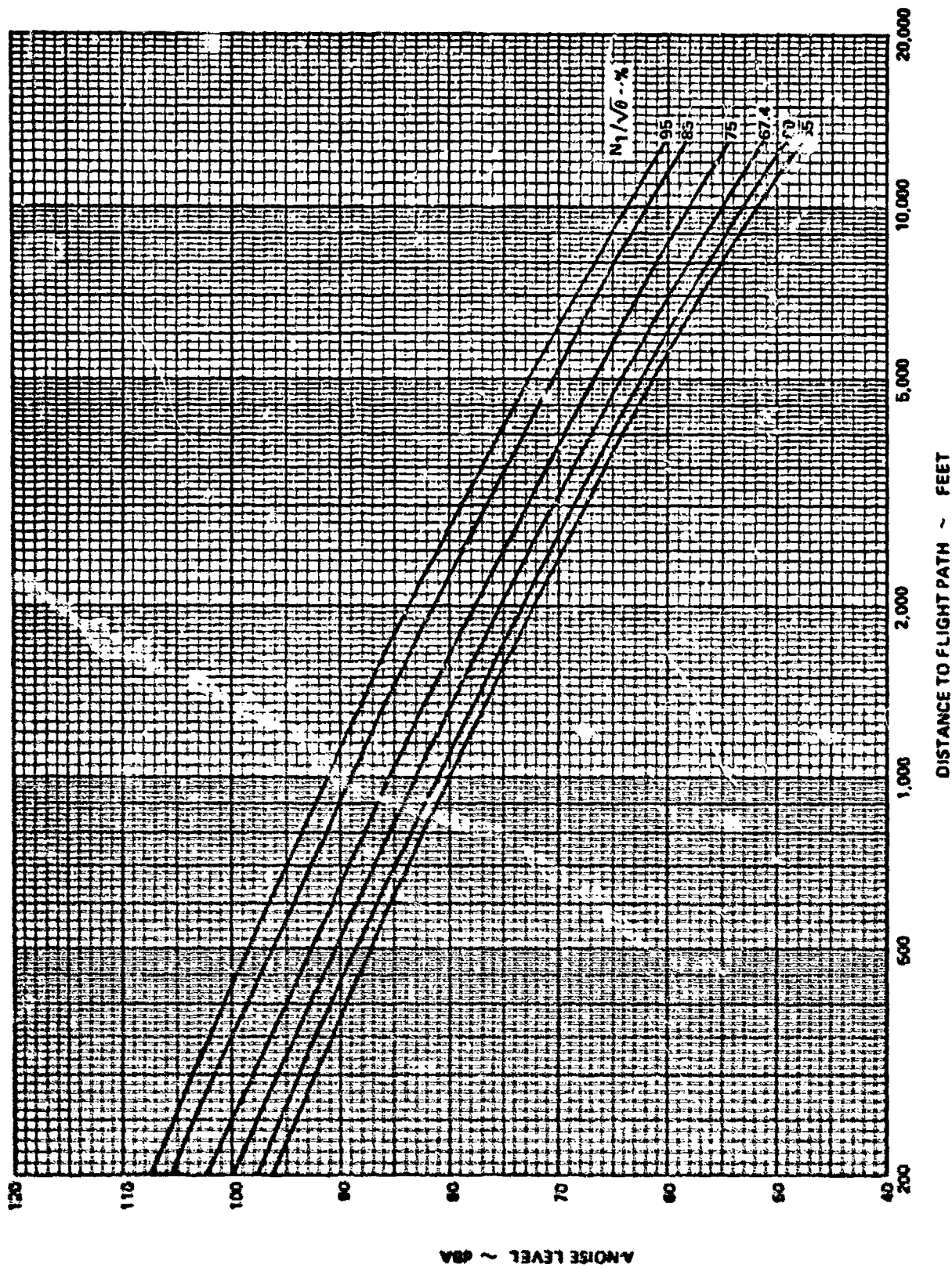


FIGURE 2-15 L-1011-1/RB.211-22B NOISE PROPAGATION
A-NOISE LEVEL
SEA LEVEL 41°F 70% RELATIVE HUMIDITY

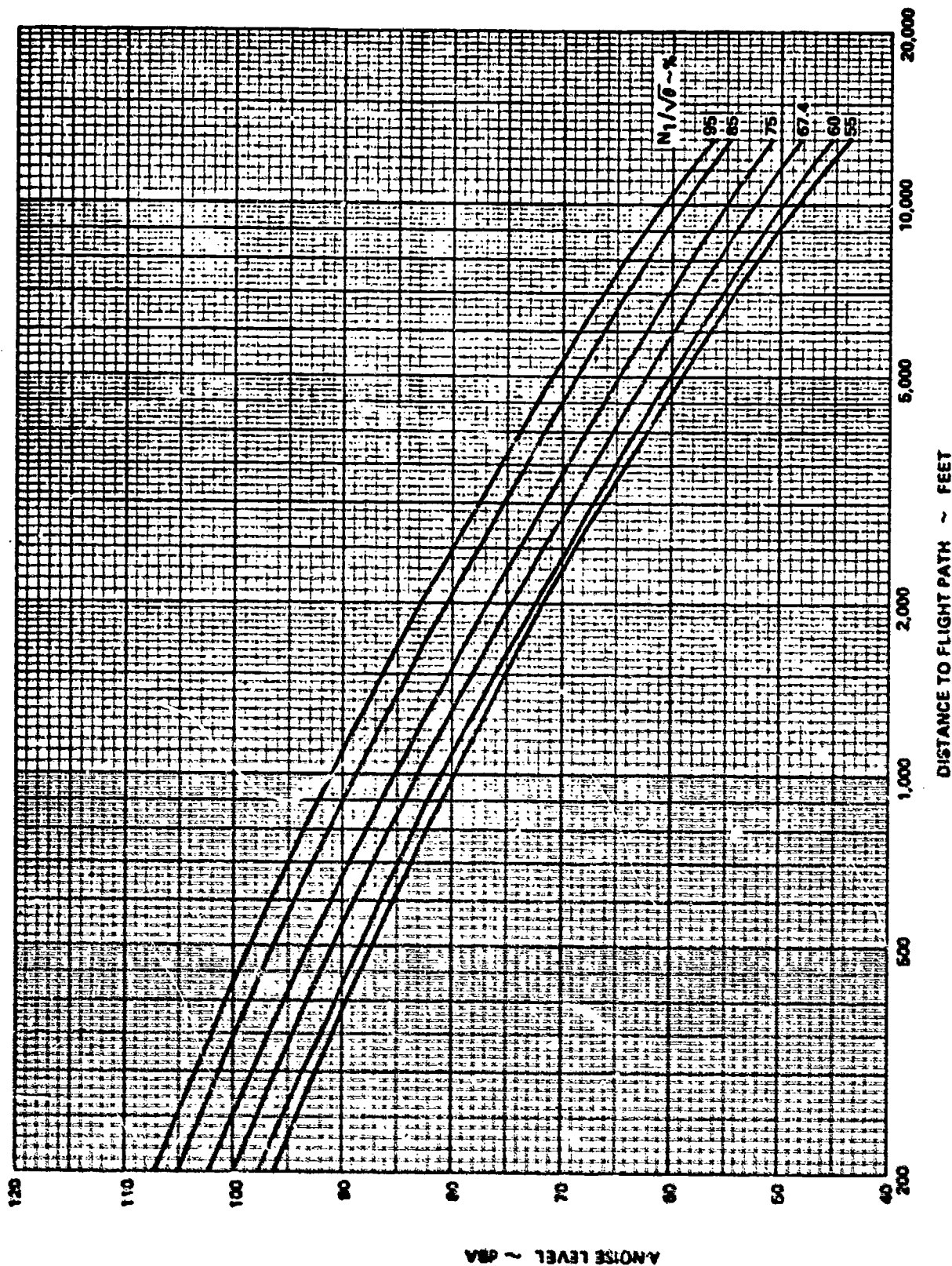


FIGURE 2-18 L-1011-1/RB-211-228 NOISE PROPAGATION
A-NOISE LEVEL
SEA LEVEL 59°F 70% RELATIVE HUMIDITY

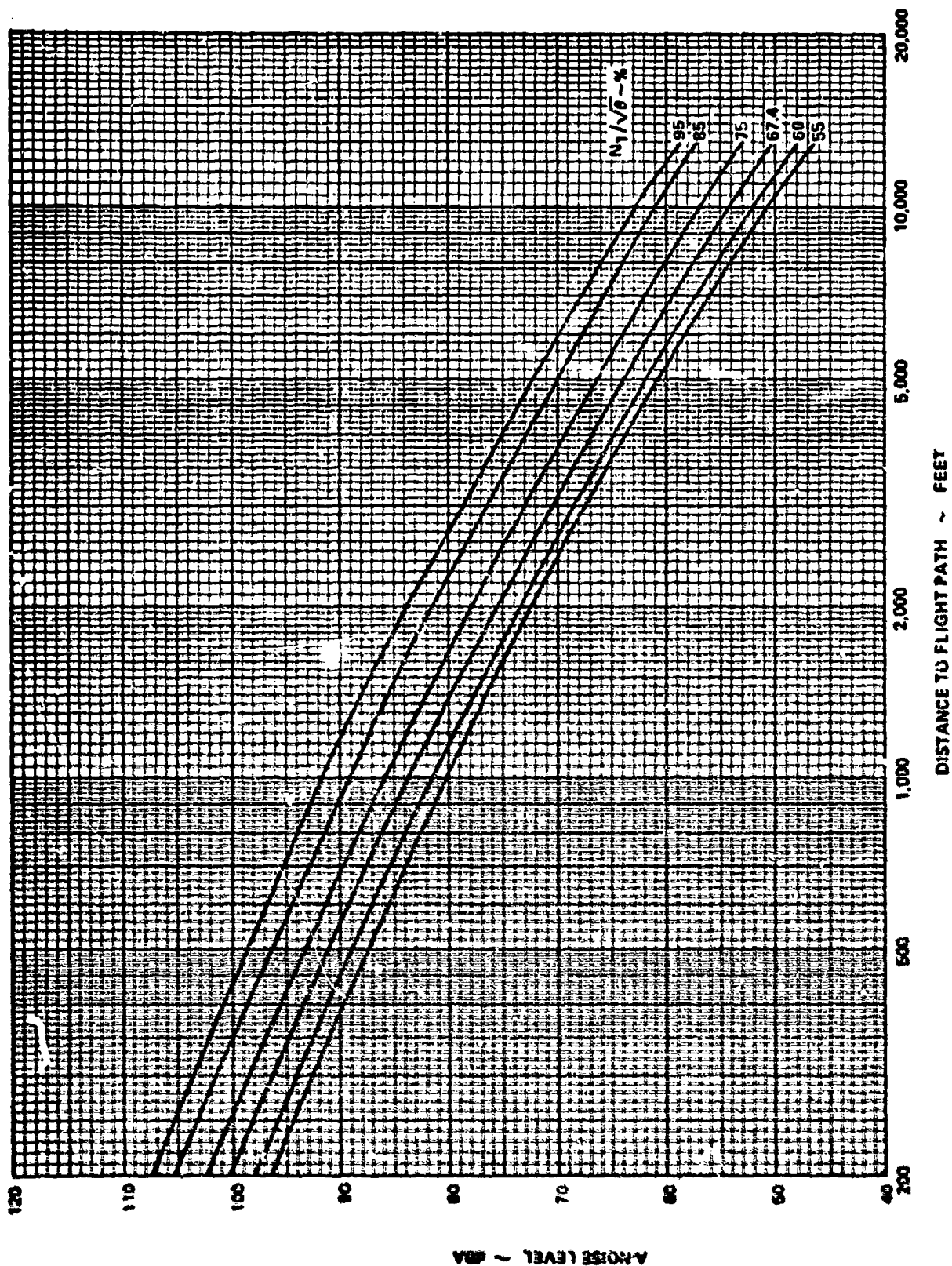


FIGURE 2-17 L-1011-1/R8.211-228 NOISE PROPAGATION
A-NOISE LEVEL
SEA LEVEL 86°F 70% RELATIVE HUMIDITY

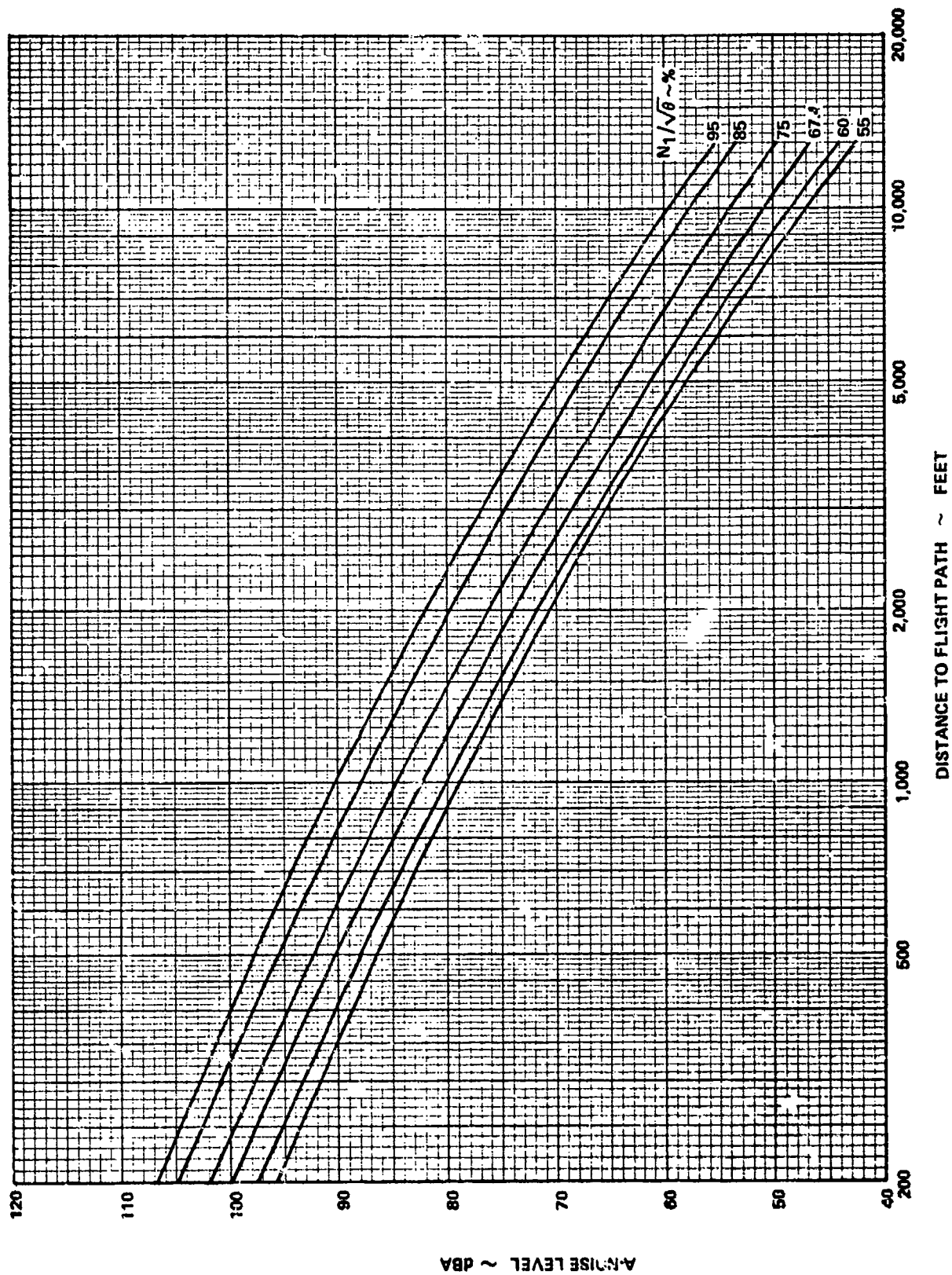


FIGURE 2-18 L-1011-1/RB.211-22B NOISE PROPAGATION
A-NOISE LEVEL
SEA LEVEL 100°F 70% RELATIVE HUMIDITY

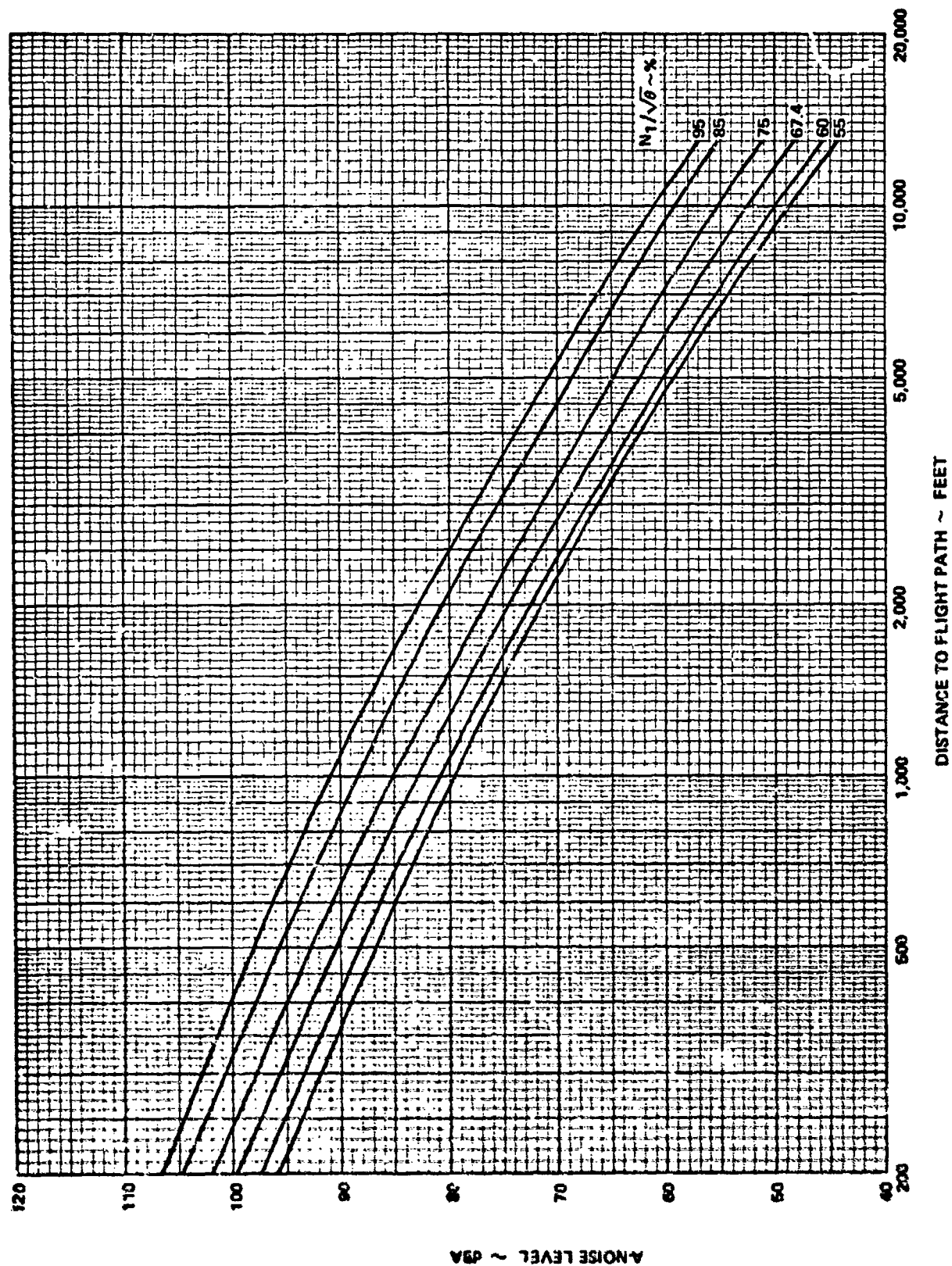


FIGURE 2-19. L-1011-1/RB-211-228 NOISE PROPAGATION
A-NOISE LEVEL
3000 FT. 77°F 70% RELATIVE HUMIDITY

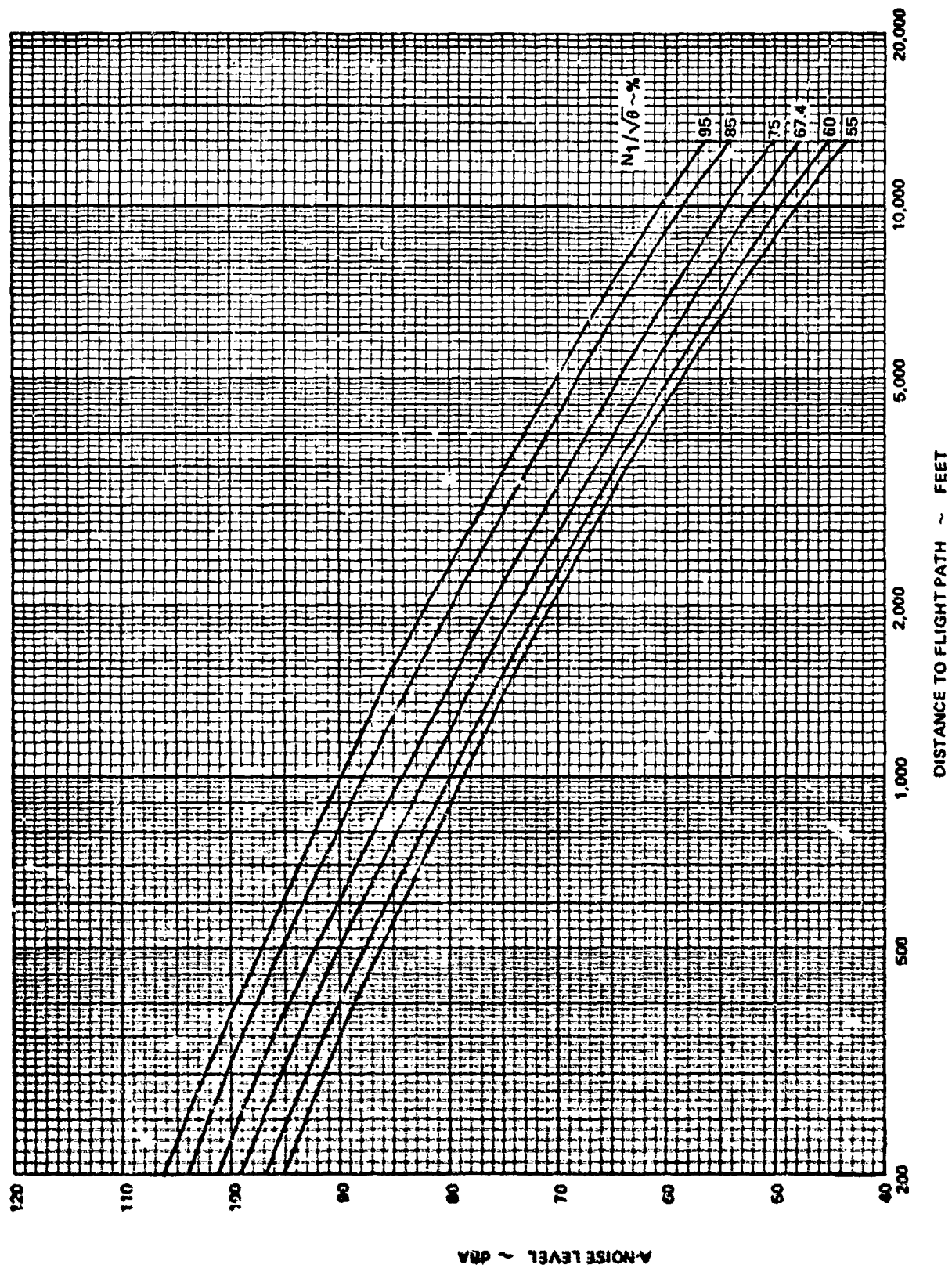


FIGURE 2-20 L-1011-1/RB-211-228 NOISE PROPAGATION
A-NOISE LEVEL
6000 FT. 77°F 70% RELATIVE HUMIDITY

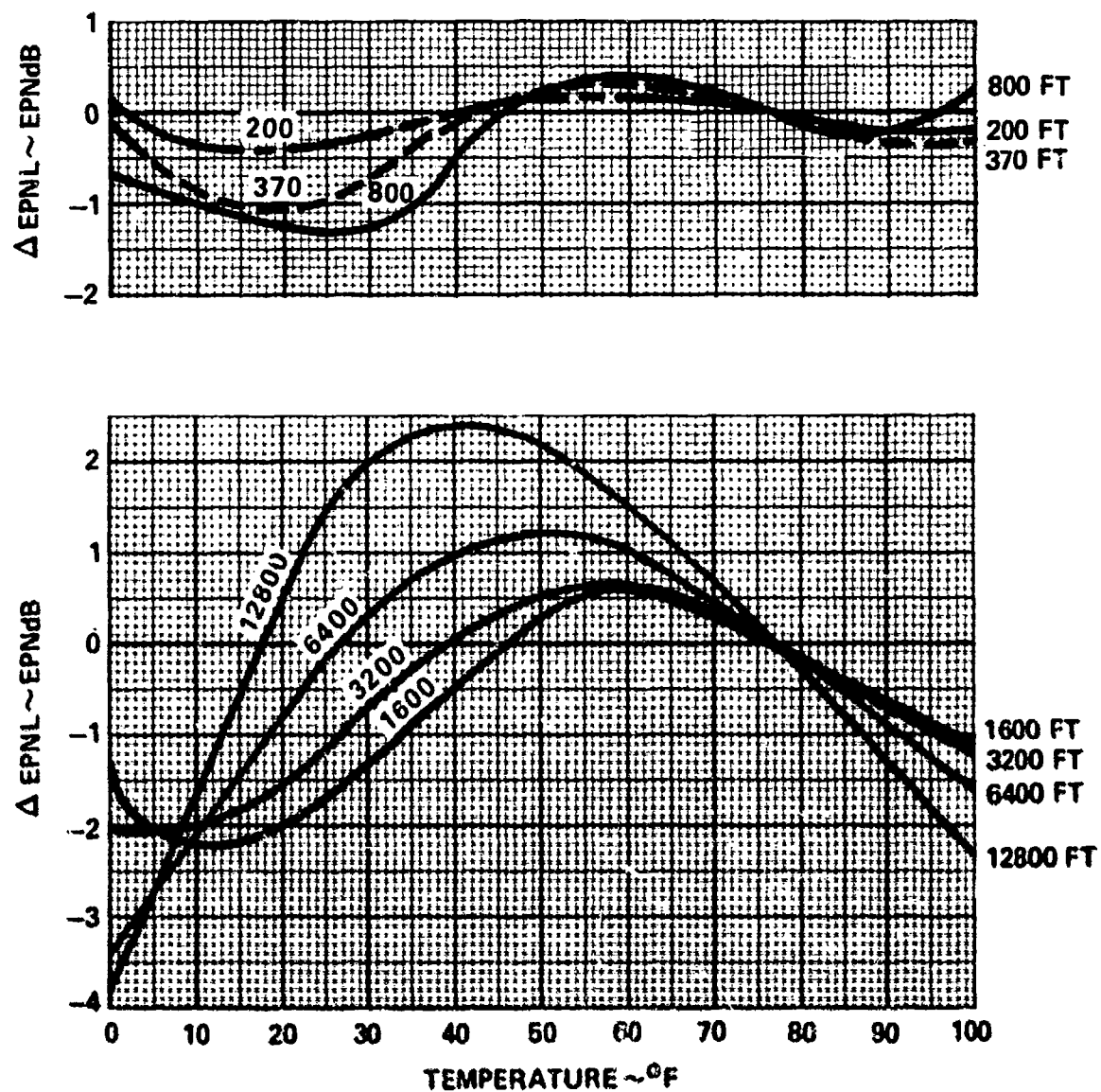


FIGURE 2-21 EFFECTIVE PERCEIVED NOISE LEVEL VS AMBIENT TEMPERATURE
 $90\% N_1/\sqrt{\theta}$

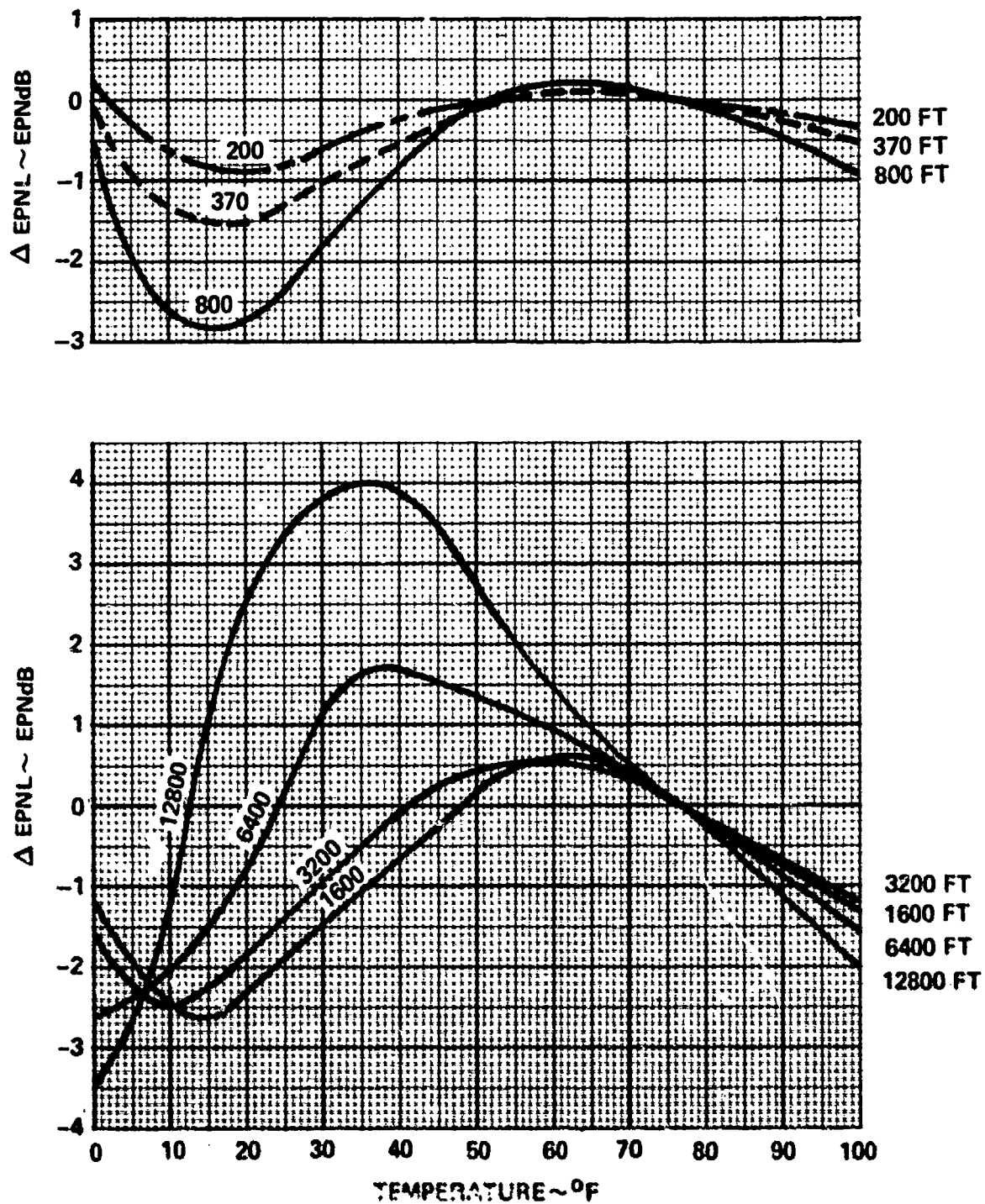


FIGURE 2-22 EFFECTIVE PERCEIVED NOISE LEVEL VS AMBIENT TEMPERATURE
 $85\% N_1 / \sqrt{\theta}$

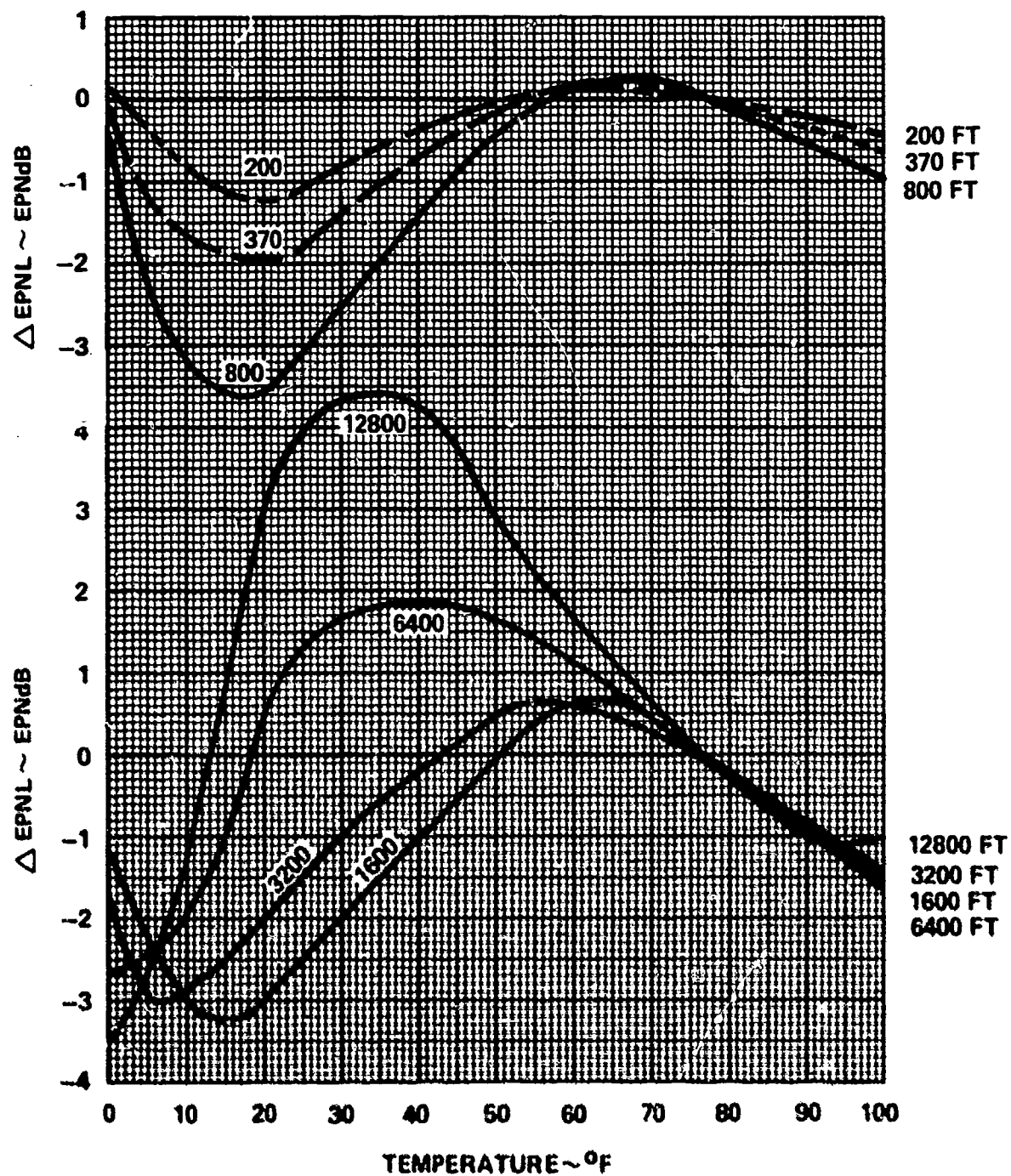


FIGURE 2-23 EFFECTIVE PERCEIVED NOISE LEVEL VS AMBIENT TEMPERATURE
 $67.4\% N_1/\sqrt{\theta}$

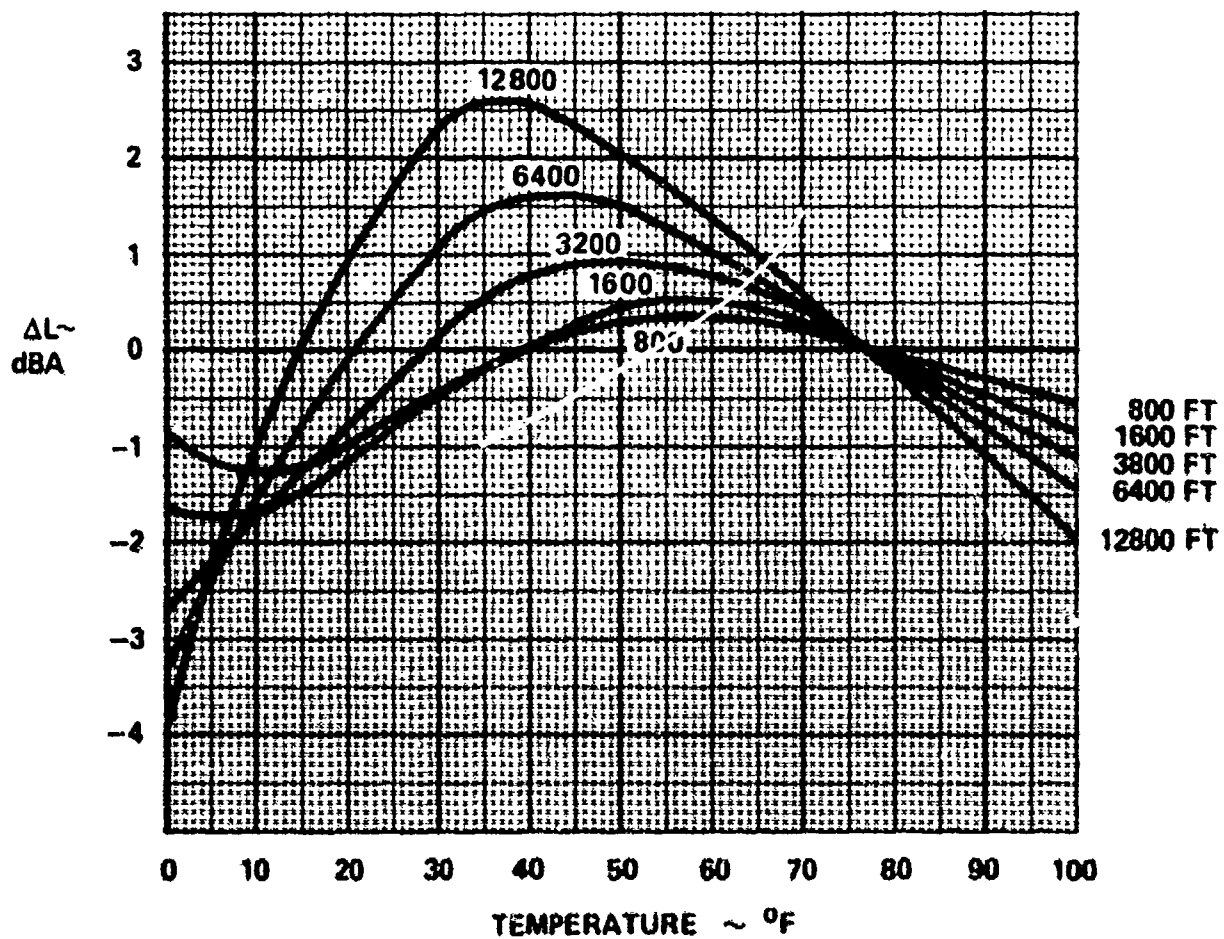
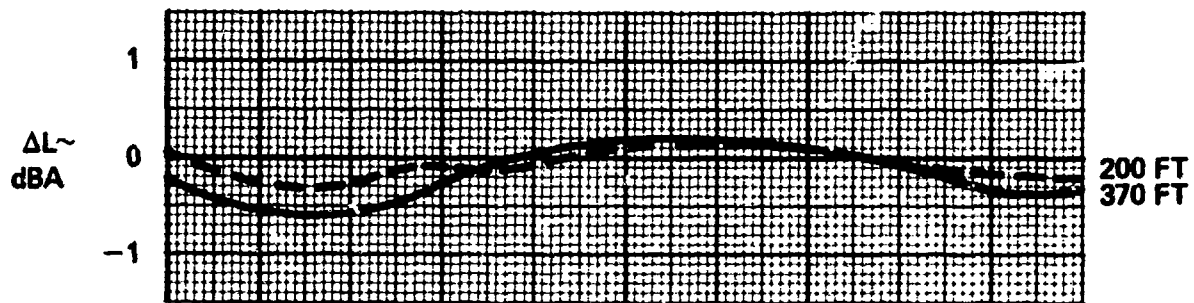


FIGURE 2-24 · A-NOISE LEVEL VS AMBIENT TEMPERATURE
 $90\% N_1/\sqrt{\theta}$

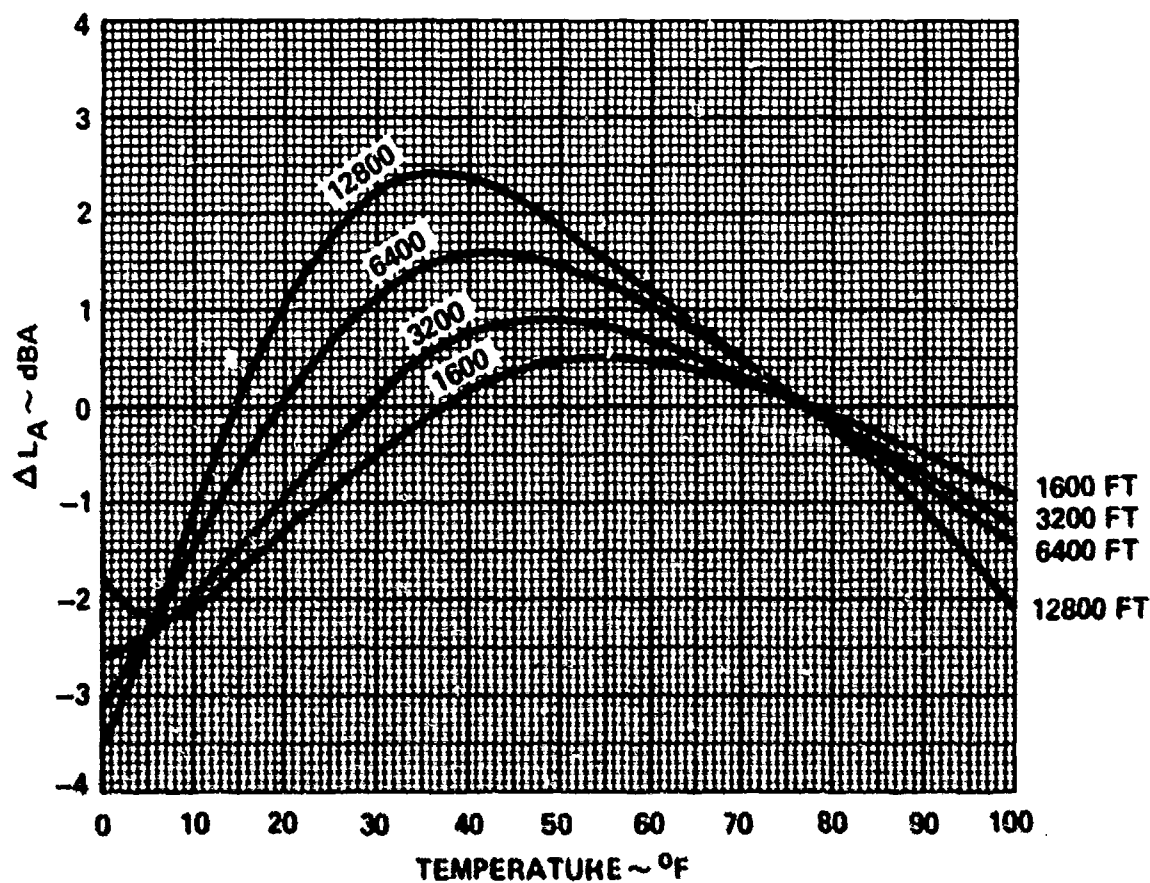
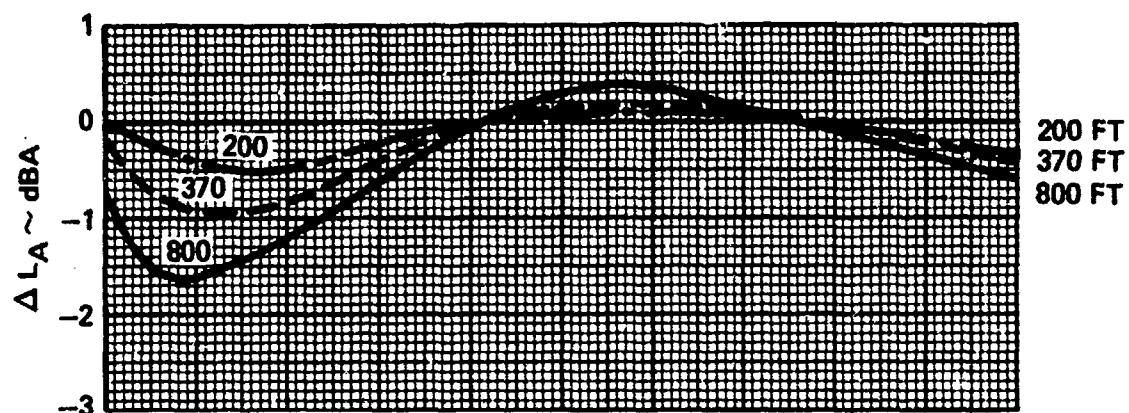


FIGURE 2-25 A-NOISE LEVEL VS AMBIENT TEMPERATURE
 $\cdot 85\% N_1/\sqrt{\theta}$

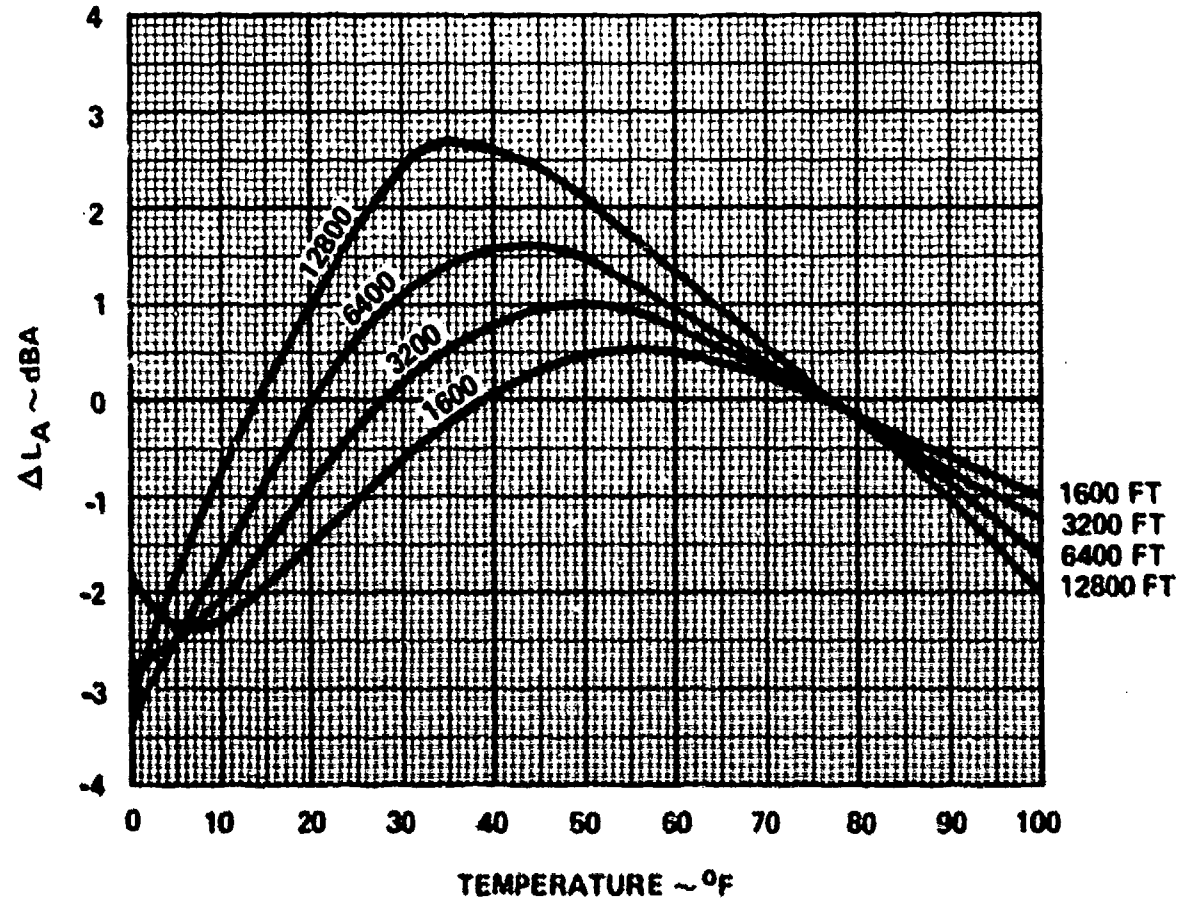
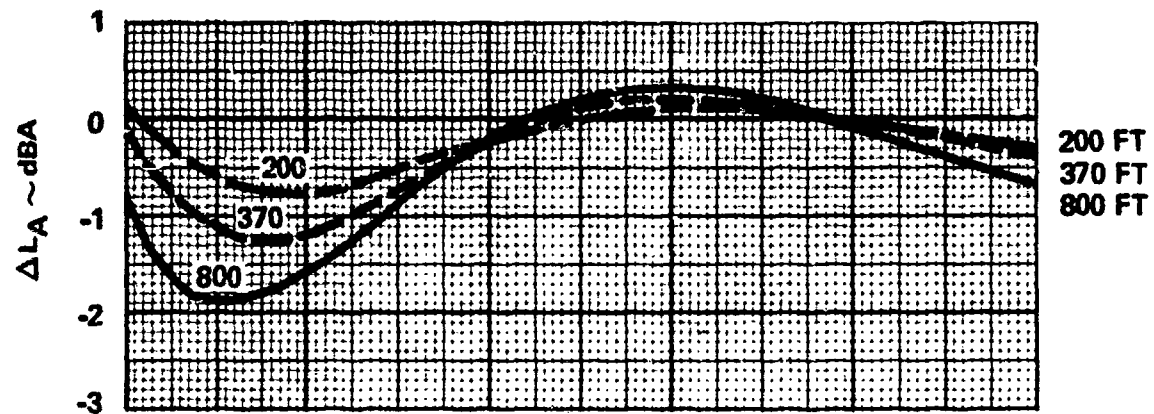


FIGURE 2-26 A-NOISE LEVEL VS AMBIENT TEMPERATURE
 $67.4\% N_1/\sqrt{h}$

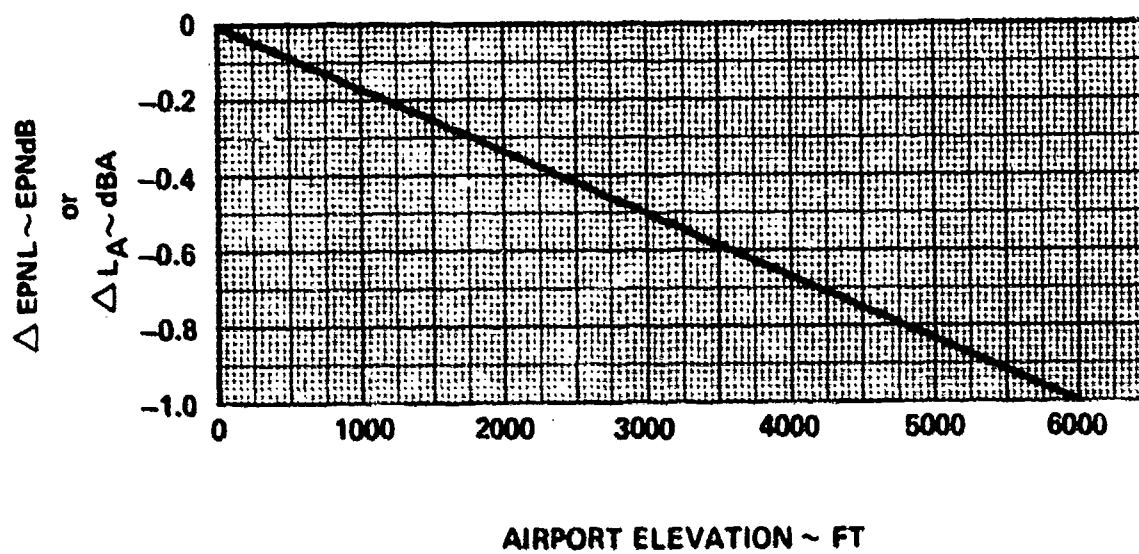


FIGURE 2-27 ΔC CORRECTION TO NOISE LEVEL FOR AIRPORT ELEVATION

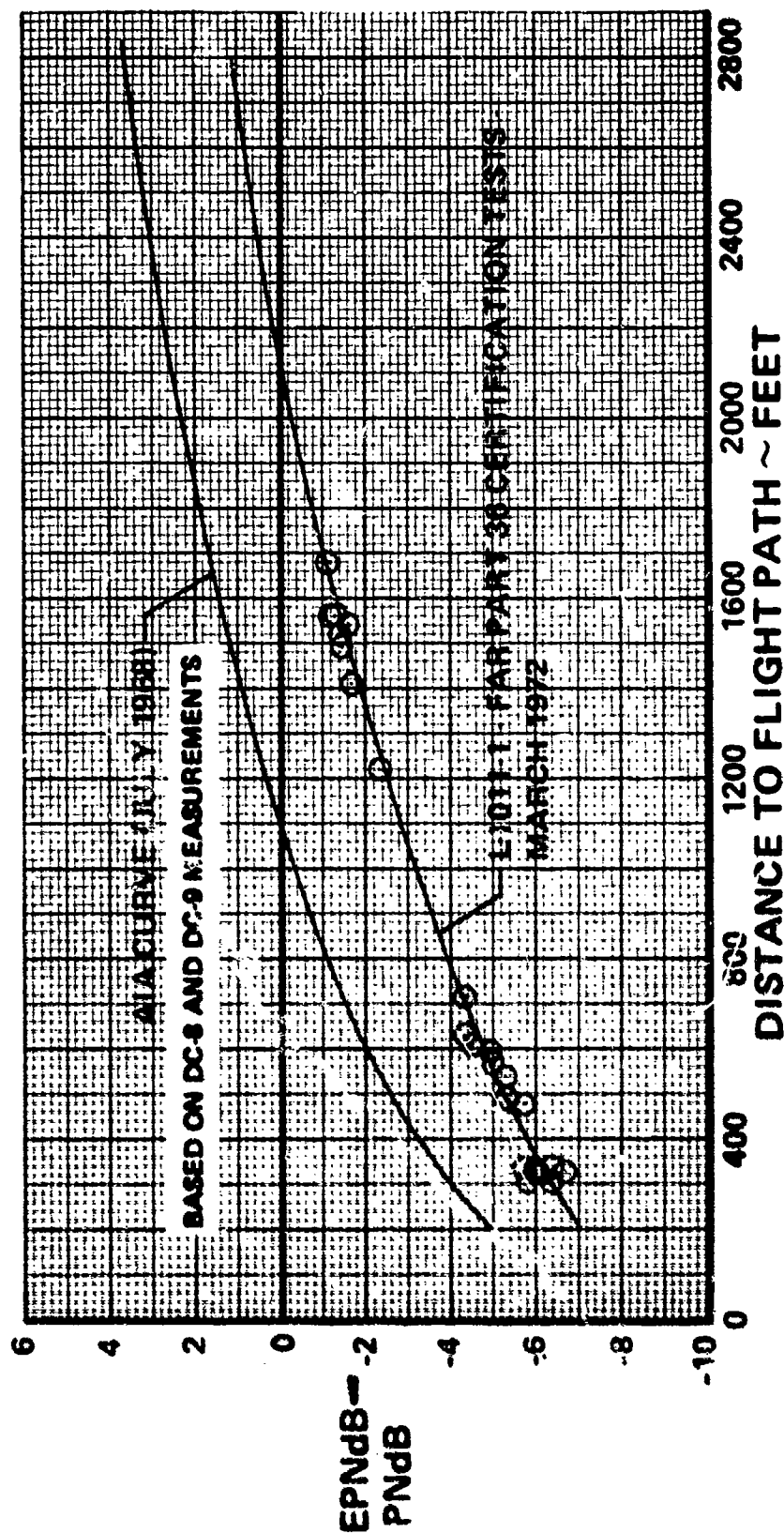


Figure 2-28. Approximate Conversion from Effective Perceived Noise Level to Perceived Noise Level (For extrapolation to greater distances, EPNdB-PNdB increases 3 dB for doubling of distance).

TABLE 2-I L-1011/RB.211-22B NOISE SPECTRA AT 200 FEET
SEA LEVEL, 77° F, 70% RELATIVE HUMIDITY

$N_1/\sqrt{3}, \%$	55	60	65	67.4	70	75	80	85	90	95
$1/3$ Octave Band Center Frequencies, Hz										
50	84.14	85.69	86.90	87.47	88.08	89.23	90.33	91.40	92.43	92.43
63	79.32	80.25	81.21	81.68	82.21	83.25	84.32	85.44	86.59	86.59
80	76.00	77.32	78.85	79.66	80.60	82.55	84.71	87.09	89.67	89.67
100	86.05	86.74	87.77	88.39	89.15	90.88	92.96	95.39	98.16	98.16
125	88.81	90.94	92.93	93.84	94.80	96.52	98.12	99.58	100.90	100.90
160	88.56	92.19	95.22	96.46	97.65	99.48	100.72	101.36	101.40	101.40
200	84.63	86.32	88.00	88.79	89.65	91.29	92.90	94.50	96.07	96.07
250	85.39	87.36	89.38	90.36	91.45	93.57	95.74	97.97	100.25	100.25
315	87.80	89.05	90.51	91.28	92.17	94.03	96.09	98.35	100.82	100.82
400	87.77	88.56	89.63	90.25	90.98	92.60	94.50	96.68	99.13	99.13
500	88.27	88.82	89.57	90.01	90.55	91.73	93.13	94.74	96.56	96.56
630	87.39	88.36	89.47	90.06	90.72	92.11	93.64	95.31	97.12	97.12
800	86.19	86.70	87.50	87.99	88.60	89.98	91.66	93.63	95.88	95.88
1000	86.00	86.19	86.76	87.16	87.71	89.03	90.74	92.83	95.30	95.30
1250	85.50	86.80	88.17	88.85	89.61	91.12	92.71	94.37	96.09	96.09
1600	83.89	85.49	87.11	87.89	88.74	90.37	92.02	93.67	95.34	95.34
2000	84.53	85.73	87.14	87.89	88.75	90.56	92.57	94.78	97.20	97.20
2500	85.15	87.25	89.13	89.95	90.78	92.20	93.39	94.36	95.10	95.10
3150	83.72	86.55	88.93	89.91	90.86	92.35	93.40	94.01	94.17	94.17
4000	82.76	85.22	87.31	88.18	89.03	90.38	91.35	91.96	92.20	92.20
5000	81.06	84.07	86.20	86.91	87.45	87.83	87.33	85.95	83.69	83.69
6300	78.66	81.93	84.10	84.75	85.17	85.13	83.99	81.75	78.41	78.41
8000	77.98	80.68	82.31	82.71	82.86	82.32	80.70	78.00	74.22	74.22
10000	72.49	76.39	78.82	79.47	79.80	79.31	77.36	73.95	69.07	69.07

Radiation Angles, degrees

65.46 65.46 65.46 65.46 65.46 65.46 65.46 82.41 82.41 82.41

Duration Corrections Normalized to 160 Knots, dB

-8.367 -8.367 -8.367 -8.367 -8.367 -8.872 -9.387 -9.902 -10.430 -10.943

TABLE 2-II L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
SEA LEVEL, 77° F, 70% RELATIVE HUMIDITY

$N_1/\sqrt{6}, \%$	55	60	67.4	75	85	95
Distance, Feet:	EPNL, EPNdB, with Extra Ground Attenuation					
200	97.5	99.5	102.3	104.0	105.1	105.7
370	93.0	95.0	97.7	99.4	100.8	101.5
800	84.9	86.8	89.3	91.2	93.2	94.3
1600	74.3	75.8	79.0	81.2	83.7	84.3
3200	65.8	67.3	70.6	72.9	75.2	75.9
6400	58.6	60.4	63.8	66.2	68.6	69.2
12800	50.1	52.6	56.1	58.6	61.2	61.3
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.6	103.6	106.4	108.1	109.1	109.6
370	98.1	100.0	102.8	104.5	105.7	106.4
800	92.8	94.7	97.3	99.0	100.6	101.6
1600	86.8	88.4	90.9	92.7	94.8	96.2
3200	79.9	81.2	84.0	86.3	88.6	89.6
6400	72.3	73.6	76.8	79.2	81.7	82.6
12800	63.2	65.2	68.7	71.2	73.8	74.3

TABLE 2-III L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
SEA LEVEL, 30° F, 70% RELATIVE HUMIDITY

$N_1 \sqrt{D}$, %	55	60	67.4	75	85	95
Distance, Feet	EPNL, EPNdB, with Extra Ground Attenuation					
200	96.9	98.8	101.5	103.2	104.6	105.4
370	91.9	93.8	96.2	97.5	99.8	100.9
600	83.0	84.7	87.4	88.2	91.7	93.1
1600	73.3	74.7	77.9	80.2	82.8	83.6
3200	65.4	66.7	70.0	72.4	74.7	75.5
6400	59.3	60.8	64.3	66.7	69.0	69.7
12800	52.4	54.4	58.0	60.5	62.9	63.2
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.0	102.9	105.6	107.3	108.5	109.4
370	97.0	98.8	101.3	103.1	104.7	105.8
600	90.7	92.5	94.9	96.8	98.8	100.3
1600	84.9	86.2	88.9	91.0	93.3	94.4
3200	79.1	80.3	83.1	85.4	87.7	88.9
6400	72.8	74.0	77.1	79.4	81.8	82.9
12800	65.5	67.0	70.5	73.0	75.4	76.2

TABLE 2-IV L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
SEA LEVEL, 41° F, 70% RELATIVE HUMIDITY

$N_1 \sqrt{\theta}, \%$	55	60	67.4	75	85	95
Distance, Feet	EPNL, EPNdB, with Extra Ground Attenuation					
200	97.3	99.2	101.9	103.7	104.9	105.6
370	92.6	94.4	97.0	98.8	100.4	101.4
800	84.0	85.9	88.4	90.2	92.6	93.9
1600	74.0	75.4	78.6	80.9	83.4	84.2
3200	66.1	67.4	70.7	73.0	75.3	76.1
6400	59.9	61.4	63.7	67.2	69.5	70.2
12800	52.7	54.7	58.2	60.7	63.1	63.7
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.4	103.3	106.0	107.7	108.9	109.6
370	97.6	99.5	102.1	103.9	105.2	106.2
800	91.9	93.8	96.2	98.0	99.9	101.3
1600	85.8	87.2	89.8	91.9	94.2	96.7
3200	80.0	81.2	83.9	86.3	88.6	89.7
6400	73.6	74.8	77.7	80.1	82.5	83.6
12800	66.1	67.4	70.8	73.3	75.7	76.6

TABLE 2-V L-1011-1/RB.211-22B EFFECTIVE RECEIVED NOISE LEVEL PROPAGATION
SEA LEVEL, 59° F, 70% RELATIVE HUMIDITY

$R \sqrt{\theta}, \%$	55	60	67.4	75	85	95
Distance, Feet						
	EPNL, EPNdB, with Extra Ground Attenuation					
200	97.6	99.6	102.3	104.1	105.2	105.8
370	93.2	95.1	97.8	99.5	101.0	101.7
800	85.1	87.0	89.5	91.1	93.5	94.6
1600	74.7	76.1	79.3	81.5	84.0	84.7
3200	66.5	67.9	71.1	73.5	75.8	76.5
6400	59.8	61.4	64.7	67.1	69.5	70.1
12800	51.8	54.0	57.4	59.9	62.4	62.7
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.7	103.7	106.5	108.2	109.2	109.8
370	98.2	100.1	102.9	104.6	105.8	106.6
800	93.1	94.9	97.5	99.2	100.8	101.9
1600	87.1	88.9	91.5	93.3	95.4	96.8
3200	80.6	81.9	84.7	86.9	89.2	90.3
6400	73.6	74.8	77.8	80.2	82.6	83.7
12800	65.1	66.7	70.1	72.6	75.1	75.9

TABLE 2-VI L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
SEA LEVEL, 86° F, 70% RELATIVE HUMIDITY

$N/\sqrt{\theta}, \%$	55	60	67.4	75	85	95
Distance, Feet						
	EPNL, EPNdB, with Extra Ground Attenuation					
200	97.4	99.4	102.1	103.8	105.0	105.6
370	92.9	94.8	97.5	99.2	100.6	101.4
800	84.5	86.4	89.0	90.8	92.9	94.0
1600	74.0	75.5	78.7	80.9	83.4	84.0
3200	65.3	66.9	70.2	72.5	74.8	75.5
6400	58.0	59.9	63.2	65.7	68.1	68.6
12800	49.2	51.8	55.4	57.9	60.5	60.6
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.5	103.5	106.2	107.9	109.0	109.5
370	97.9	99.8	102.6	104.3	105.5	106.2
800	92.5	94.4	96.9	98.7	100.3	101.3
1600	86.0	87.8	90.3	92.2	94.3	95.7
3200	79.3	80.6	83.5	85.8	88.2	89.2
6400	71.6	72.9	76.2	78.6	81.1	82.0
12800	62.2	64.4	67.9	70.4	73.0	73.4

TABLE 2-VII L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
SEA LEVEL, 100° F, 70% RELATIVE HUMIDITY

$N_1/\sqrt{\theta}, \%$	55	60	67.4	75	85	95
Distance, Feet	EPNL, EPNdB, with Extra Ground Attenuation					
200	97.2	99.2	101.9	103.6	104.8	105.4
370	92.5	94.4	97.1	98.9	100.3	101.1
800	84.0	85.8	88.4	90.2	92.4	93.6
1600	73.4	74.9	78.1	80.4	82.9	83.5
3200	64.5	66.2	69.5	71.8	74.2	74.8
6400	56.9	59.0	62.4	64.9	67.3	67.6
12800	47.9	50.6	54.2	56.8	59.4	59.4
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.3	103.3	106.0	107.7	108.8	109.4
370	97.6	99.5	102.2	103.9	105.2	106.0
800	91.8	93.8	96.3	98.0	99.7	100.9
1600	85.2	86.8	89.4	91.5	93.5	95.0
3200	78.4	79.7	82.7	85.1	87.4	88.4
6400	70.4	71.9	75.2	77.6	80.2	81.0
12800	60.6	63.1	66.6	69.2	71.8	71.9

TABLE 2-VIII L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
3000 FEET, 77° F, 70% RELATIVE HUMIDITY

$N_1/\sqrt{\theta}, \%$	55	60	67.4	75	85	95
Distance, Feet	EPNL, EPNdB, with Extra Ground Attenuation					
200	97.0	99.0	101.8	103.5	104.6	105.2
370	92.6	94.5	97.2	98.9	100.3	101.0
800	84.4	86.3	88.9	90.7	92.7	93.8
1600	73.8	75.4	78.5	80.7	83.2	83.8
3200	65.3	66.8	70.1	72.4	74.7	75.4
6400	58.1	59.9	63.3	65.7	68.1	68.7
12800	49.6	52.0	55.6	58.1	60.7	60.8
	EPNL, EPNdB, without Extra Ground Attenuation					
200	101.1	103.2	105.9	107.6	108.6	109.2
370	97.6	99.6	102.3	104.0	105.2	105.9
800	92.3	94.2	96.8	98.6	100.1	101.1
1600	86.1	87.9	90.4	92.3	94.3	95.7
3200	79.4	80.7	83.5	85.8	88.1	89.1
6400	71.8	73.1	76.3	78.7	81.2	82.1
12800	62.7	64.7	68.2	70.7	73.3	73.8

TABLE 2-IX L-1011-1/RB.211-22B EFFECTIVE PERCEIVED NOISE LEVEL PROPAGATION
6000 FEET, 77° F, 70% RELATIVE HUMIDITY

$N_1 \sqrt{6}$	55	60	67.4	75	85	95
Distance, Feet	EPNL, EPNDB, with Extra Ground Attenuation					
200	96.5	98.6	101.3	103.0	104.1	104.7
370	92.1	94.0	96.7	98.5	99.8	100.6
800	83.9	85.8	88.4	90.2	92.2	93.3
1600	73.3	74.8	78.0	80.2	82.7	83.3
3200	64.8	66.3	69.5	71.9	74.2	74.9
6400	57.6	59.4	62.7	65.2	67.6	68.1
12800	49.1	51.5	55.1	57.6	60.1	60.3
	EPNL, EPNDB, without Extra Ground Attenuation					
200	100.6	102.7	105.4	107.1	108.1	108.7
370	97.1	99.1	101.8	103.5	104.7	105.4
800	91.8	93.7	96.3	98.1	99.6	100.6
1600	85.6	87.4	89.9	91.8	93.9	95.2
3200	78.9	80.2	83.0	85.3	87.6	88.6
6400	71.3	72.6	75.8	78.2	80.6	81.6
12800	62.2	64.2	67.6	70.1	72.7	73.2

TABLE 2-X L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
SEA LEVEL, 77° F, 70% RELATIVE HUMIDITY

$N_A \sqrt{r}$, %	55	60	67.4	75	85	95
Distance, Feet						
	L _A , dBA, with Extra Ground Attenuation					
200	92.2	93.7	96.0	98.2	101.1	103.2
370	85.3	86.7	88.9	91.2	94.3	96.5
800	74.7	75.9	78.1	80.4	84.1	86.3
1600	62.4	63.6	65.7	68.1	72.1	74.2
3200	51.8	53.0	55.3	57.8	61.5	63.5
6400	42.8	44.2	46.7	49.3	53.0	54.8
12800	32.5	34.3	37.2	39.9	43.6	45.3
	L _A , dBA, without Extra Ground Attenuation					
200	96.2	97.8	100.1	102.3	105.0	107.2
370	90.3	91.8	94.0	96.7	99.2	101.4
800	82.4	83.6	85.8	88.1	91.3	93.6
1600	74.5	75.5	77.7	80.0	83.6	85.8
3200	65.9	66.9	68.9	71.2	75.0	77.2
6400	56.1	57.3	59.4	61.9	65.8	67.8
12800	44.9	46.4	49.0	51.7	55.6	57.5

TABLE 2-XI L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
SEA LEVEL, 30° F, 70% RELATIVE HUMIDITY

$N/\sqrt{G}, \%$	55	60	67.4	75	85	95
Distance, Feet	L_A , dBA, with Extra Ground Attenuation					
200	91.9	93.3	95.5	97.8	100.9	103.1
370	84.9	86.2	88.3	90.6	94.0	96.3
800	74.3	75.4	77.4	79.8	83.7	85.9
1600	62.4	63.5	65.6	68.0	72.0	74.1
3200	52.3	53.6	55.8	58.3	61.9	63.9
6400	44.0	45.4	47.9	50.5	54.1	56.0
12800	34.9	36.6	39.4	42.1	45.8	47.5
	L_A , dBA, without Extra Ground Attenuation					
200	96.0	97.4	99.6	101.9	104.9	107.1
370	89.9	91.2	93.3	95.6	98.8	101.1
800	81.8	82.9	84.9	87.2	90.7	93.0
1600	74.2	75.2	77.1	79.4	83.1	85.3
3200	66.1	67.1	69.1	71.4	75.2	77.2
6400	57.3	58.5	60.6	63.1	66.9	68.9
12800	47.4	48.9	51.4	54.0	57.9	59.8

TABLE 2-XII L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
SEA LEVEL, 41° F, 70% RELATIVE HUMIDITY

$N_1/\sqrt{r}, \%$	55	60	67.4	75	85	95
Distance, Feet						
	L_A , dBA, with Extra Ground Attenuation					
200	92.1	93.6	95.8	98.1	101.1	103.3
370	85.2	86.6	88.7	91.0	94.3	96.6
800	74.8	75.9	78.0	80.3	84.2	86.4
1600	62.9	64.0	66.0	68.4	72.5	74.6
3200	52.8	53.9	56.1	58.6	62.2	64.2
6400	44.4	45.8	48.1	50.7	54.3	56.2
12800	35.1	36.7	39.3	42.0	45.7	47.5
	L_A , dBA, without Extra Ground Attenuation					
200	96.2	97.7	99.9	102.2	105.1	107.3
370	90.2	91.6	93.8	96.0	99.2	101.4
800	82.4	83.5	85.6	87.9	91.3	93.6
1600	74.9	75.4	77.8	80.1	83.8	86.1
3200	66.9	67.8	69.7	72.1	75.8	78.0
6400	58.0	59.1	61.1	63.5	67.4	69.4
12800	47.9	49.2	51.6	54.2	58.1	60.0

TABLE 2-XIII L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
SEA LEVEL, 59° F, 70% RELATIVE HUMIDITY

$N_1 \sqrt{\theta, \%$	55	60	67.4	75	85	95
Distance, Feet	L_A , dBA, with Extra Ground Attenuation					
200	92.3	93.8	96.1	98.3	101.2	103.3
370	85.4	86.9	89.1	91.3	94.5	96.7
800	75.0	76.2	78.4	80.7	84.4	86.6
1600	62.9	64.0	66.1	68.5	72.6	74.7
3200	52.5	53.7	55.9	58.4	62.1	64.1
6400	43.8	45.1	47.5	50.1	53.8	55.7
12800	33.9	35.6	38.4	41.1	44.8	46.5
	L_A , dBA, without Extra Ground Attenuation					
200	96.4	97.9	100.2	102.4	105.2	107.3
370	90.5	91.9	94.2	96.4	99.4	101.6
800	82.7	84.0	86.1	88.4	91.7	93.9
1600	75.1	76.2	78.2	80.5	84.1	86.4
3200	66.7	67.8	69.7	72.1	75.8	78.0
6400	57.4	58.5	60.5	63.0	66.9	68.9
12800	46.6	48.0	50.4	53.1	57.0	58.9

TABLE 2-XIV L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
SEA LEVEL, 86° F, 70% RELATIVE HUMIDITY

$N\sqrt{r}, \%$	55	60	67.4	75	85	95
Distance, Feet						
	L_A , dBA, with Extra Ground Attenuation					
200	92.1	93.6	95.9	98.0	101.0	103.1
370	85.1	86.5	88.8	91.0	94.2	96.4
800	74.4	75.7	77.8	80.1	83.9	86.1
1600	62.1	63.3	65.4	67.8	71.9	74.0
3200	51.4	52.7	55.0	57.5	61.2	63.1
6400	42.2	43.7	46.2	48.9	52.6	54.4
12800	31.8	33.6	36.5	39.3	43.0	44.6
	L_A , dBA, without Extra Ground Attenuation					
200	96.1	97.7	100.0	102.2	105.0	107.1
370	90.2	91.6	93.9	96.1	99.1	101.2
800	82.1	83.4	85.5	87.8	91.1	93.3
1600	74.2	75.3	77.3	79.6	83.2	85.5
3200	65.4	66.5	68.4	70.8	74.6	76.8
6400	55.5	56.7	58.9	61.4	65.3	67.3
12800	44.0	45.6	48.3	51.0	54.9	56.7

TABLE 2-XV L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
SEA LEVEL, 100° F, 70% RELATIVE HUMIDITY

$N\sqrt{r}$, %	55	60	67.4	75	85	95
Distance, Feet	L_A , dBA, with Extra Ground Attenuation					
200	91.9	93.4	95.7	97.9	100.8	102.9
370	84.9	86.3	88.5	90.7	94.0	96.2
800	74.1	75.3	77.4	79.7	83.5	85.8
1600	61.7	62.8	65.0	67.4	71.5	73.5
3200	50.8	52.1	54.4	56.9	60.7	62.6
6400	41.3	42.9	45.5	48.2	51.9	53.7
12800	30.5	32.5	35.5	38.3	42.0	43.6
	L_A , dBA, without Extra Ground Attenuation					
200	96.0	97.5	99.8	102.0	104.8	106.9
370	89.9	91.3	93.6	95.8	98.8	101.0
800	81.7	83.0	85.1	87.4	90.7	93.0
1600	73.6	74.7	76.7	79.0	82.7	84.9
3200	64.6	65.7	67.7	70.1	73.9	76.0
6400	54.4	55.7	57.9	60.5	64.4	66.4
12800	42.5	44.2	47.0	49.8	53.7	55.5

TABLE 2-XVI L-1011-1/R3.211-22B A-NOISE LEVEL PROPAGATION
3000 FEET, 77° F, 70% RELATIVE HUMIDITY

$N\sqrt{6}, \%$	55	60	67.4	75	85	95
Distance, Feet						
	L_A , dBA, with Extra Ground Attenuation					
200	91.7	93.2	95.5	97.7	100.6	102.7
370	84.8	86.2	88.5	90.7	93.9	96.0
800	74.2	75.4	77.6	79.9	83.6	85.8
1600	61.9	63.1	65.2	67.6	71.7	73.8
3200	51.3	52.6	54.8	57.3	61.0	63.0
6400	42.3	43.7	46.2	48.8	52.5	54.4
12800	32.0	33.8	36.7	39.5	43.2	44.8
	L_A , dBA, without Extra Ground Attenuation					
200	95.8	97.3	99.6	101.9	104.6	106.7
370	89.8	91.3	93.6	95.8	98.7	100.9
800	81.9	83.2	85.3	87.6	90.9	93.1
1600	74.1	75.2	77.2	79.5	83.1	85.3
3200	65.4	66.4	68.4	70.8	74.6	76.7
6400	55.7	56.8	59.0	61.5	65.4	67.4
12800	44.4	45.9	48.5	51.2	55.2	57.0

TABLE 2-XVII L-1011-1/RB.211-22B A-NOISE LEVEL PROPAGATION
6000 FEET, 77° F, 70% RELATIVE HUMIDITY

$N\sqrt{r}$, %	55	60	67.4	75	85	95
Distance, Feet						
	L_A , dBA, with Extra Ground Attenuation					
200	91.2	92.7	95.0	97.2	100.1	102.2
370	84.3	85.7	88.0	90.2	93.1	95.5
800	73.7	75.0	77.1	79.4	83.1	85.3
1600	61.4	62.6	64.7	67.1	71.2	73.3
3200	50.9	52.1	54.3	56.8	60.5	62.5
6400	41.8	43.3	45.7	48.3	52.0	53.9
12800	31.5	33.3	36.2	39.0	42.7	44.3
	L_A , dBA, without Extra Ground Attenuation					
200	95.3	96.8	99.1	101.3	104.1	106.2
370	89.4	90.8	93.1	95.3	98.2	100.4
800	81.4	82.7	84.8	87.1	90.4	92.6
1600	73.6	74.7	76.7	79.0	82.6	84.9
3200	64.9	66.0	67.9	70.3	74.1	76.3
6400	55.2	56.3	58.5	61.0	64.9	66.9
12800	43.9	45.5	48.1	50.7	54.7	56.5

SECTION III TAKEOFF PERFORMANCE

SECTION III
TAKEOFF PERFORMANCE

The determination of takeoff noise levels (both EPNdB and dBA) under the flight path for each engine and flap setting is described as follows. Figure 3-1 shows the physical relationships between brake release and some predetermined noise monitor. The particular example selected shows the use of the curves for variations of altitude, wind, and slope. This example is illustrated on Figure 3-2, 3-28, 3-30, 3-31, and 3-32. Entering Figure 3-2 with airport elevation and airport ambient temperature allows the user to determine the airport equivalent temperature. Entering Figure 3-28 with equivalent temperature, takeoff gross weight, airport elevation, wind, and runway slope allows the user to determine equivalent gross weight. Entering the climb profiles with equivalent weight will allow the user to determine the aircraft geometric height to about 3000 feet above the airport at any distance from brake release. Once height and distance from brake release are determined, then a runway slope correction is made and the height above the noise monitor obtained. A further airport elevation adjustment is made for noise, and then EPNdB or dBA for the given ambient temperature at 70% relative humidity can be read from the appropriate chart. Entering Figure 3-32 with the same distance and height above brake release as determined above, the instantaneous rate of climb and gradient can be determined. This figure may also be used for more accurate determination of airplane height above brake release for use with noise propagation data of Section 2.

The example described in Figure 3-1 is for a takeoff condition with a 360,000 lb. takeoff weight, RB.211-22B engines with ECS bleed on.

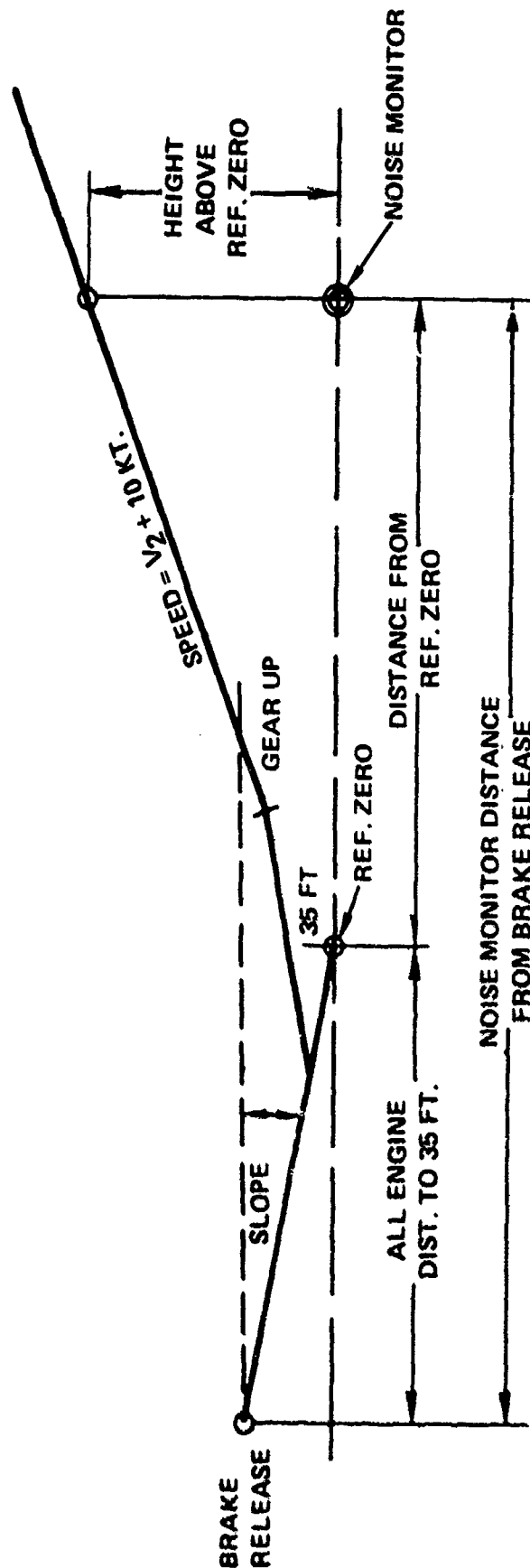
1. Figure 3-2

Airport elevation	4000 ft.
Airport ambient temperature	51.5° F
Airport equivalent temperature	66° F

2. Figure 3-28

Flap	10°
RB.211-22B Engine	
Takeoff gross weight	360,000 lb.

Airport equivalent temperature	66° F
Airport elevation	4000 ft.
Runway slope	-2% (down)
All engine distance to 35 ft.	6850 ft.
3. Figure 3-30	
Takeoff gross weight	360,000 lb.
Airport equivalent temperature	66° F
Airport elevation	4000 ft.
Reported wind	-10 kt.
Equivalent weight	415,000 lb.
Distance from brake release to noise monitor (3.5 n mi)	21,280 ft.
All engine distance to 35 ft.	6850 ft.
Distance to noise monitor from reference zero	14,430 ft.
Height of airplane above brake release point at 3.5 n mi from brake release	1620 ft.
Height of airplane above noise monitor (reference zero) at point 3.5 n mi from brake release	1760 ft.
Airport ambient temperature at 4000 ft. elevation	51.6° F
Effective perceived noise level at 3.5 n mi (Fig. 3-30)	95 EPNdB
A-noise level (L_A) at 3.5 n mi (Fig. 3-31)	85 dBA
EPR setting for takeoff	1.55
4. Figure 3-32	
Distance to noise monitor from reference zero	14,430 ft.
Height of airplane above brake release	1620 ft.
Instantaneous rate of climb for all engine climb	2100 ft./min.
Zero wind climb gradient for all engine climb	12%
Reported wind	-10 kt.
Wind corrected climb gradient for all engine climb	11%



EXAMPLE PROBLEM

1. TAKEOFF GROSS WEIGHT	350,000 LB.	AIRPORT EQUIVALENT TEMP.	66°F
2. RUNWAY AVAILABLE	9,000 FT.	ALL ENGINE DISTANCE TO REF. ZERO	6,850 FT.
3. RUNWAY SLOPE	-2% DOWN	NOISE MONITOR DISTANCE FROM BRAKE RELEASE	21,280 FT.
4. AIRPORT PRESS. ALTITUDE	4,000 FT.	DISTANCE TO NOISE MONITOR FROM REF. ZERO	14,480 FT.
5. AIRPORT TEMPERATURE	51.6°F	EQUIVALENT WEIGHT	415,000 LB.
6. NOISE MONITOR DISTANCE	21,280 FT.	TAPELINE HEIGHT ABOVE NOISE MONITOR	1,760 FT.
7. ECS BLEED	ON.	NOISE @ 3.5 N.MI. FROM BRAKE RELEASE	95 EPNdB
8. REPORTED WIND	-10 KT		
9. FLAP SETTING	10 DEG.		

FIGURE 3-1 ALL ENGINE TAKEOFF PROFILE SCHEMATIC AND SAMPLE PROBLEM FOR TAKEOFF NOISE NOMOGRAPHS

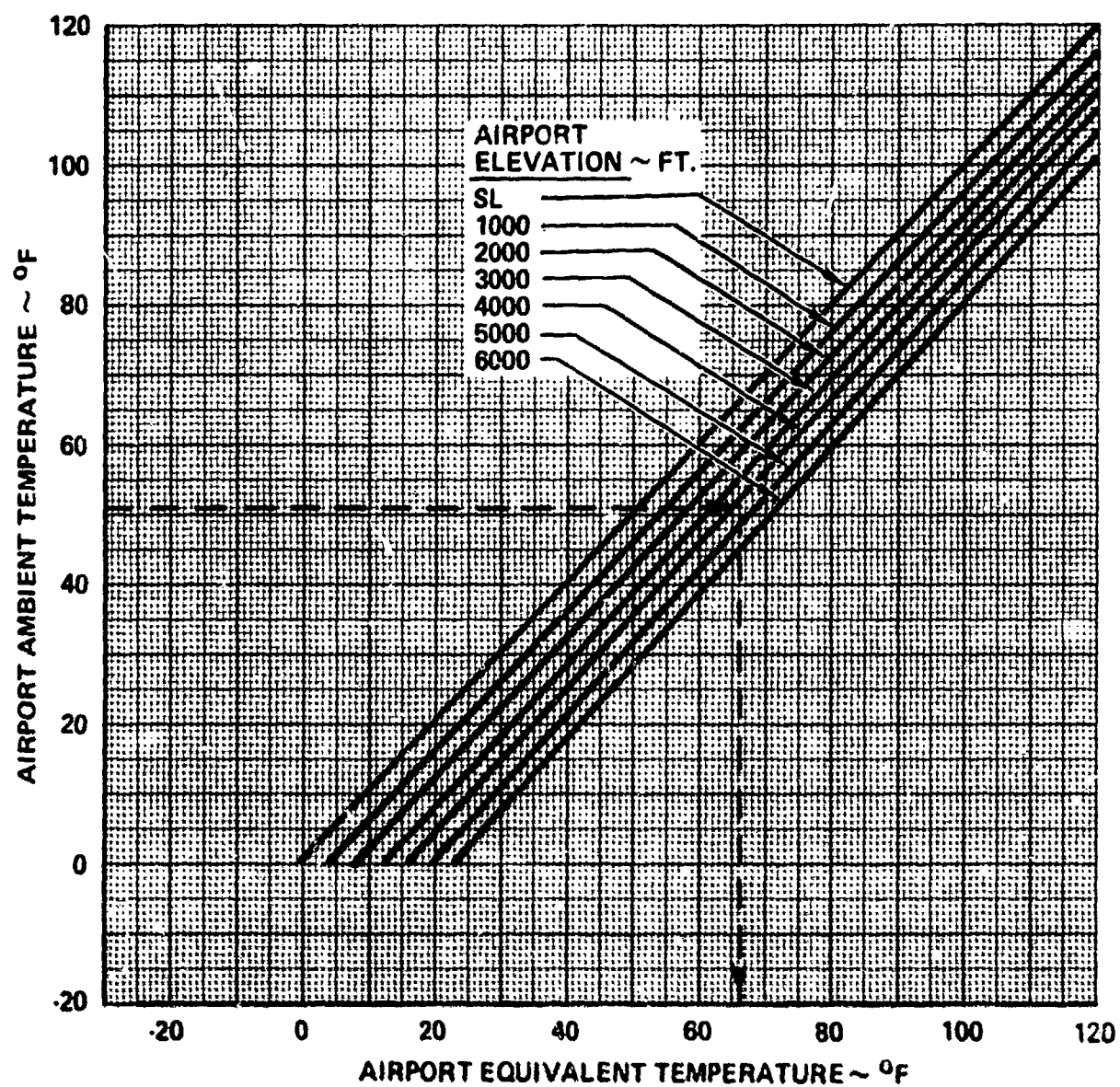


FIGURE 3-2 AIRPORT EQUIVALENT TEMPERATURE

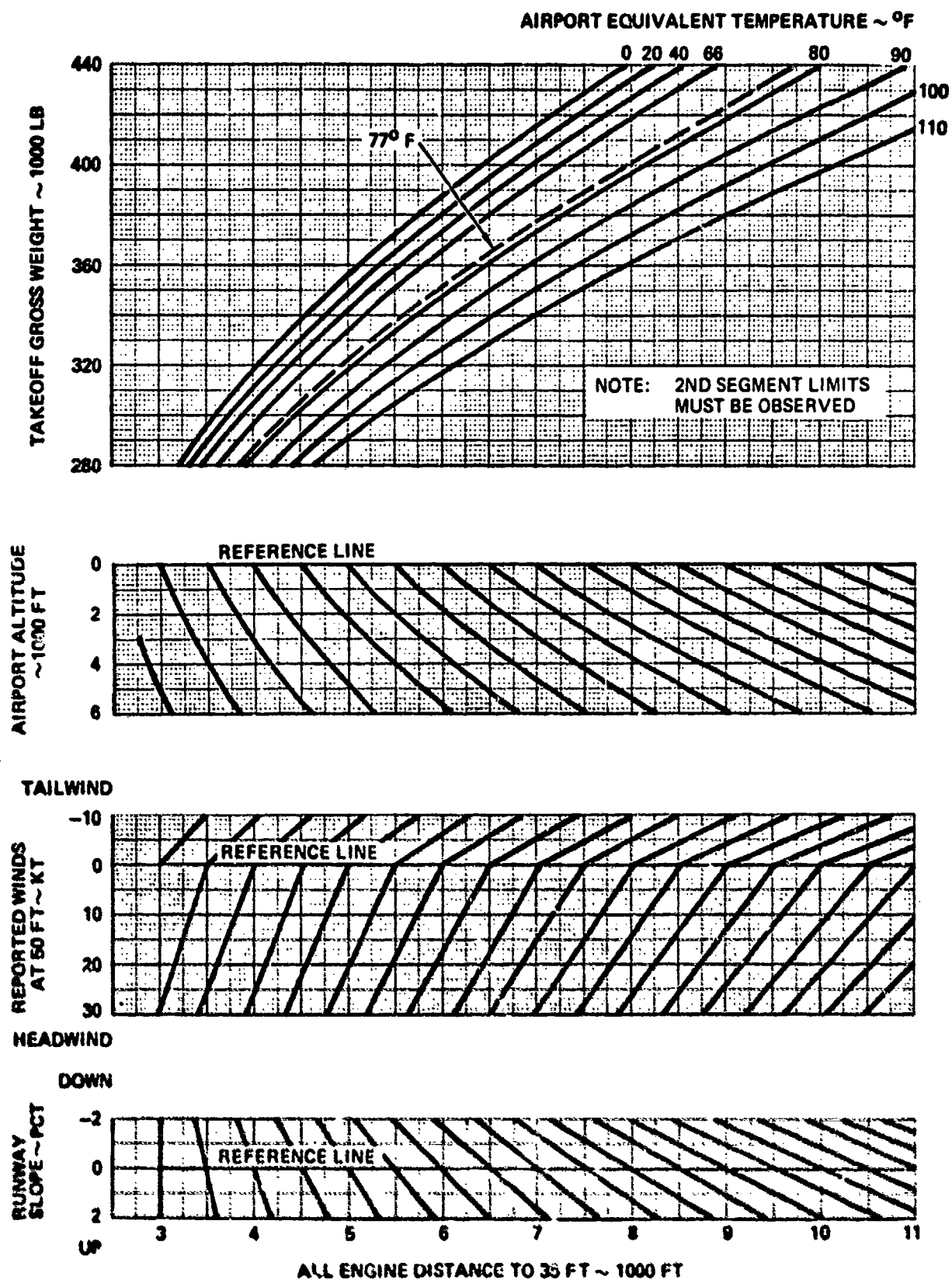


FIGURE 3-3 L-1011-1/RB.211-22C1 ALL ENGINE DISTANCE TO 35 FEET
4° FLAPS

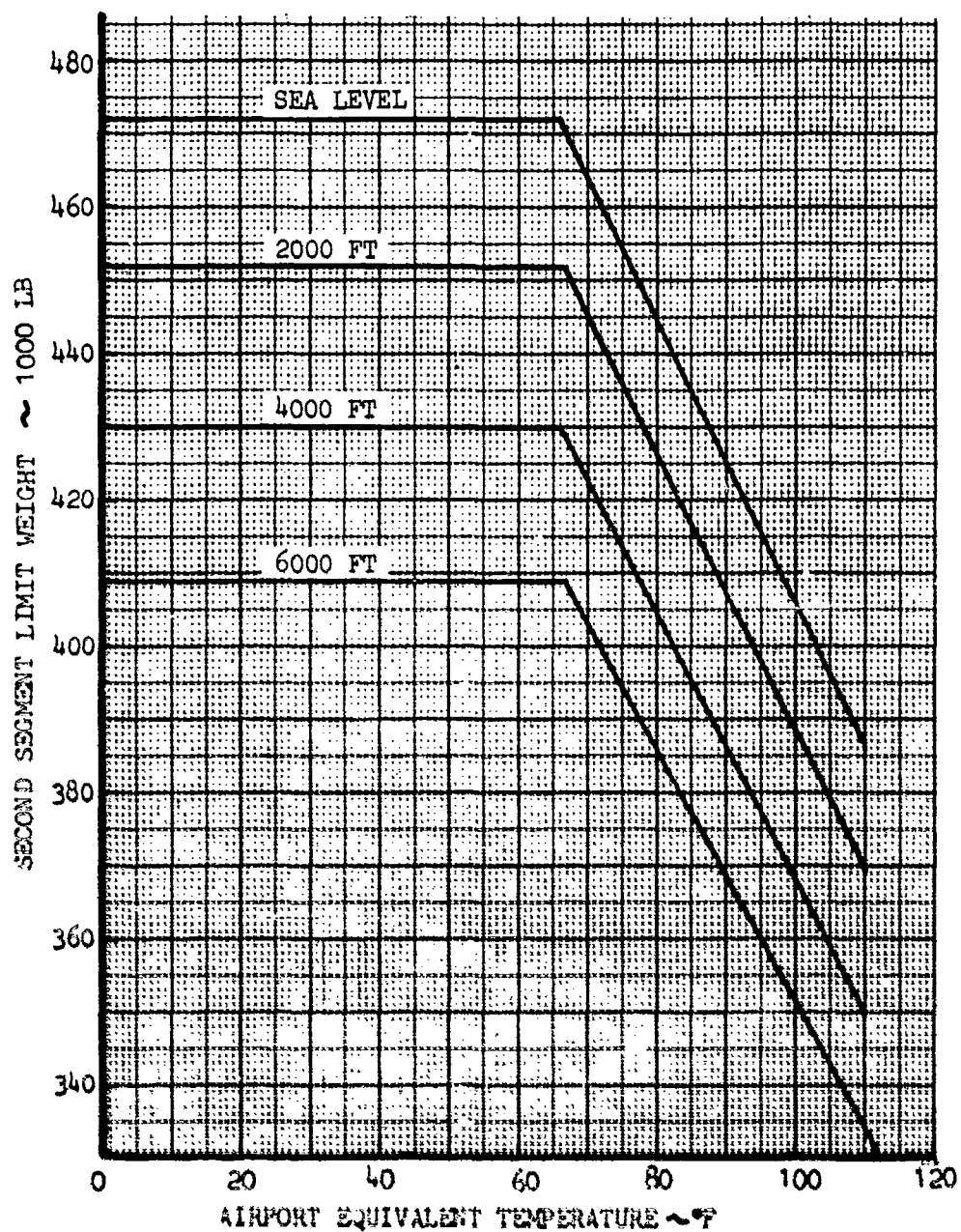


FIGURE 3-4 L-1011-1/RB.211-22C SECOND SEGMENT
LIMIT WEIGHTS 4° FLAPS

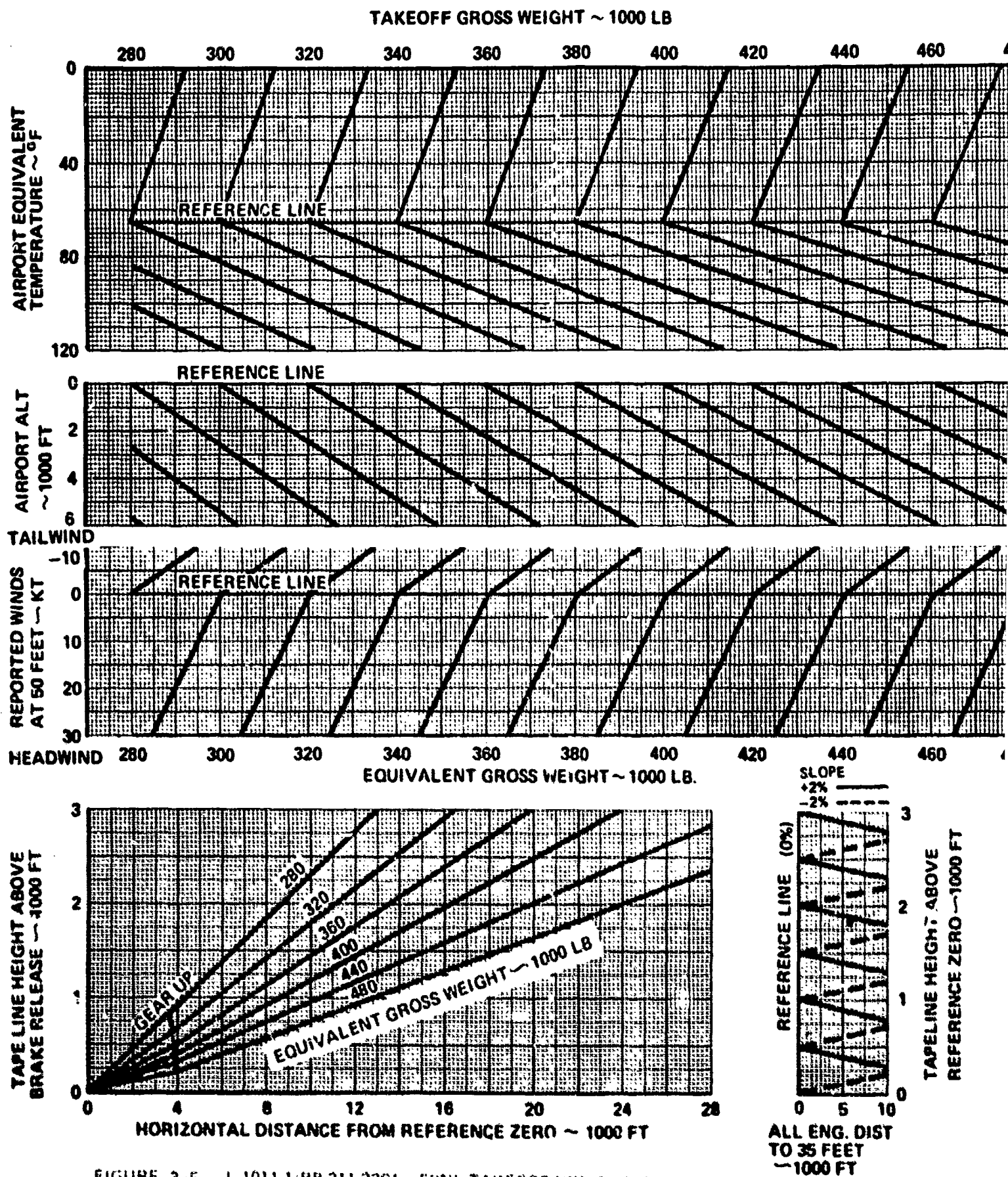
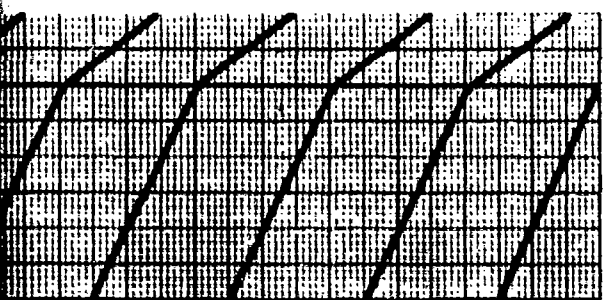
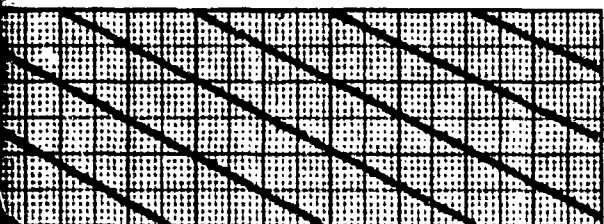
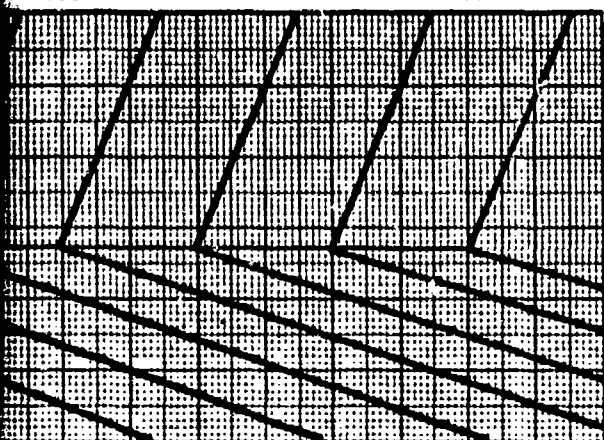


FIGURE 3-5 L 1011 1/RB.211 22C1 EPNL TAKEOFF NOMOGRAPH
4° FLAPS

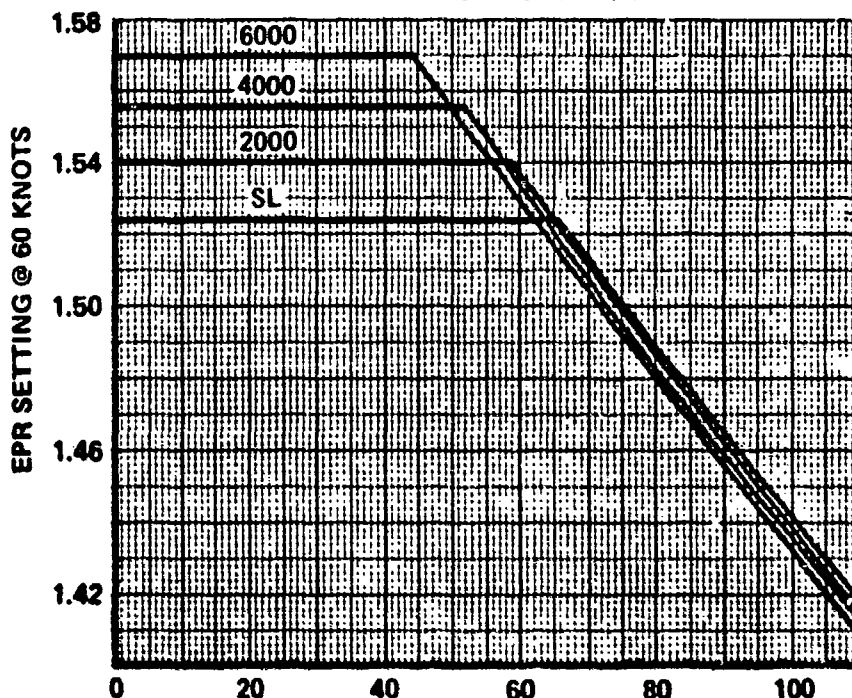
100 LB

400 420 440 460 480



TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

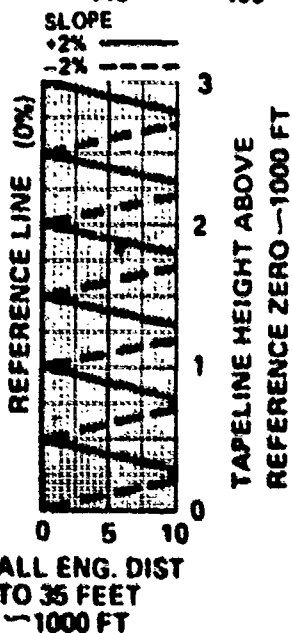
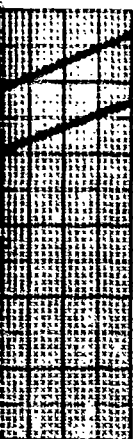
AIRPORT ALTITUDE ~ FT



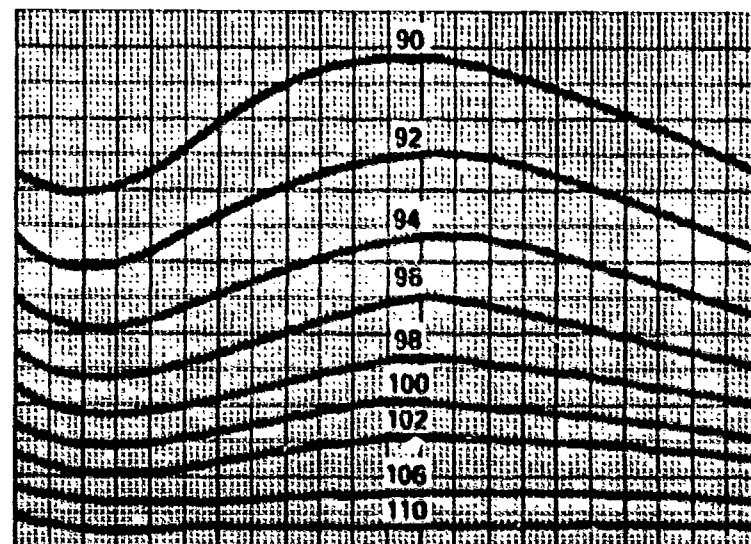
AIRPORT AMBIENT TEMP ~ °F

400 420 440 460 480

1000 LB.



EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F

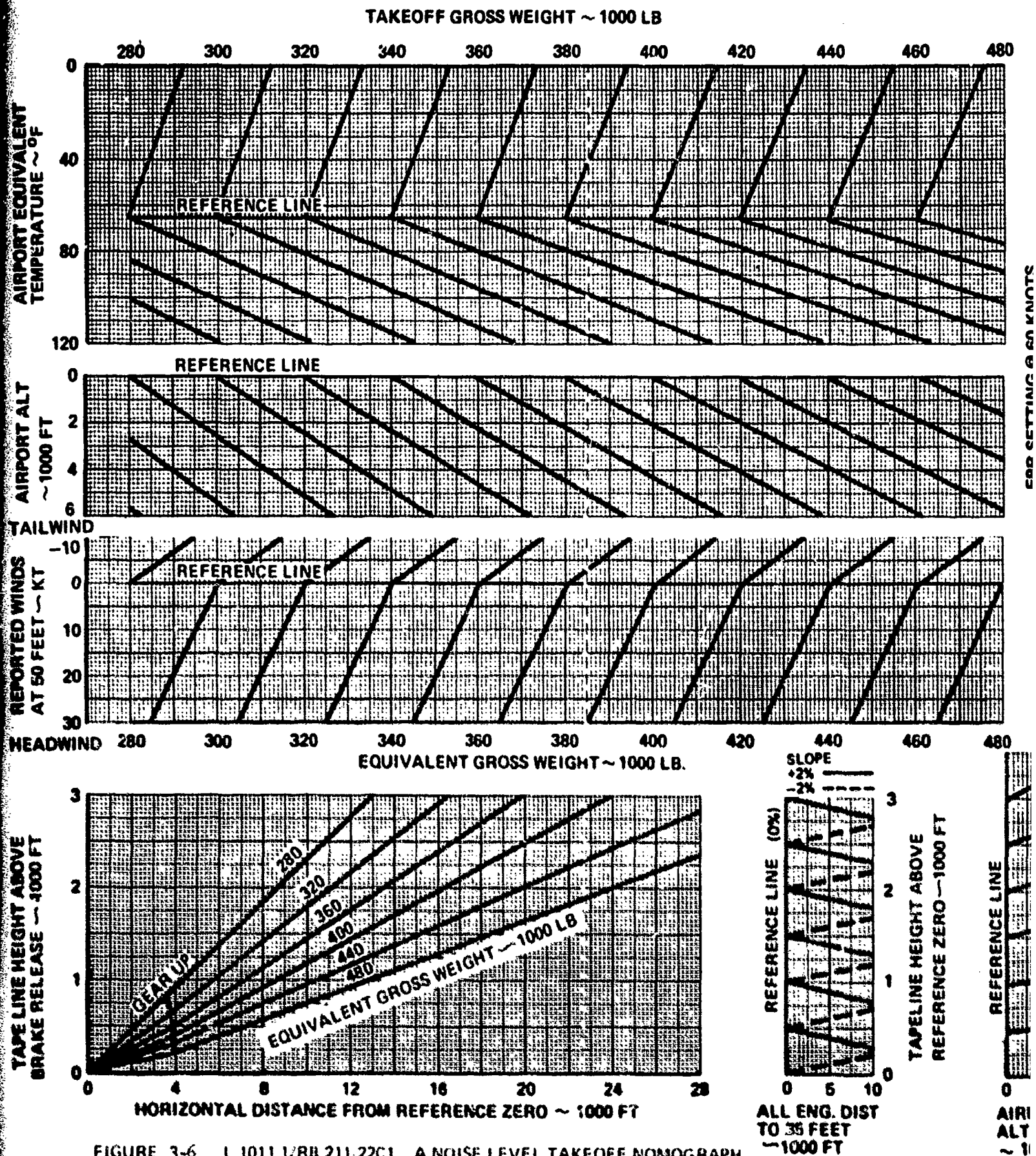
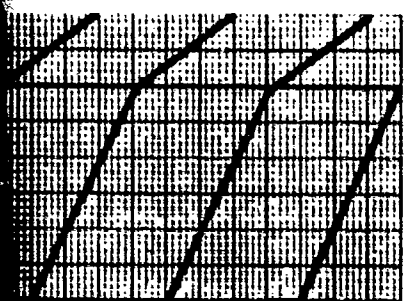
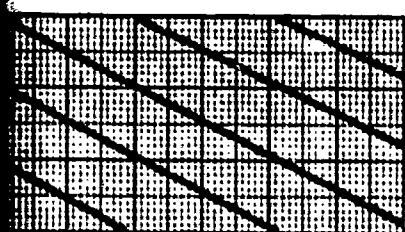
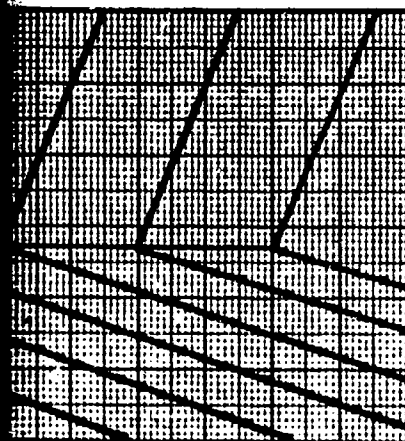


FIGURE 3-6 L 1011 1/RB.211-22C1 A NOISE LEVEL TAKEOFF NOMOGRAPH
4° FLAPS

440 460 480

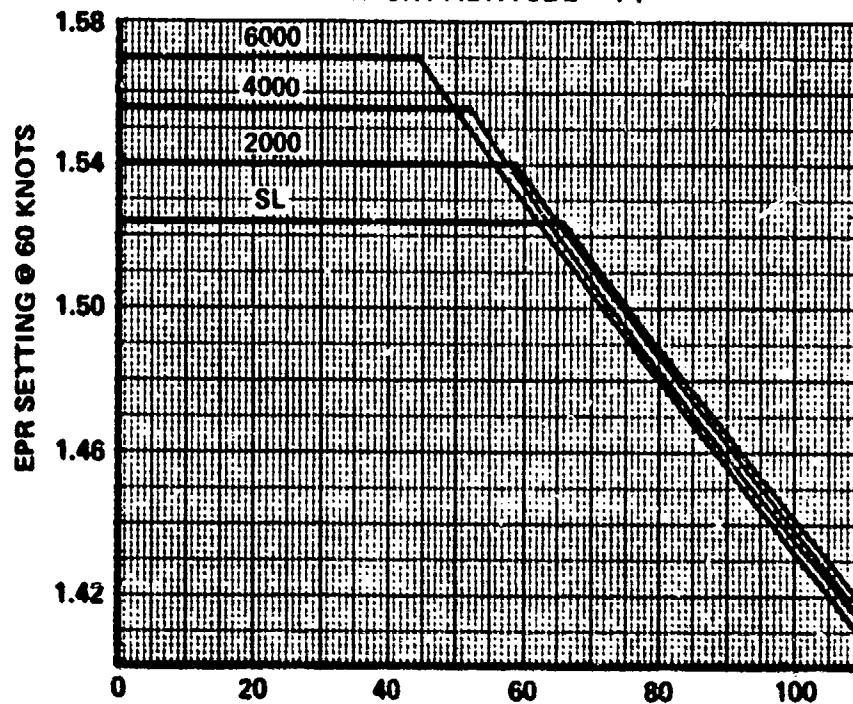


TAKEOFF POWER

ECS BLEED ON

CLIMB SPEED = $V_2 + 10$ KT

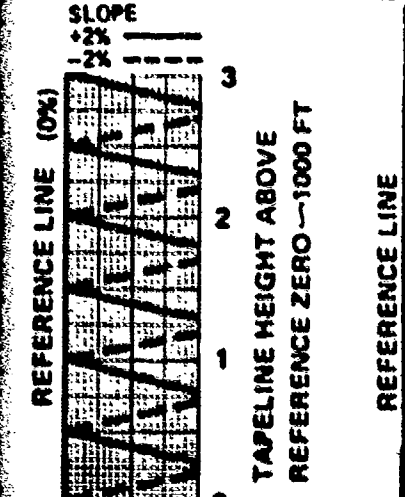
AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ °F

$L_A \sim$ dBA

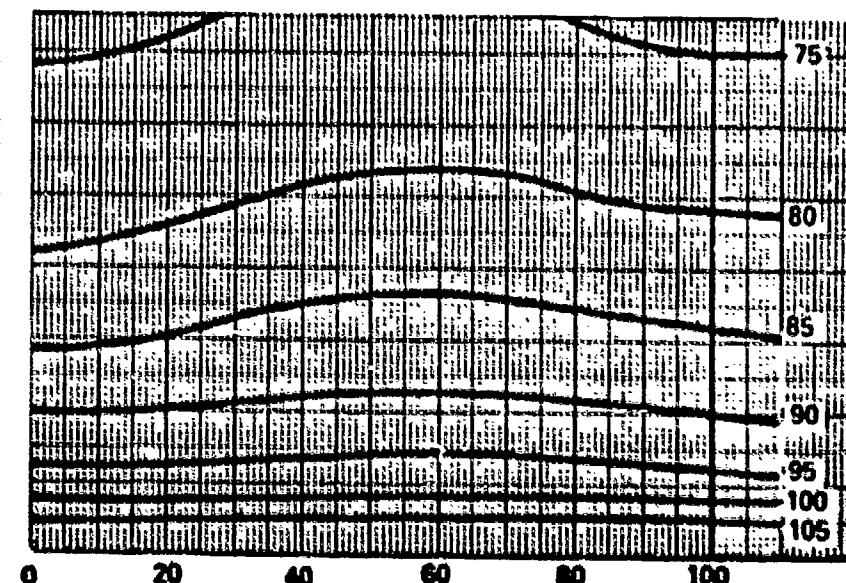
440 460 480



ALL ENG. DIST
TO 35 FEET
~1000 FT



AIRPORT
ALTITUDE
~ 1000 FT



AIRPORT AMBIENT TEMP ~ °F

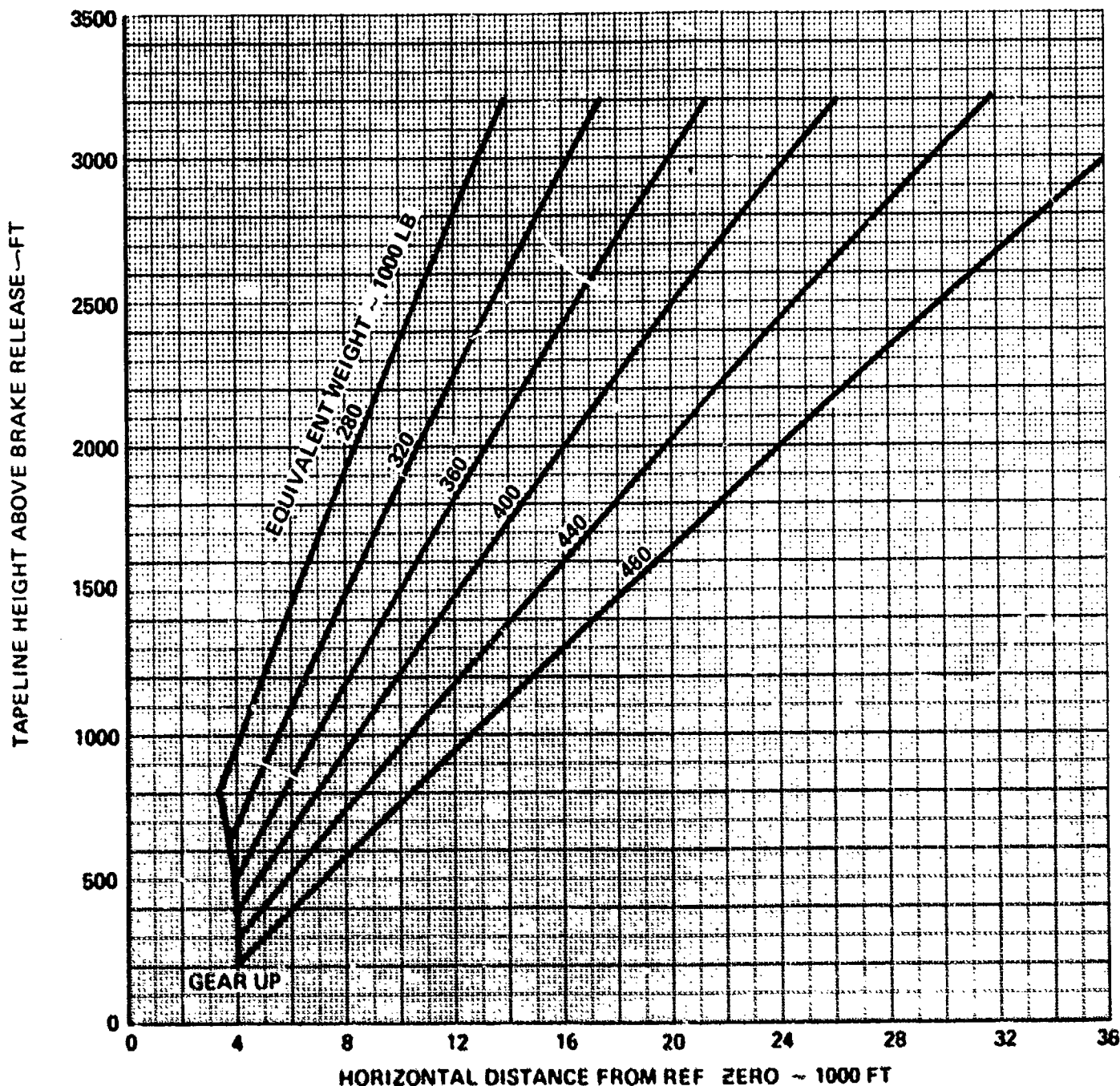
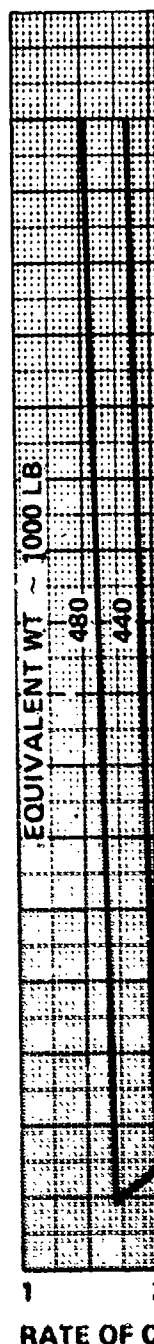
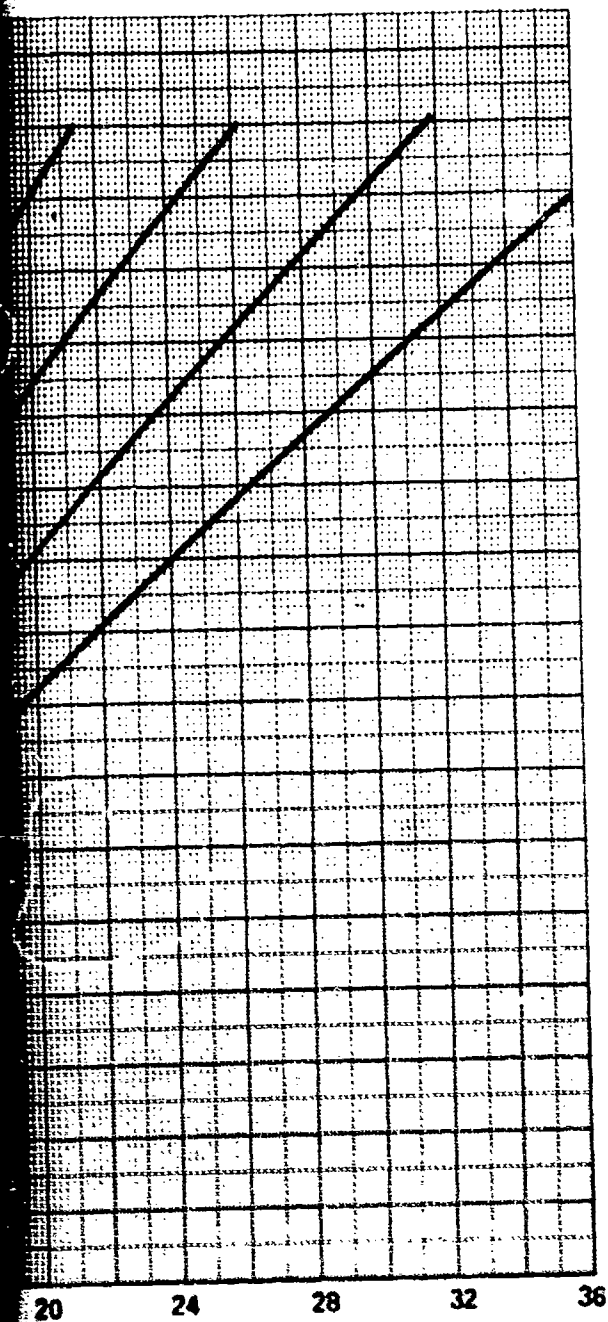
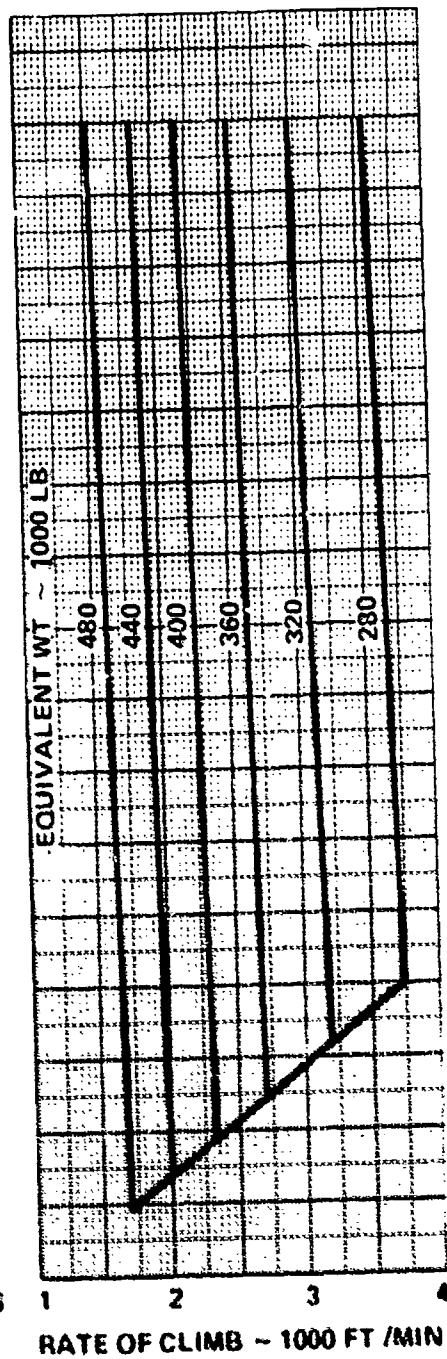


FIGURE 3-7 L-1011 1/RB 211 22C1 RATE OF CLIMB AND CLIMB GRADIENT
ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
4° FLAPS

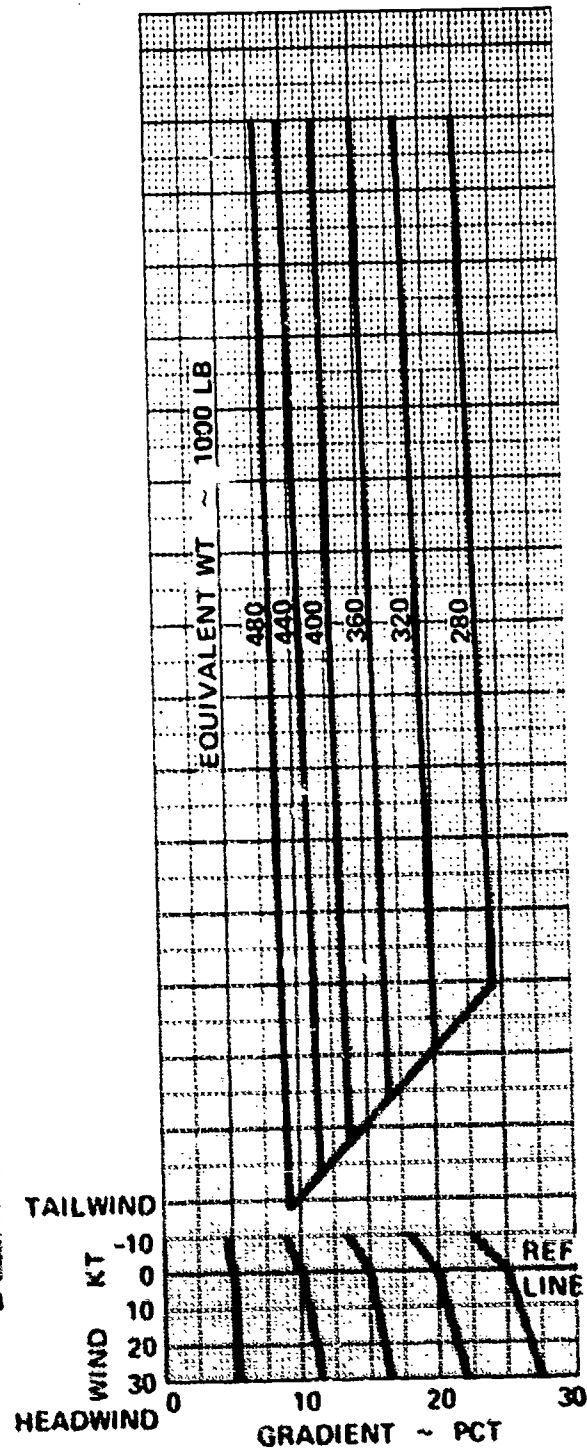




REF ZERO ~ 1000 FT
OF CLIMB AND CLIMB GRADIENT
BEAR UP (TAKEOFF POWER)



RATE OF CLIMB ~ 1000 FT / MIN



TAILWIND
KT
-10
0
10
20
30
WIND
HEADWIND
0 10 20 30
GRADIENT ~ PCT
REF
LINE

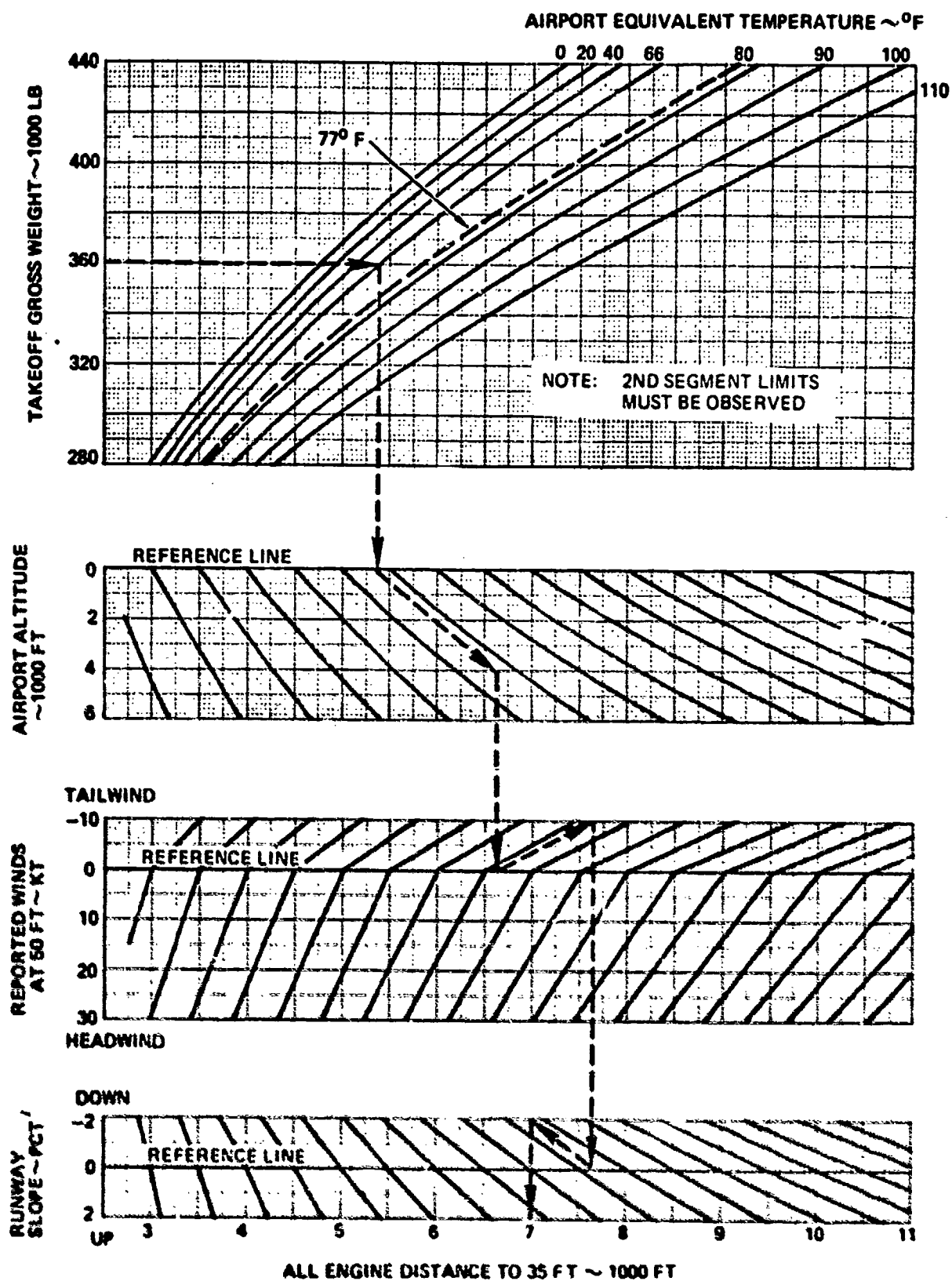


FIGURE 3-8 L 1011-1/22C1 ALL ENGINE DISTANCE TO 35 FEET
10° FLAPS

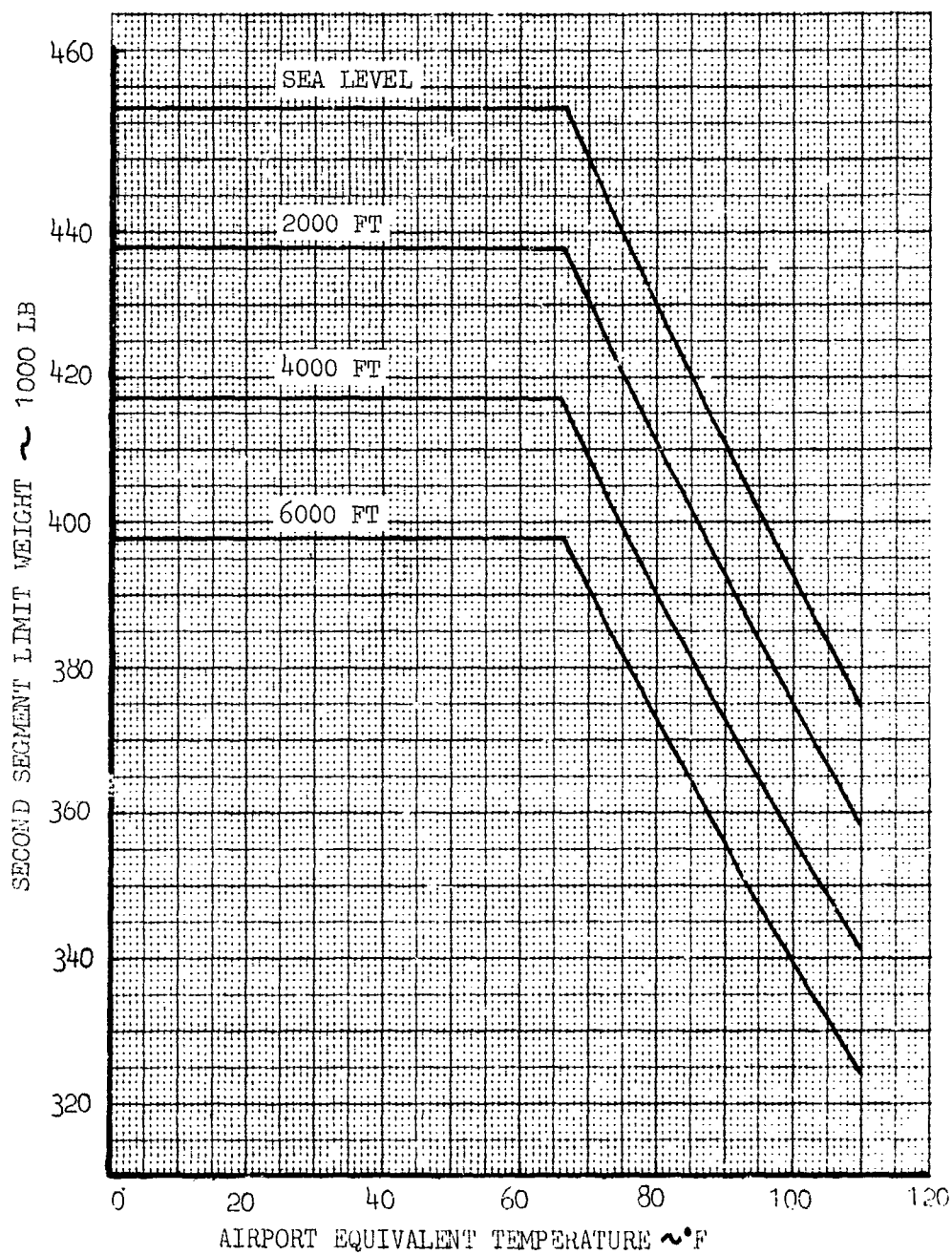


FIGURE 3-9 L-1011-1/RB.211-22C SECOND SEGMENT
LIMIT WEIGHTS 10° FLAPS

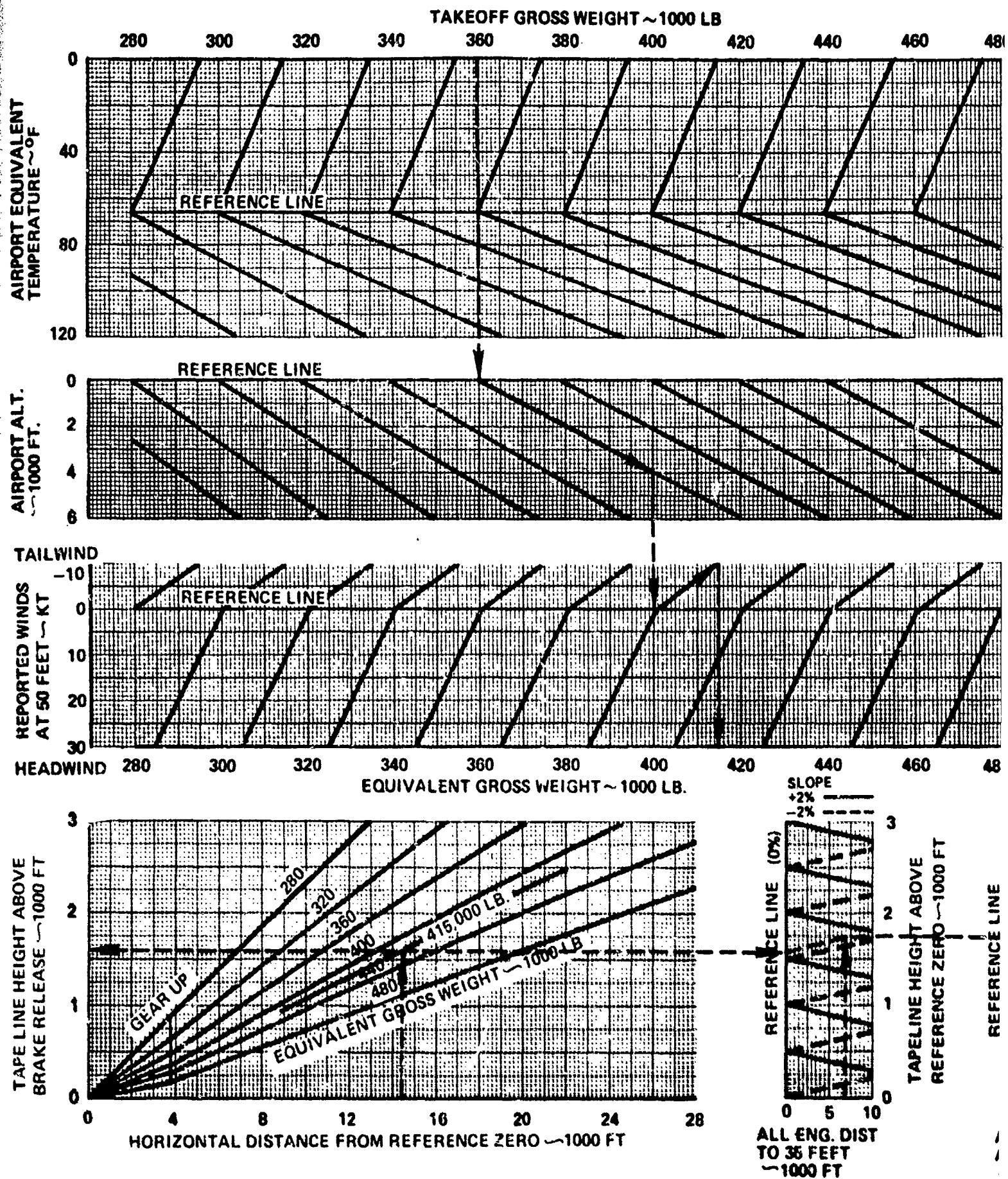
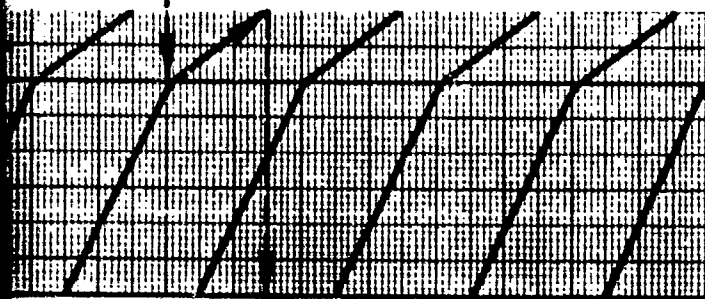
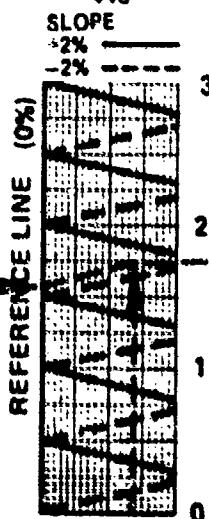


FIGURE 3-10 L 1011-1/RB.211-22C1 EPNL TAKEOFF NOMOGRAPH
10° FLAPS

380 400 420 440 460 480



380 400 420 440 460 480



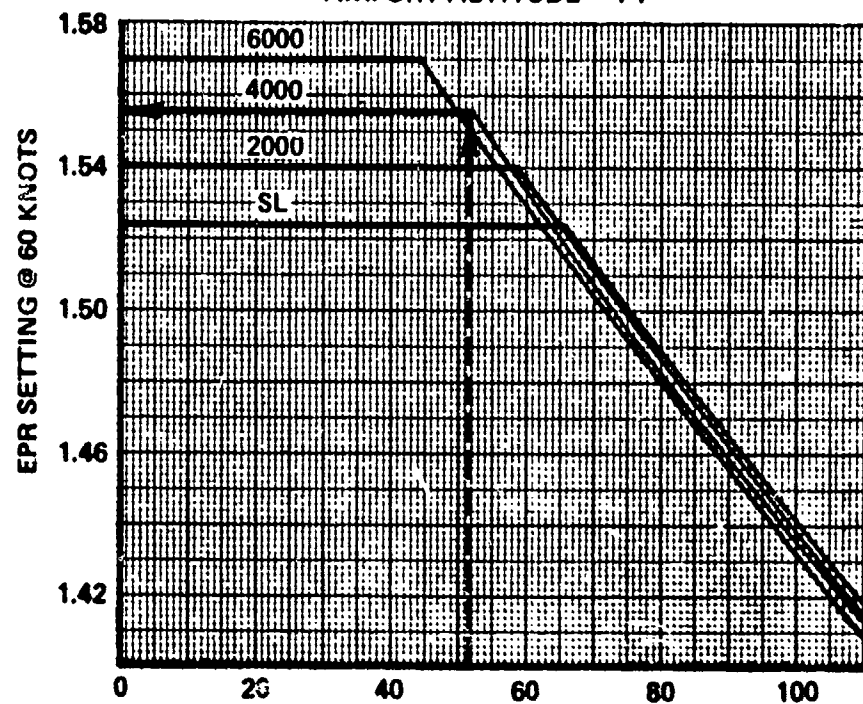
ALL ENG. DIST
TO 36 FEET
-1000 FT



**AIRPORT
ALTITUDE
~ 1000 FT**

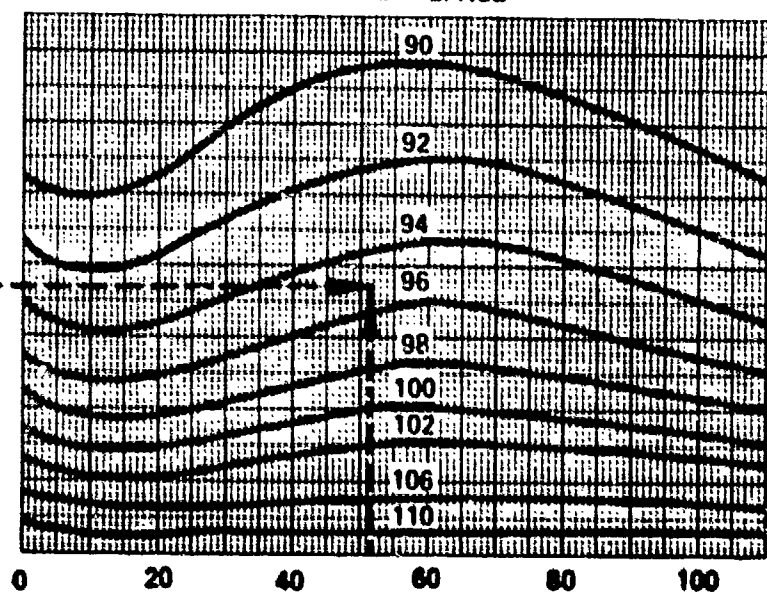
OMOGRAPH

AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ 0° F

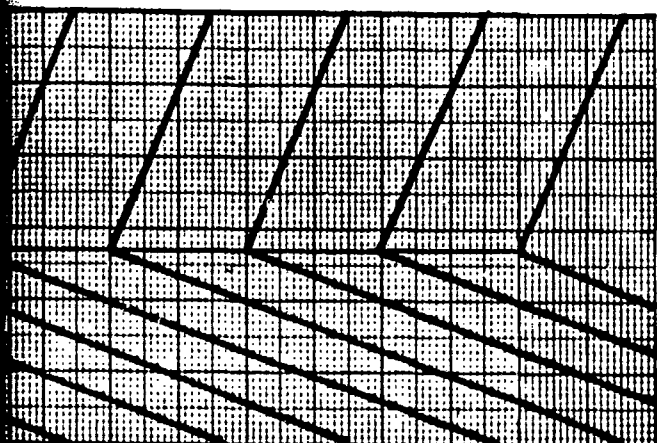
EPNL ~ EPNdB



AIRPORT AMBIENT TEMP - °F

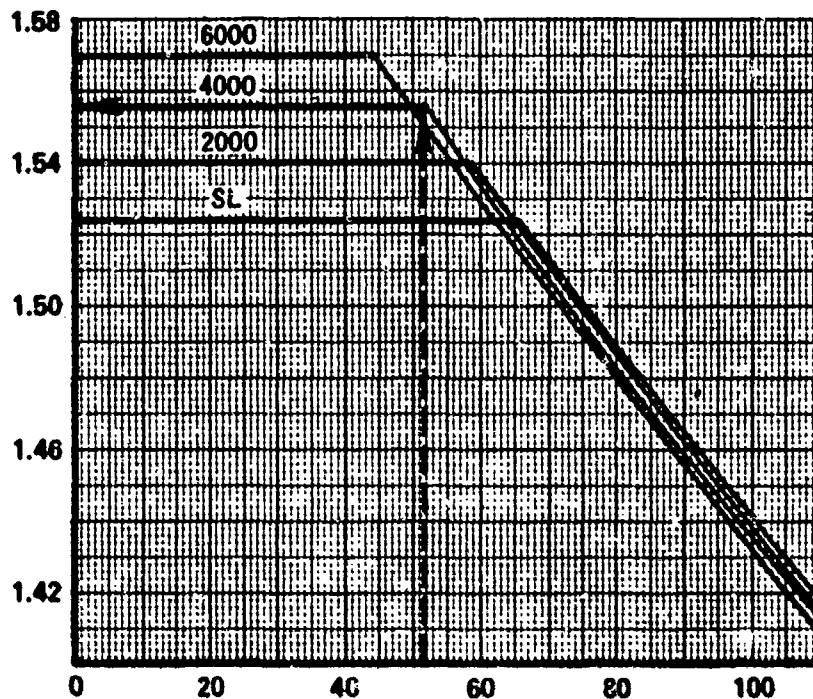
WEIGHT ~ 1000 LB

400 420 440 460 480



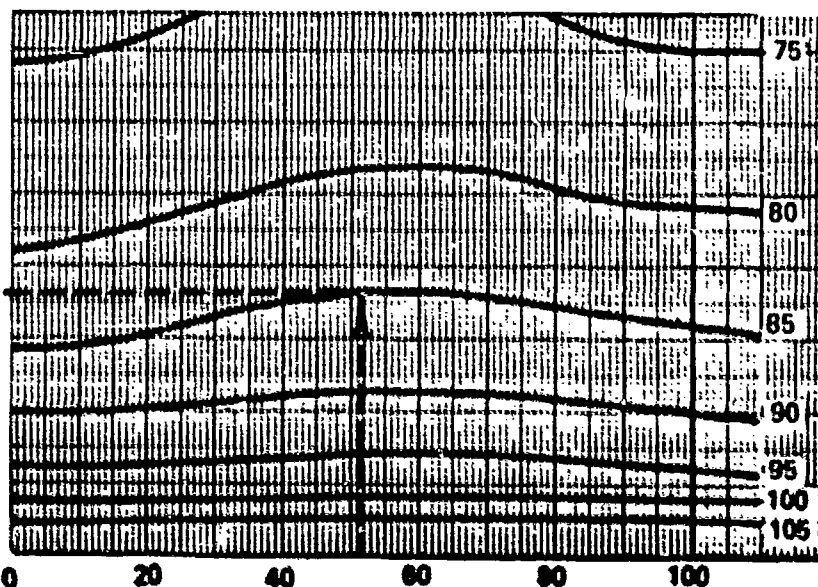
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



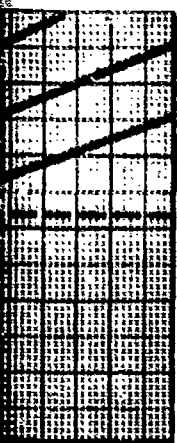
AIRPORT AMBIENT TEMP ~ °F

L_A ~ dBA



AIRPORT AMBIENT TEMP ~ °F

WEIGHT ~ 1000 LB



SLOPE
+2%
-2%



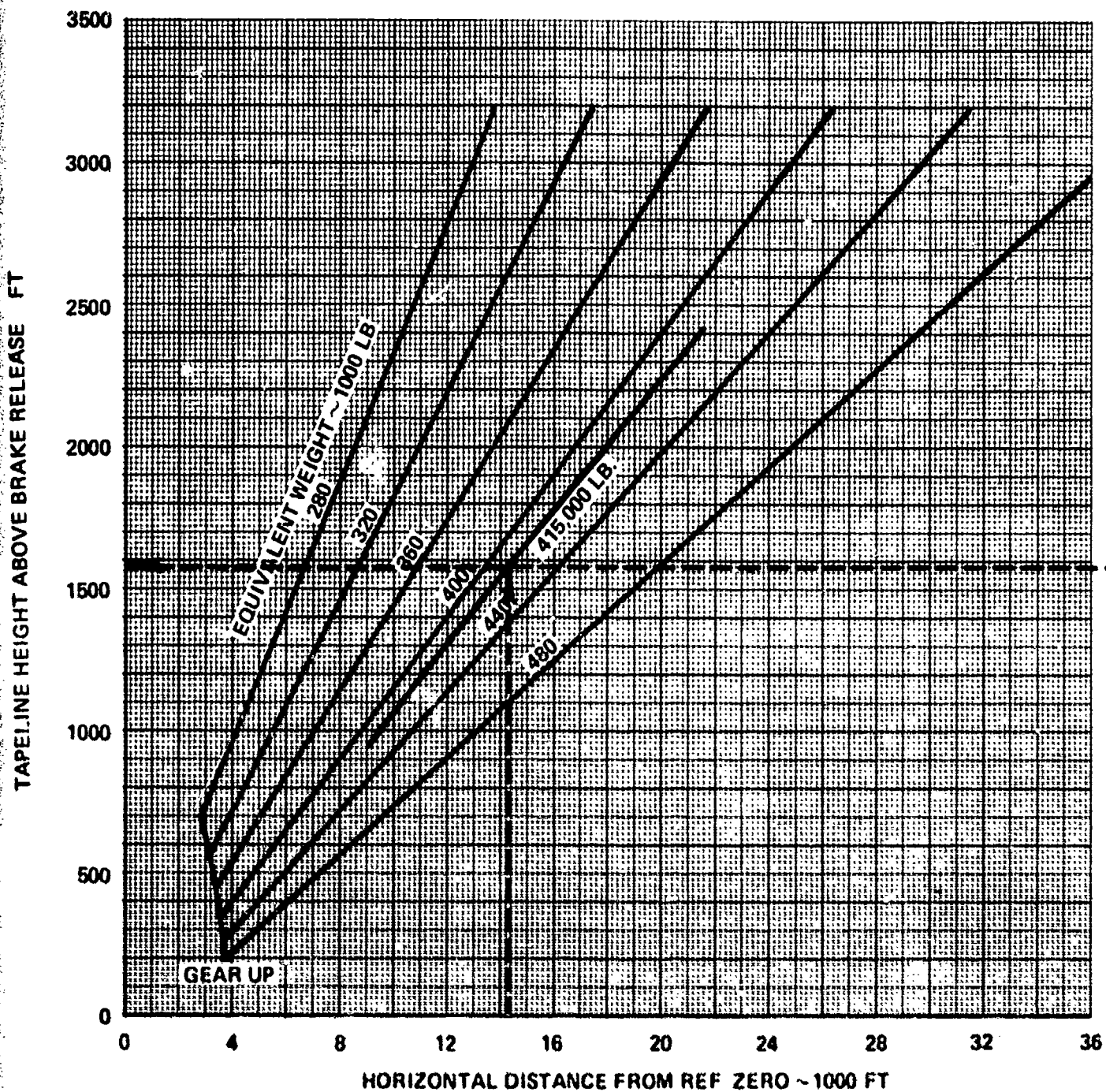
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT

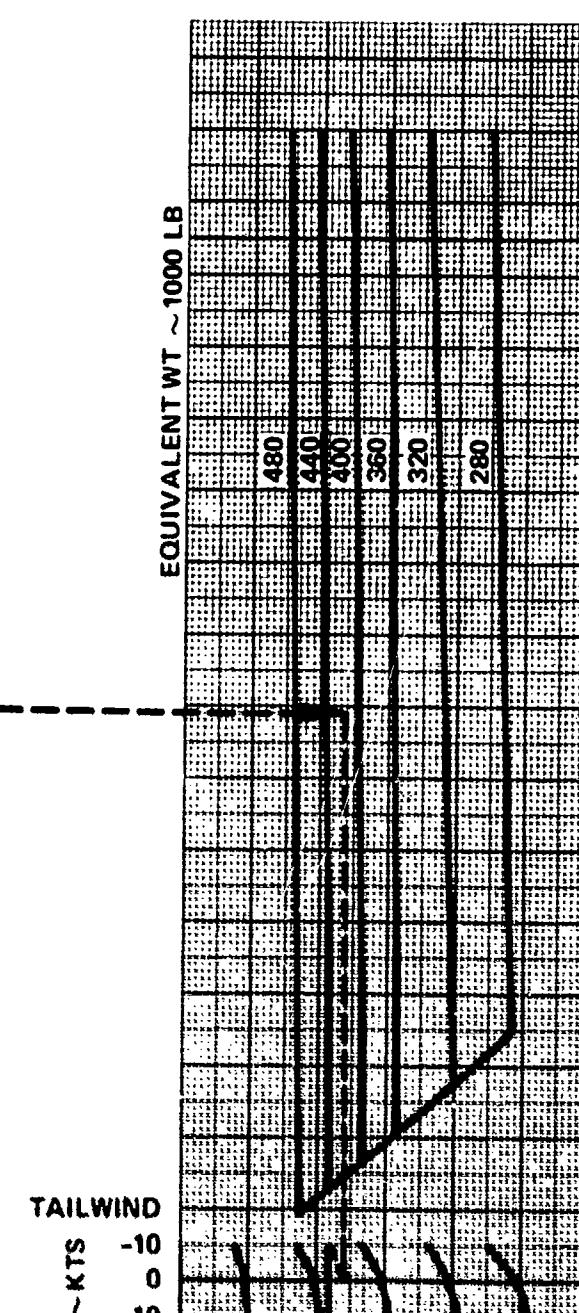
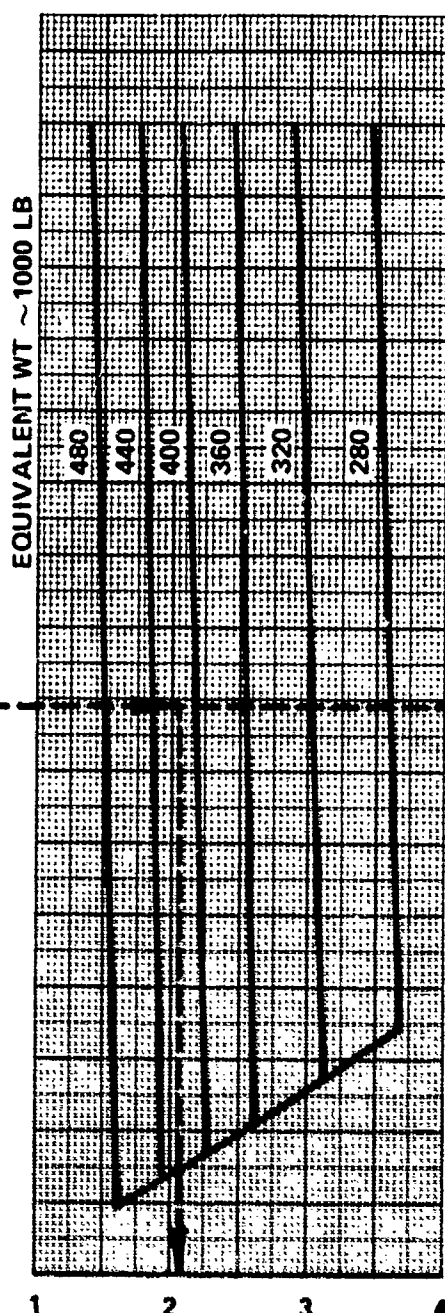
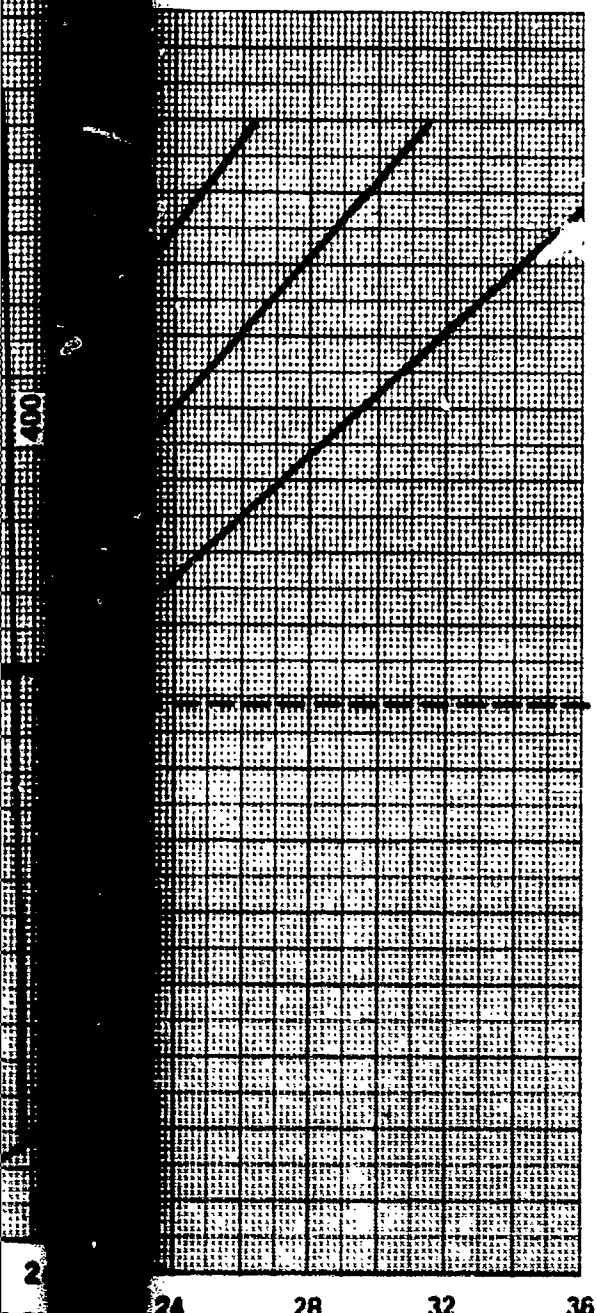


AIRPORT
ALTITUDE
~ 1000 FT

100 FT

OFF NOMOGRAPH





24 28 32 36
ERO ~ 1000 FT
B AND CLIMB GRADIENT
(TAKEOFF POWER)

1 2 3 4
RATE OF CLIMB ~ 1000 FT / MIN

TAILWIND
WIND ~ KTS -10 0 10 20 30
HEADWIND 0 10 20 30
GRADIENT ~ PCT

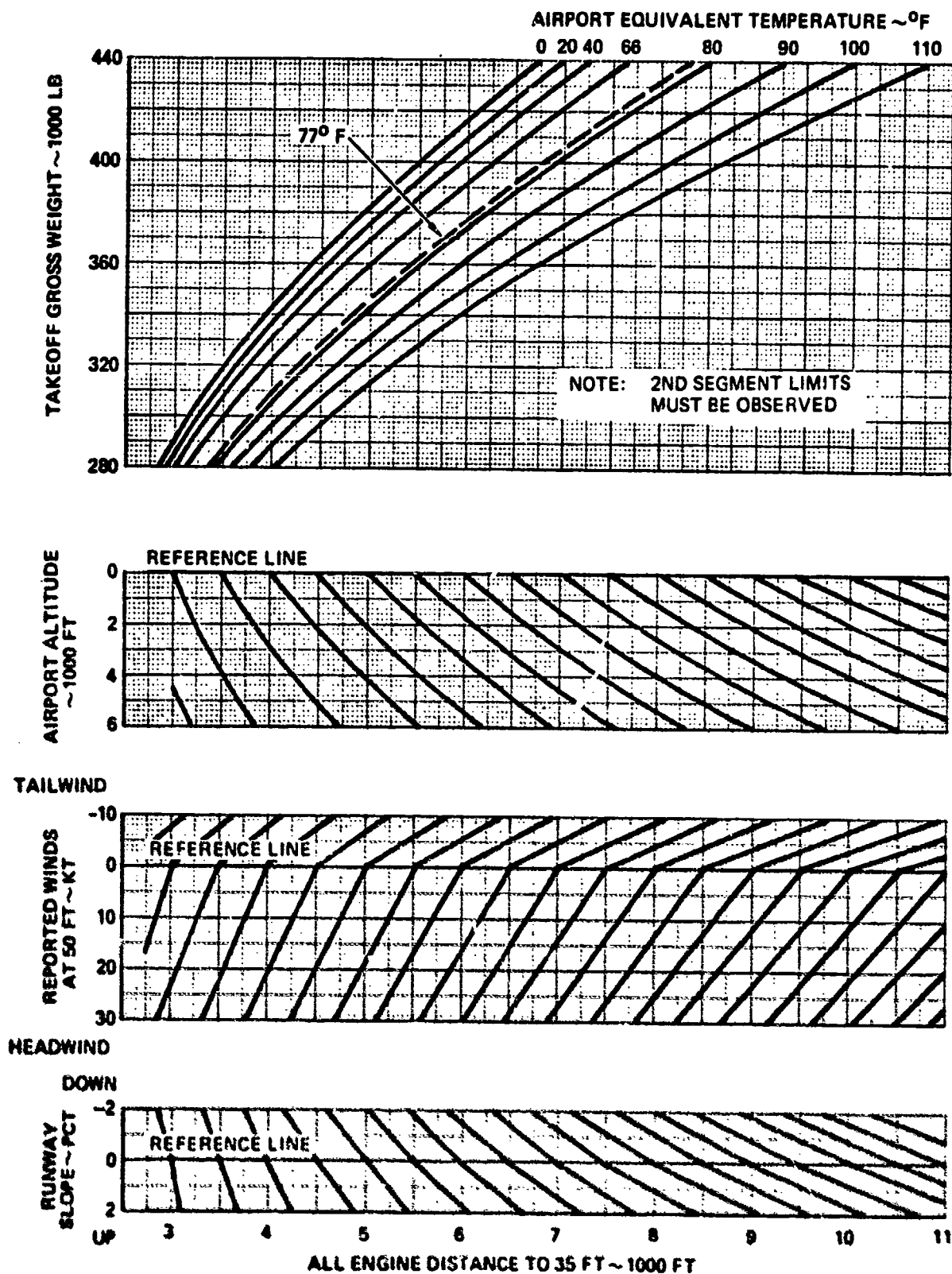


FIGURE 3-13 L-1011-1/RB.211-22C1 ALL ENGINE DISTANCE TO 35 FEET
18° FLAPS

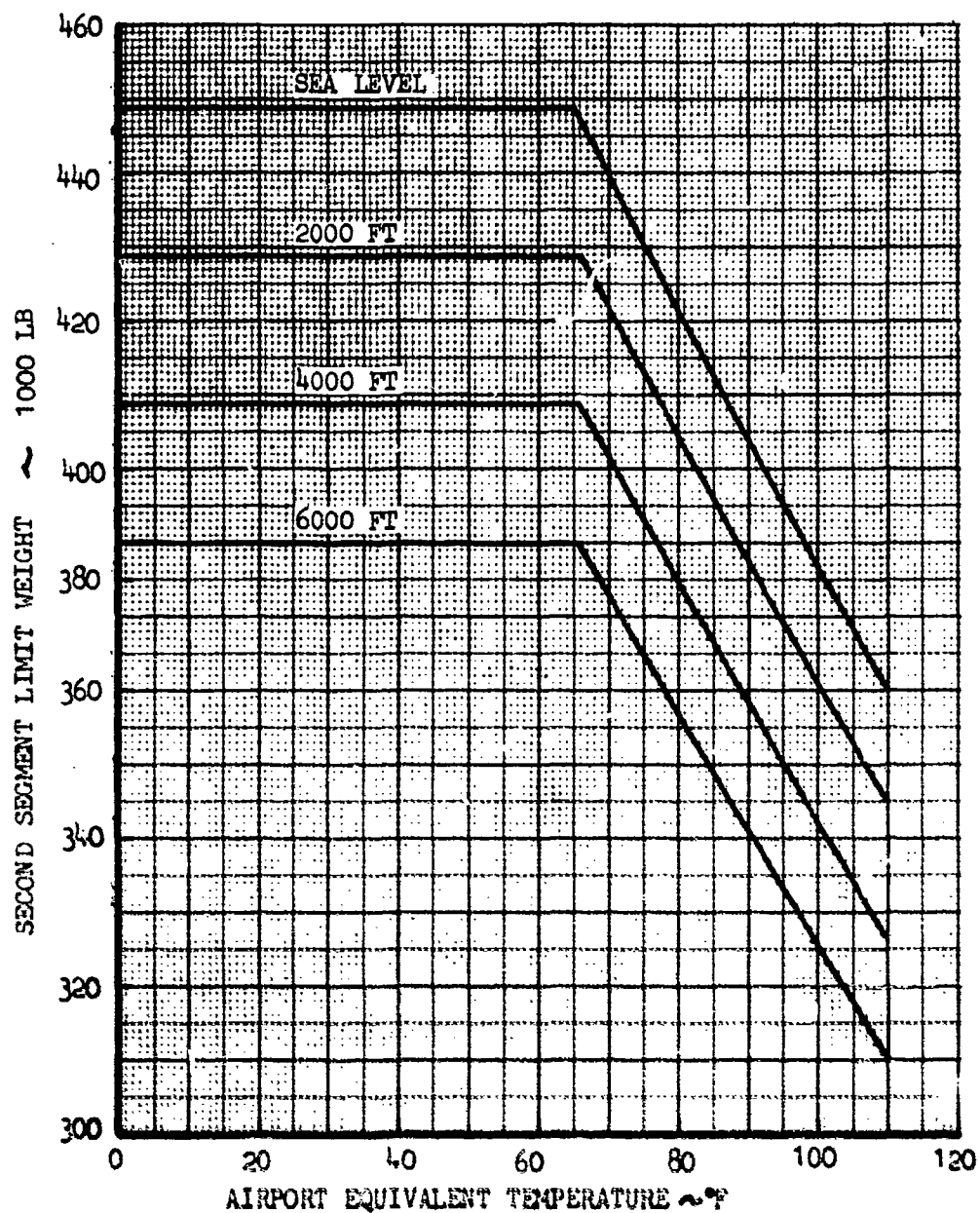
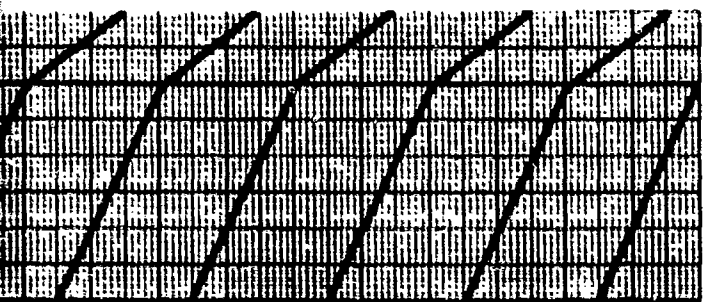
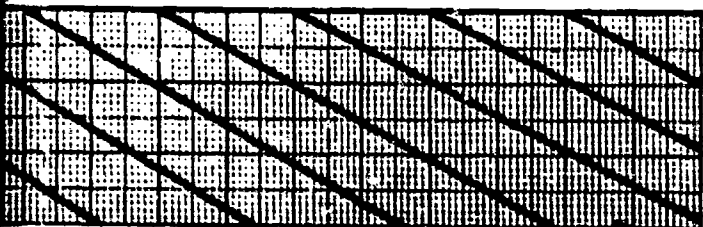
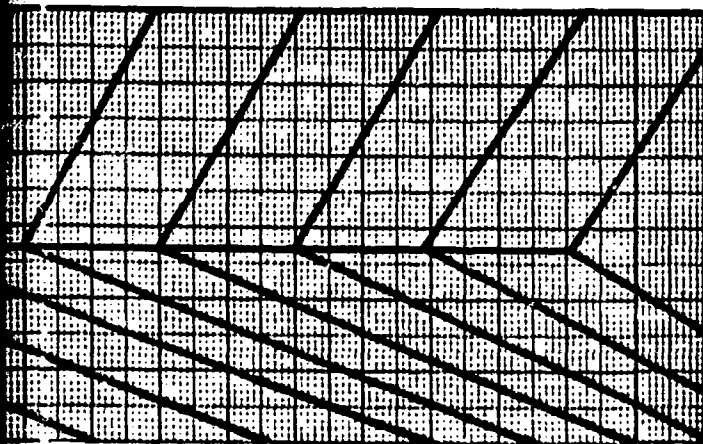


FIGURE 3-14 L-1011-1/RB.211-22C SECOND SEGMENT
LIMIT WEIGHTS 18° FLAPS

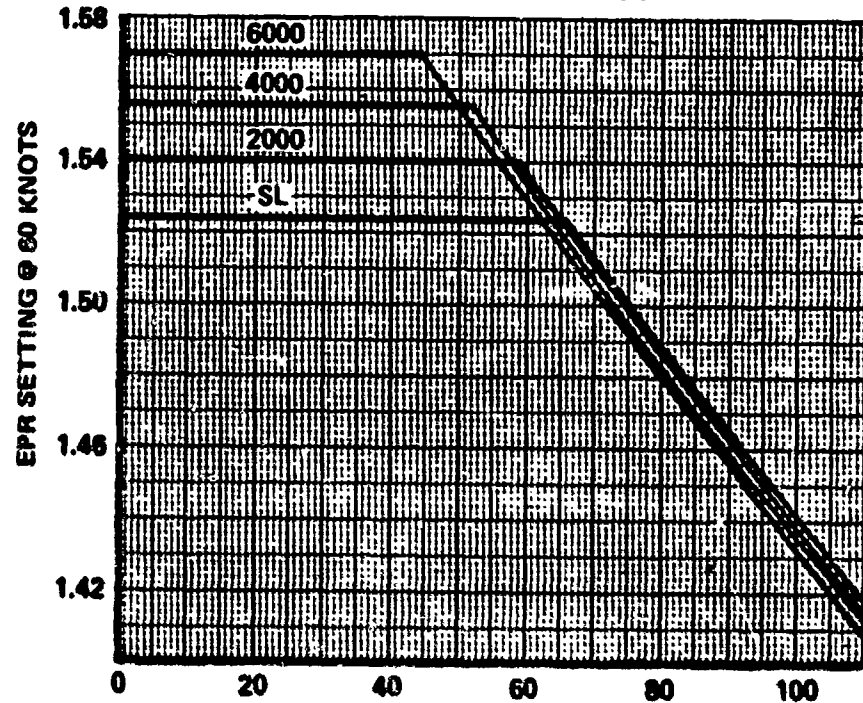
1600 LB

380 400 420 440 460 480



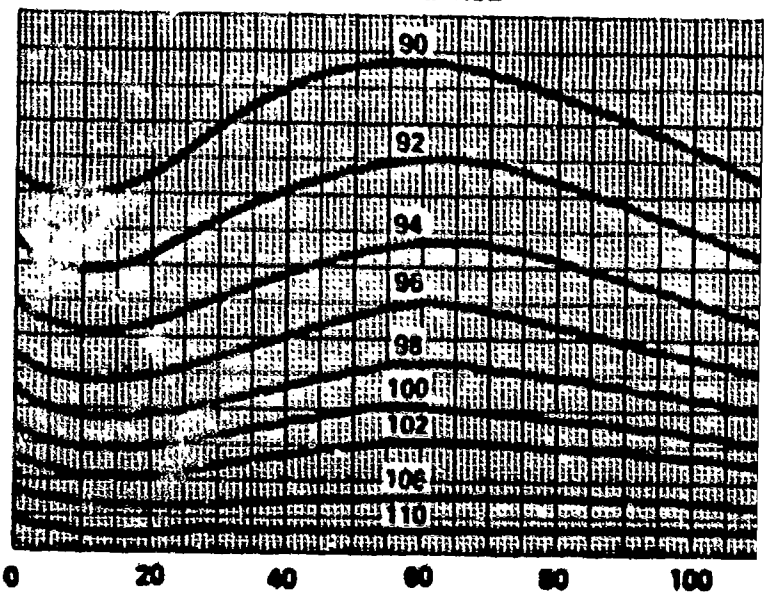
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



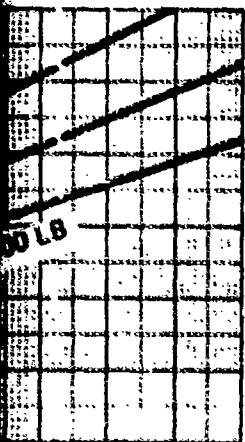
AIRPORT AMBIENT TEMP ~ °F

EPNL ~ EPNdB



380 400 420 440 460 480

HEIGHT ~ 1000 LB



24 28

NO ~ 1000 FT.

OFF NOMOGRAPH



ALL ENG. DIST
TO 35 FEET
~ 1000 FT

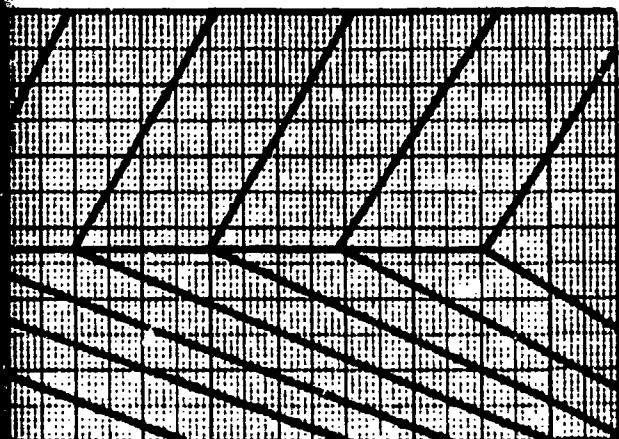


AIRPORT
ALTITUDE
~ 1000 FT



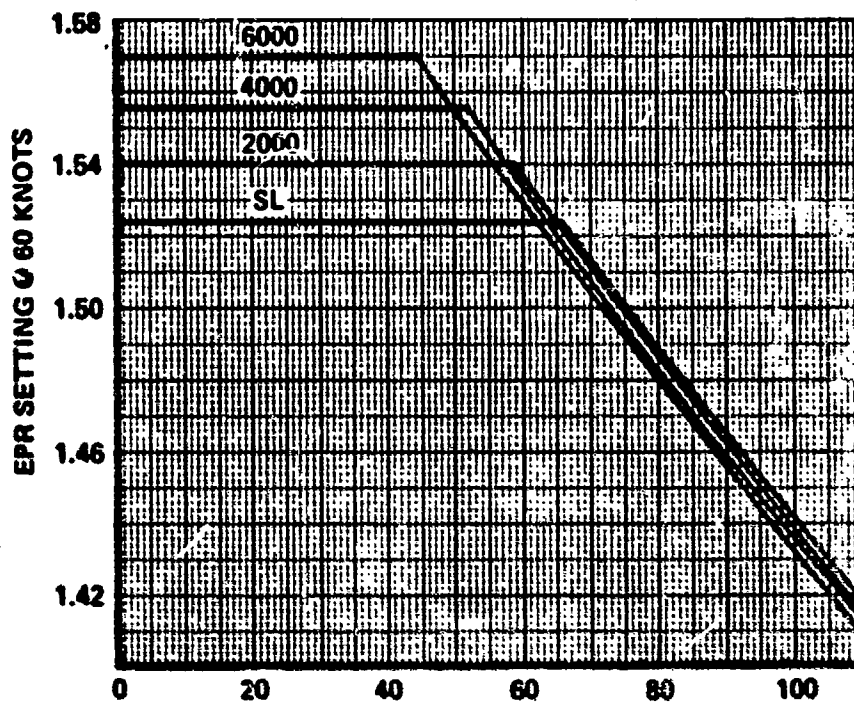
FIGURE 3-16 L 1011-1/RB.211-22C1 A NOISE LEVEL TAKEOFF NOISE NOMOGRAPH

400 420 440 460 480



TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

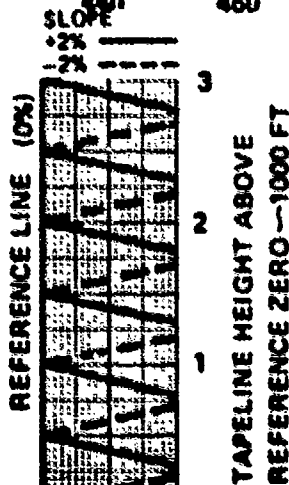
AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ °F

$L_A \sim dBA$

400 420 440 460 480
~ 1000 LB



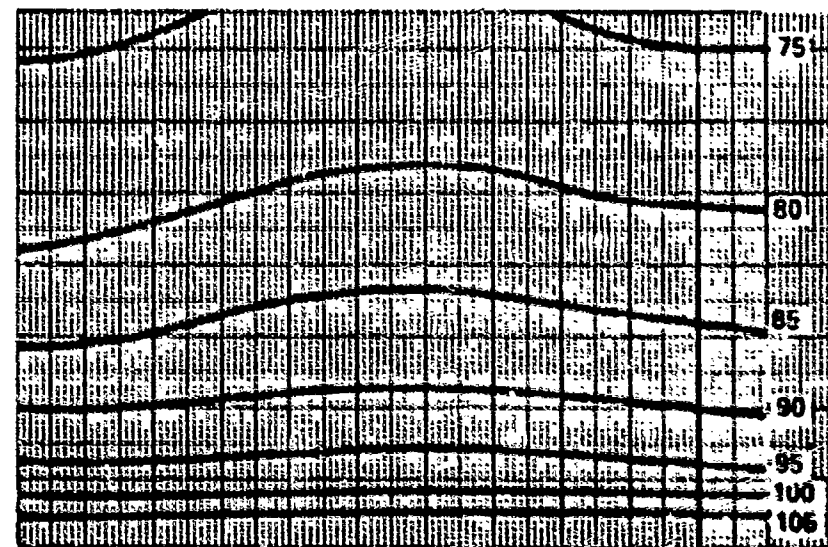
24 28

0 FT.

DISC NOMOGRAPH

ALL ENG. DIST
TO 35 FEET
~ 1000 FT

AIRPORT
ALTITUDE
~ 1000 FT



AIRPORT AMBIENT TEMP ~ °F

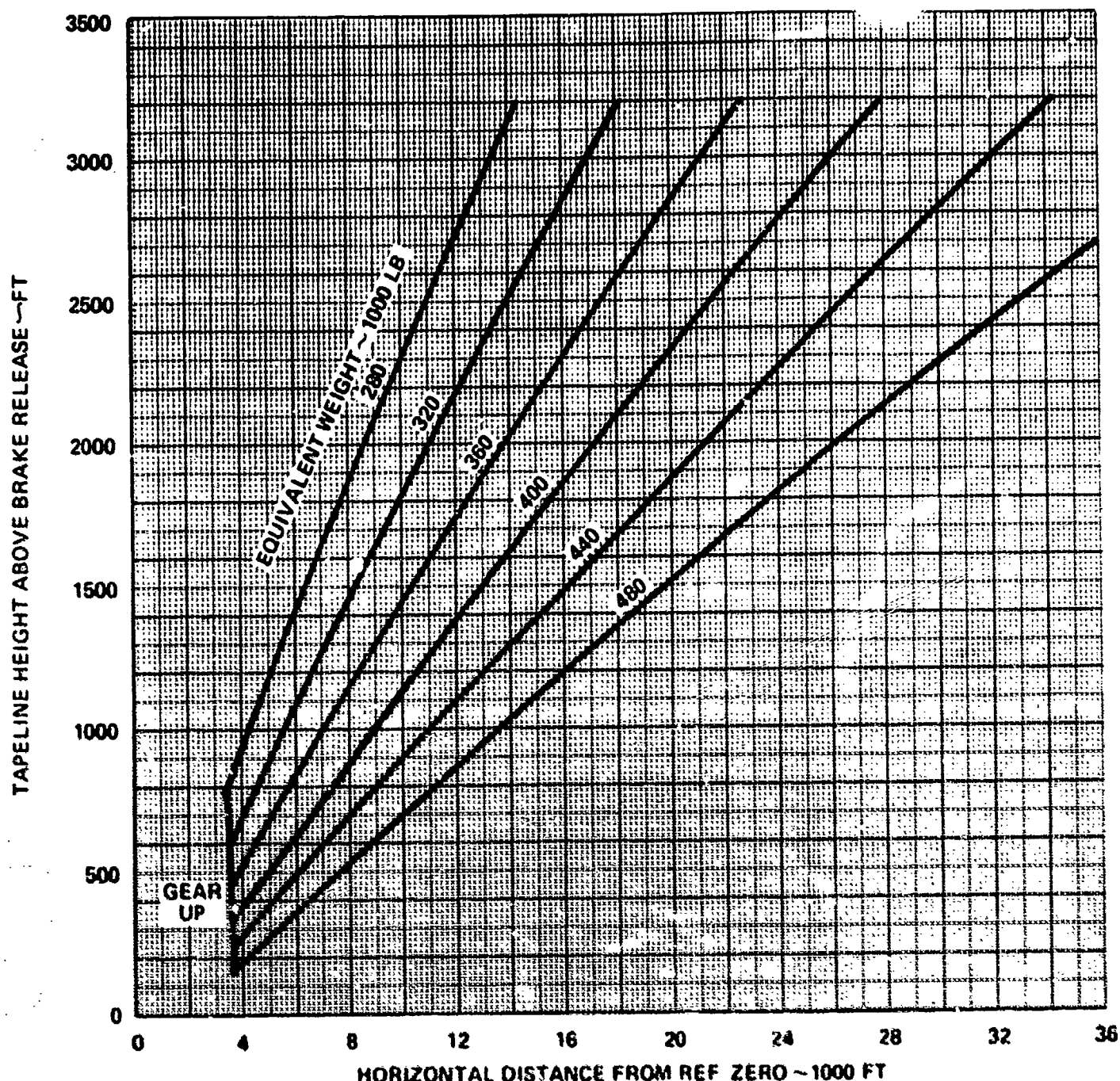
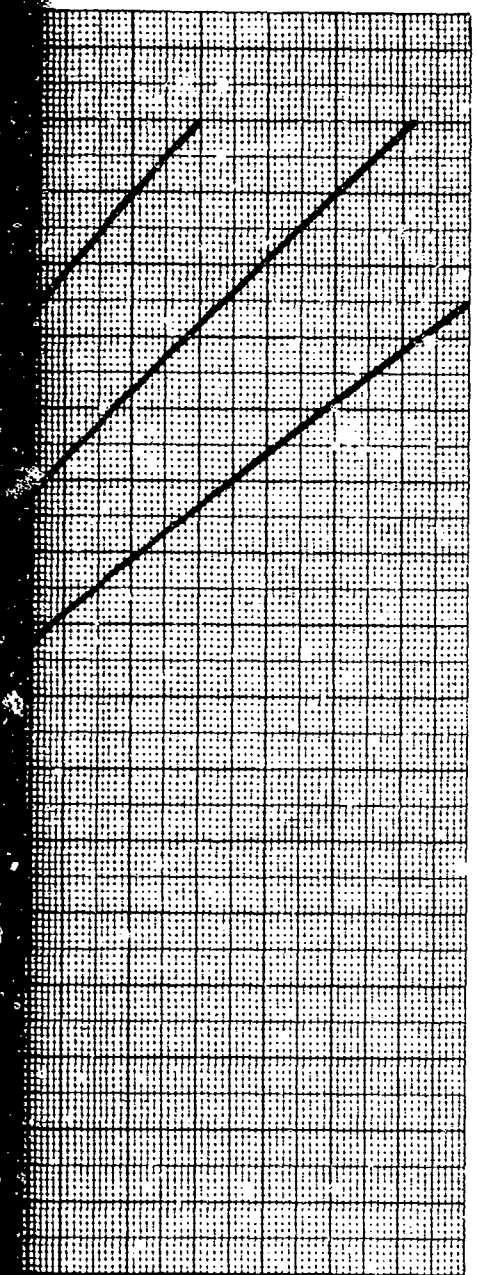
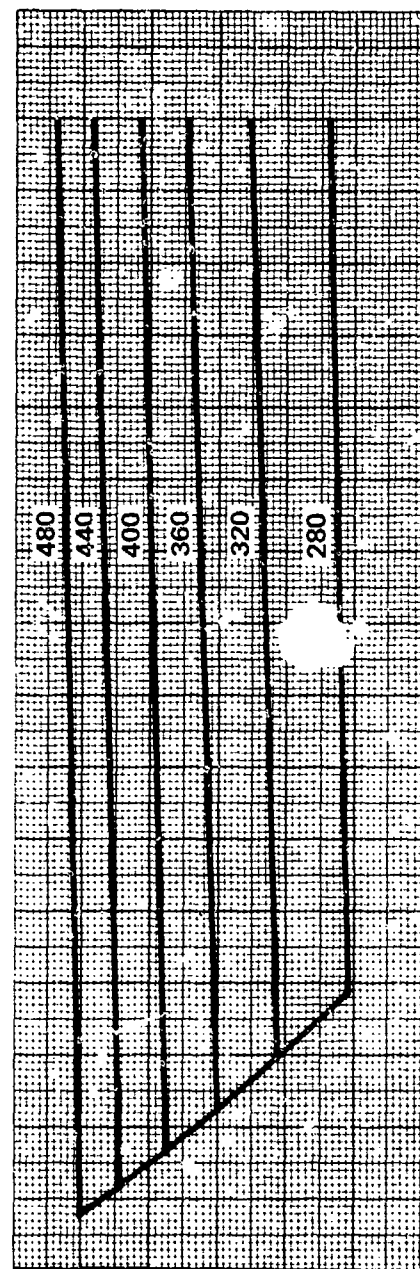


FIGURE 3-17 L 1011-1/RB.211-22C1 RATE OF CLIMB AND CLIMB GRADIENT
ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
ECS BLEED ON 18° FLAPS



ERO ~ 1000 FT
CLIMB AND CLIMB GRADIENT
AR UP (TAKEOFF POWER)

EQUIVALENT WT ~ 1000 LB

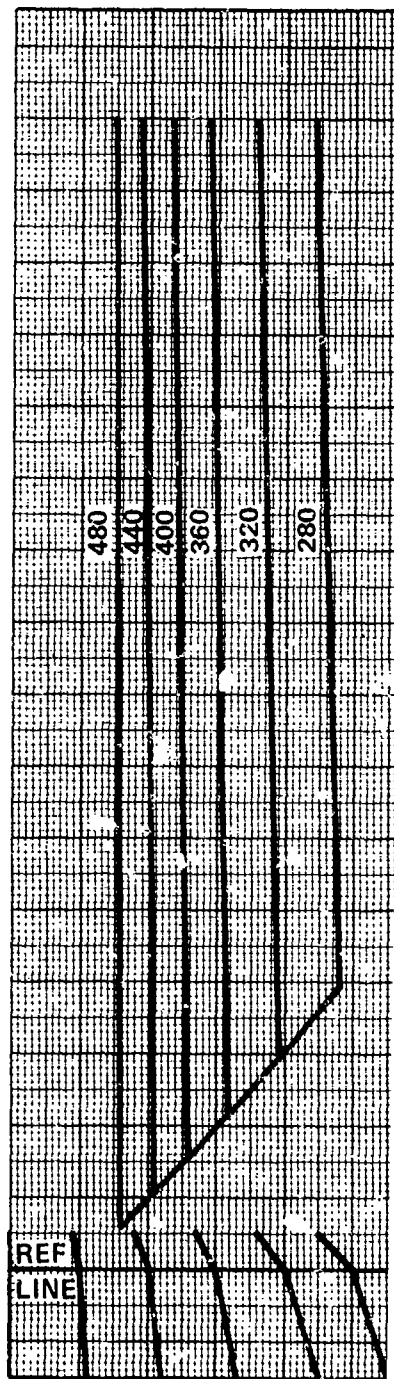


RATE OF CLIMB ~ 1000 FT / MIN

TAILWIND

WIND ~ KT
-10
0
10
20
30

EQUIVALENT WT ~ 1000 LB



HEADWIND 0

GRADIENT ~ PCT

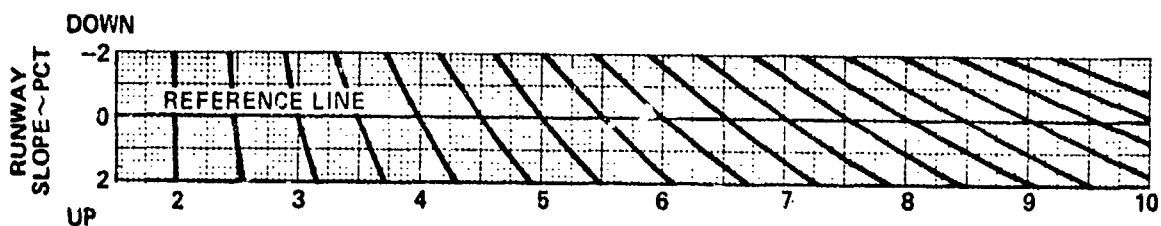
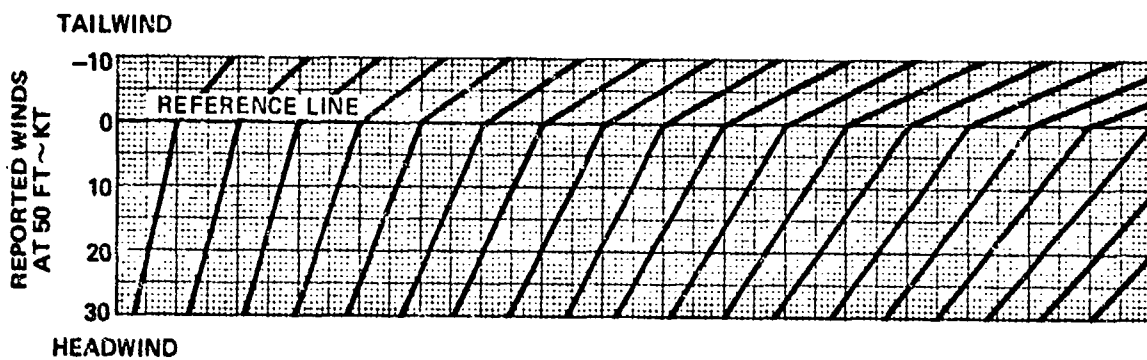
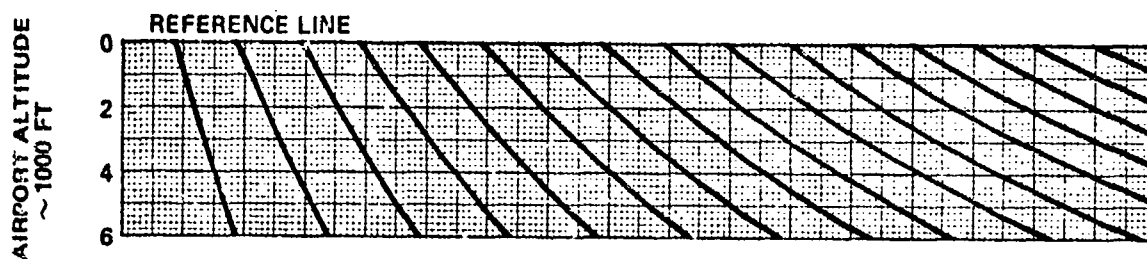
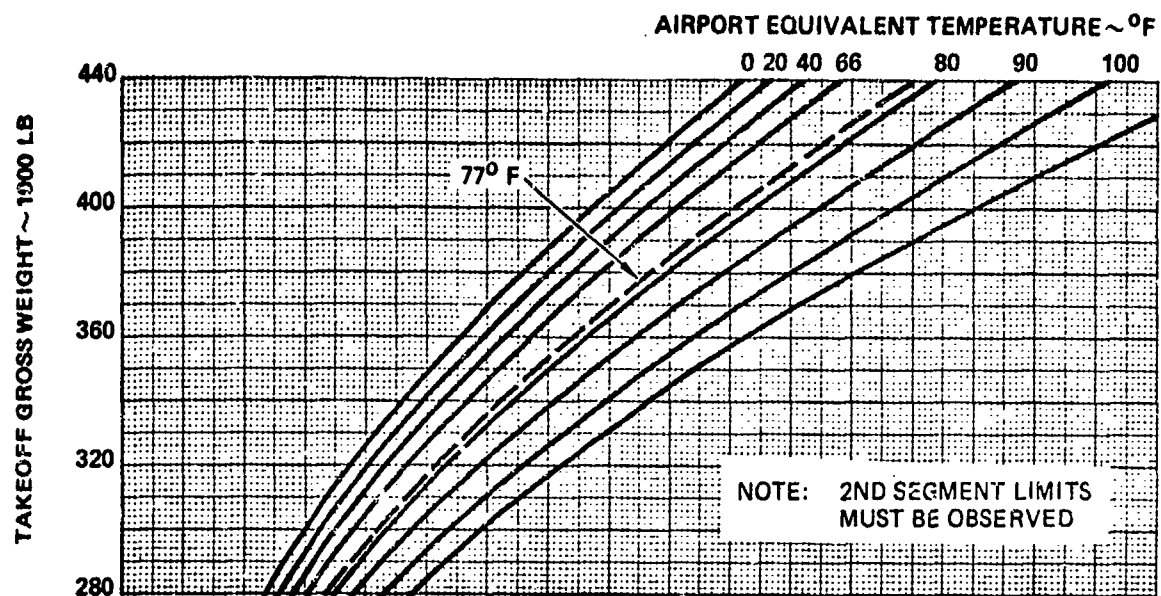


FIGURE 3-18 L-1011-1/RB.211-22C1 ALL ENGINE DISTANCE TO 35 FEET
22° FLAPS

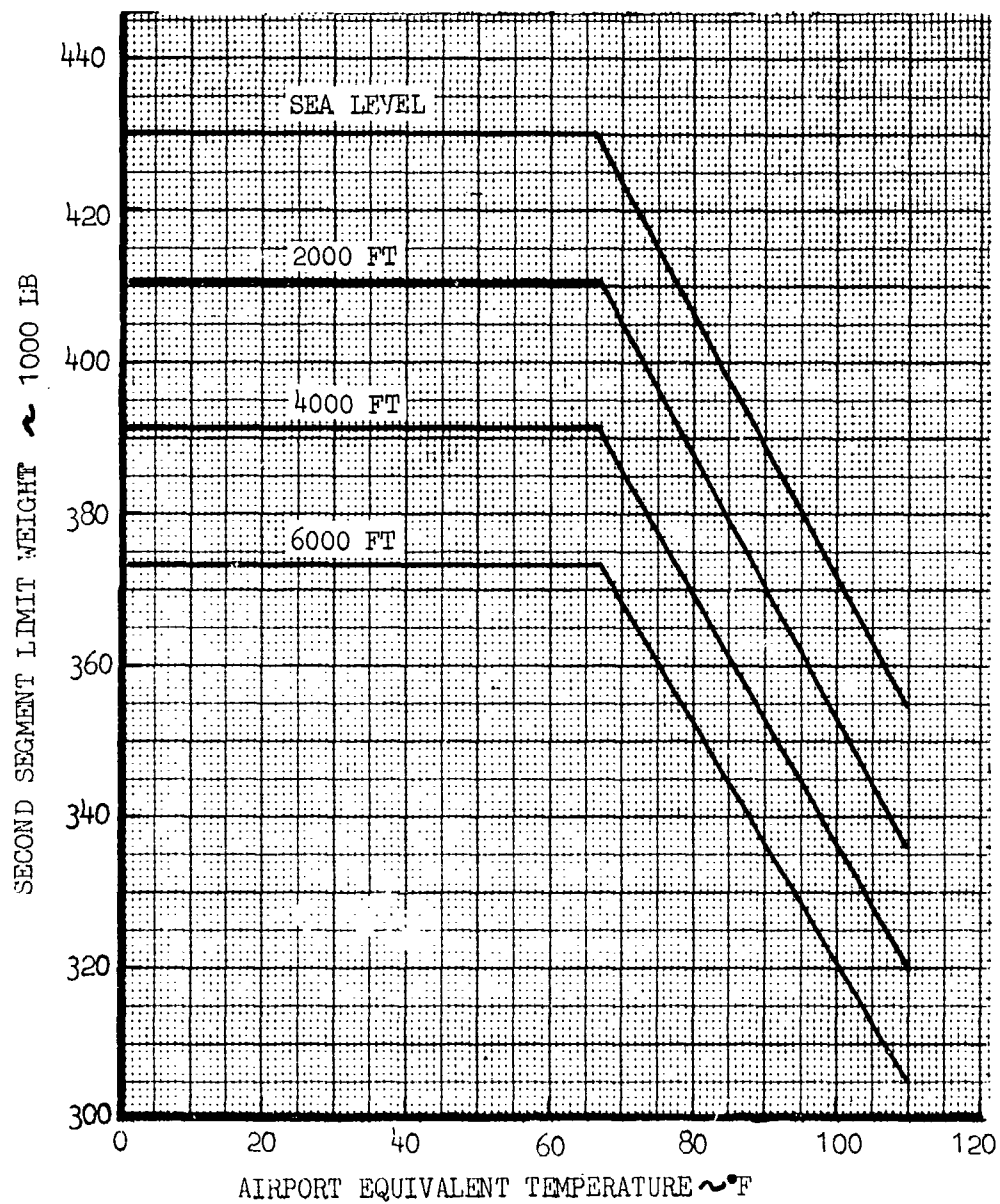


FIGURE 3-19 L-1011-1/RB.211-22C SECOND SEGMENT
LIMIT WEIGHTS 22° FLAPS

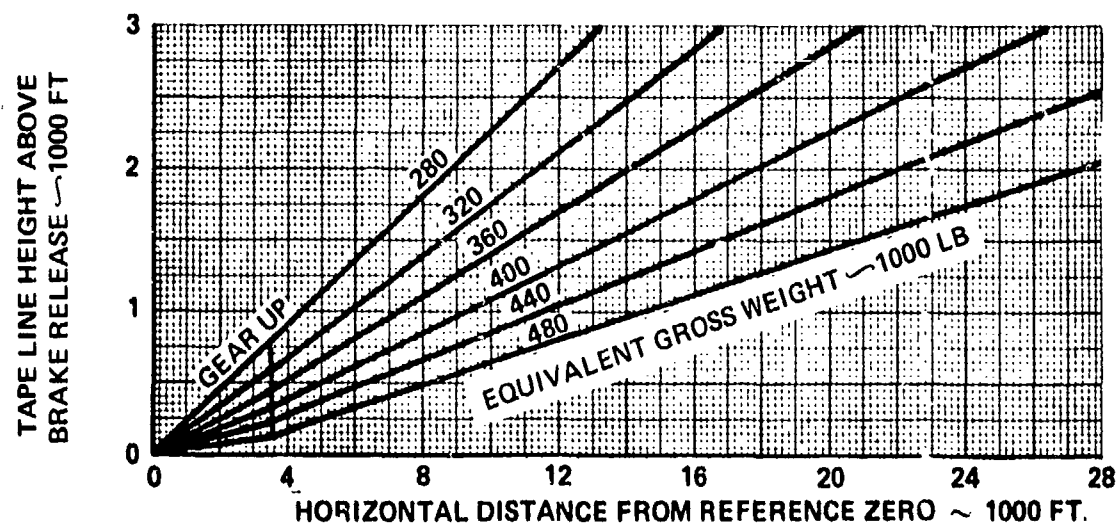
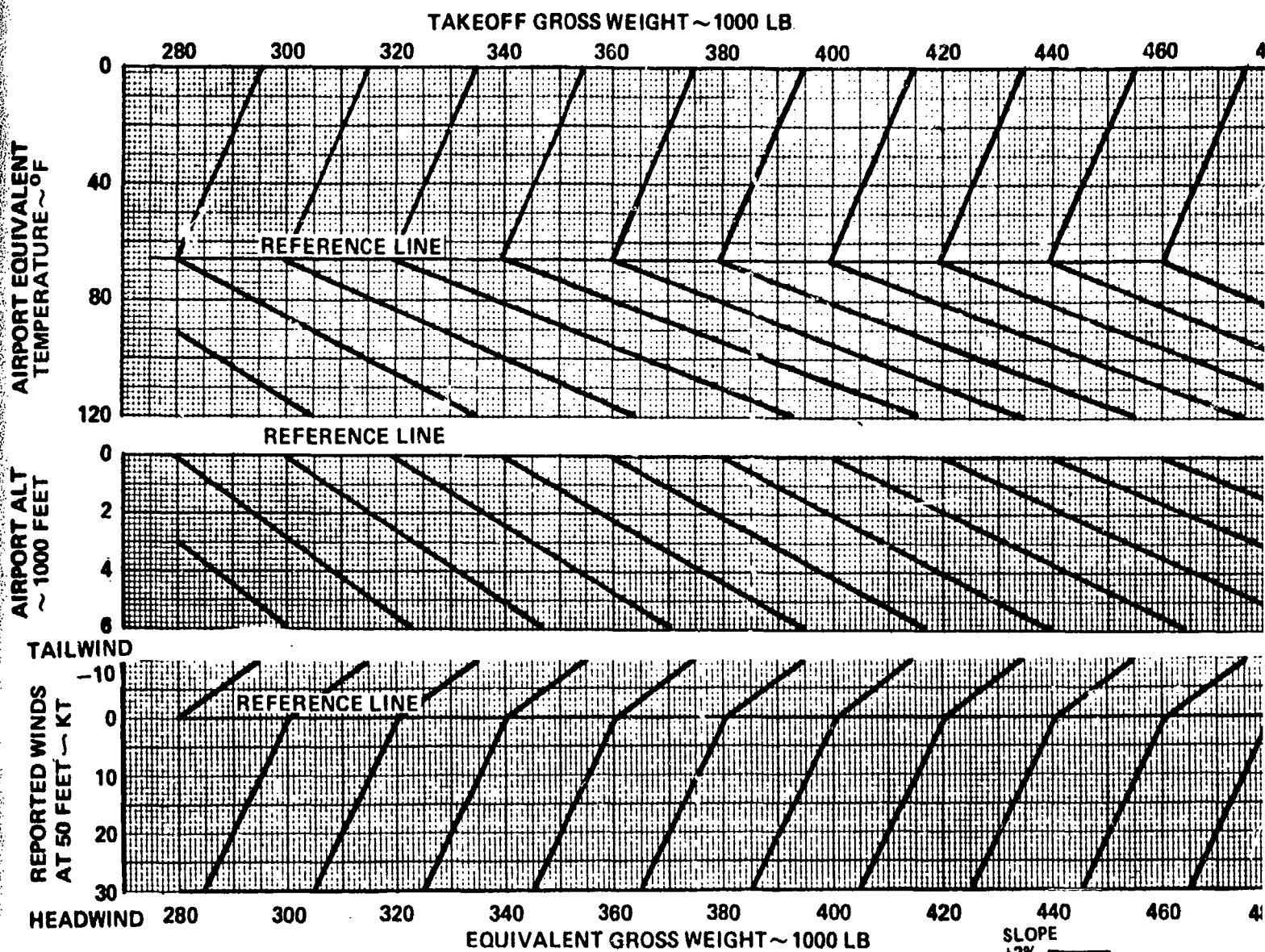
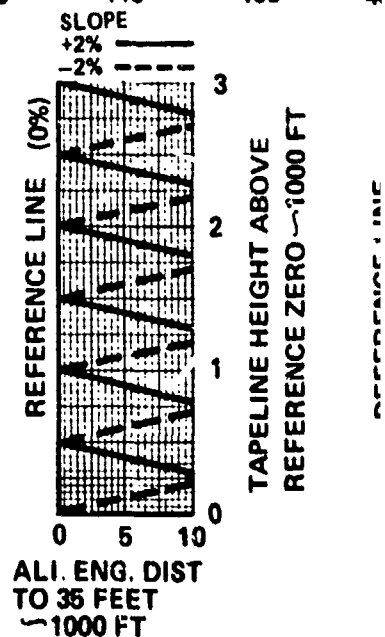
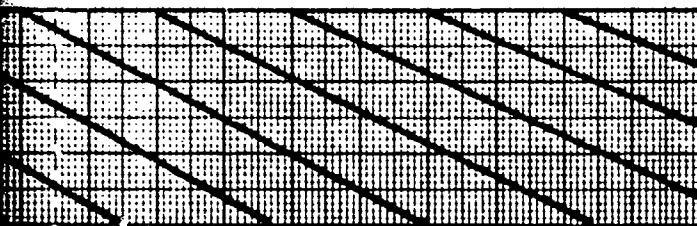
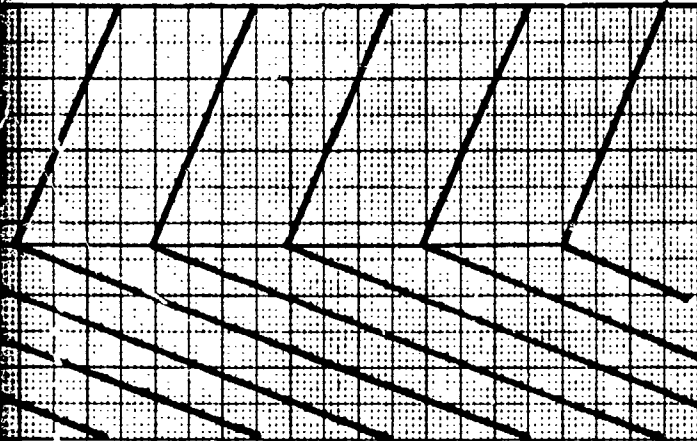


FIGURE 3-20 L-1011-1/RB.211-22C1 EPNL TAKEOFF NOMOGRAPH
22° FLAPS

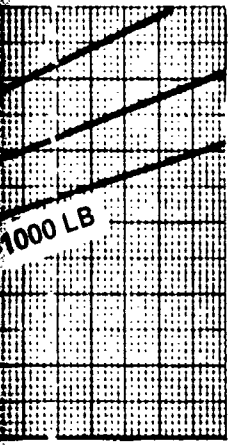


EPR SETTING @ 60 KNOTS

1000 LB
380 400 420 440 460 480



380 400 420 440 460 480
HEIGHT ~ 1000 LB



24 28
ZERO ~ 1000 FT.
HOMOGRAPH

SLOPE
+2%
-2%



ALL ENG. DIST
TO 35 FEET
~ 1000 FT

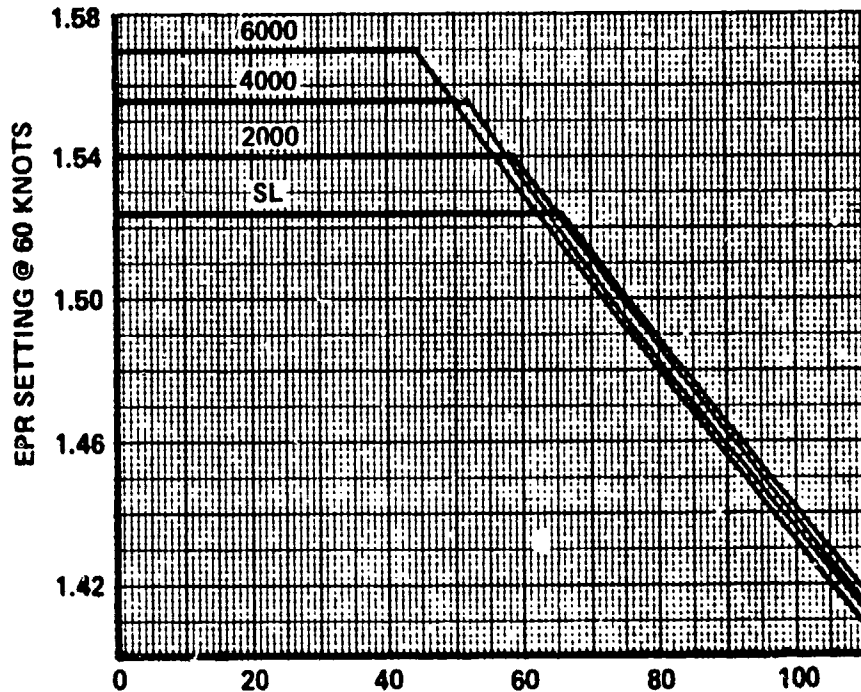
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT



AIRPORT
ALTITUDE
~ 1000 FT

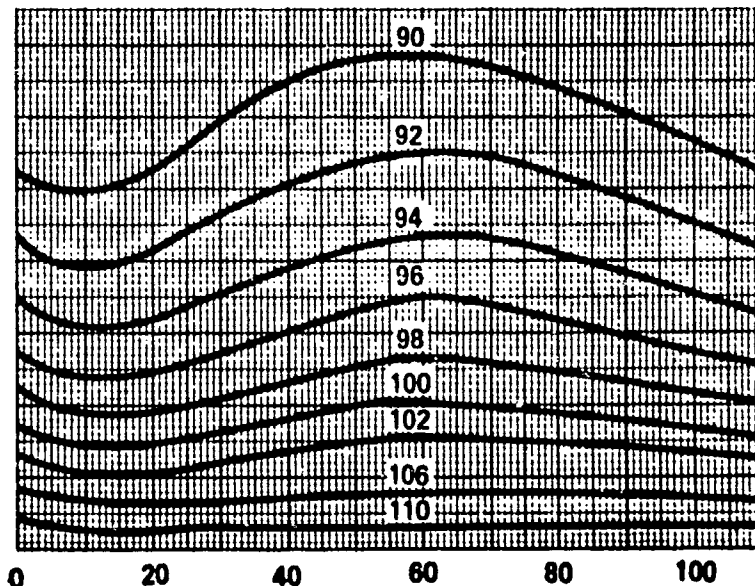
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ °F

EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F

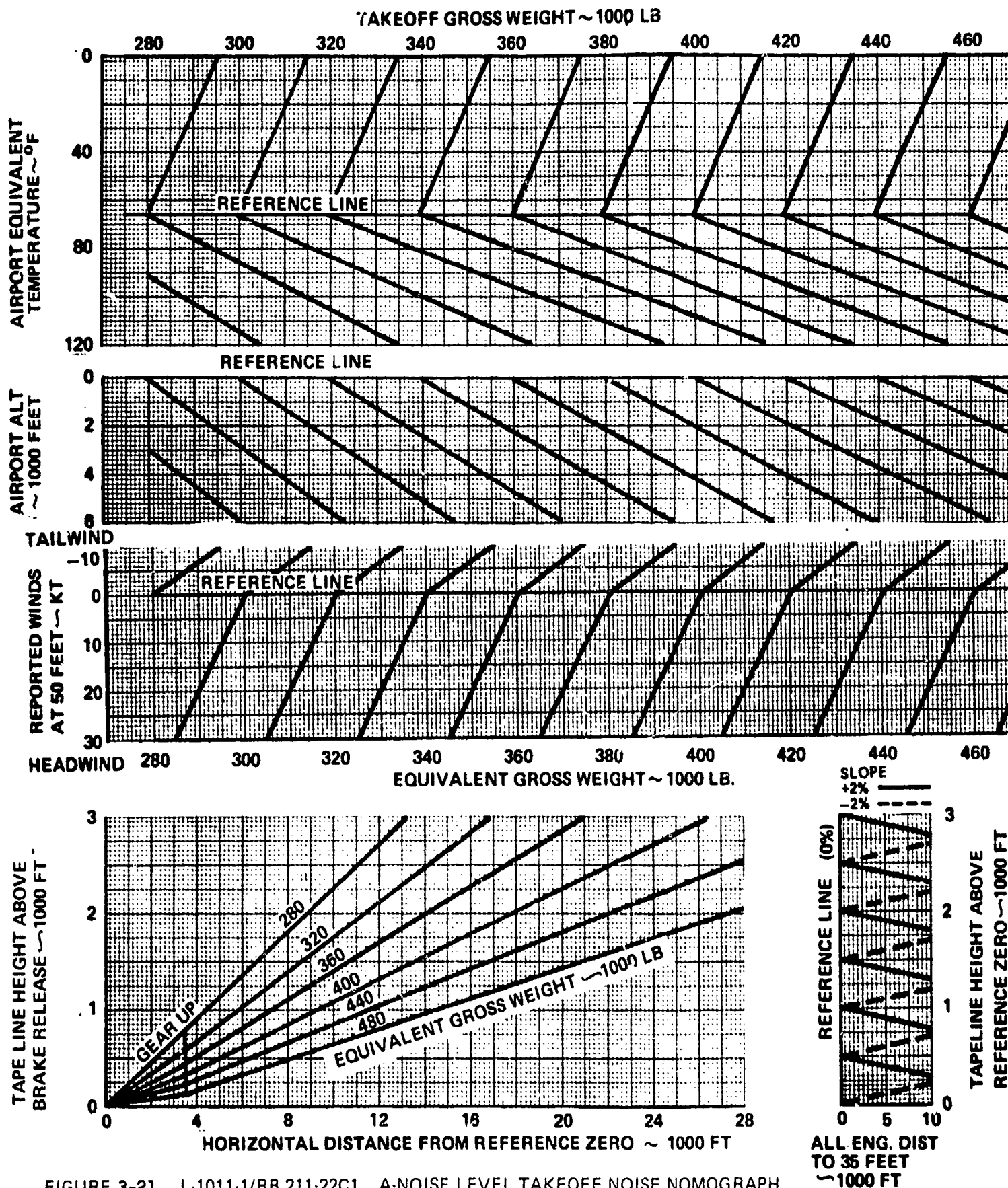
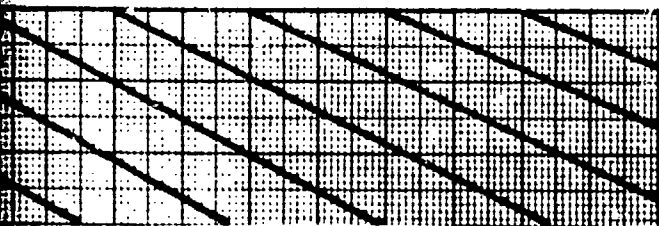
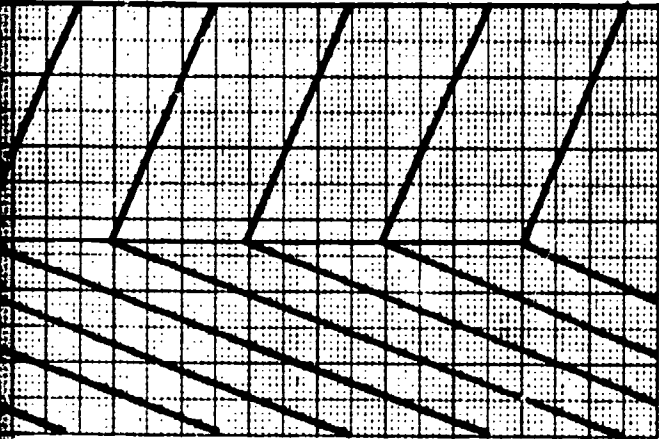


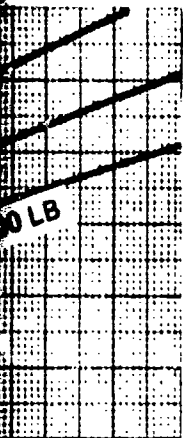
FIGURE 3-21 L-1011-1/RB.211-22C1 A-NOISE LEVEL TAKEOFF NOISE NOMOGRAPH
22° FLAPS

10 LB.

400 420 440 460 480



HT ~ 1000 LB.



0 ~ 1000 FT

NOISE NOMOGRAPH

SLOPE
+2%
-2%



ALL ENG. DIST
TO 35 FEET
~ 1000 FT

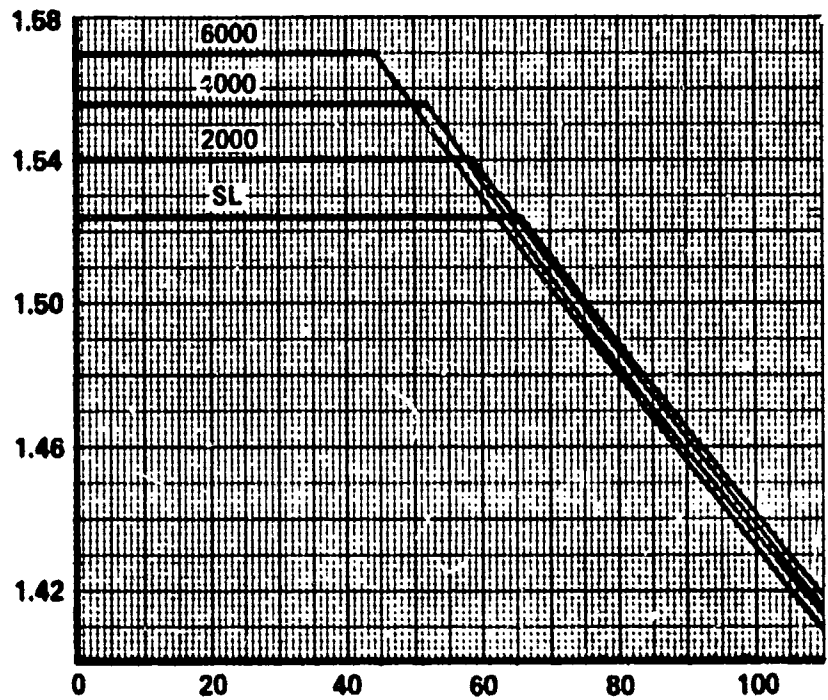
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT



AIRPORT
ALTITUDE
~ 1000 FT

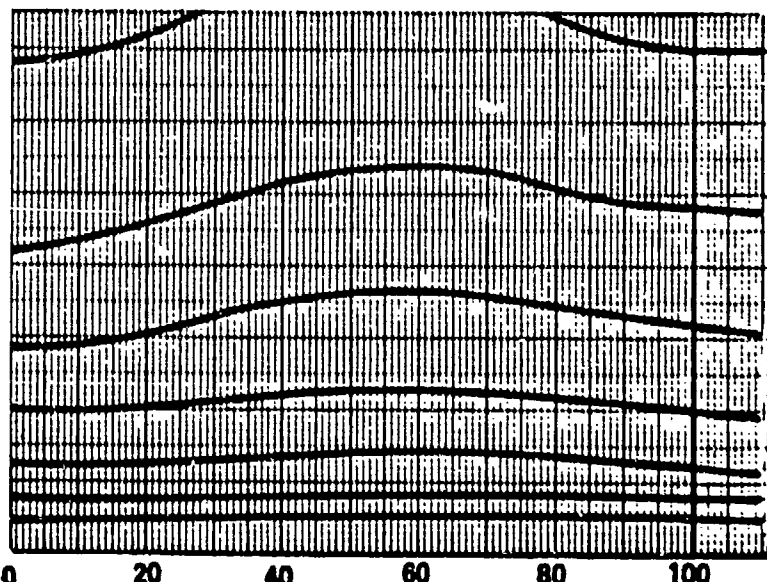
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ °F

$\Delta L_A \sim dBA$



AIRPORT AMBIENT TEMP ~ °F

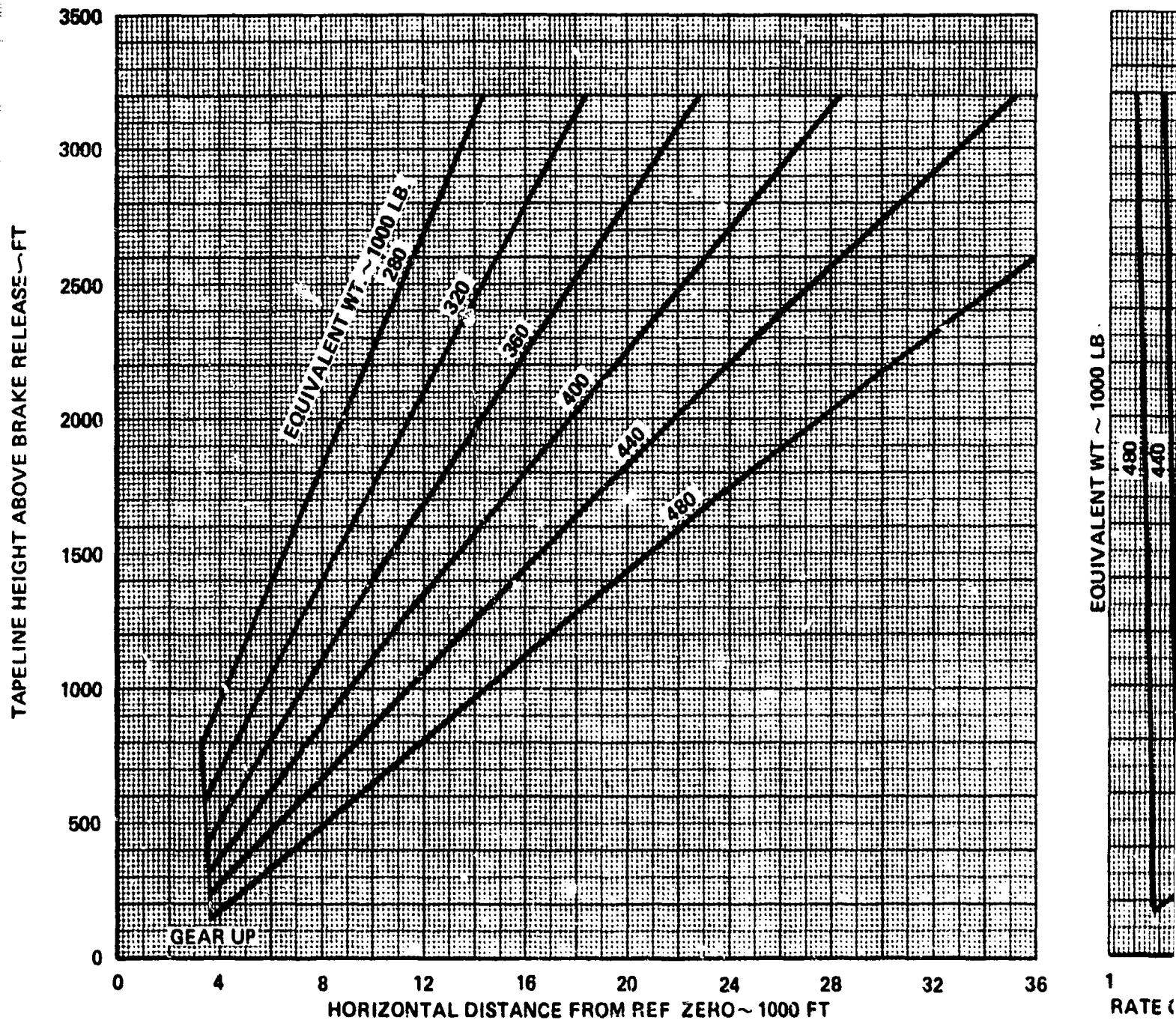
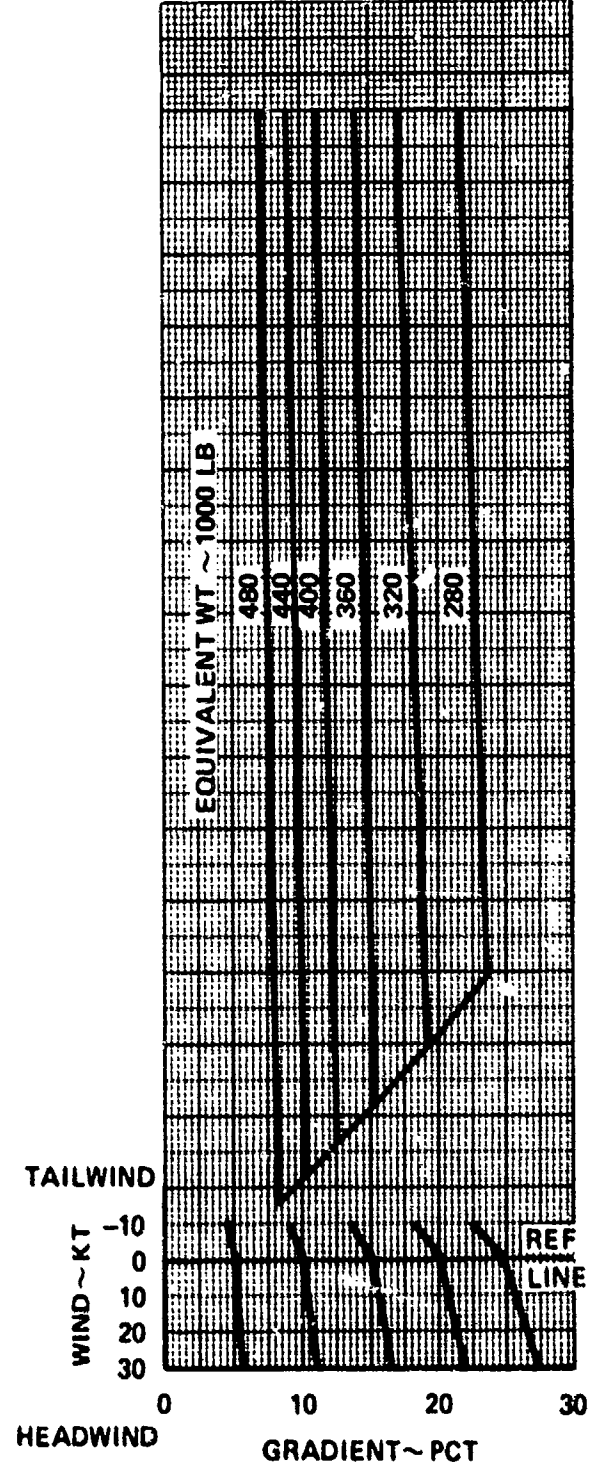
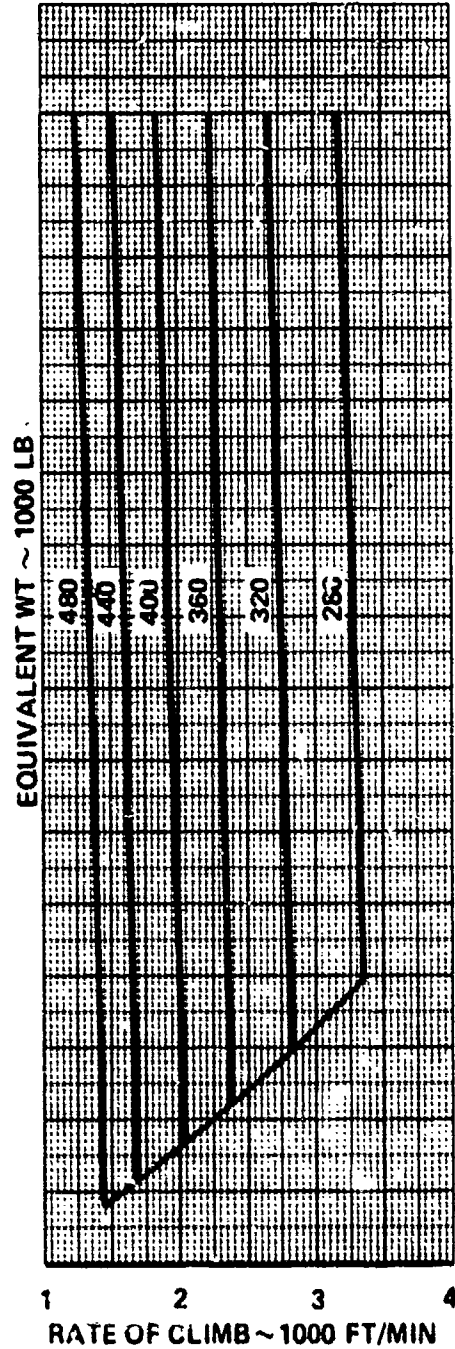
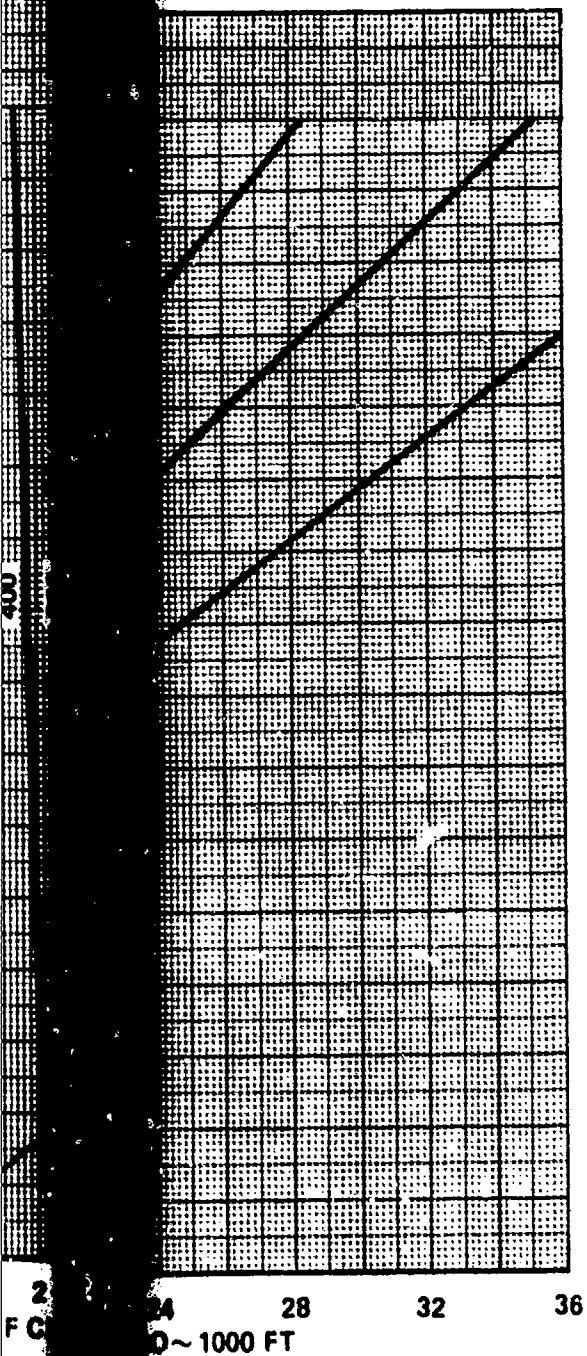


FIGURE 3-22 L-1011-1/RB.211-22C1 RATE OF CLIMB AND CLIMB GRADIENT
FOR ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
ECS BLEED ON 22° FLAPS



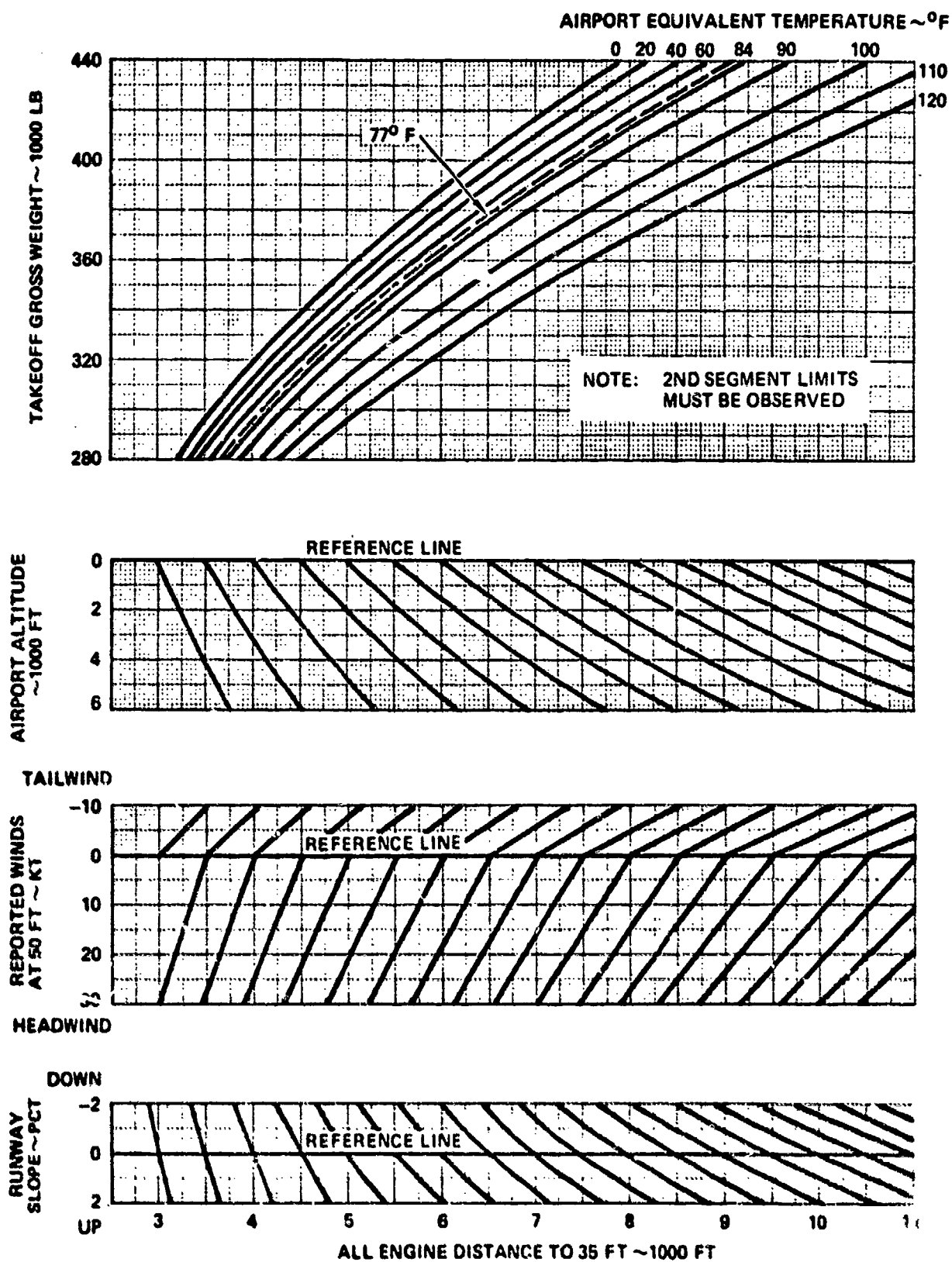


FIGURE 3-23 L1011-1/RB.211-228 ALL ENGINE DISTANCE TO 35 FEET
4° FLAPS

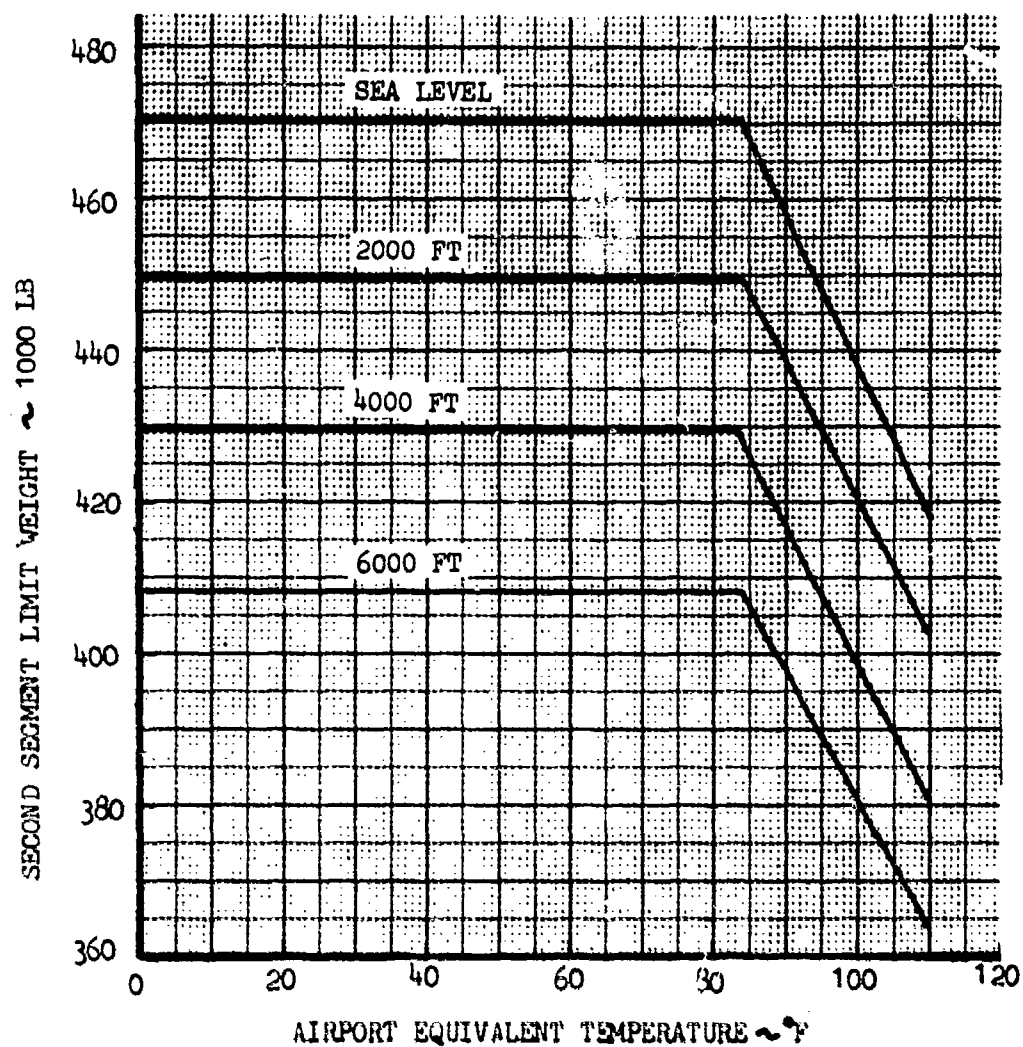


FIGURE 3-24 L-1011-1/RB.211-22B SECOND SEGMENT
LIMIT WEIGHTS 4° FLAPS

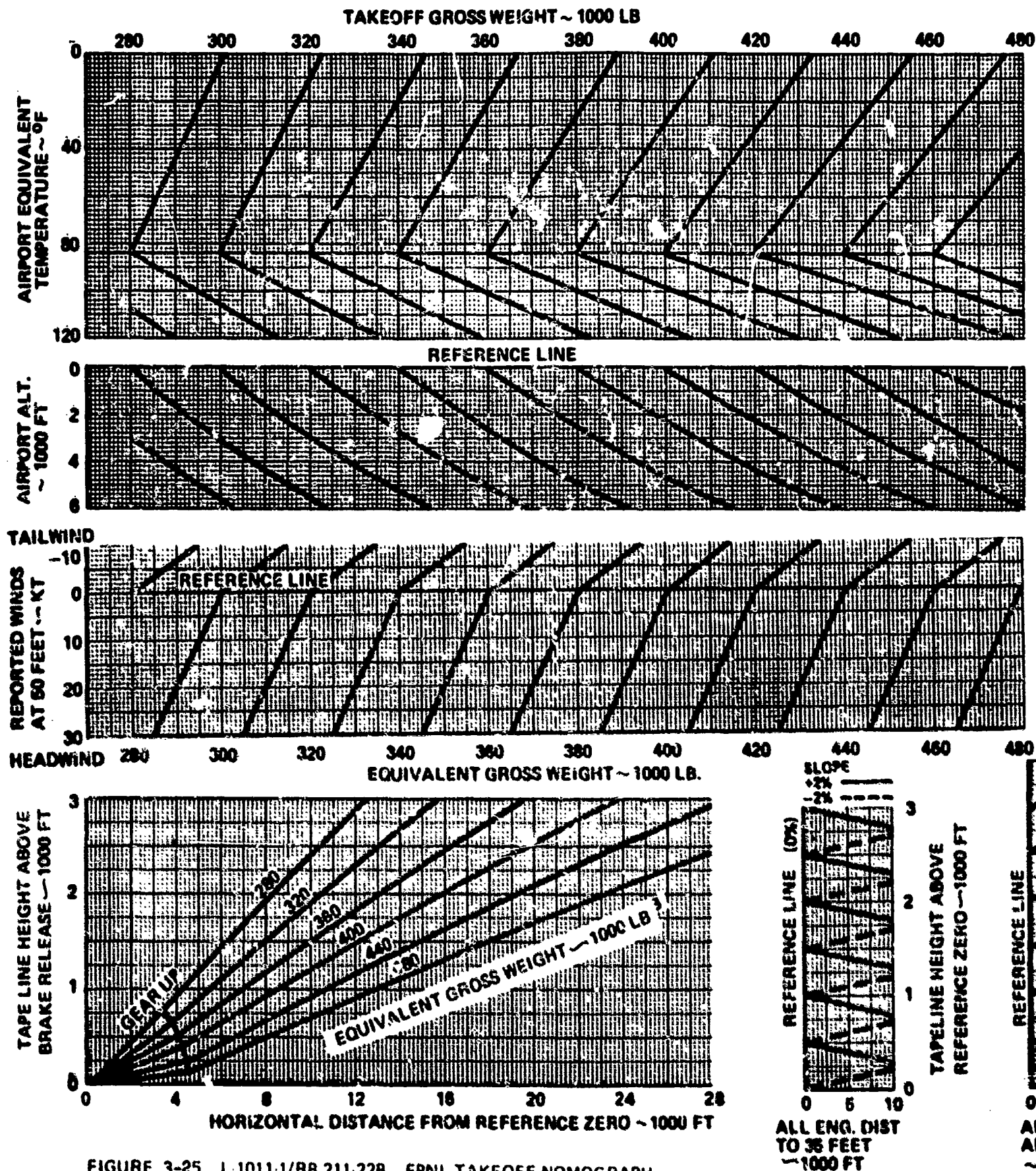
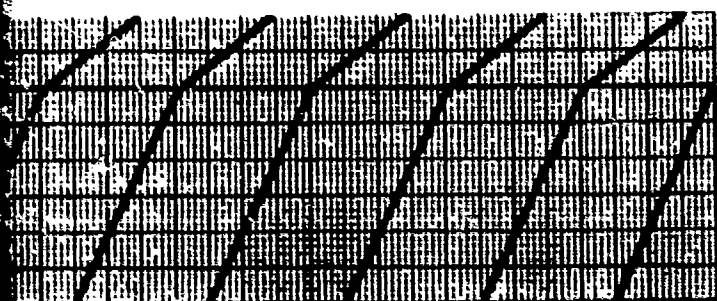
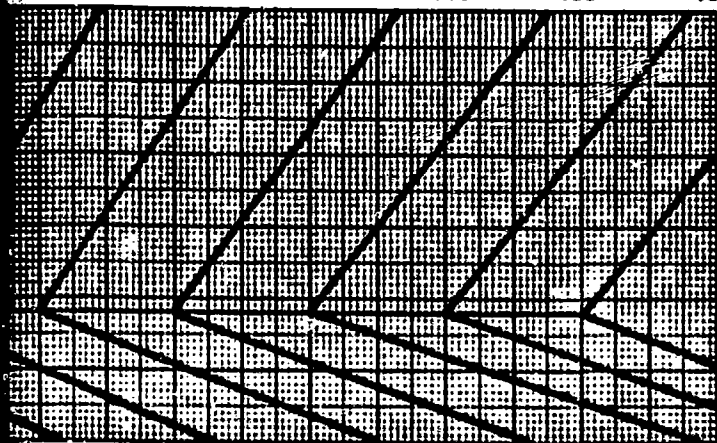
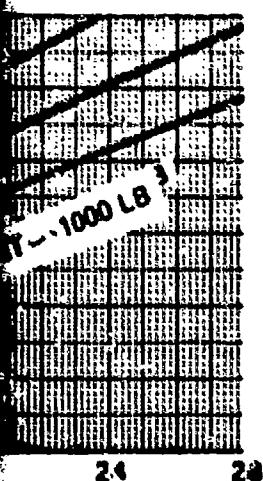


FIGURE 3-25 L-1011-1/RB.211-22B EPNL TAKEOFF NOMOGRAPH
40° FLAPS

~ 1000 LB
380 400 420 440 460 480



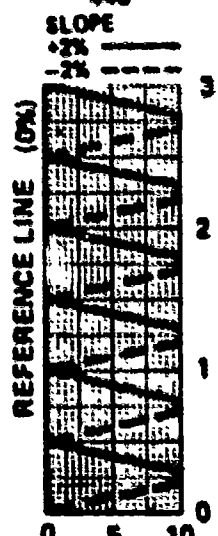
380 400 420 440 460 480
WEIGHT ~ 1000 LB.



24 28

ANCE ZERO ~ 1000 FT

OMOGRAPH



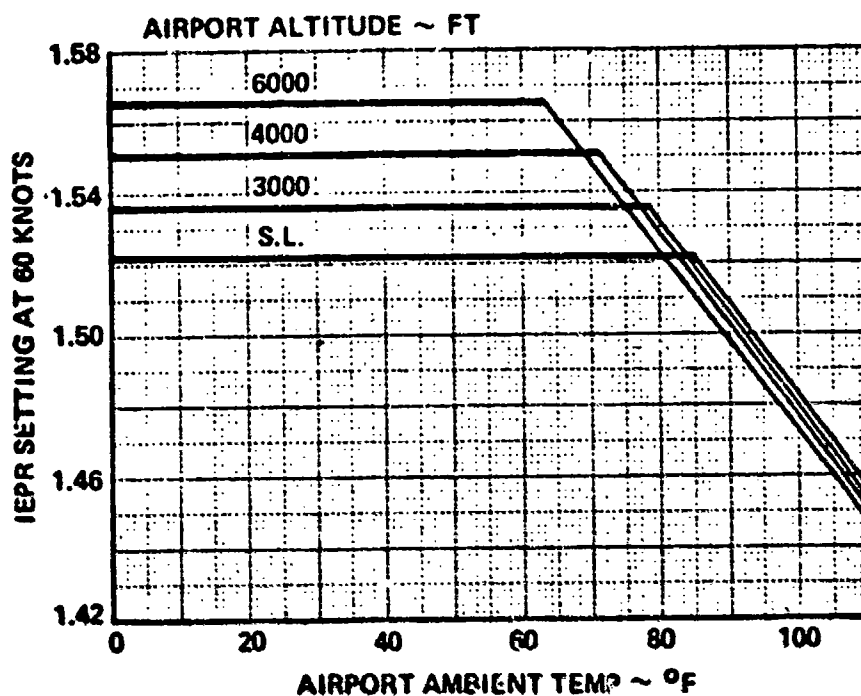
ALL ENG. DIST
TO 35 FEET
~ 1000 FT

TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT

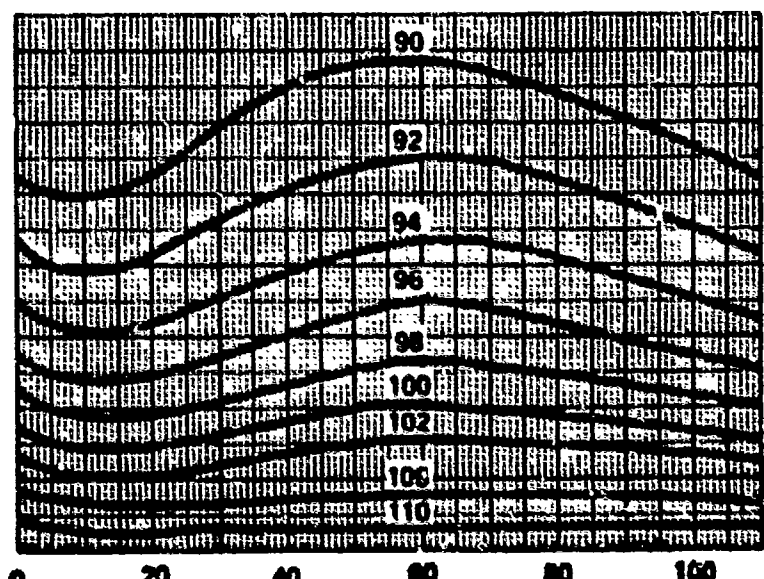


AIRPORT
ALTITUDE
~ 1000 FT

TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT



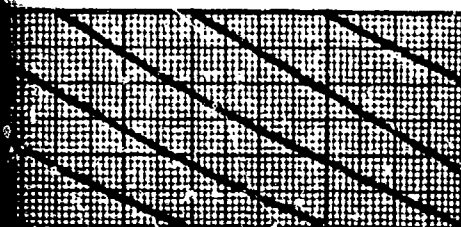
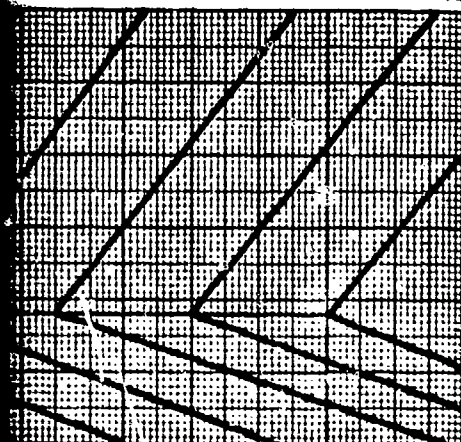
EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F



420 440 460 480



420 440 460 480



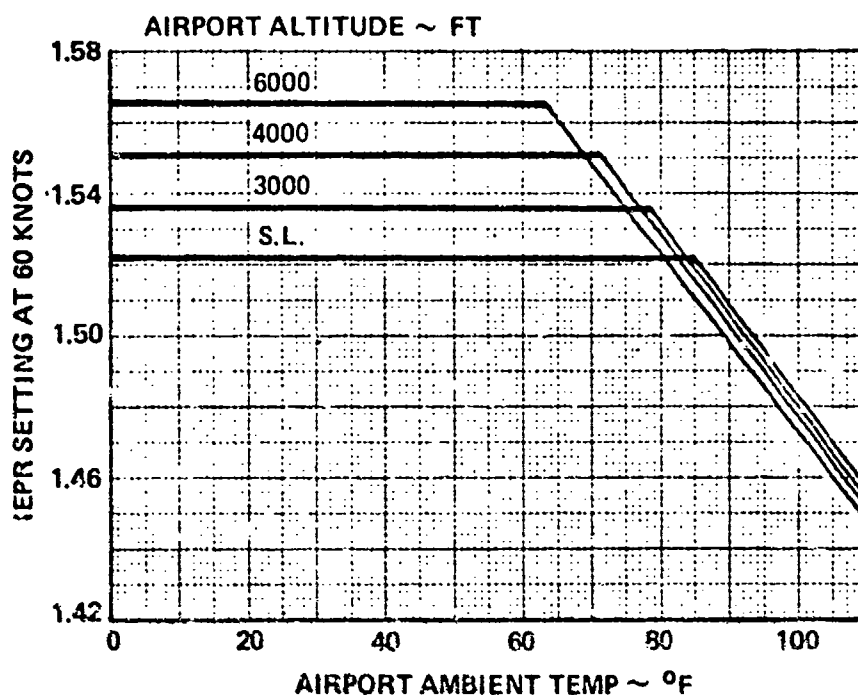
ALL ENG. DIST
TO 35 FEET
~1000 FT

TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~1000 FT

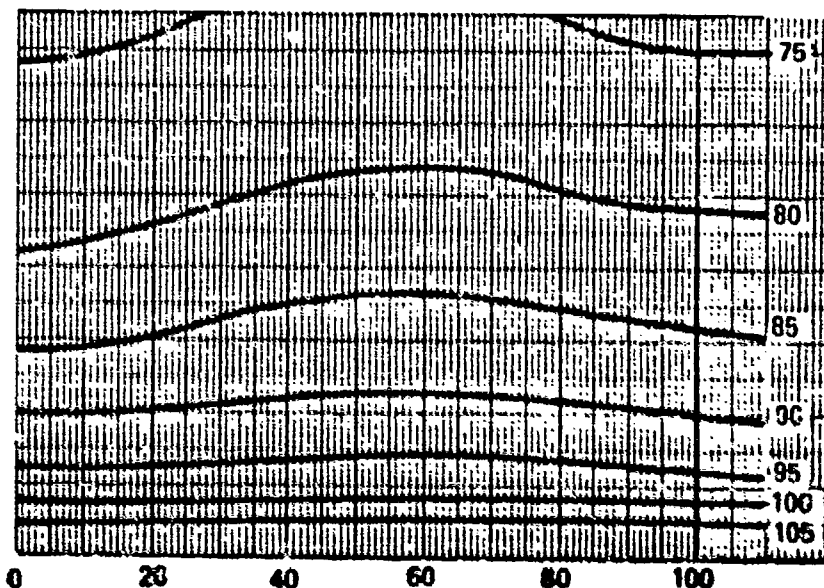


AIRPORT
ALTITUDE
~ 1000 FT

TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

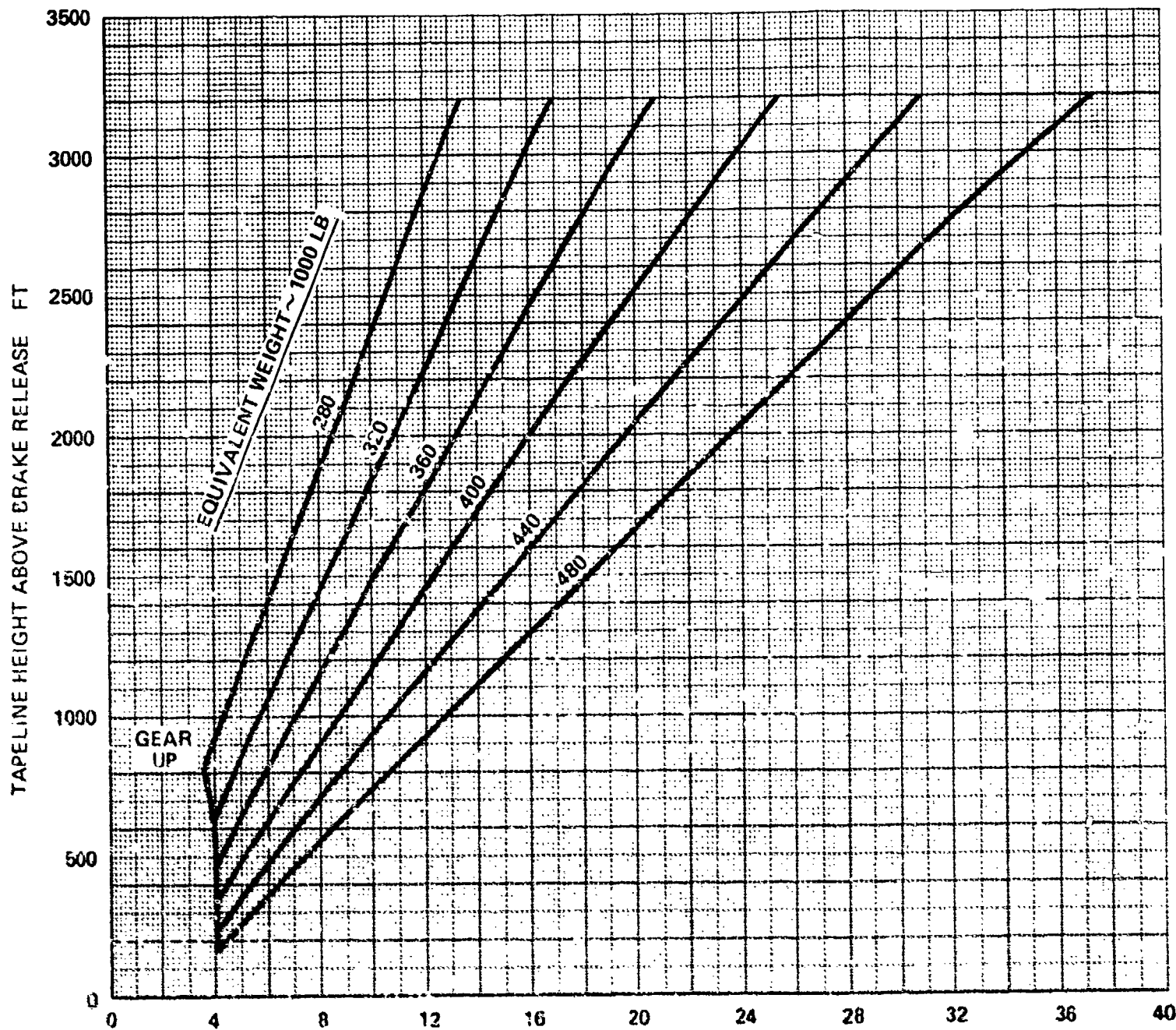


$L_A \sim$ dBA



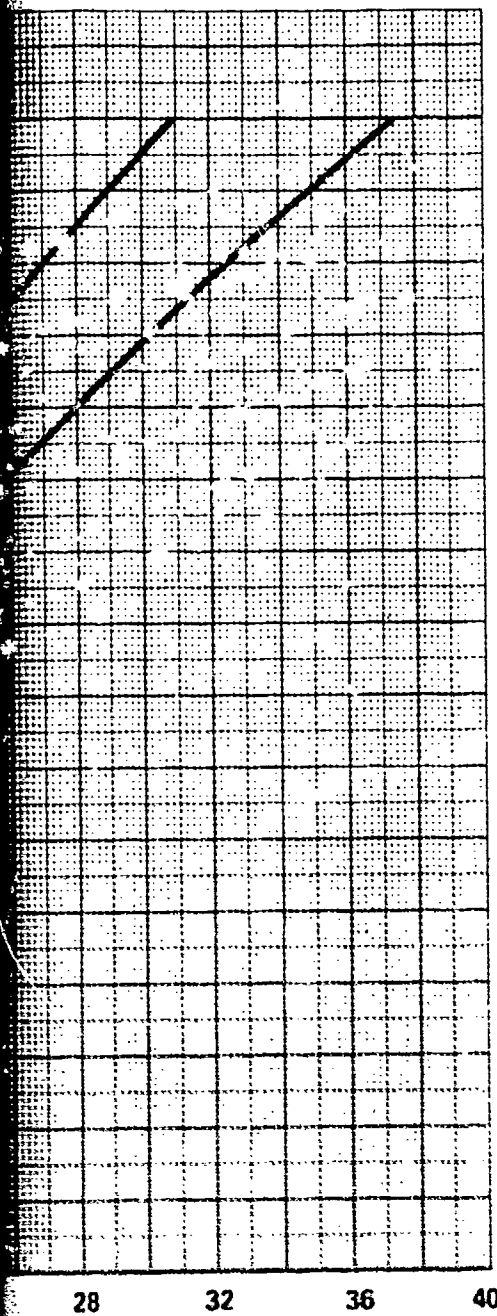
AIRPORT AMBIENT TEMP ~ °F

GRAPH

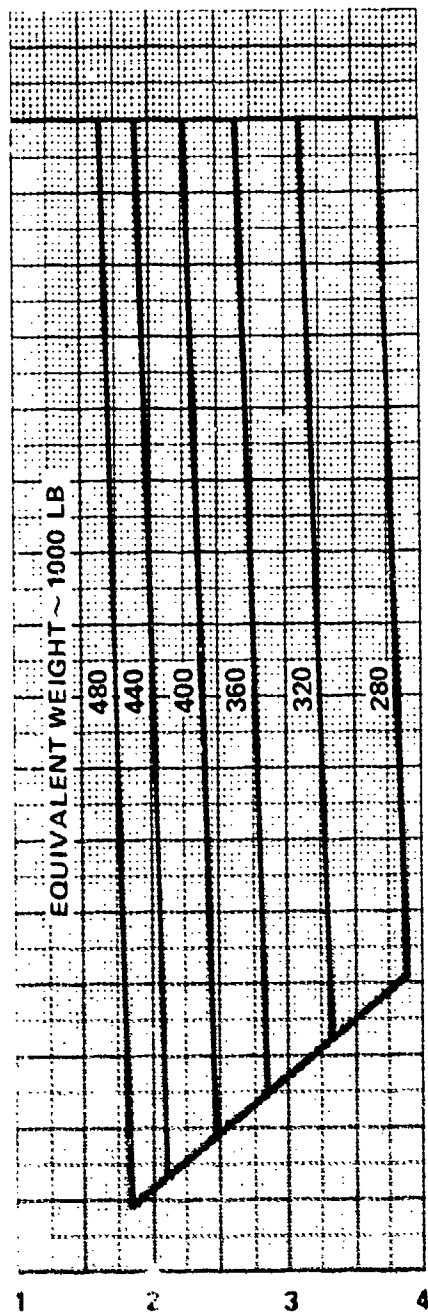


HORIZONTAL DISTANCE FROM REFERENCE ZERO ~ 1000 FT
 FIGURE 3-27 L 1011 1/RB.211 22B RATE OF CLIMB AND CLIMB GRADIENT
 FOR ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
 ECS BLEED ON 1.° FLAPS

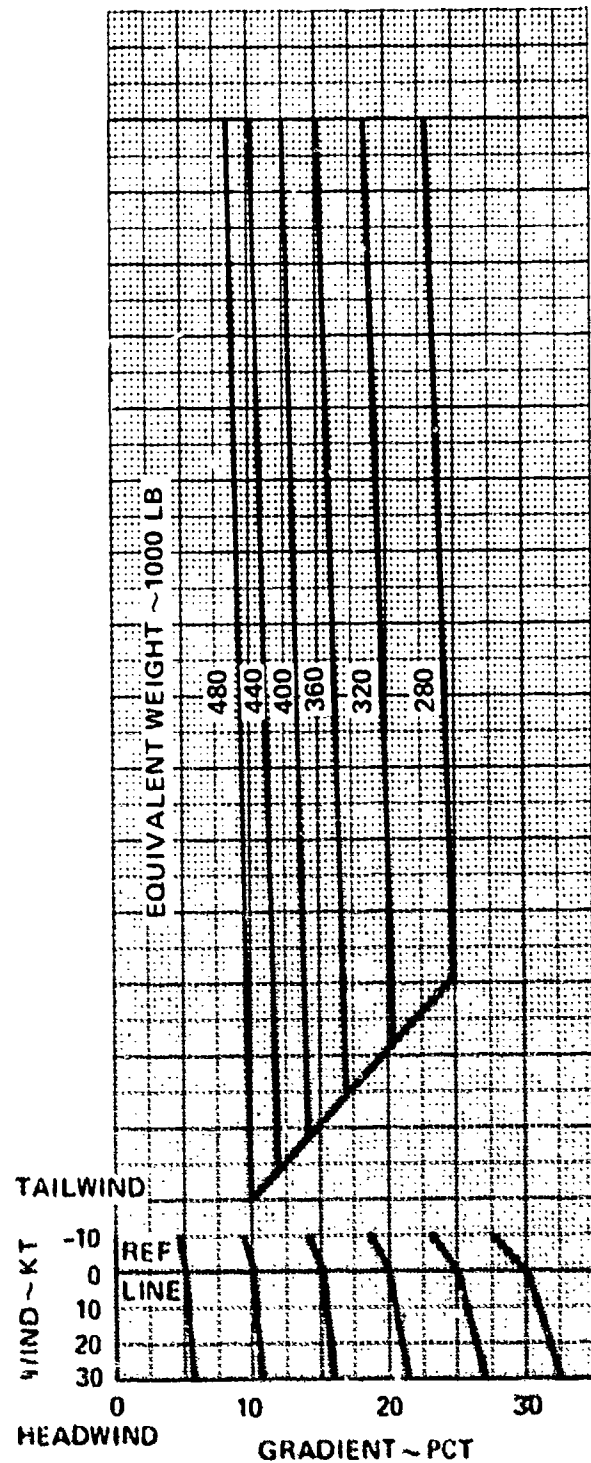
EQUIVALENT WEIGHT ~ 1000 LB



ZERO ~ 1000 FT
CLIMB AND CLIMB GRADIENT
GEAR UP (TAKEOFF POWER)



RATE OF CLIMB ~ 1000 FT /MIN



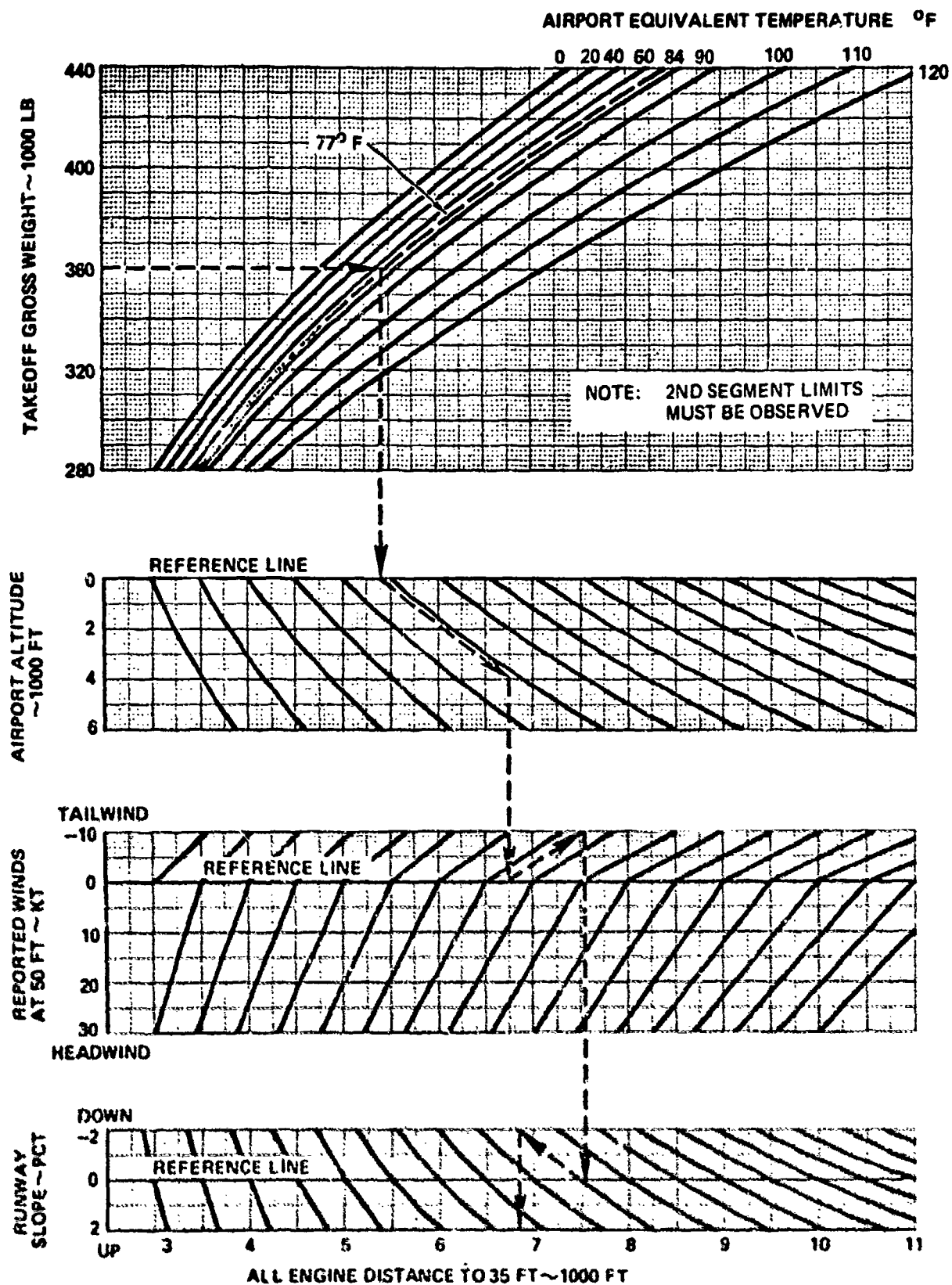


FIGURE 3-28 L 1011 1/8B 211-228 ALL ENGINE DISTANCE TO 35 FEET
10° FLAPS

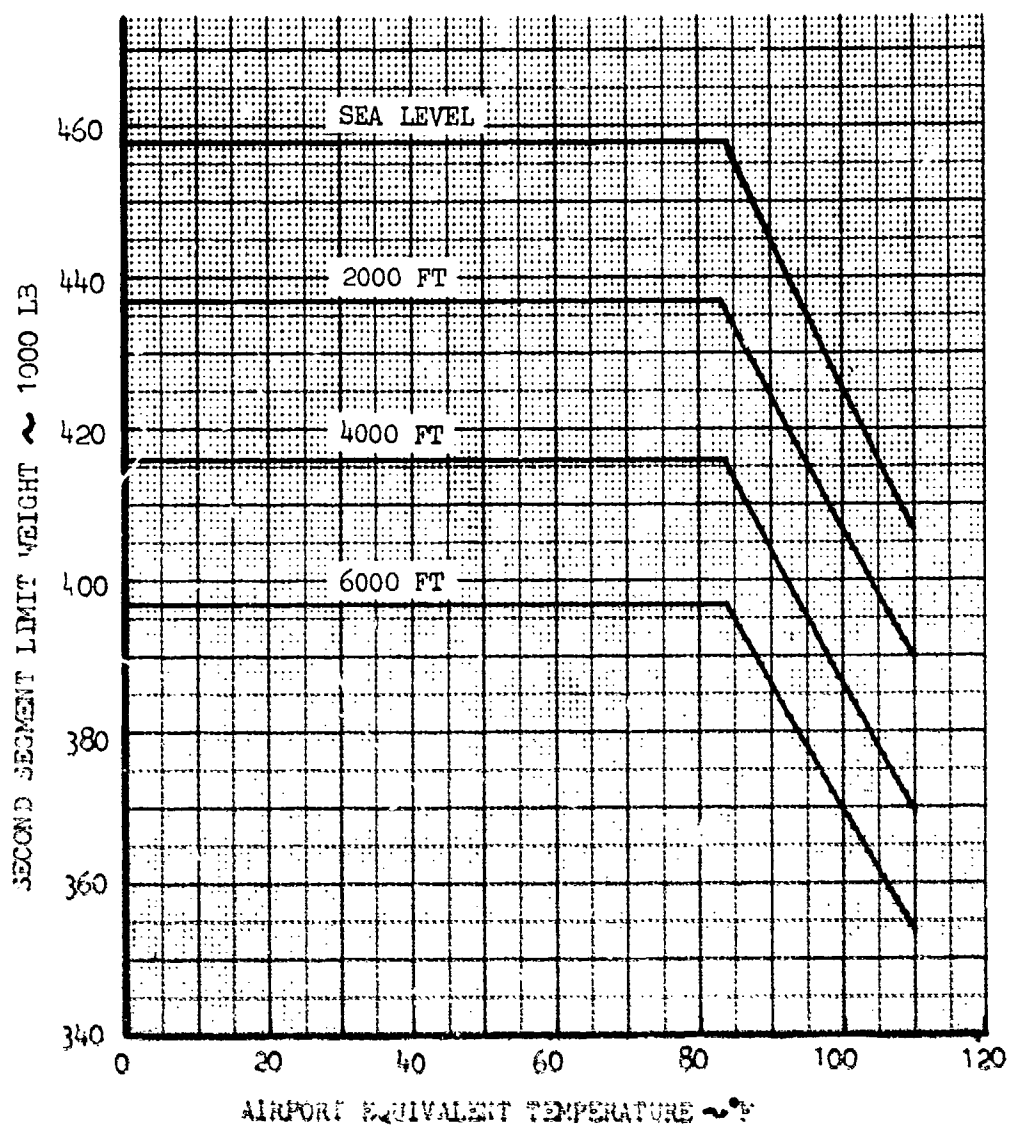
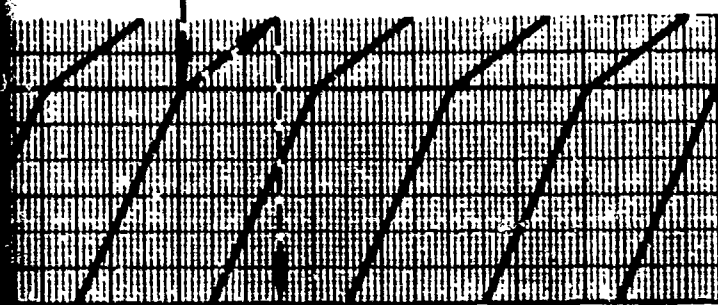
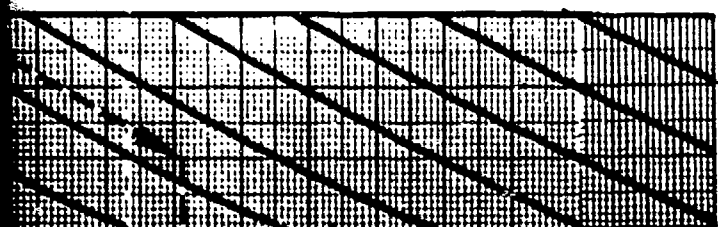
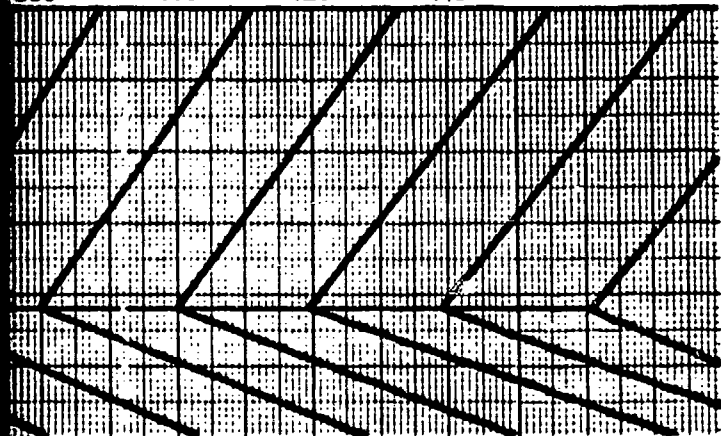


FIGURE 3-29 L-1011-1/RB.211-22B SECOND SEGMENT
LIMIT WEIGHTS 10° FLAPS

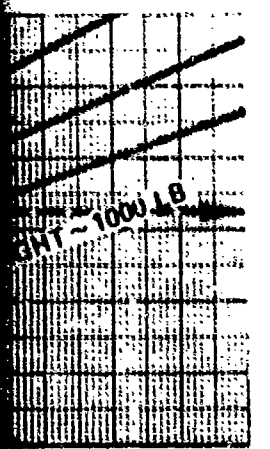
~1000 LB.

380 400 420 440 460 480



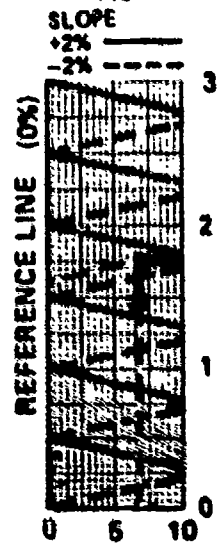
380 400 420 440 460 480

WEIGHT ~ 1000 LB.



ZERO ~1000 FT

OMOGRAPH



ALL ENG. DIST
TO 35 FEET
~1000 FT

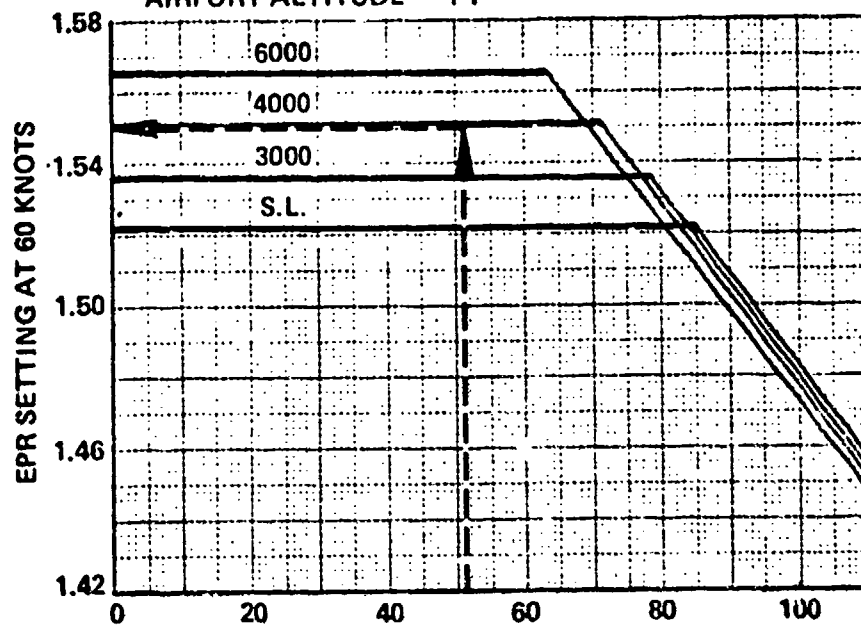
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~1000 FT



AIRPORT
ALTITUDE
~ 1000 FT

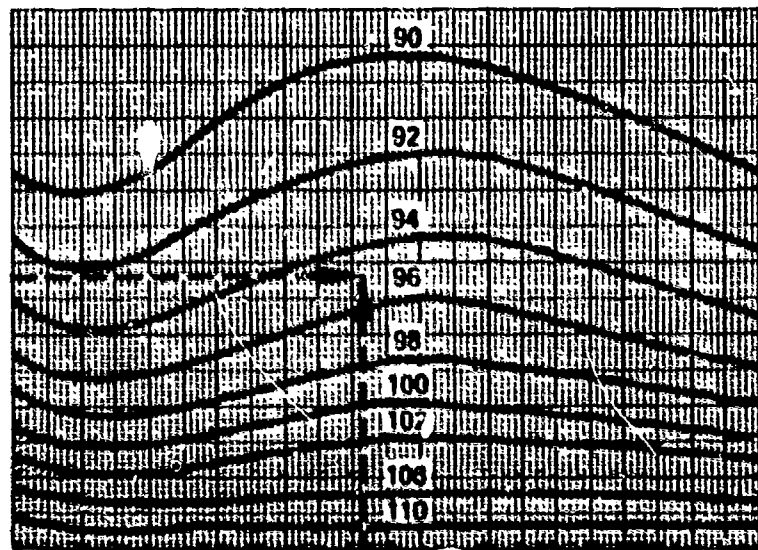
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ °F

EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F

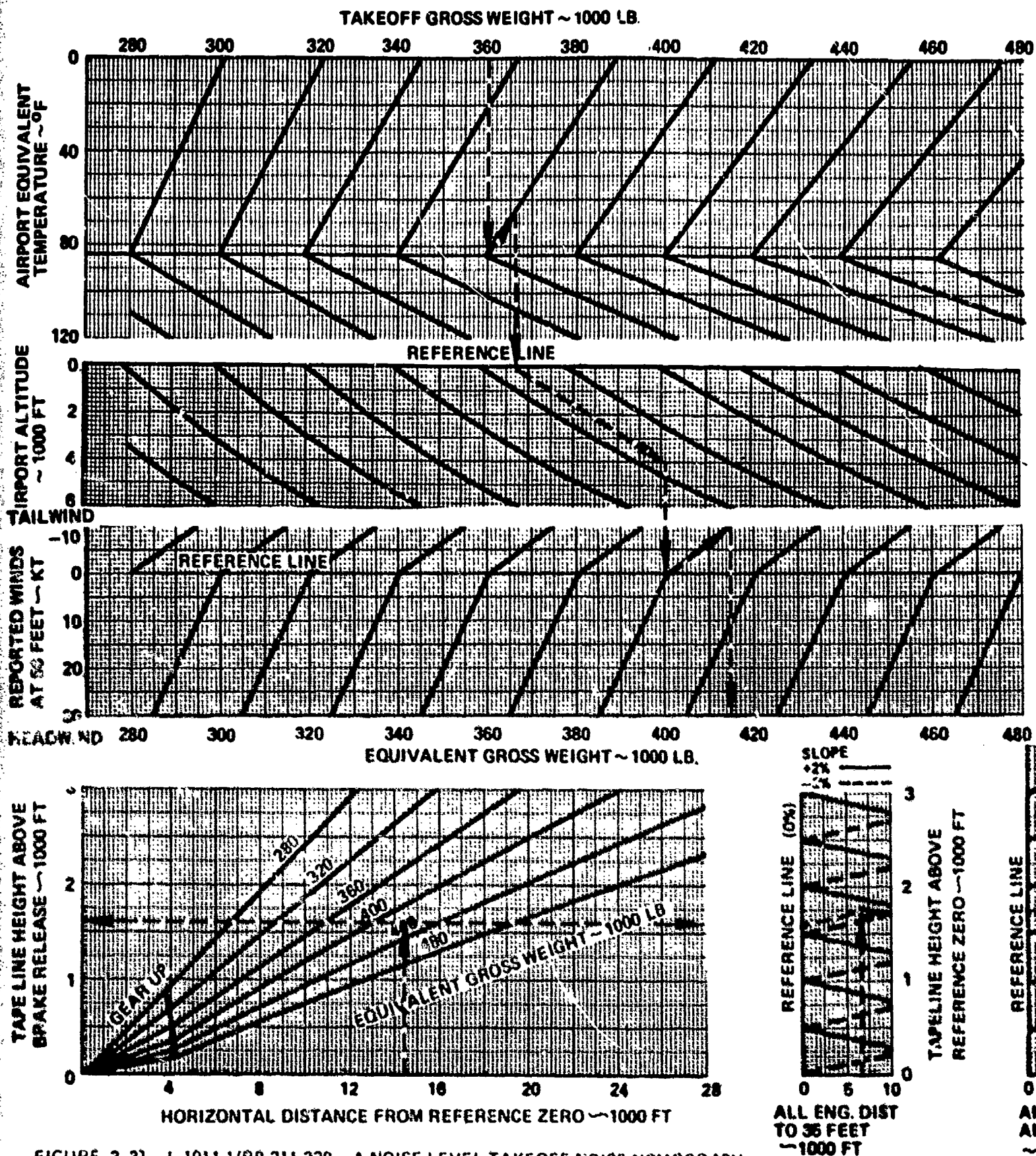
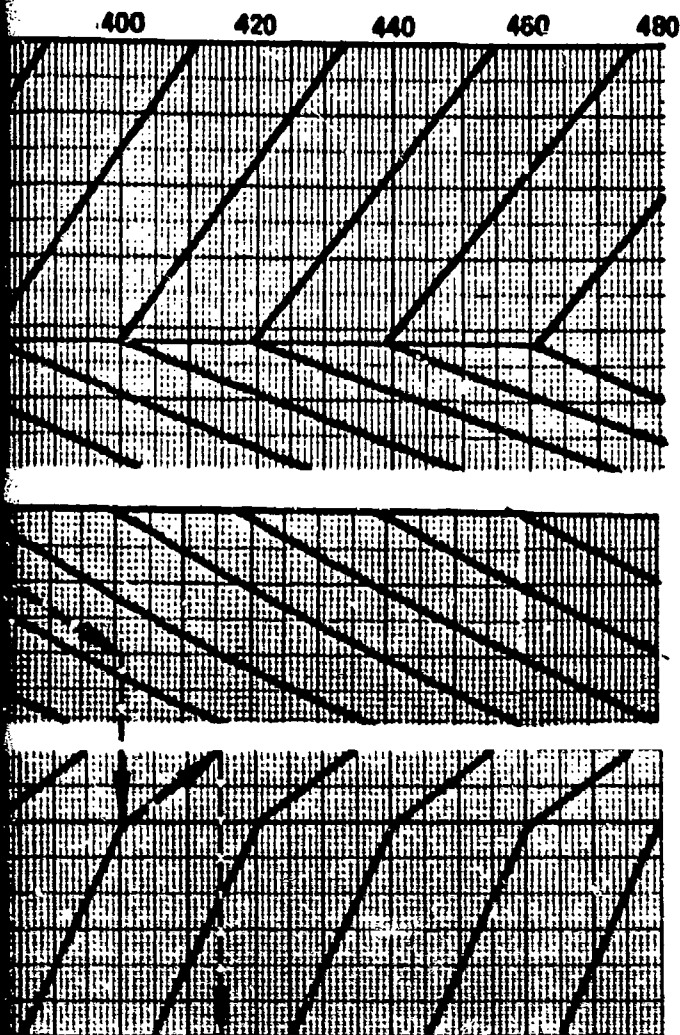
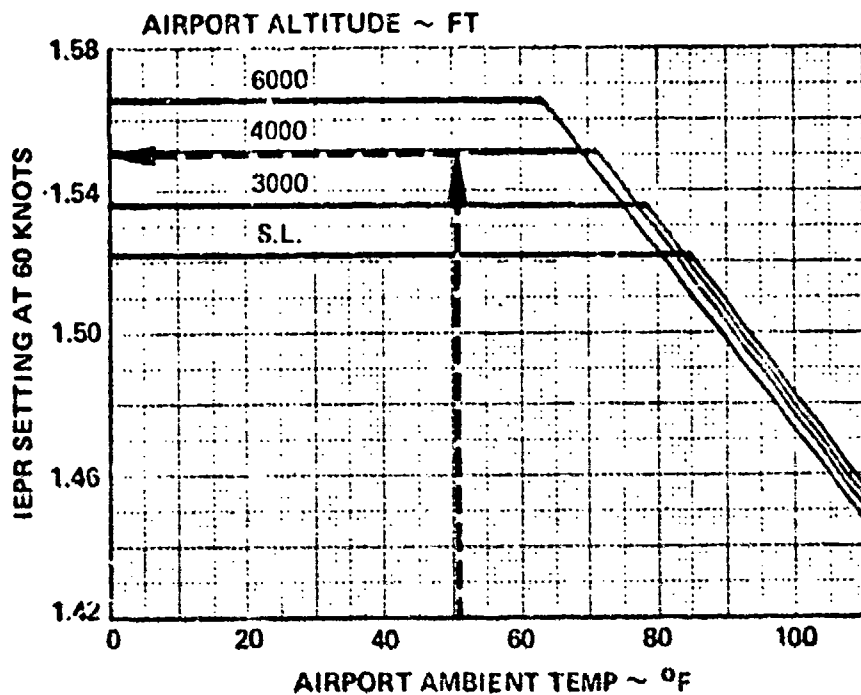


FIGURE 3-31 L-1011-1/RB.211-228 A-NOISE LEVEL TAKEOFF NOISE NOMOGRAPH
10° FLAPS

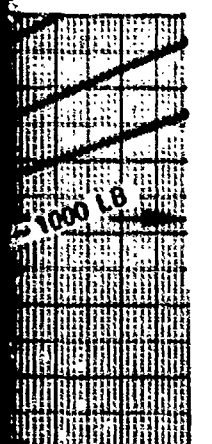
100 LB.



TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

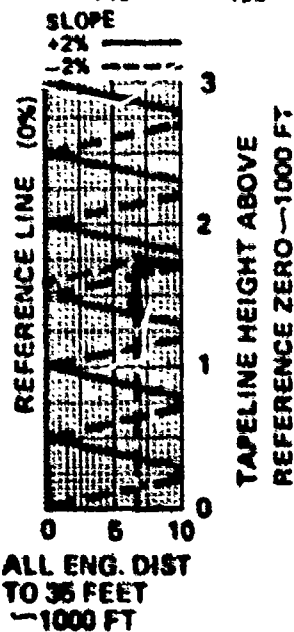


WT ~ 1000 LB.



~1000 FT

NOISE NOMOGRAPH

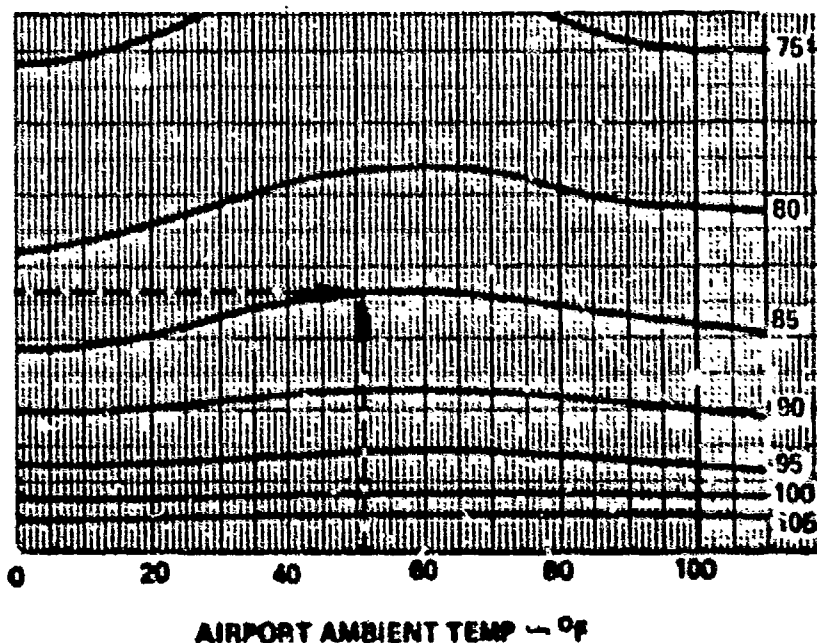


ALL ENG. DIST
TO 35 FEET
~1000 FT



AIRPORT
ALTITUDE
~ 1000 FT

$L_A \sim$ dBA



AIRPORT AMBIENT TEMP ~ °F

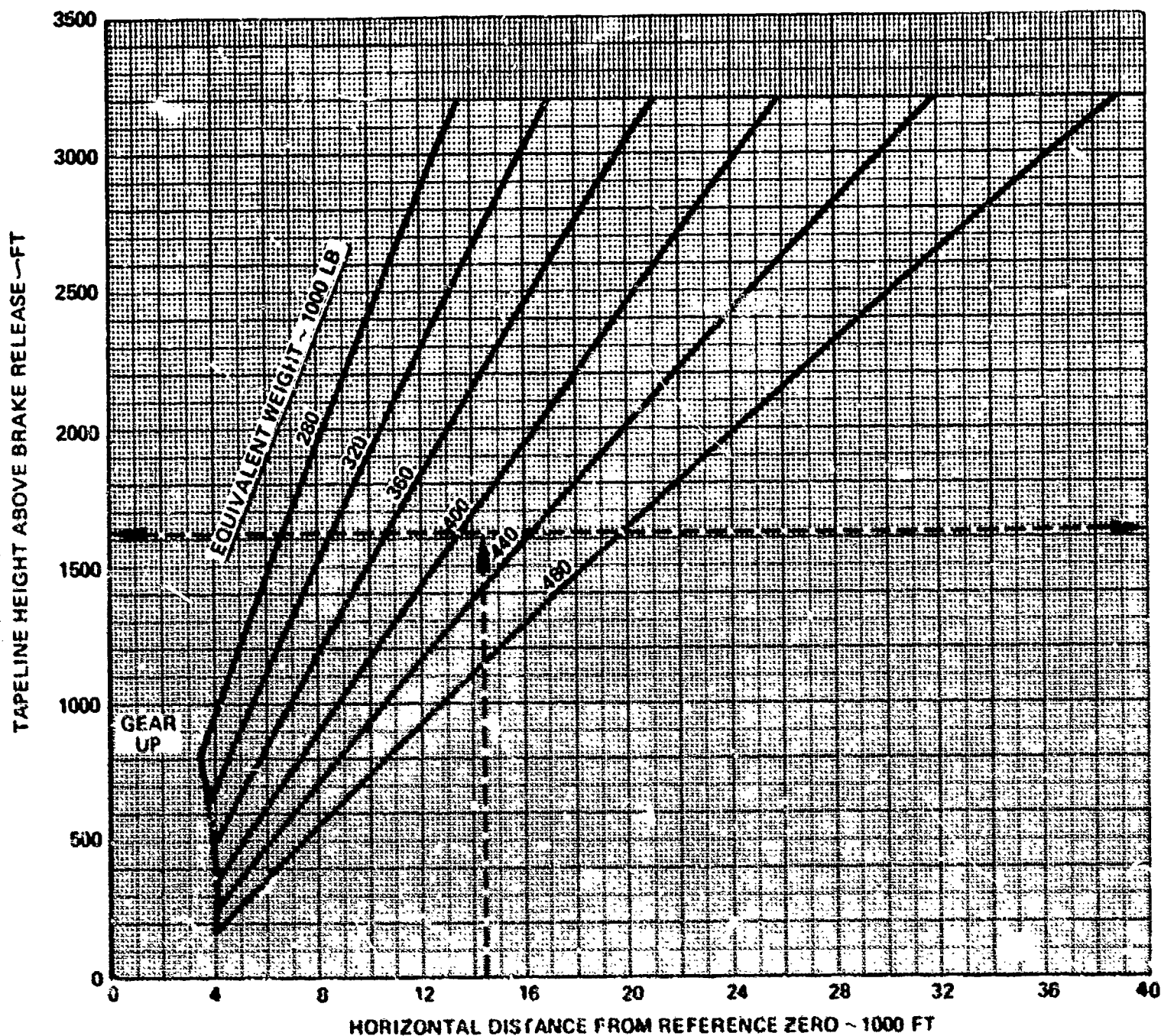
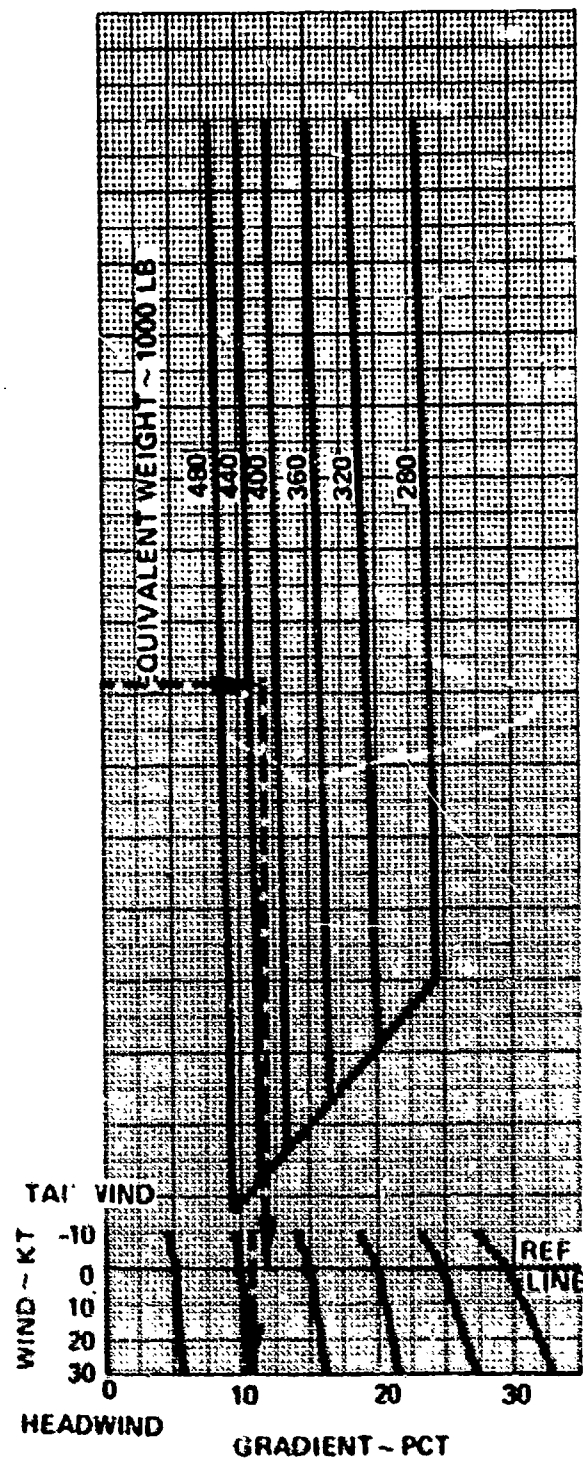
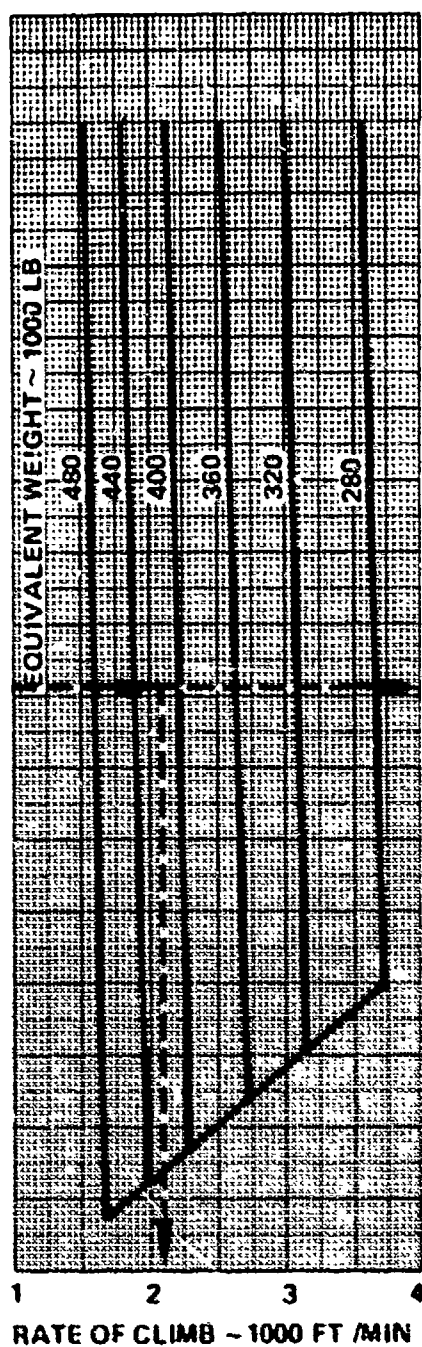
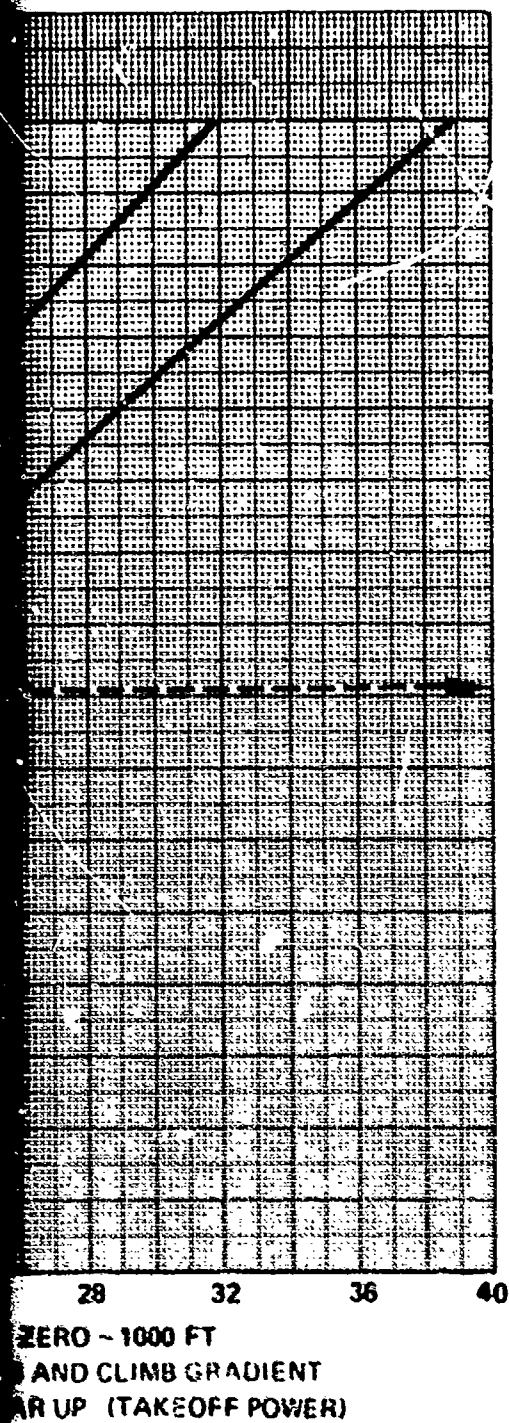


FIGURE 3-32 L 1011 1/8B 711 228 RATE OF CLIMB AND CLIMB GRADIENT
FOR ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
ECS BASED ON 10° FLAPS



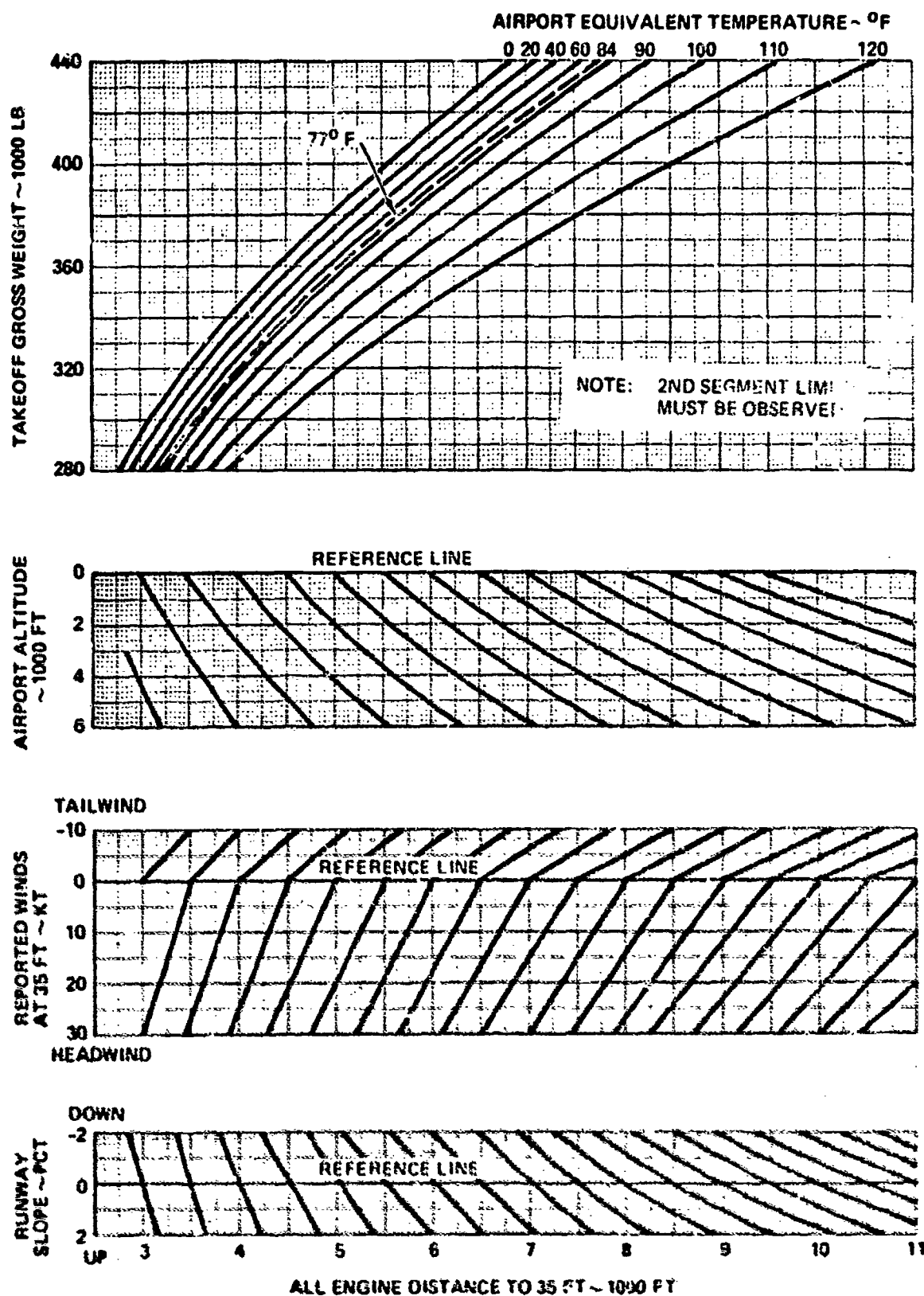


FIGURE 3-33 L1011-1/78B-211-228 ALL ENGINE DISTANCE TO 35 FEET
18° FLAPS

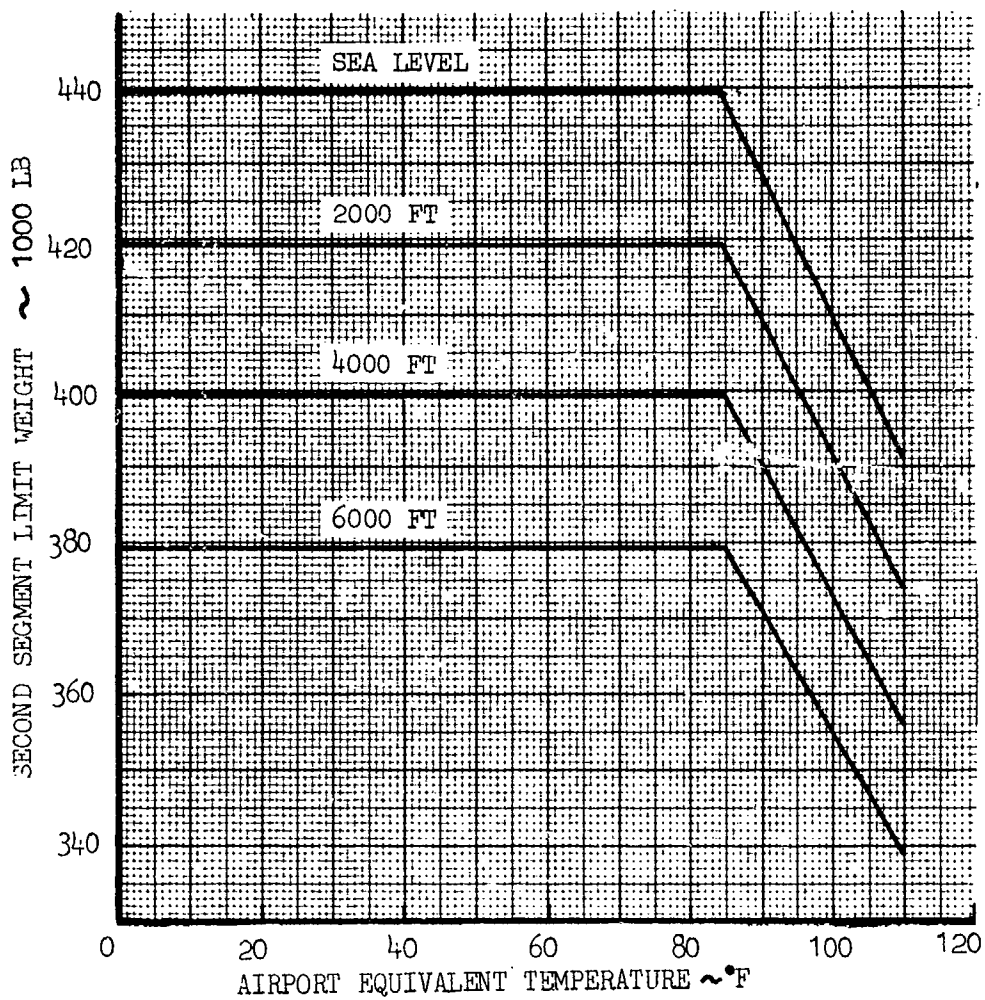


FIGURE 3-34 L-1011-1/RB.211-22B SECOND SEGMENT
LIMIT WEIGHTS 18° FLAPS

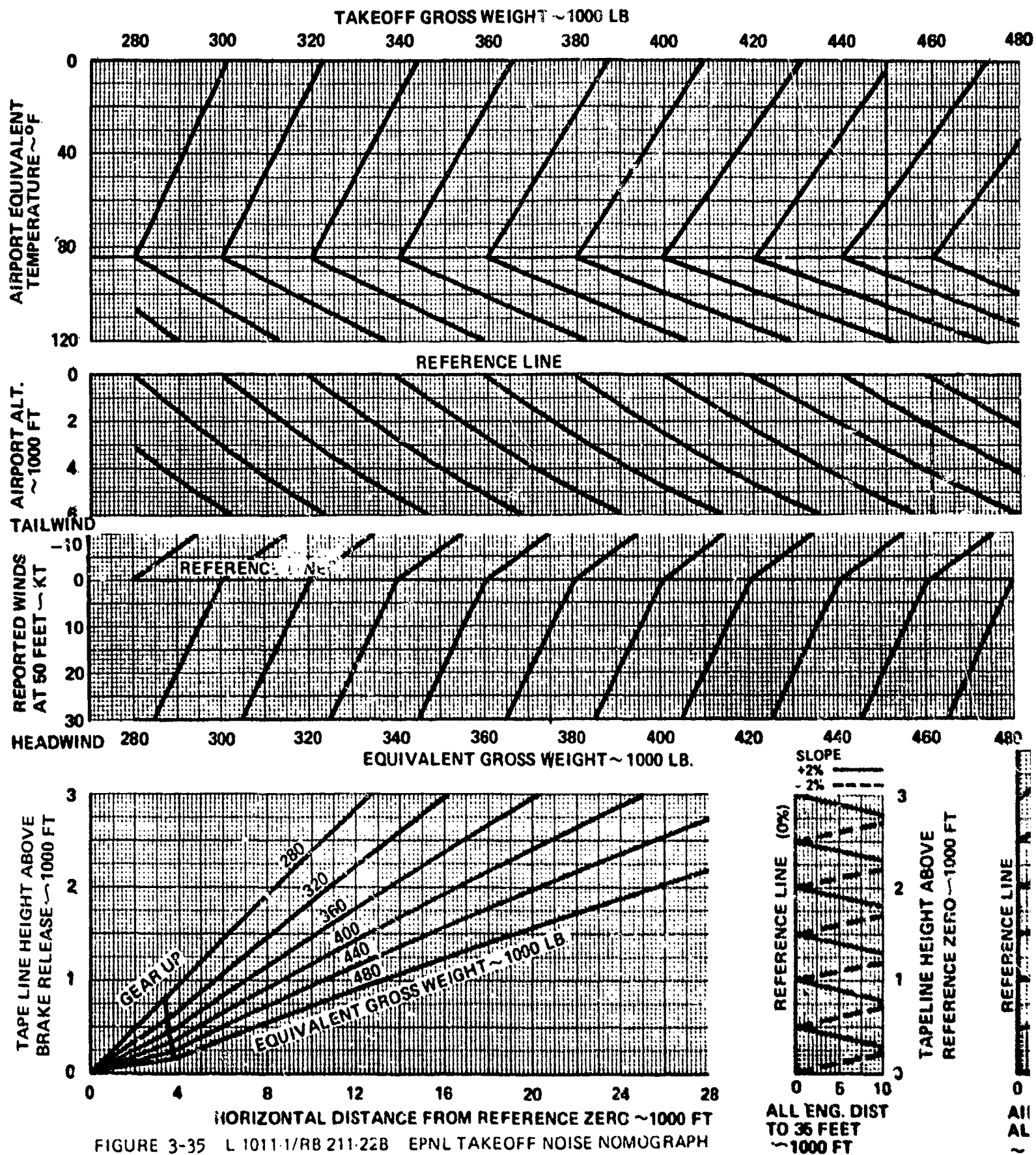
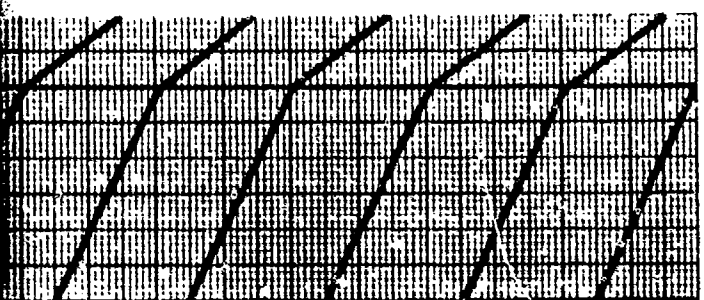
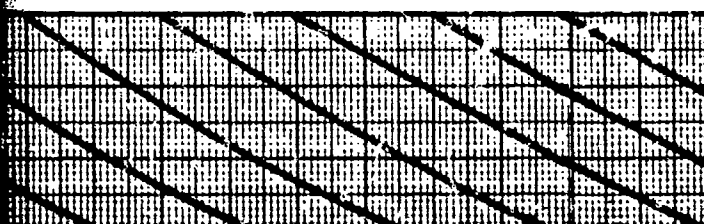
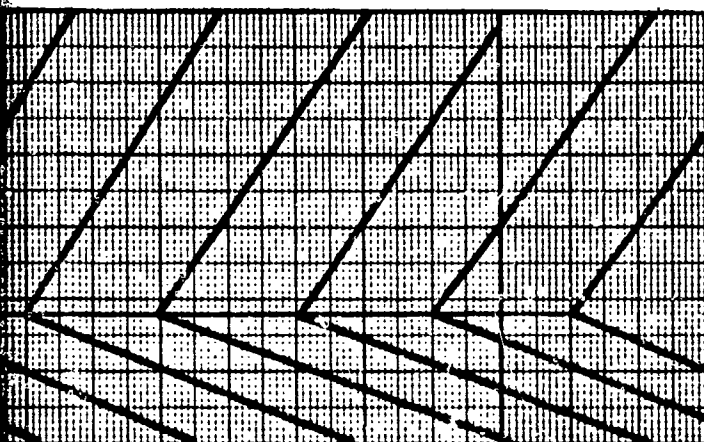


FIGURE 3-35 L 1011-1/RB 211-22B EPNL TAKEOFF NOISE NOMOGRAPH
18° FLAPS

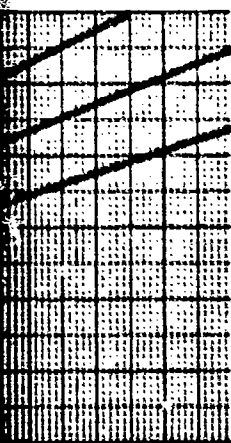
1000 LB.

380 400 420 440 460 480



380 400 420 440 460 480

HEIGHT ~ 1000 LB.



24 28

HEIGHT ~ 1000 FT
DISC NOMOGRAPH

SLOPE
+2%
-2%



ALL ENG. DIST
TO 35 FEET
~ 1000 FT

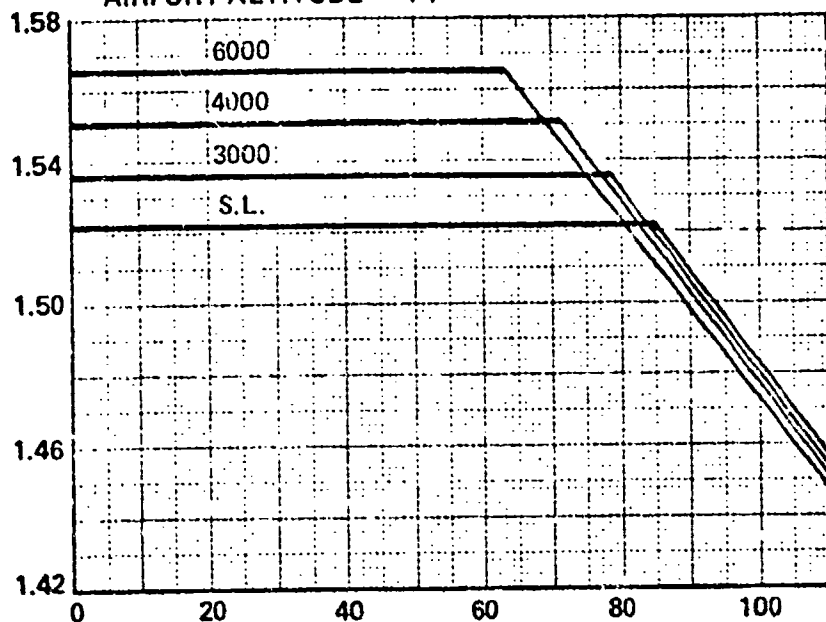
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT



AIRPORT
ALTITUDE
~ 1000 FT

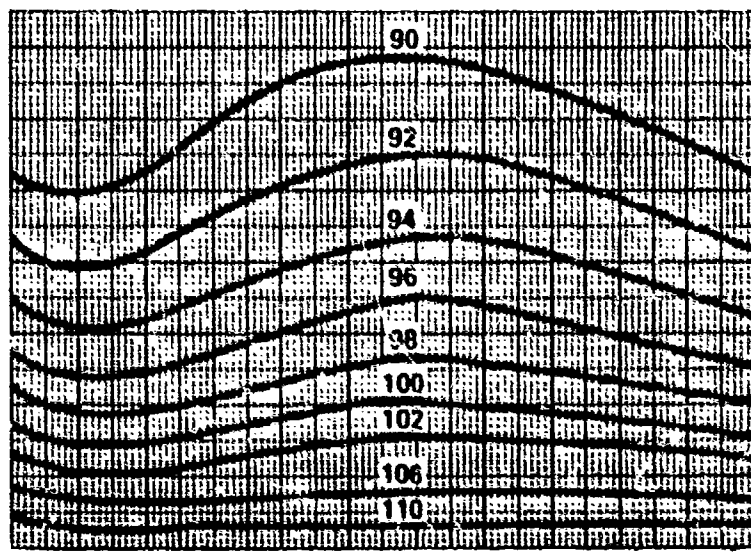
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



AIRPORT AMBIENT TEMP ~ °F

EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F

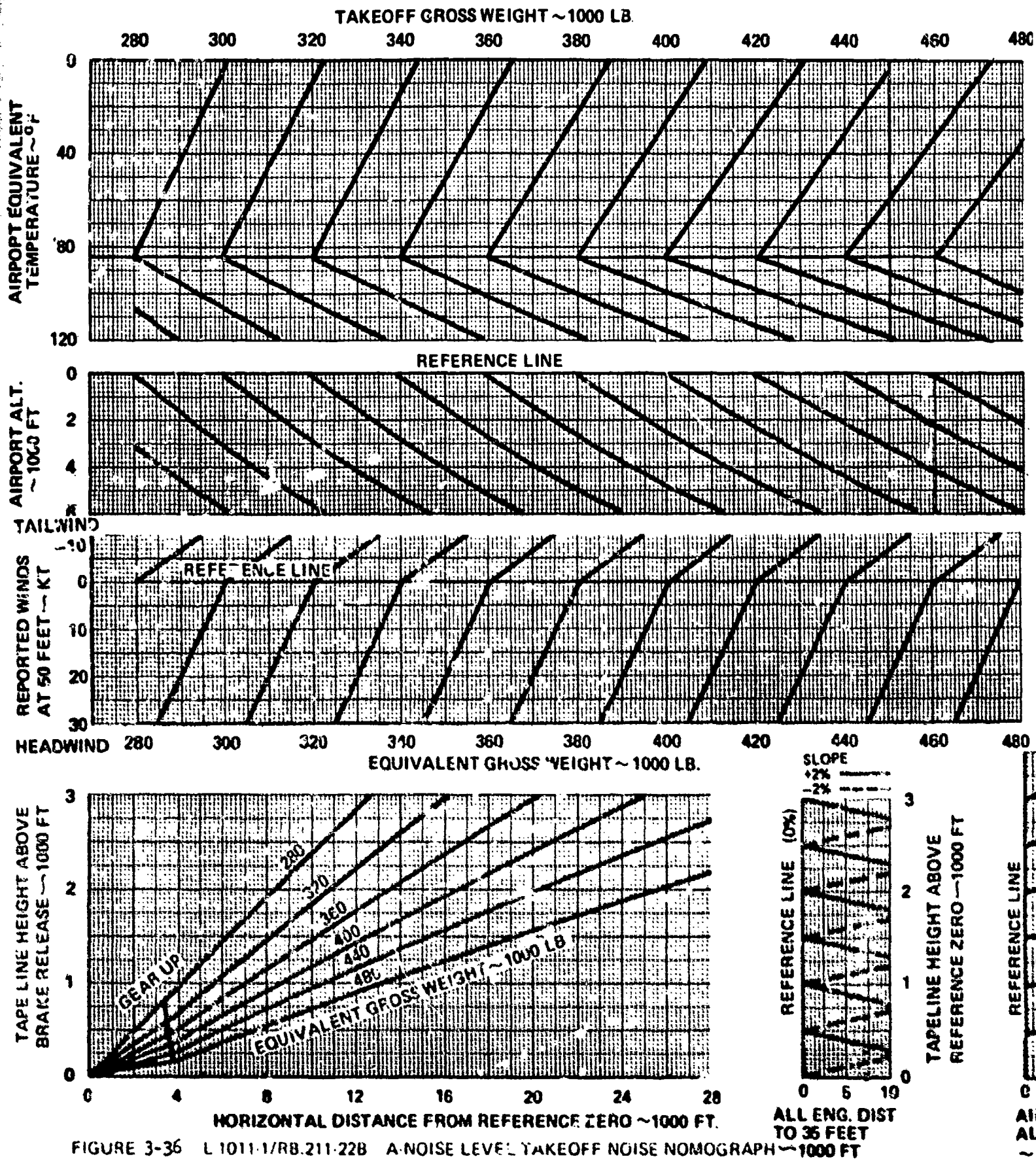
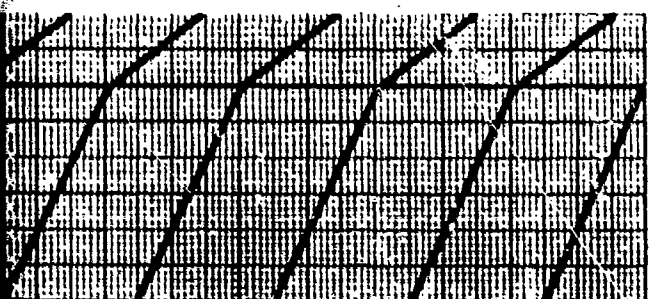
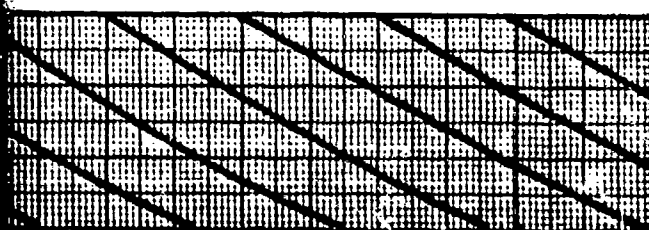
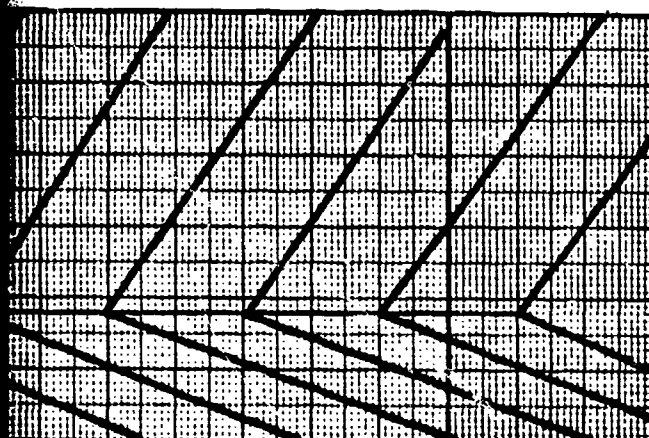


FIGURE 3-36 L 1011-1/RB.211-22B A NOISE LEVEL TAKEOFF NOISE NOMOGRAPH ~1000 FT
18° FLAPS

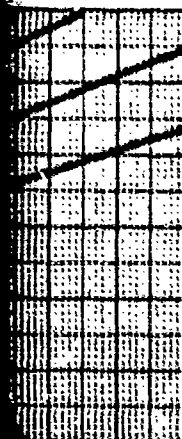
LB

400 420 440 460 480



400 420 440 460 480

WT ~ 1000 LB.



24 28

W/RO ~ 1000 FT.

NOISE NOMOGRAPH ~ 1000 FT

SLOPE
+2%
-2%



0 5 10

ALL ENG. DIST
TO 35 FEET

NOISE NOMOGRAPH ~ 1000 FT

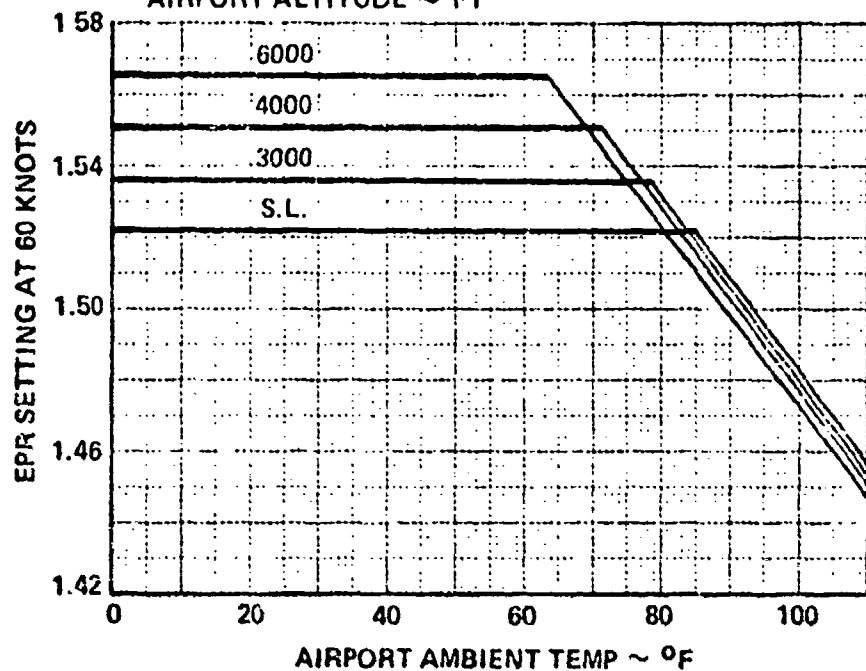
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT

REFERENCE LINE

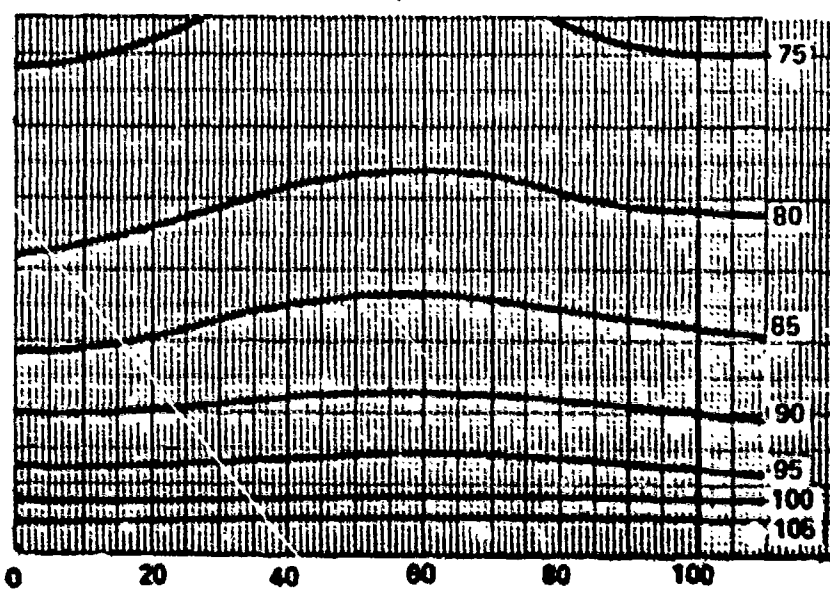
AIRPORT
ALTITUDE
~ 1000 FT

TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



L_A ~ dBA



AIRPORT AMBIENT TEMP ~ °F

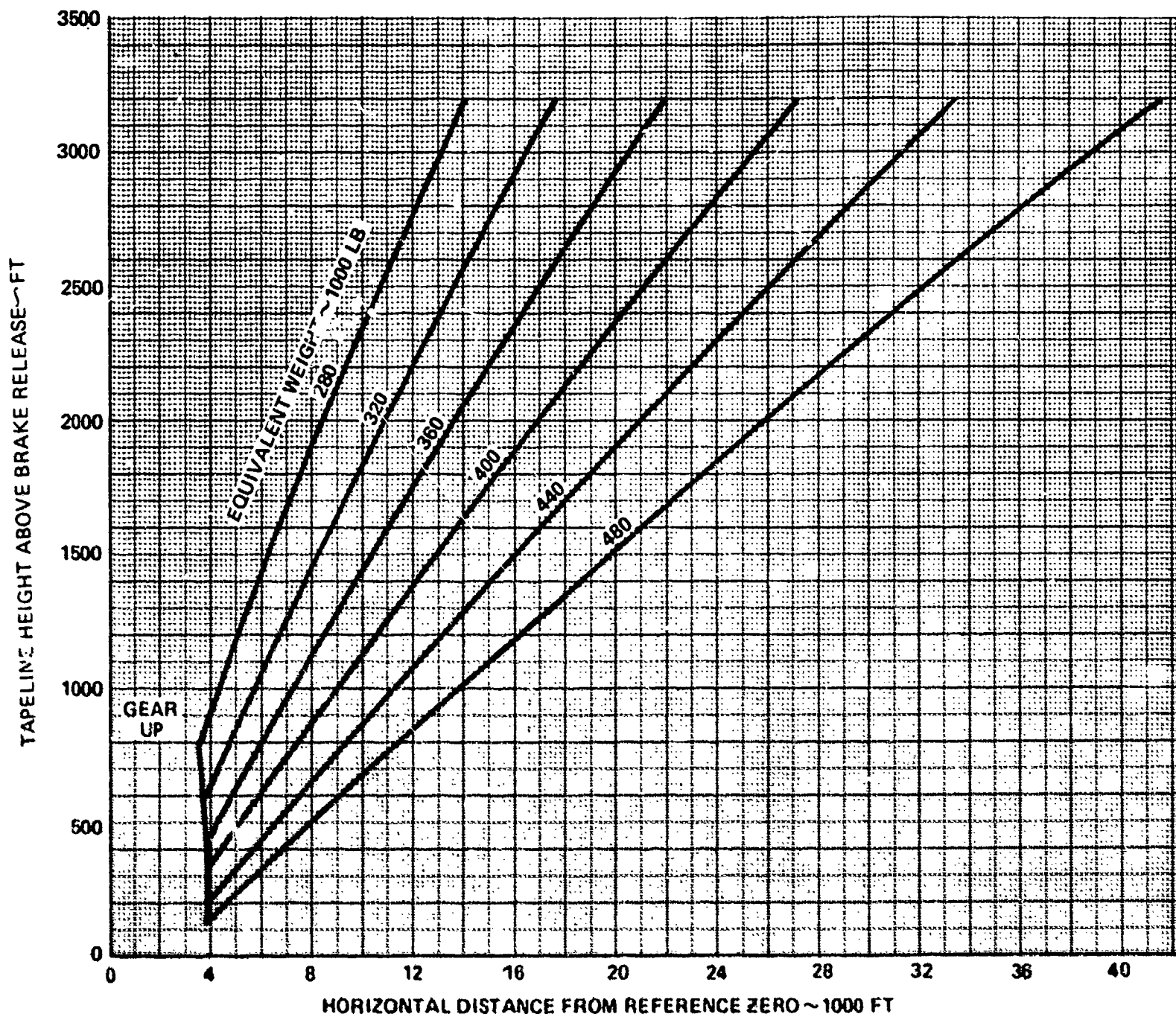
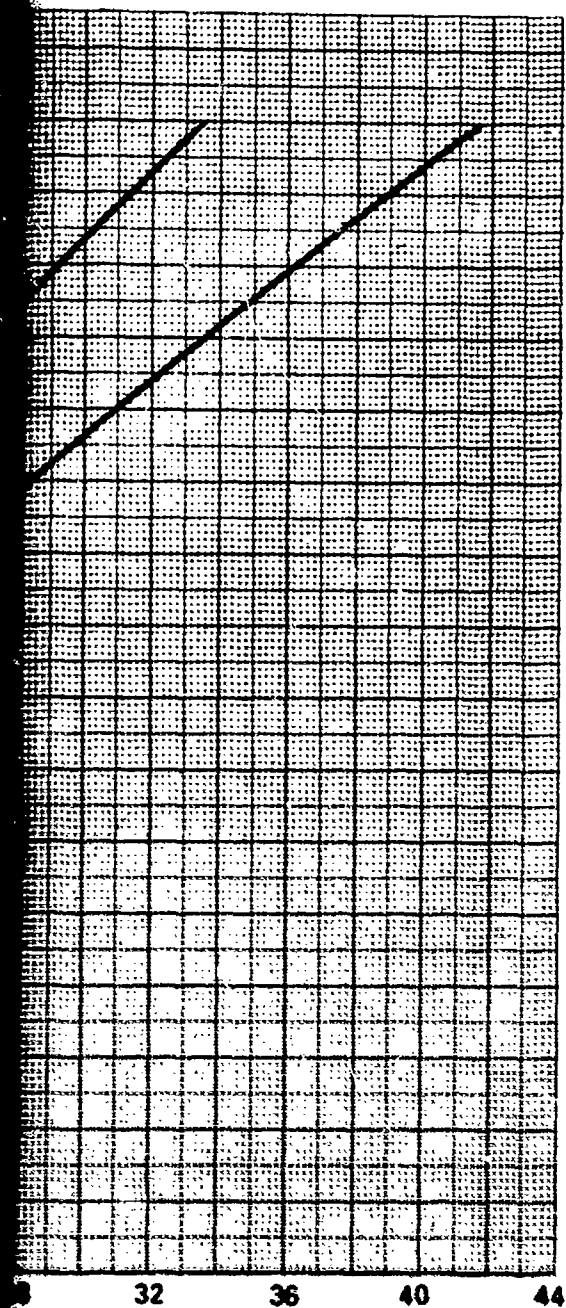
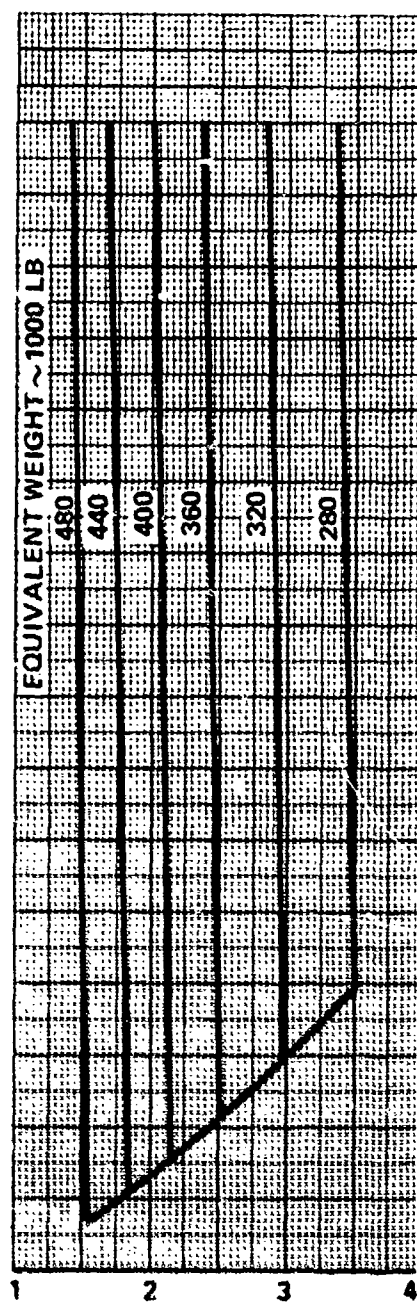


FIGURE 3-37 L1011-1/RB.211-22B RATE OF CLIMB AND CLIMB GRADIENT
ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
ECS BLEED ON 18° FLAPS

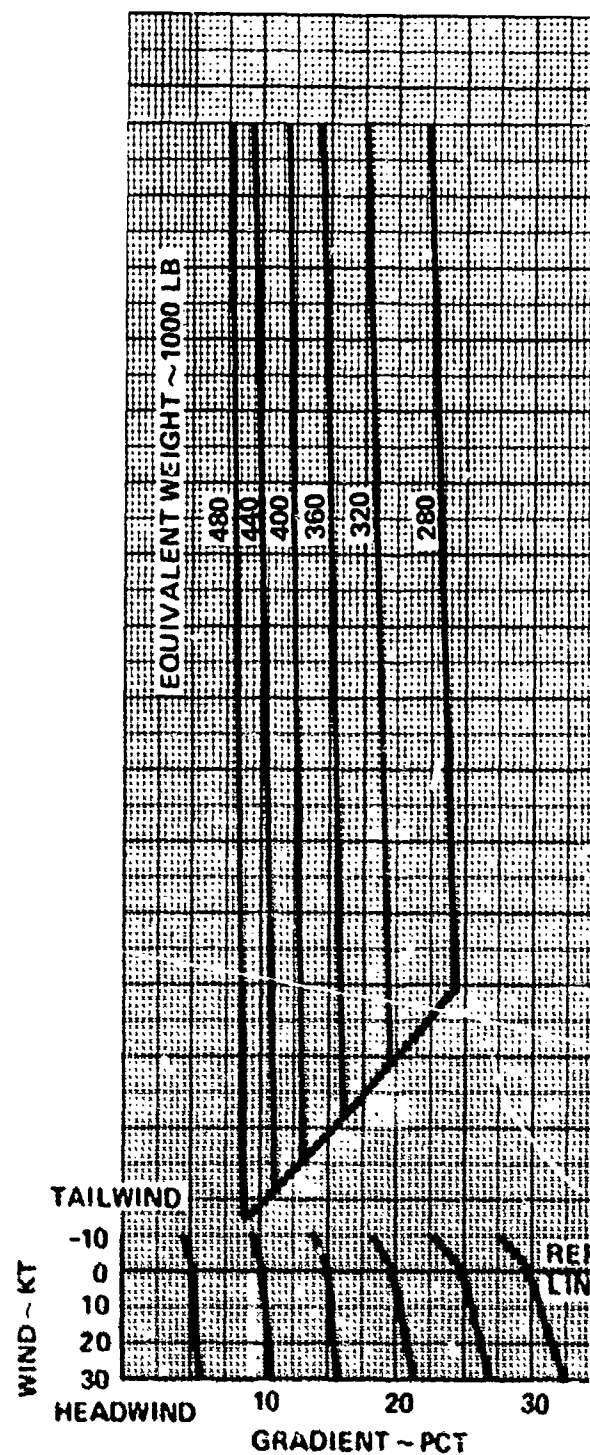


1000 FT

CLIMB GRADIENT
COEFF POWER



RATE OF CLIMB ~ 1000 FT / MIN



TAILWIND

-10

0

10

20

30

HEADWIND

GRADIENT ~ PCT

REI
LIN

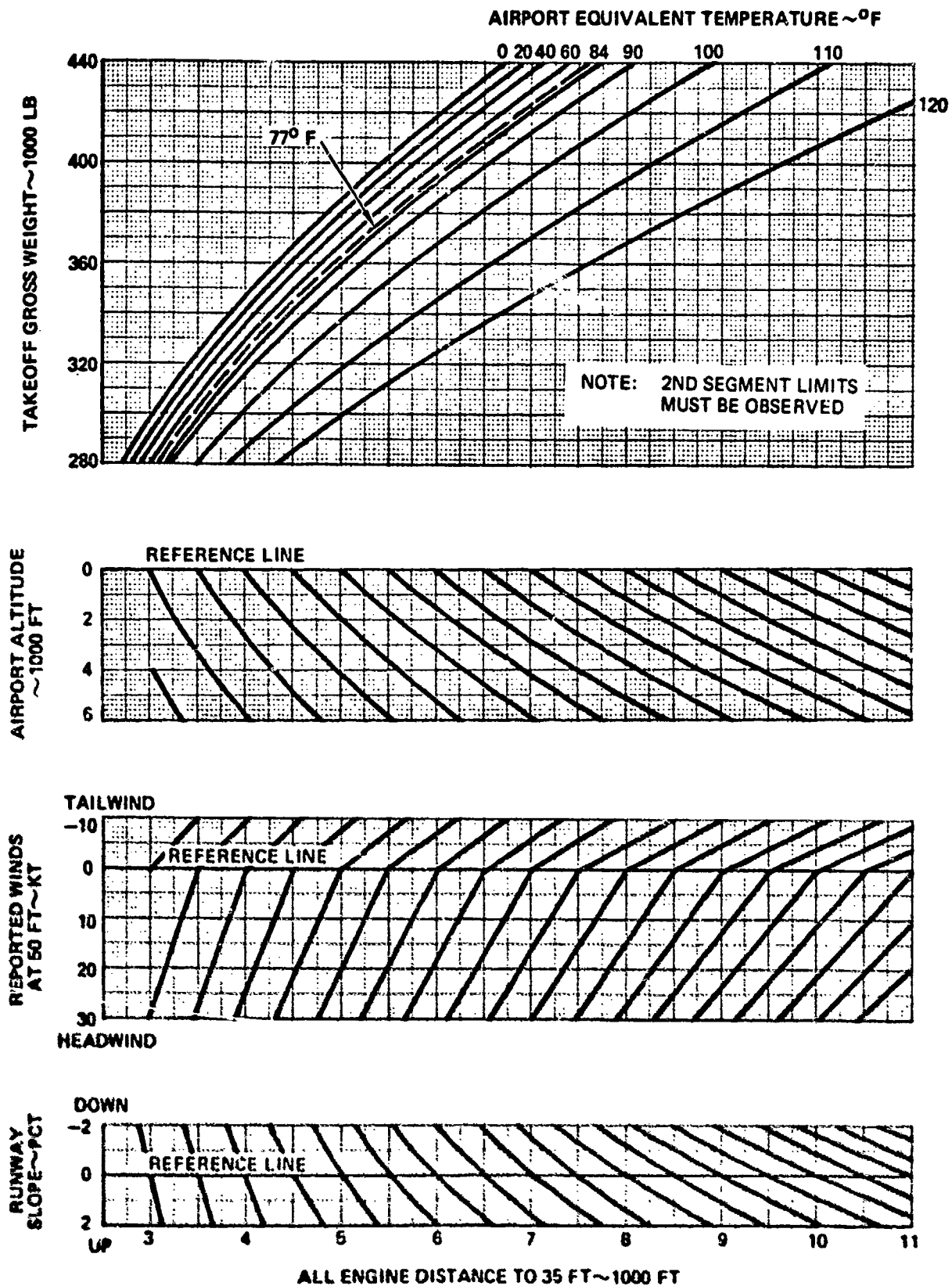


FIGURE 3-38 L-1011-1/RB.211-228 ALL ENGINE DISTANCE TO 35 FEET
22° FLAPS

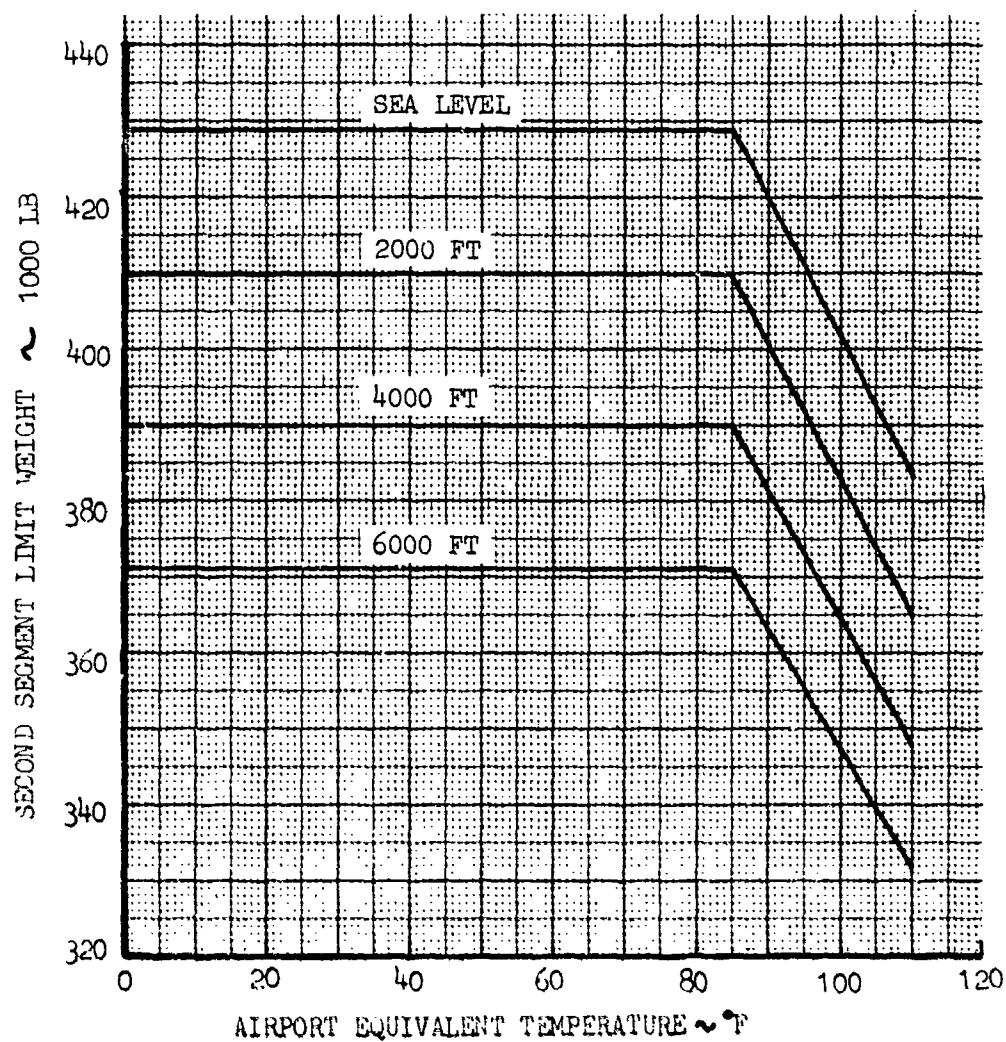


FIGURE 3-39 L-1011-1/RB.211-22B SECOND SEGMENT
LIMIT WEIGHTS 22° FLAPS

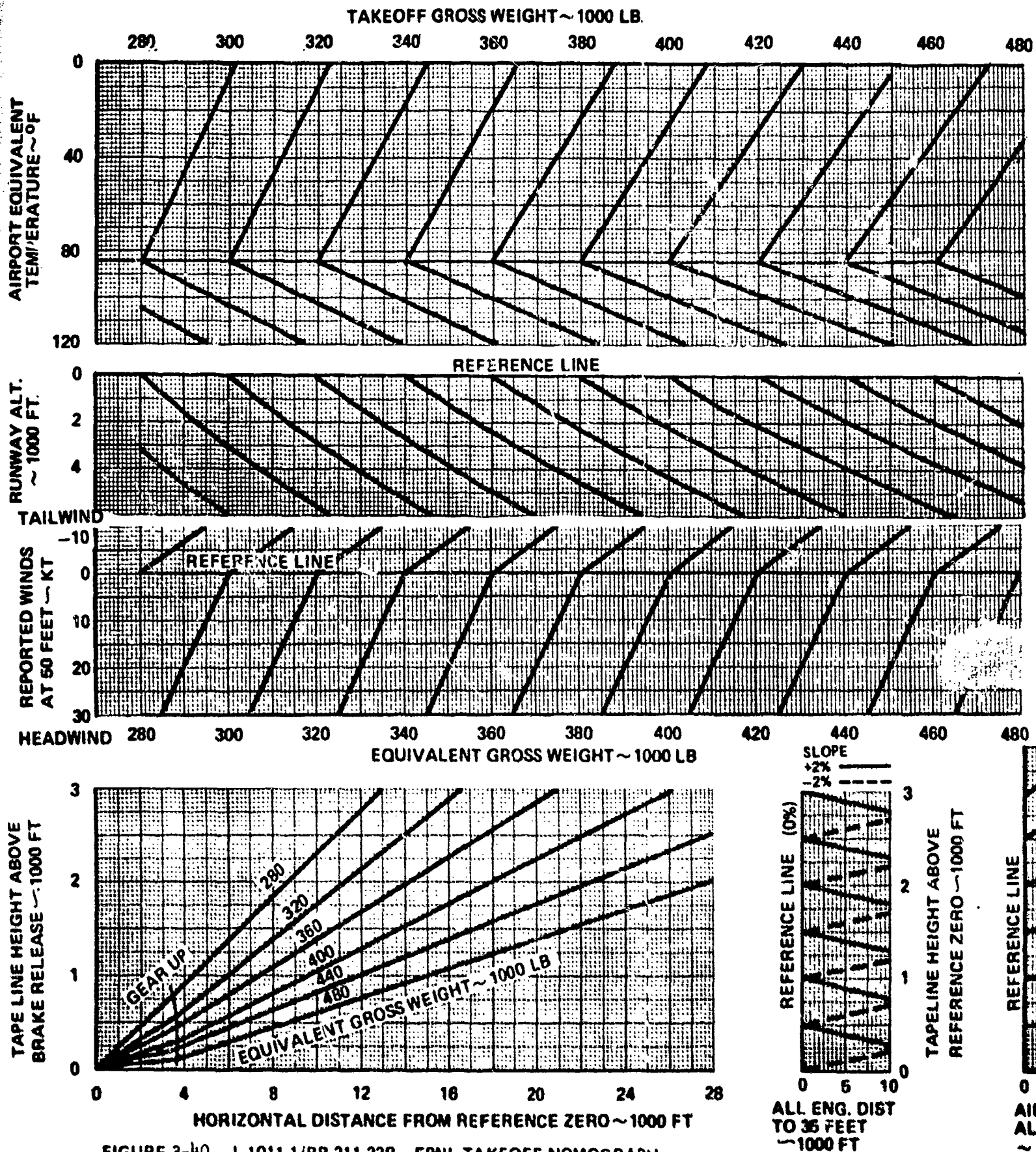
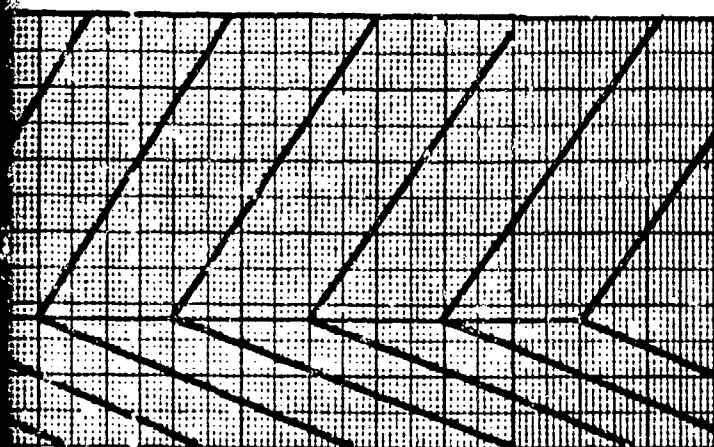


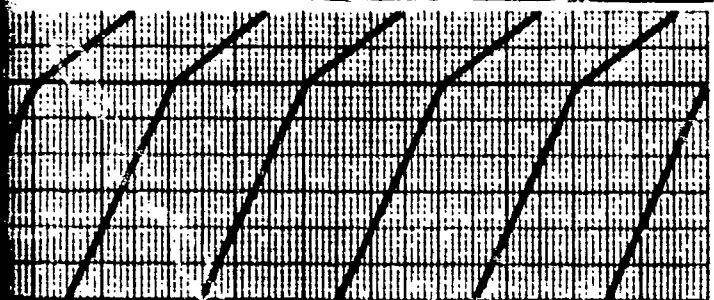
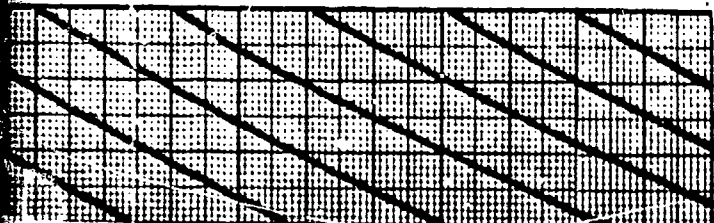
FIGURE 3-40 L-1011-1/RB.211-22B EPNL TAKEOFF NOMOGRAPH
22° FLAPS

~ 1000 LB.

380 400 420 440 460 480

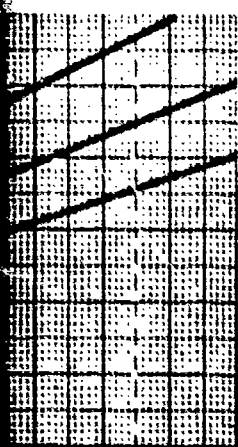


LINE



380 400 420 440 460 480

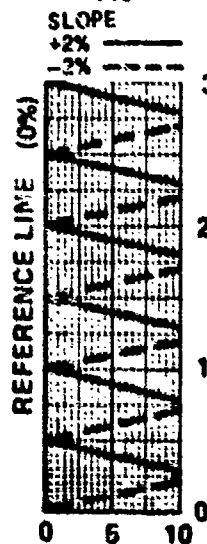
HEIGHT ~ 1000 LB



24 23

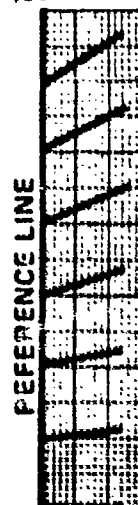
ZERO ~ 1000 FT

OMOGRAPH



ALL ENG. DIST
TO 35 FEET
~ 1000 FT

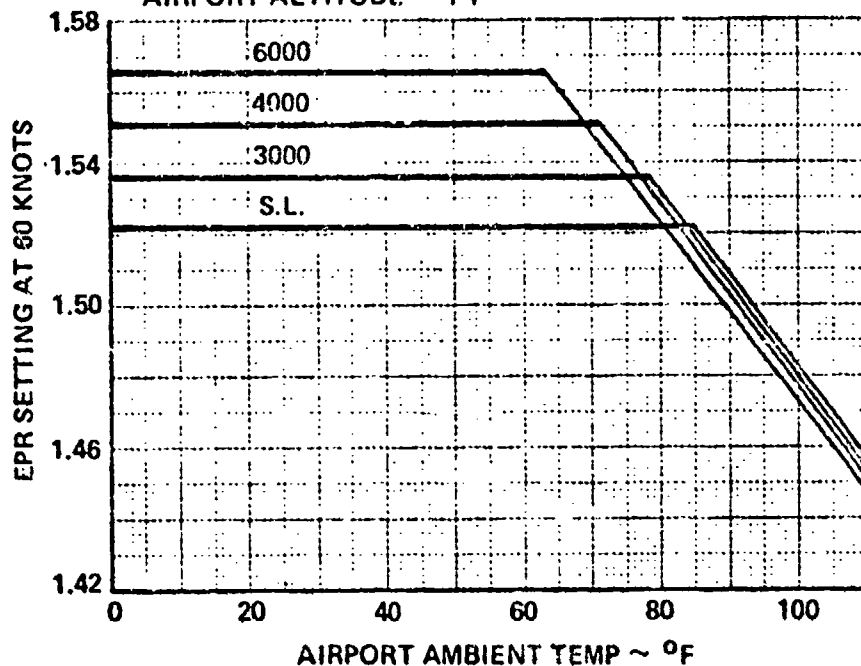
TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT



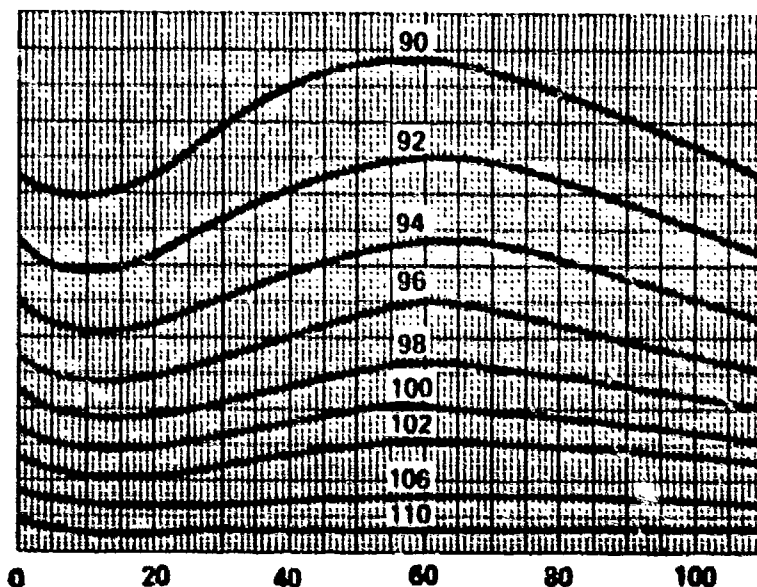
AIRPORT
ALTITUDE
~ 1000 FT

TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F

TAKEOFF GROSS WEIGHT ~ 1000 LB.

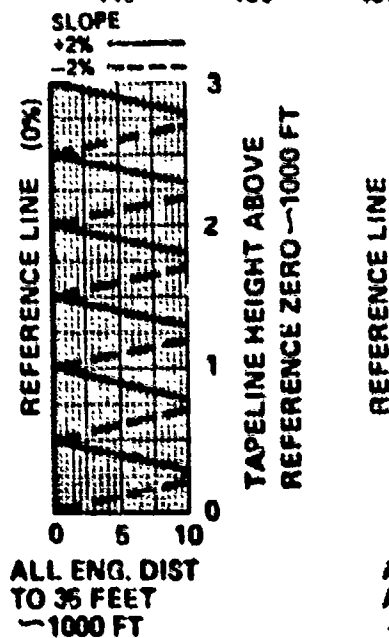
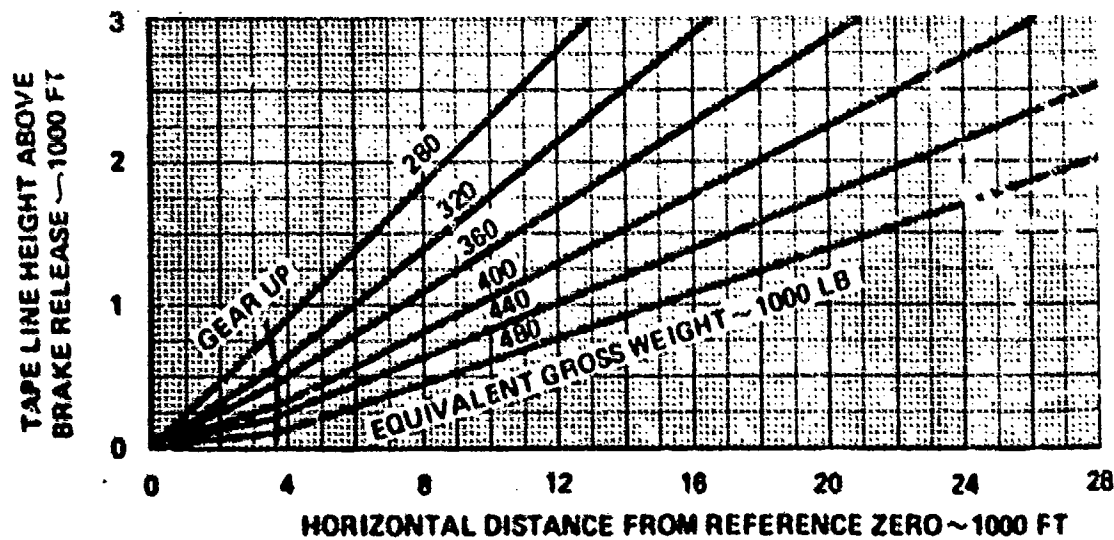
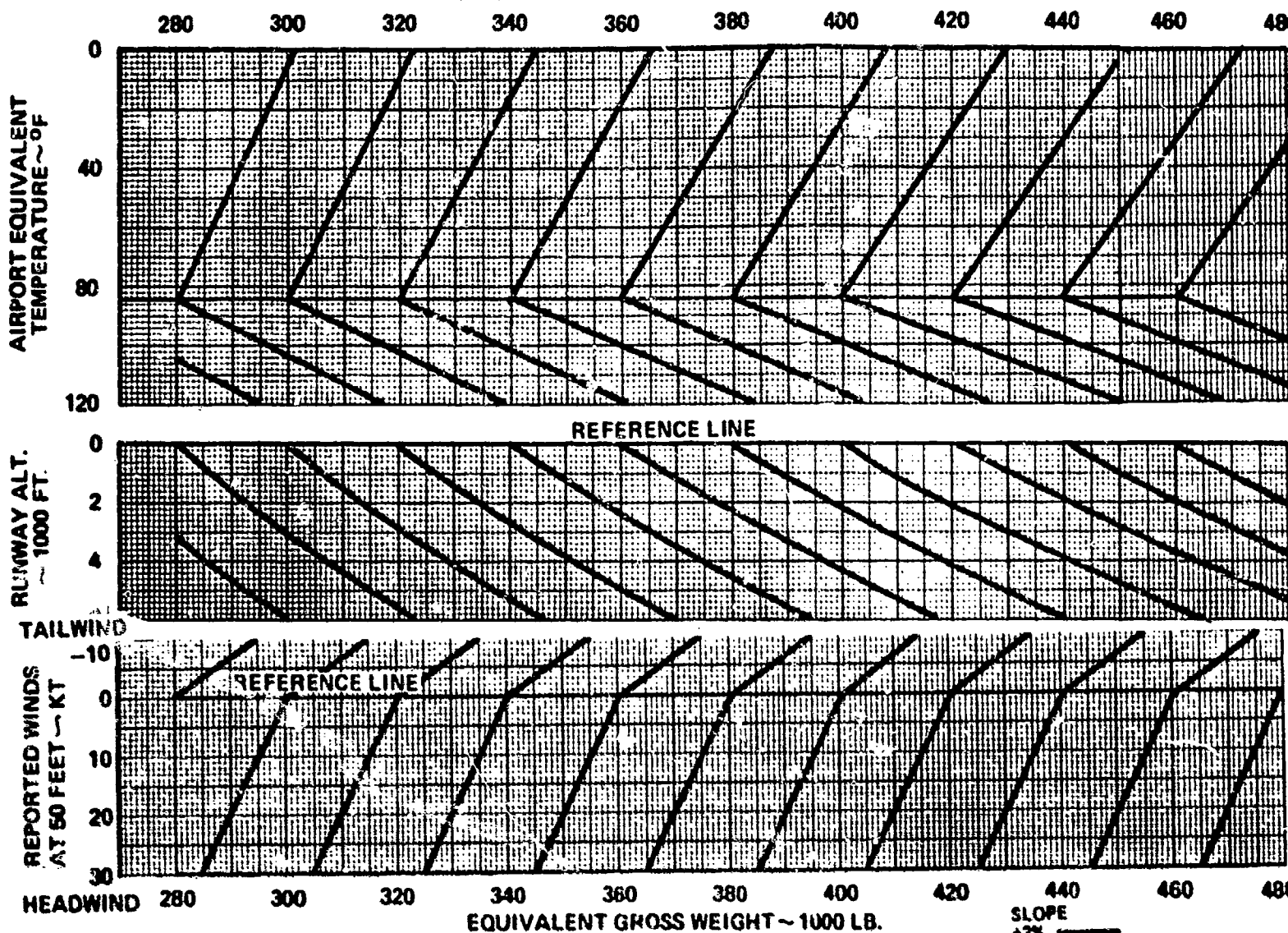
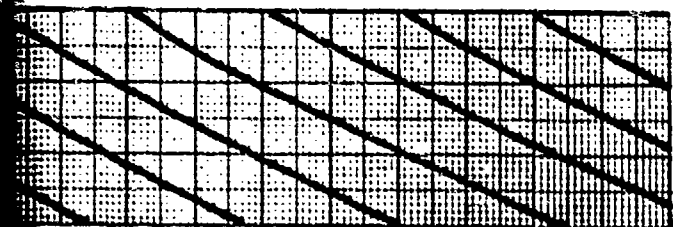
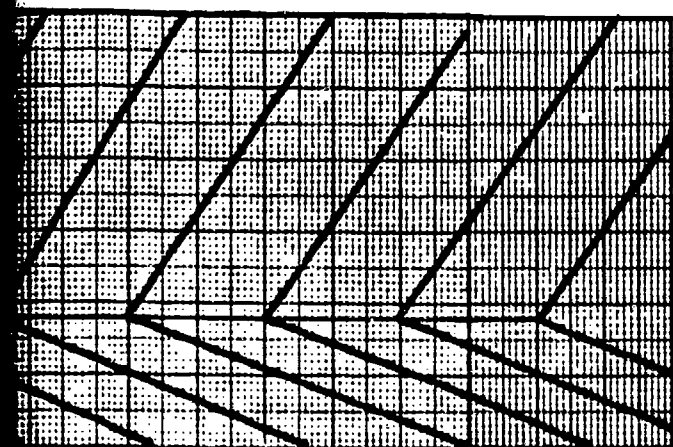


FIGURE 3-41 L 1011 1/RB.211-22B A NOISE LEVEL TAKEOFF NOISE NOMOGRAPH
22° FLAPS

100 LB.

400 420 440 460 480

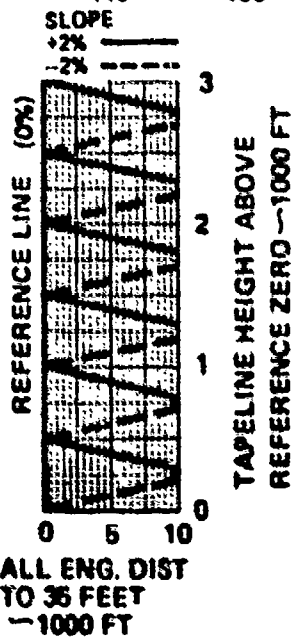


WT ~ 1000 LB.

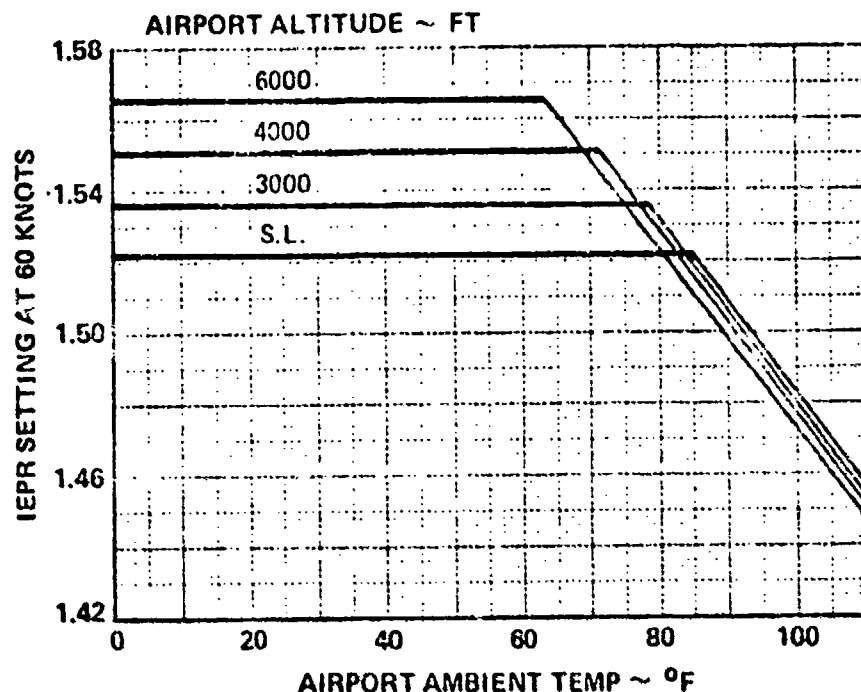


100 ~ 1000 FT

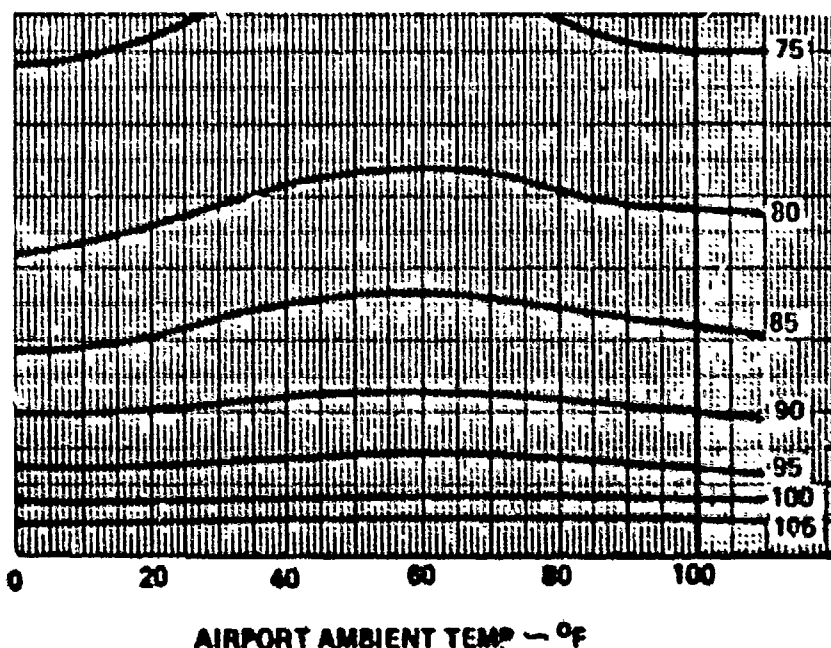
NOISE NOMOGRAPH



TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT



$L_A \sim \text{dBA}$



AIRPORT AMBIENT TEMP ~ °F

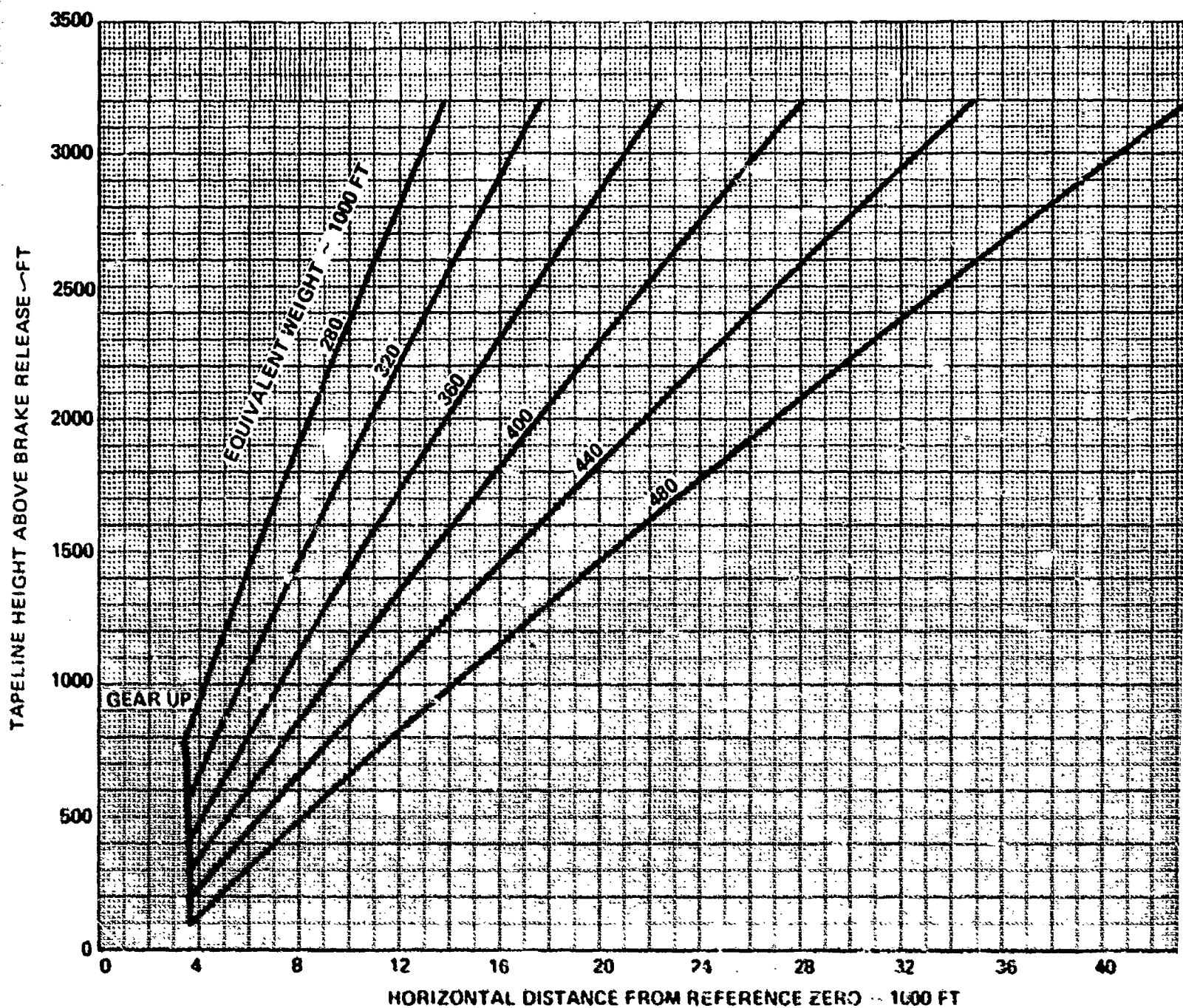
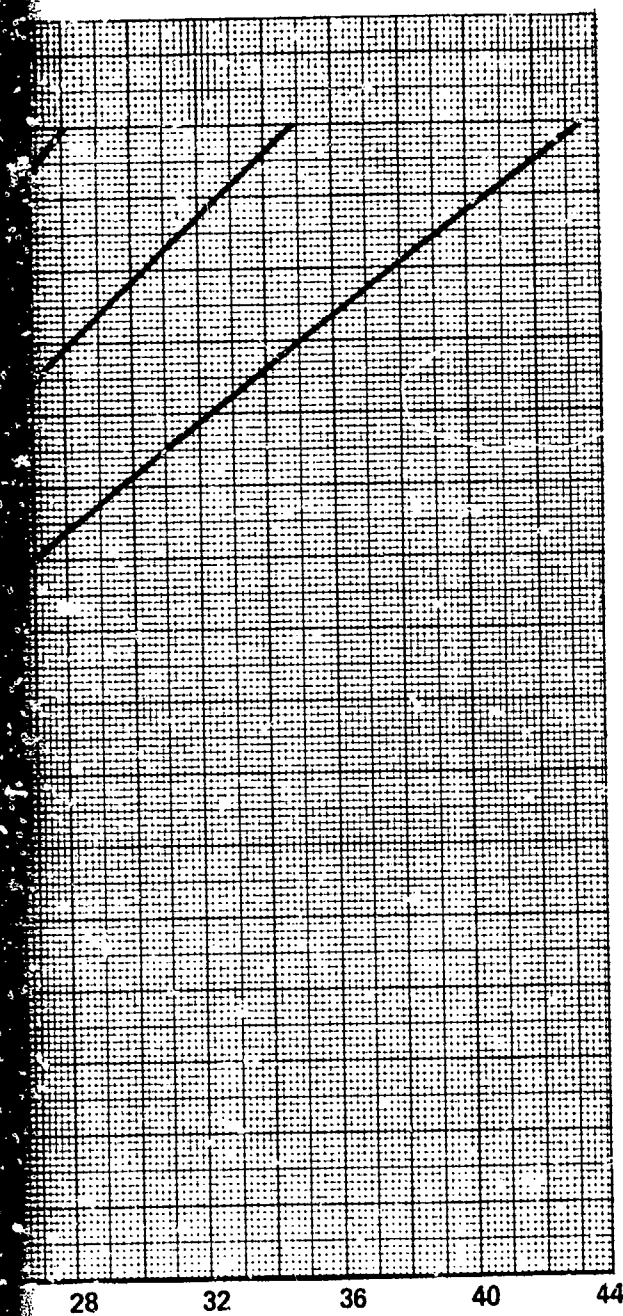
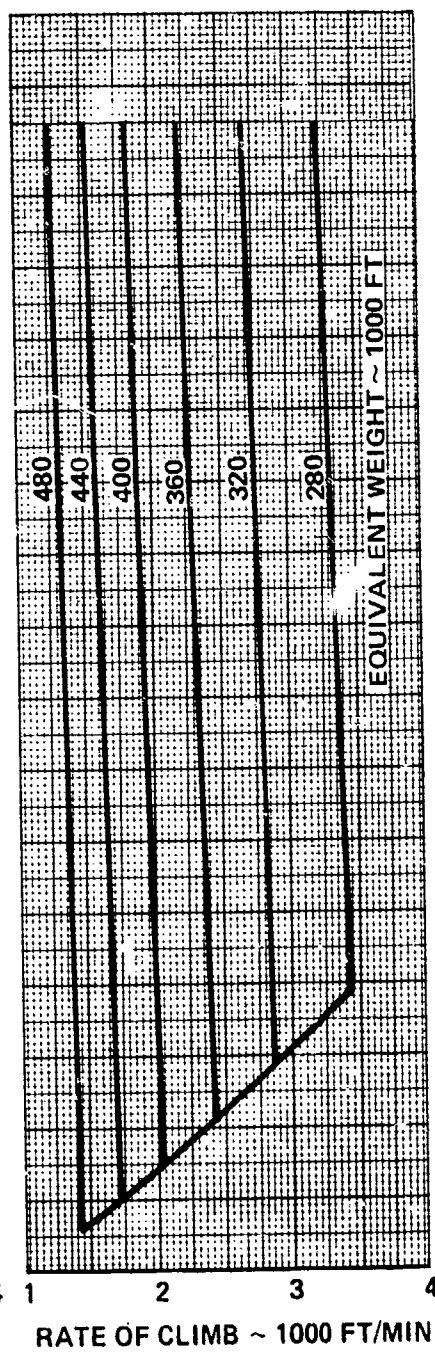


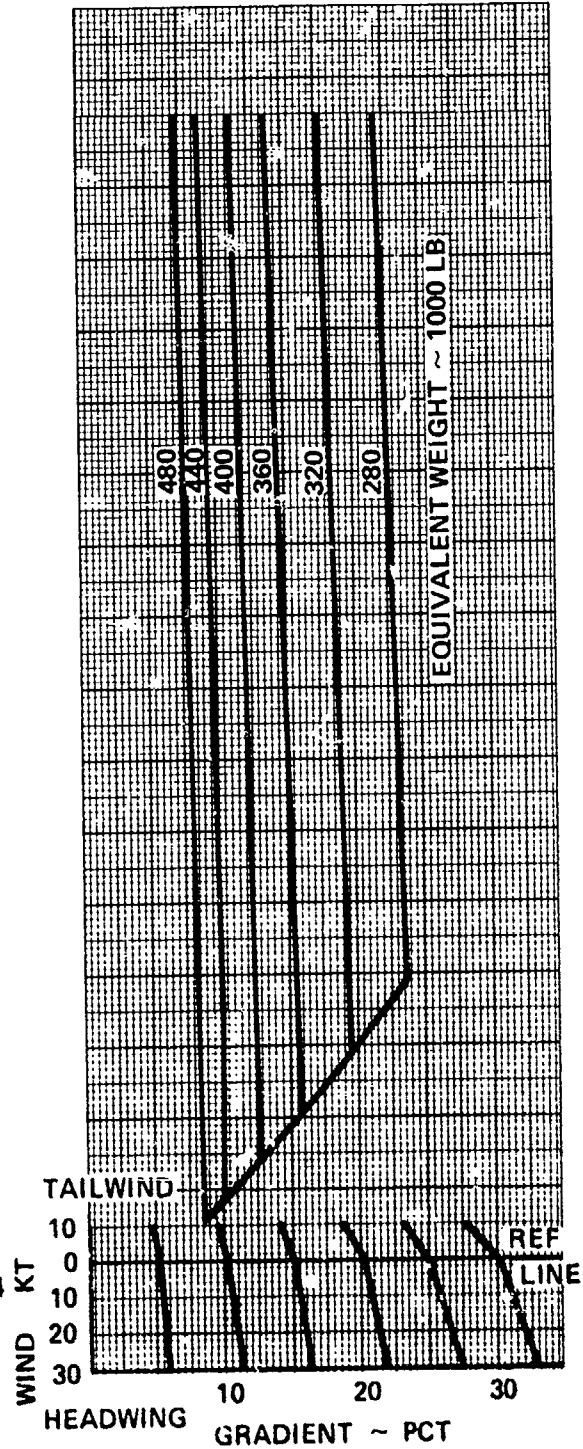
FIGURE 3-42 L 1011 1/RB 211-228 RATE OF CLIMB AND CLIMB GRADIENT
FOR ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
SCS BLEED ON 22° FLAPS



ANCE ZERO ~ 1000 FT
B AND CLIMB GRADIENT
AR UP (TAKEOFF POWER)



RATE OF CLIMB ~ 1000 FT/MIN



TAILWIND

WIND KT

HEADING

GRADIENT ~ PCT

REF
LINE

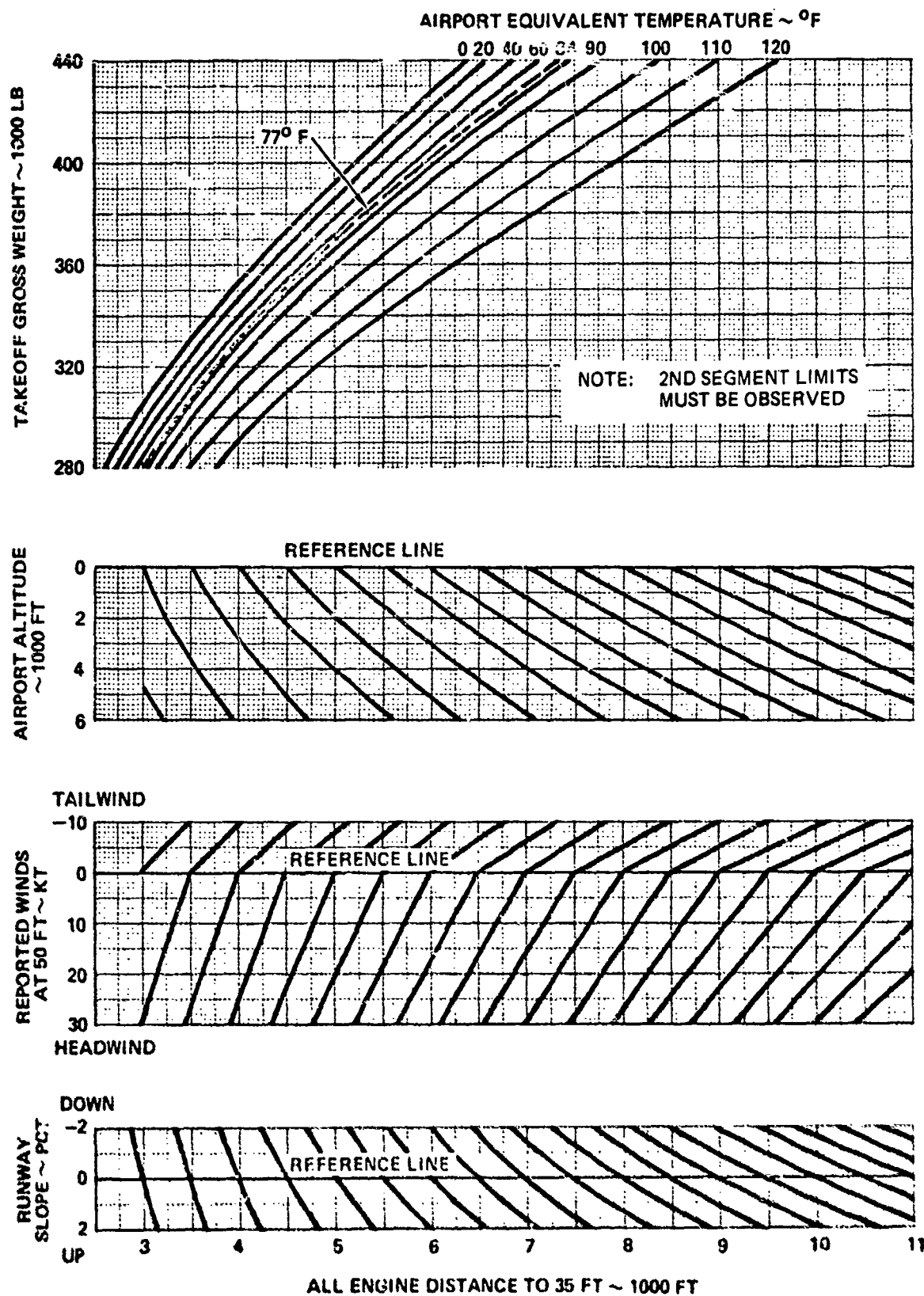


FIGURE 3-43 L-1011-1/RR-211-228 ALL ENGINE DISTANCE TO 35 FEET
27° FLAPS

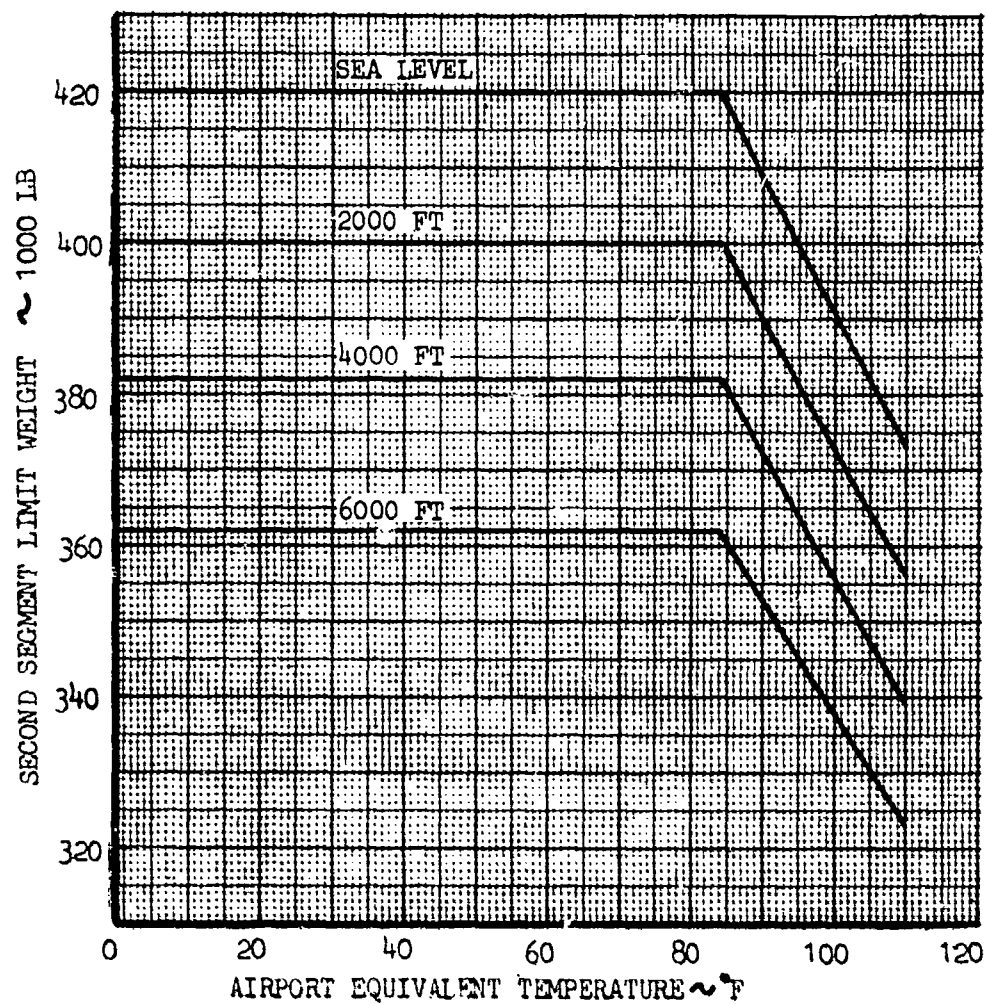
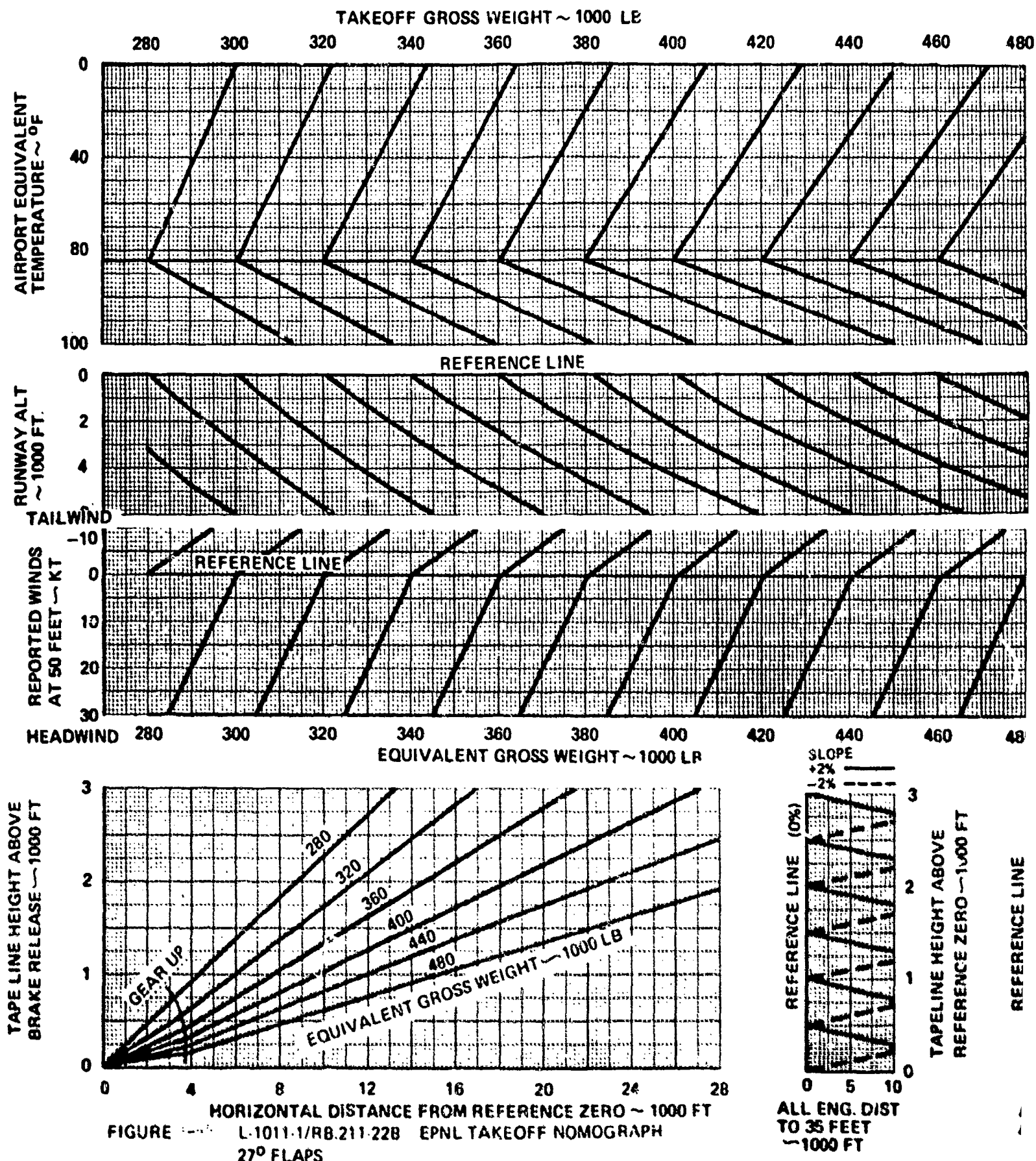
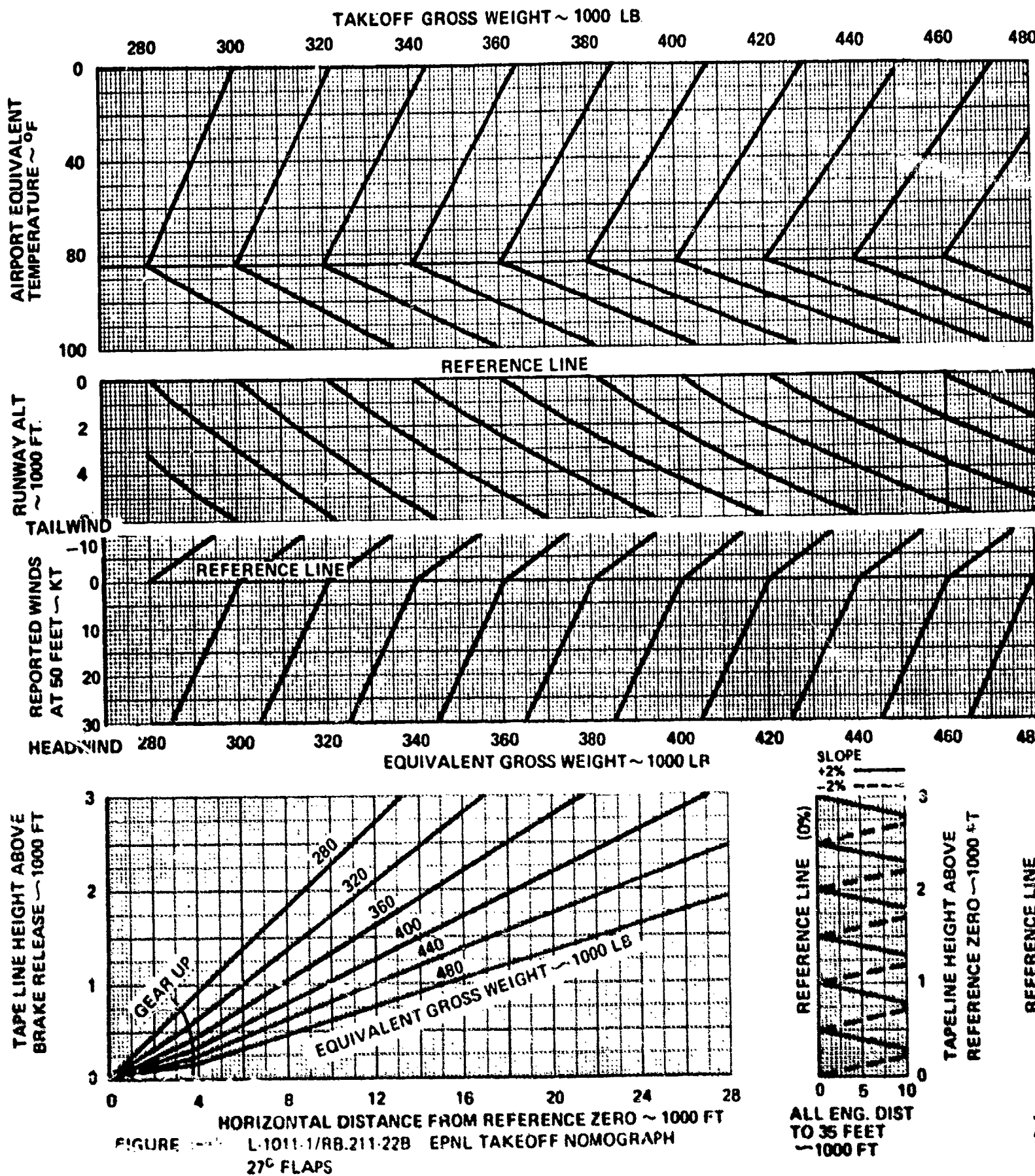


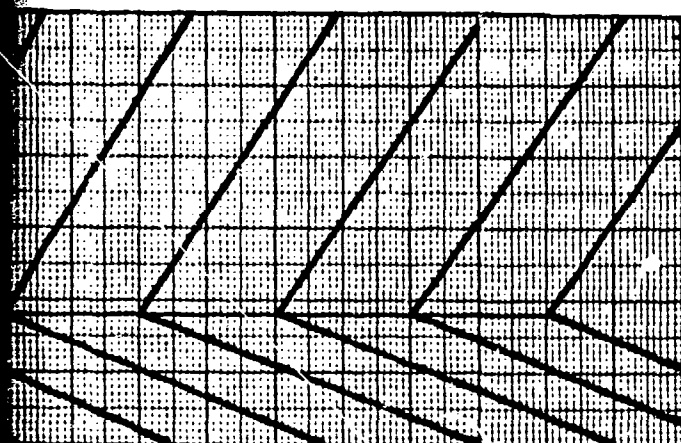
FIGURE 3-44 L-1011-1/RB.211-22B SECOND SEGMENT
LIMIT WEIGHTS 27° FLAPS





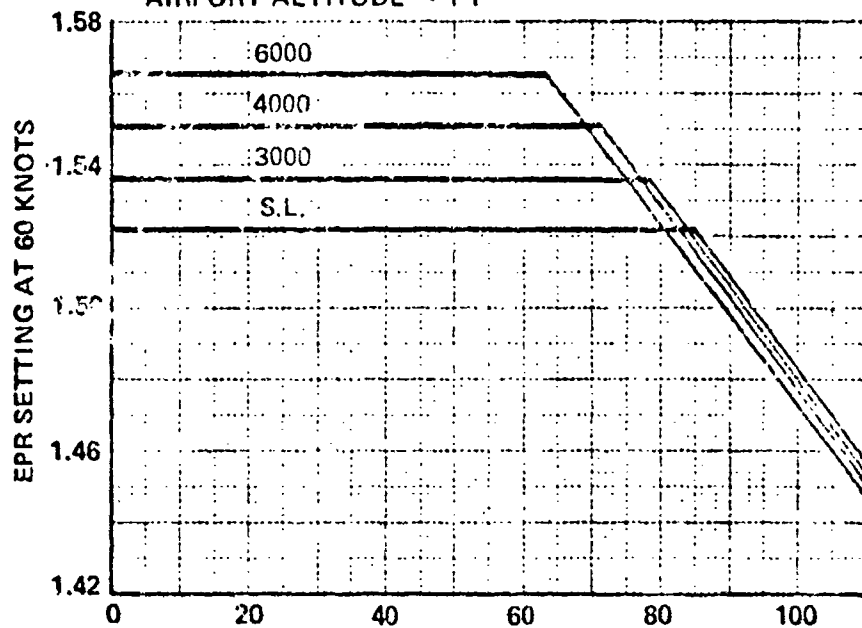
100 LB

400 420 440 460 480



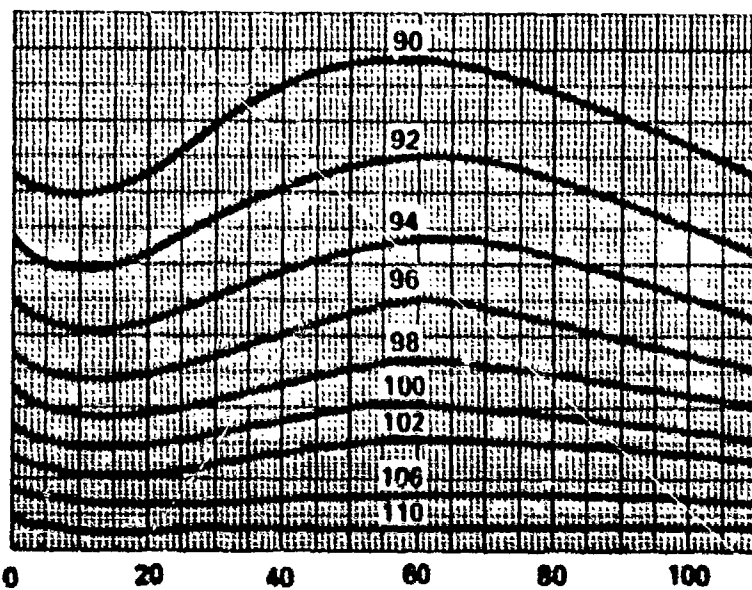
TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10$ KT

AIRPORT ALTITUDE ~ FT



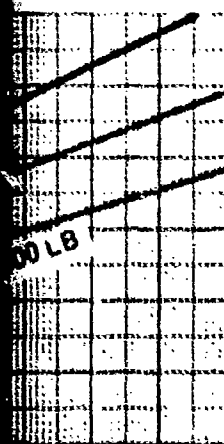
AIRPORT AMBIENT TEMP ~ °F

EPNL ~ EPNdB



AIRPORT AMBIENT TEMP ~ °F

HEIGHT ~ 1000 LR



ZERO ~ 1000 FT
MOGRAPH

SLOPE
+2%
-2%



ALL ENG. DIST
TO 35 FEET
~ 1000 FT

TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT



AIRPORT
ALTITUDE
~ 1000 FT

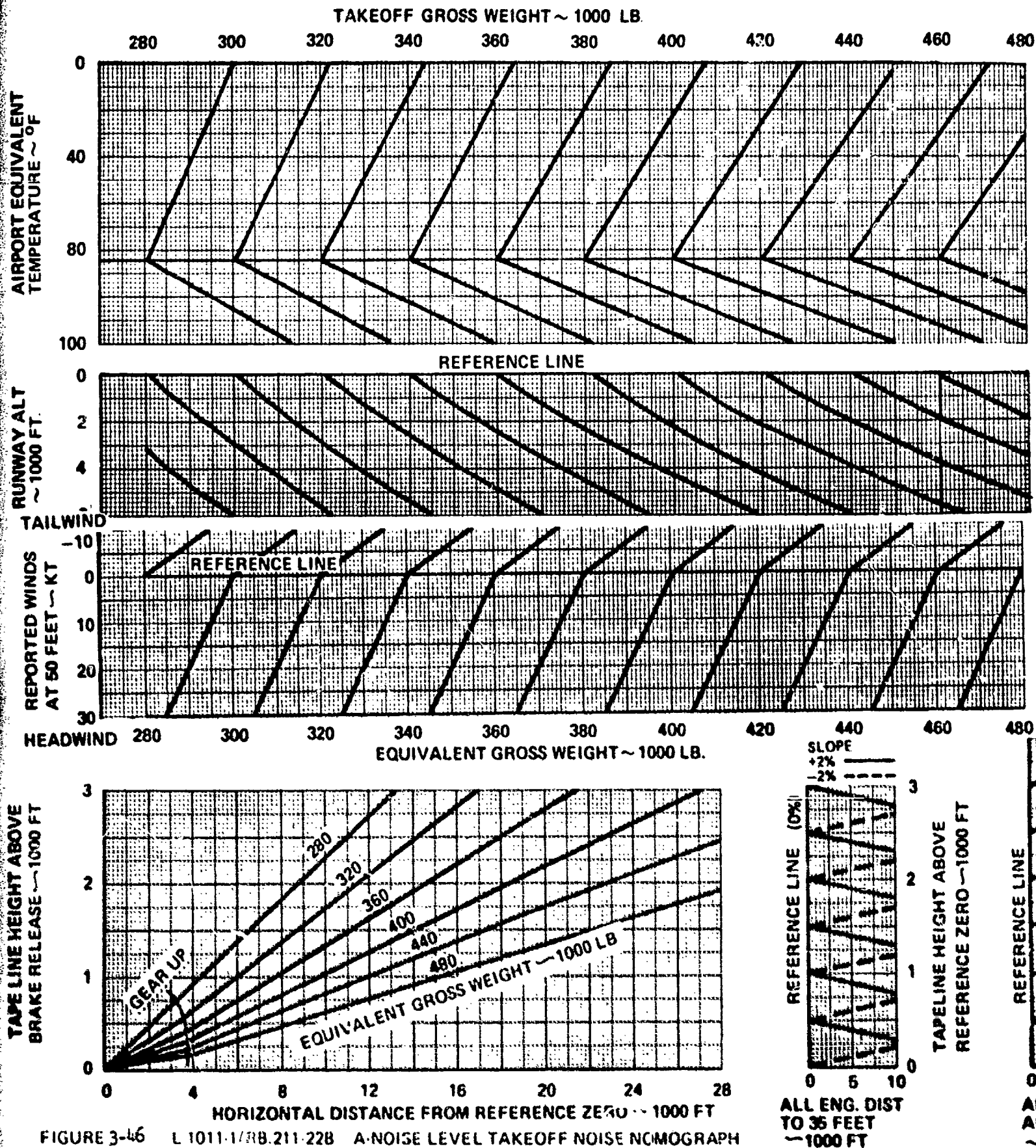
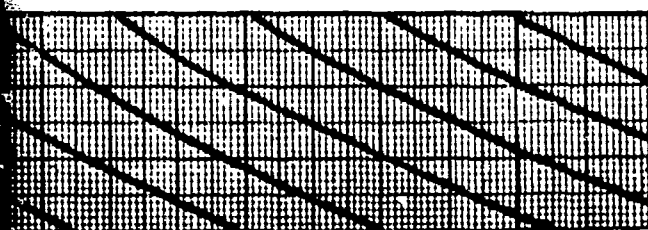
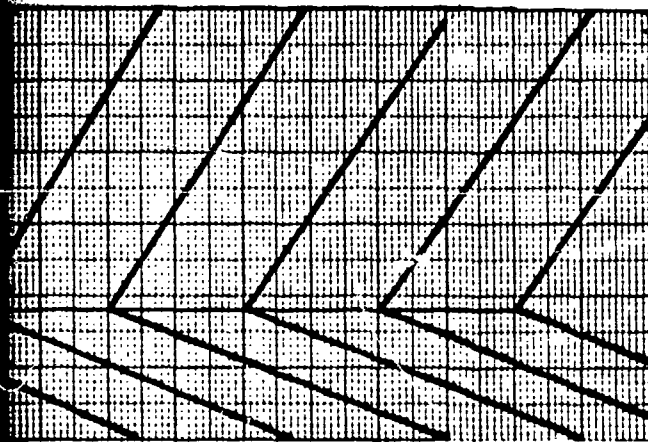


FIGURE 3-46 L 1011-1/RB.211-228 A-NOISE LEVEL TAKEOFF NOISE NCMOGRAPH 27° FLAPS

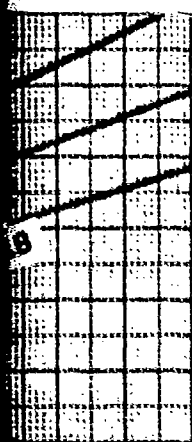
LB

400 420 440 460 480



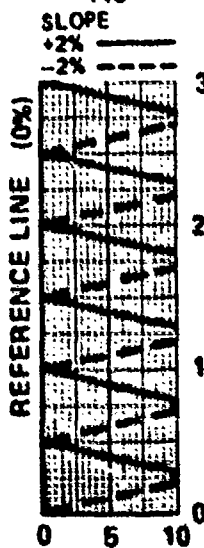
400 420 440 460 480

WT ~ 1000 LB.



24 28

RO ~ 1000 FT
SE NOMOGRAPH



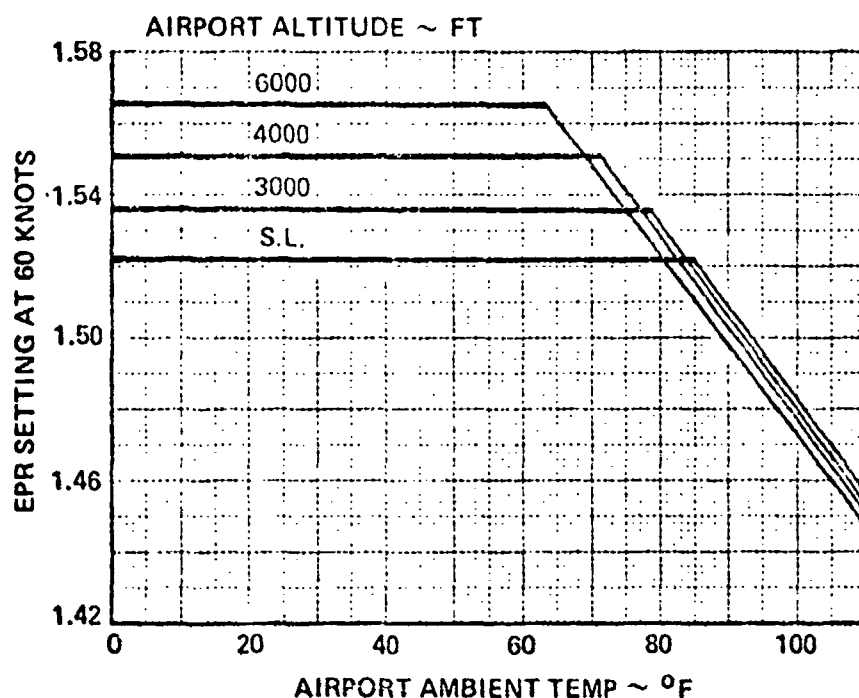
ALL ENG. DIST
TO 36 FEET
~ 1000 FT

TAPELINE HEIGHT ABOVE
REFERENCE ZERO ~ 1000 FT

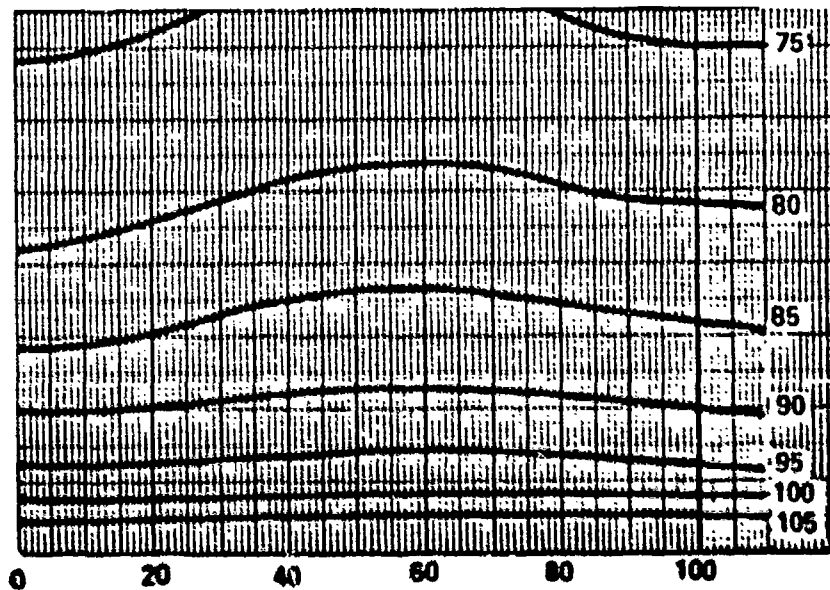


AIRPORT
ALTITUDE
~ 1000 FT

TAKEOFF POWER
ECS BLEED ON
CLIMB SPEED = $V_2 + 10KT$



$L_A \sim dBA$



AIRPORT AMBIENT TEMP ~ °F

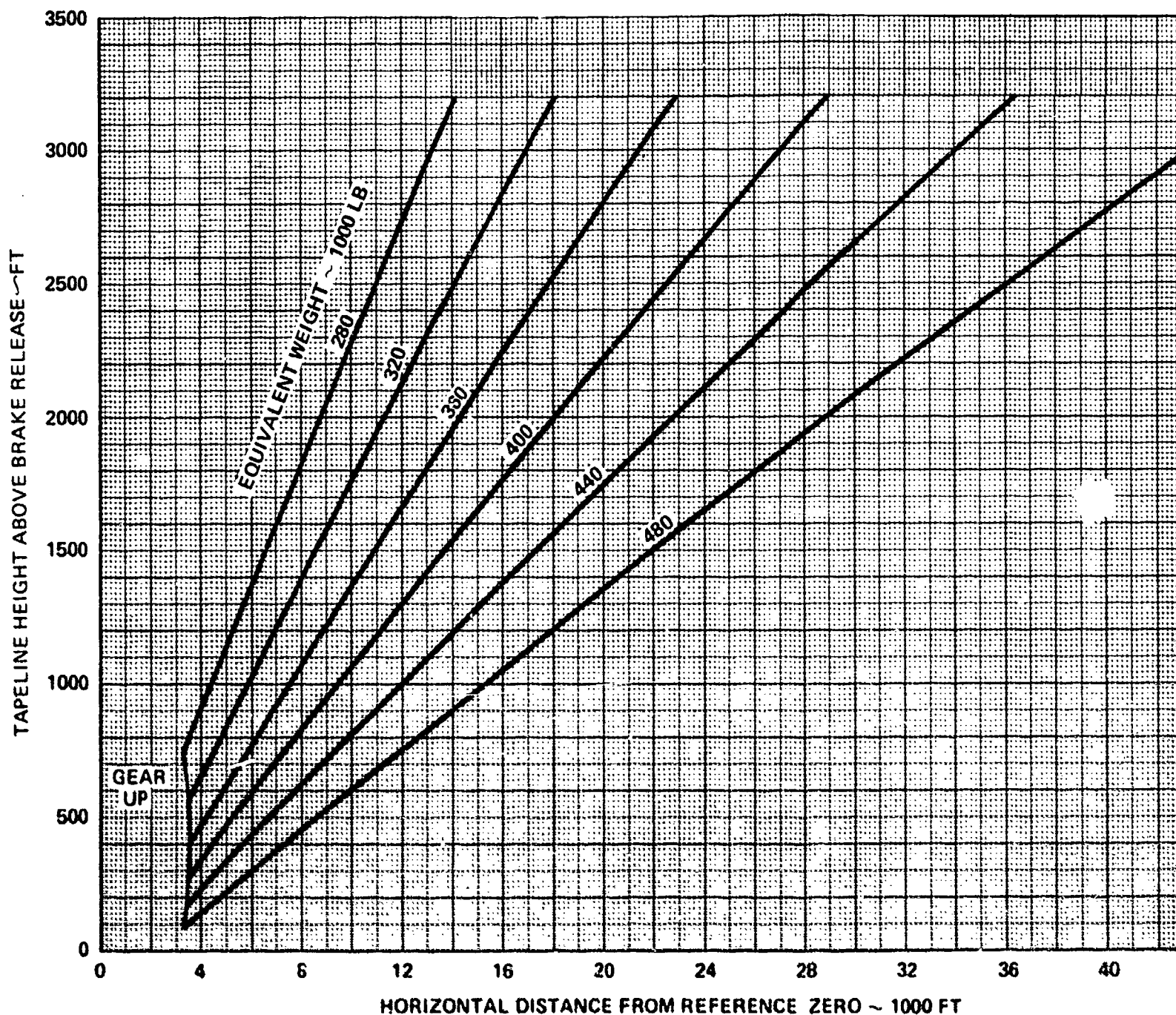
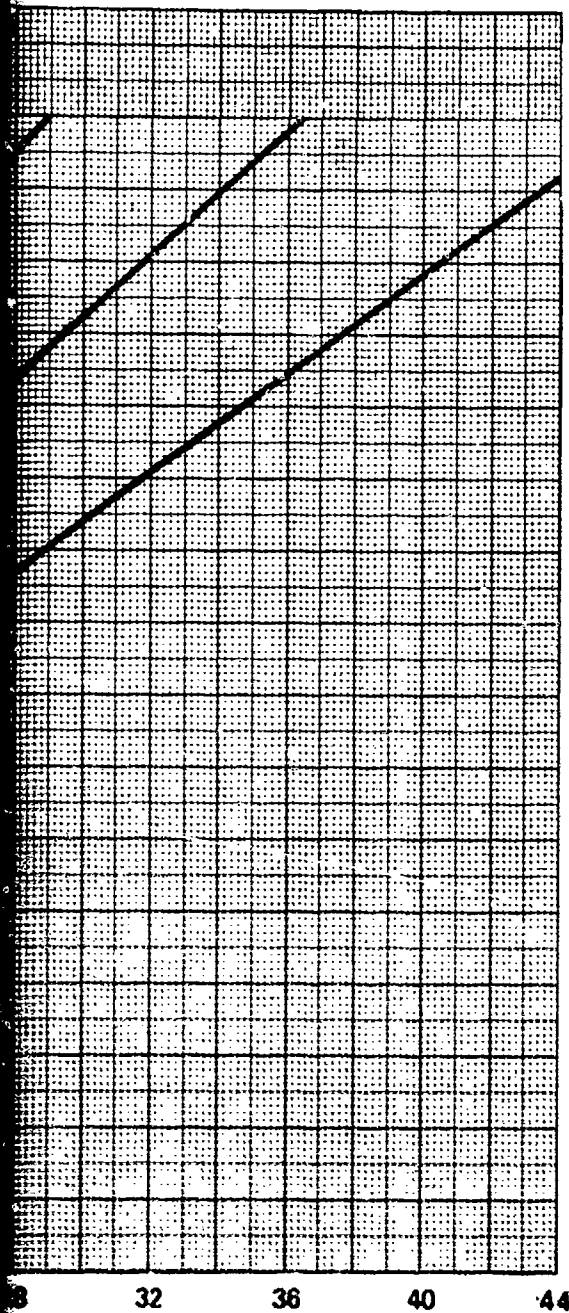
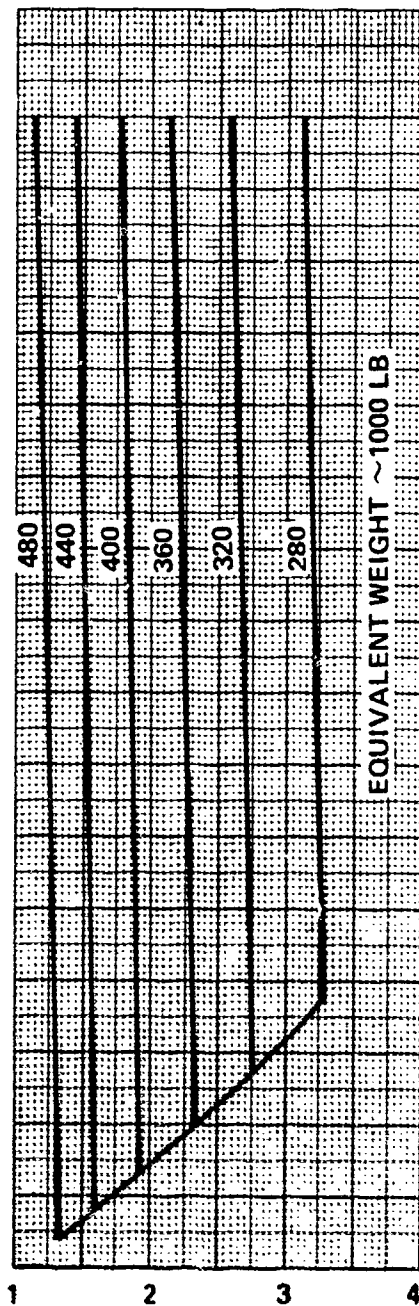


FIGURE 3-47 L-1011-1/RB.211-228 RATE OF CLIMB AND CLIMB GRADIENT
ALL ENGINE FLIGHT AFTER GEAR UP (TAKEOFF POWER)
ECS BLEED ON 27° FLAPS

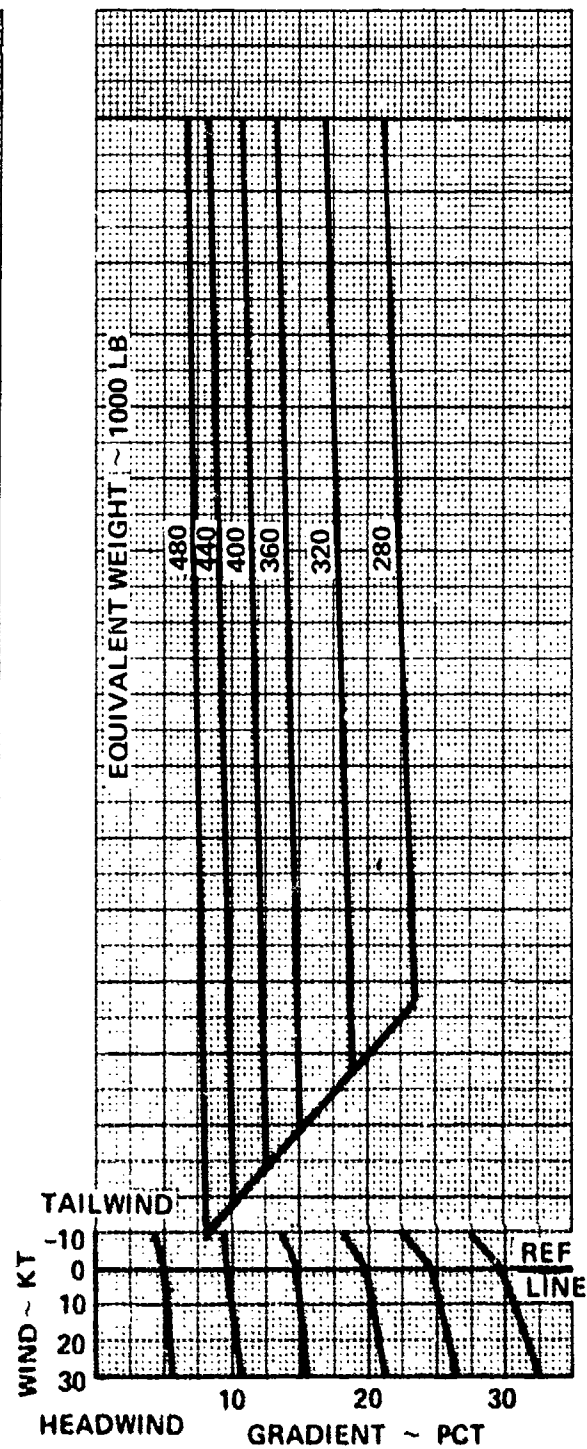


ZERO ~ 1000 FT
AND CLIMB GRADIENT
(TAKEOFF POWER)



RATE OF CLIMB ~ 1000 FT/MIN

EQUIVALENT WEIGHT ~ 1000 LB



TAILWIND

WIND ~ KT

HEADWIND

GRADIENT ~ PCT

REF
LINE

SECTION IV APPROACH PERFORMANCE

SECTION IV
APPROACH PERFORMANCE

The approach graphs permit determination of thrust-required from flap setting, DLC, glide angle and gross weight (Figure 4-2, 4-3). The approach speed and wind condition for a particular landing, are used to correct the thrust-required from that at reference speed of $1.3 V_s + 10$ knots and reference wind of zero knots (Figure 4-1). At a given airport elevation the corrected fan speed, $N_1/\sqrt{\theta}$, can be found for the thrust required. Height above runway and $N_1/\sqrt{\theta}$ determines the EPNL or A-noise level for 77° F, 70% relative humidity, at sea level. These noise levels can be corrected to other airport elevations and temperatures (at 70% relative humidity) on Figures 4-2 and 4-3.

1. Approach Conditions

Airport elevation	0 ft.
Airport ambient temperature	77° F
Glide slope angle	3°
Landing gross weight	358,000 lbs.
Flap	42°
Approach speed	$1.3 V_s + 10$ kts.
Wind speed	0 kts.

2. Figure 4a

Flap	42°
Approach speed	$1.3 V_s + 10$ kts.
Δ thrust per engine	0 lbs.

3. Figure 4.1b

Glide slope angle	3°
Wind speed	0 kts.
Δ thrust per engine	0 lbs.

4. Figure 4.2, Upper Right

Flap	42° , DLC on
Glide slope angle	3°
Landing gross weight	358,000 lbs.
Thrust required per engine	12,000 lbs.

5. Figure 4.2, Upper Center
Corrected thrust per engine (from 2. to 3.) 12,200 lbs.
Airport elevation 0 ft.
 $N_1/\sqrt{\theta}$ 66.6%
6. Figure 4.2, Lower Left
Glide slope angle 3°
Distance to threshold 6080 ft.
Height of airplane above noise monitor 370 ft.
7. Figure 4.2, Lower Center
 $N_1/\sqrt{\theta}$ 66.6%
Height above noise monitor 370 ft.
Equivalent height 400 ft.
8. Figure 4.2, Lower Right
Equivalent height 400 ft.
Ambient temperature 77°
Effective perceived noise level at 1 n mi from threshold 103 EPNdB

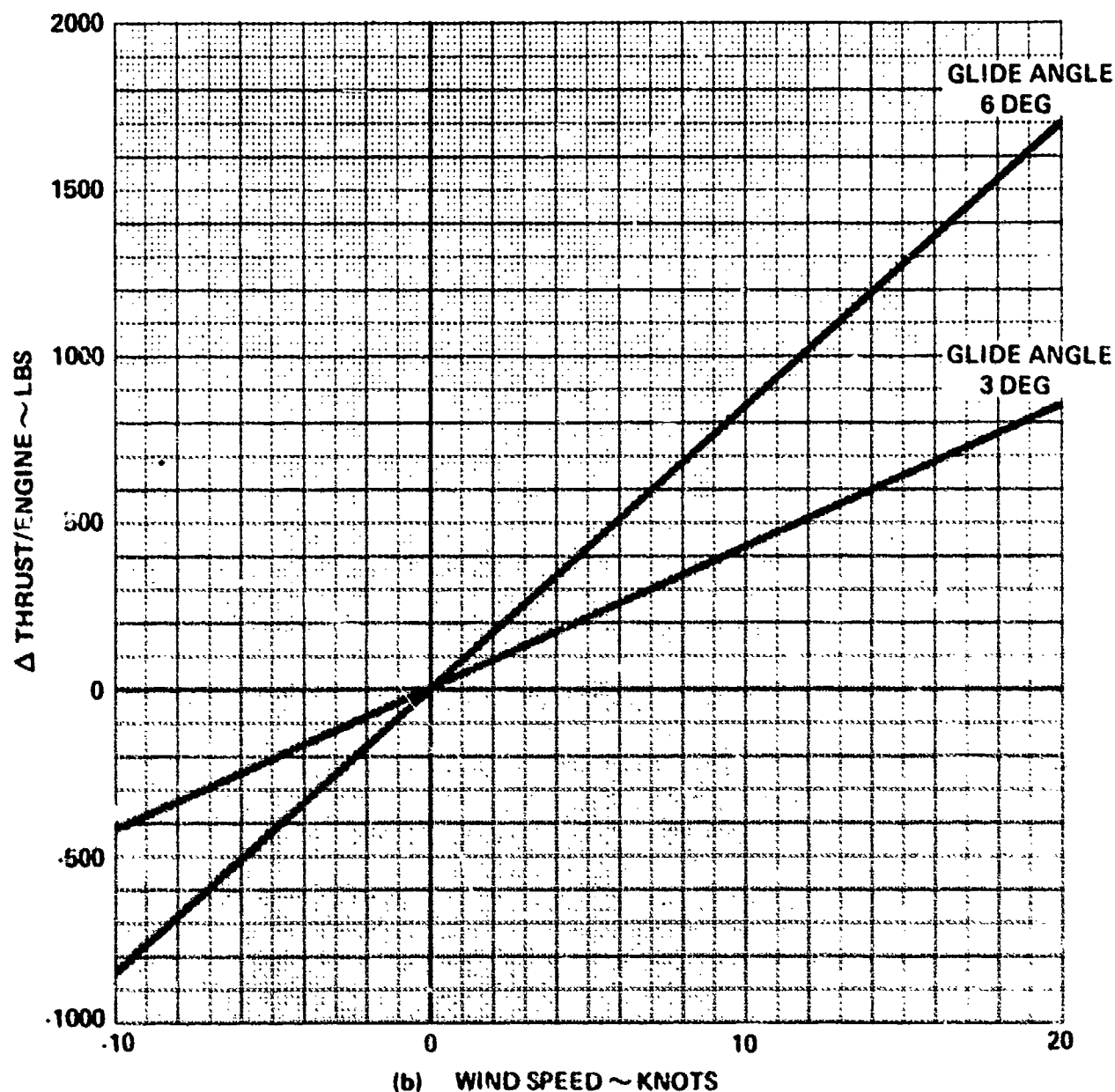
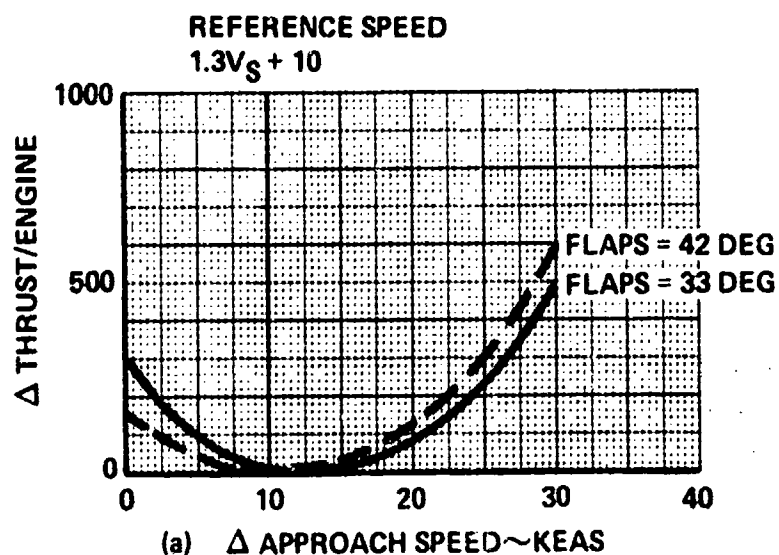
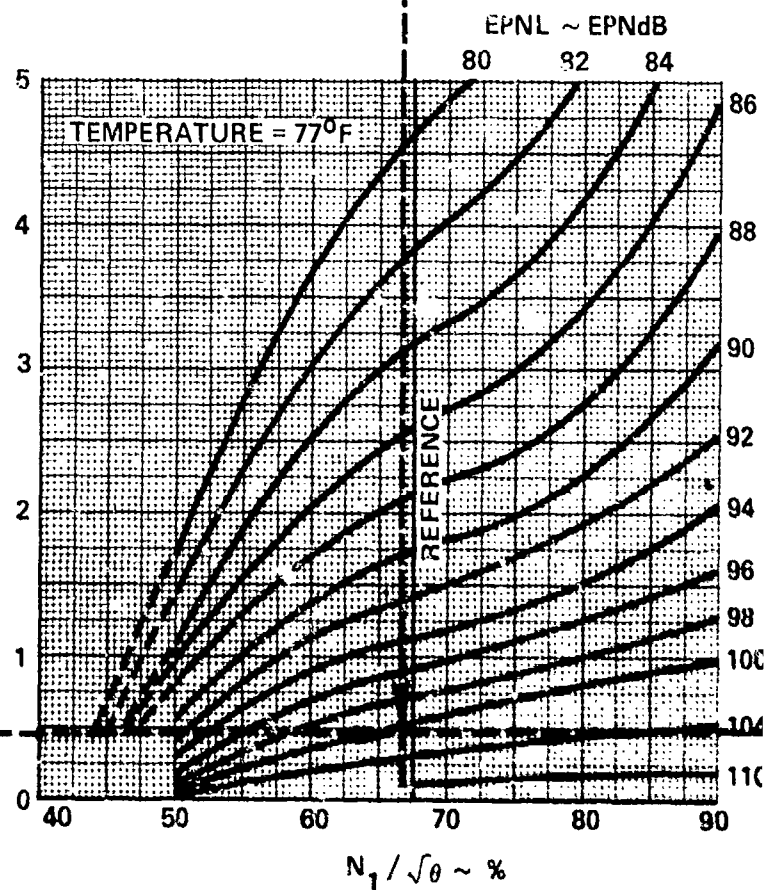
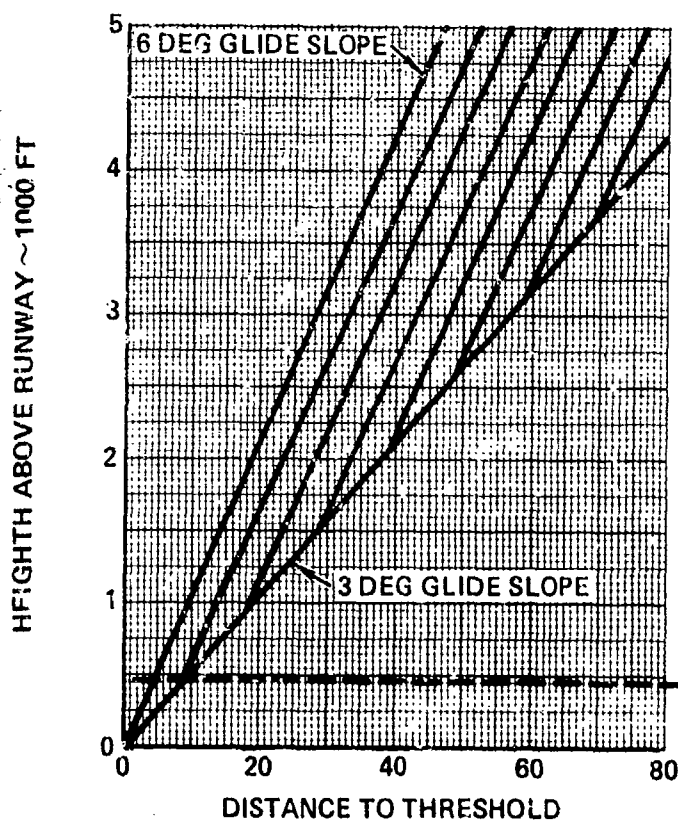
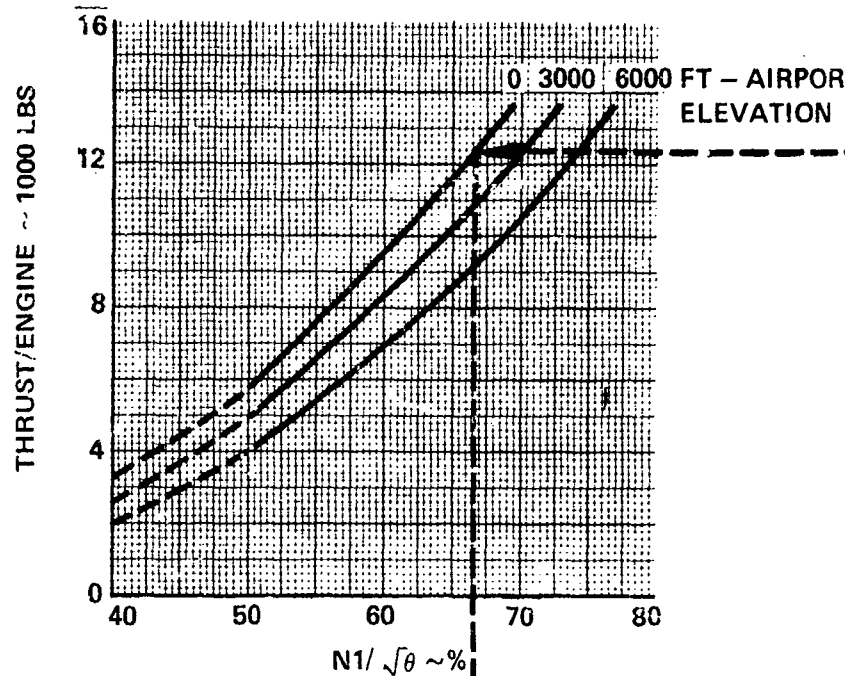
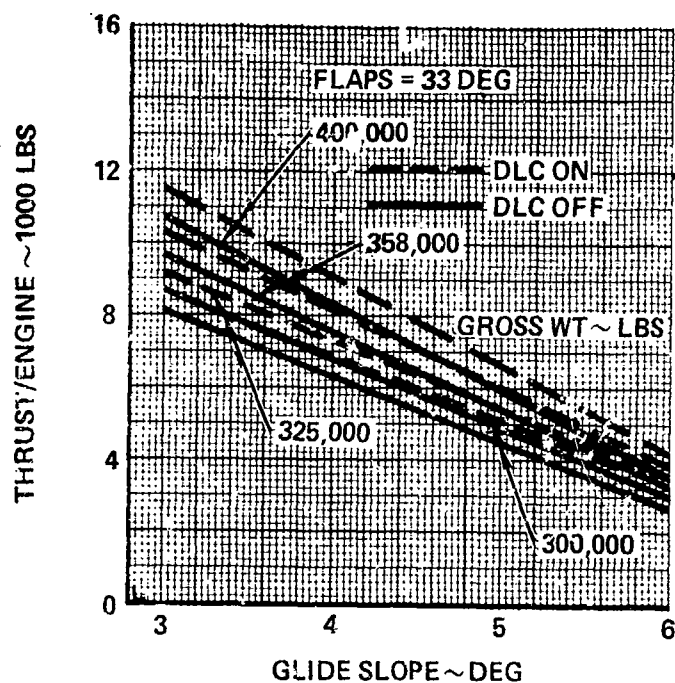


FIGURE 4-1 L 1011-1/RB 211-22B APPROACH THRUST CORRECTION
 a. SPEED EFFECT AT ZERO WIND, ALL GLIDE ANGLES
 b. WIND EFFECT



RT

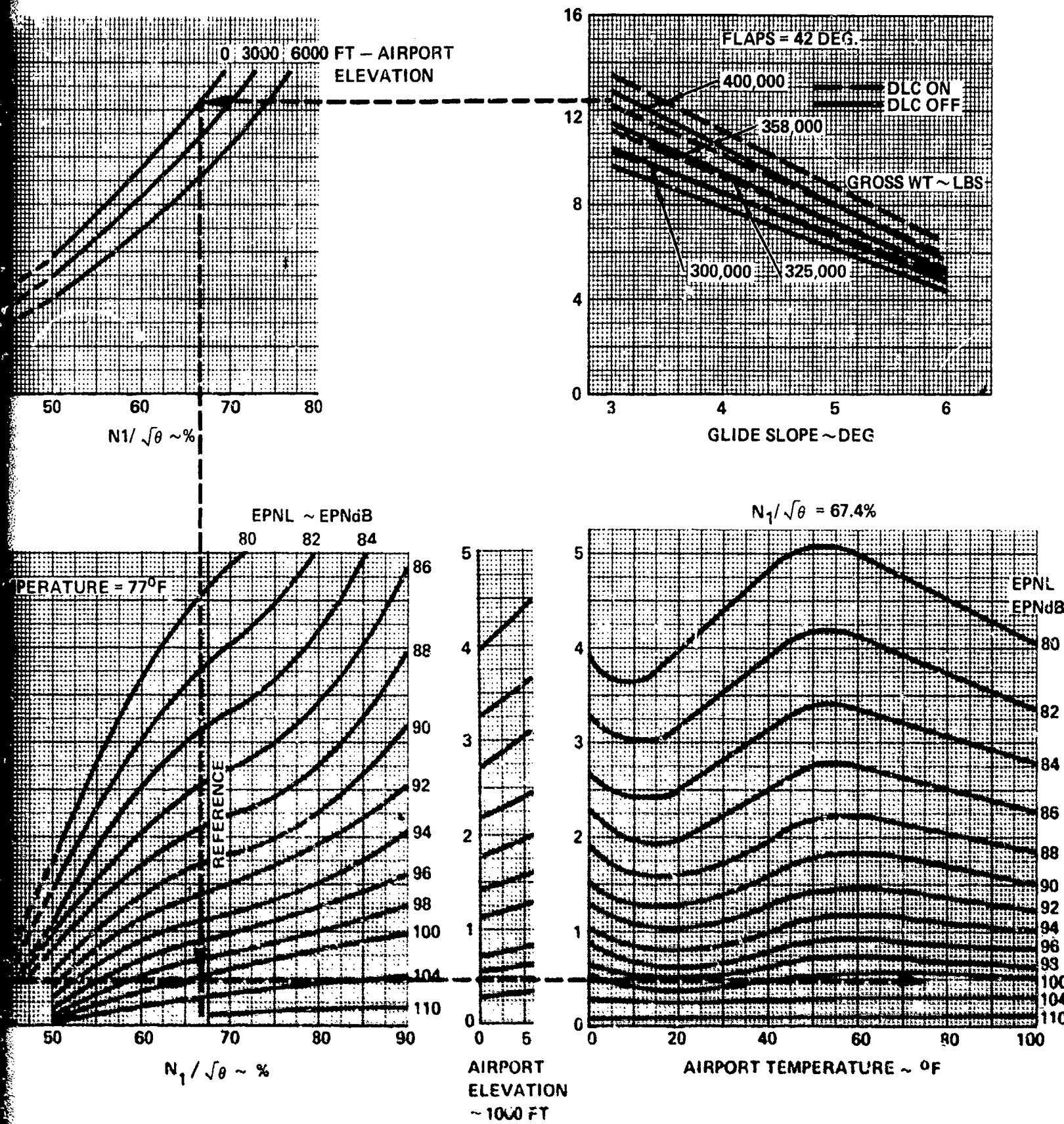
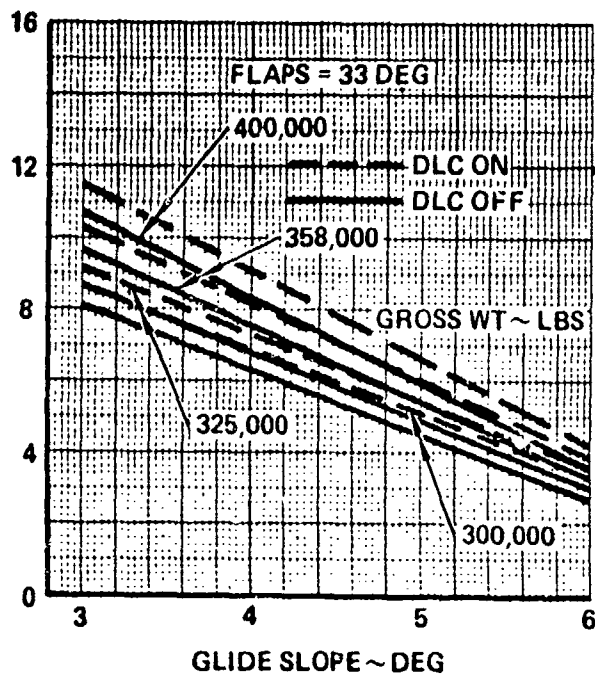
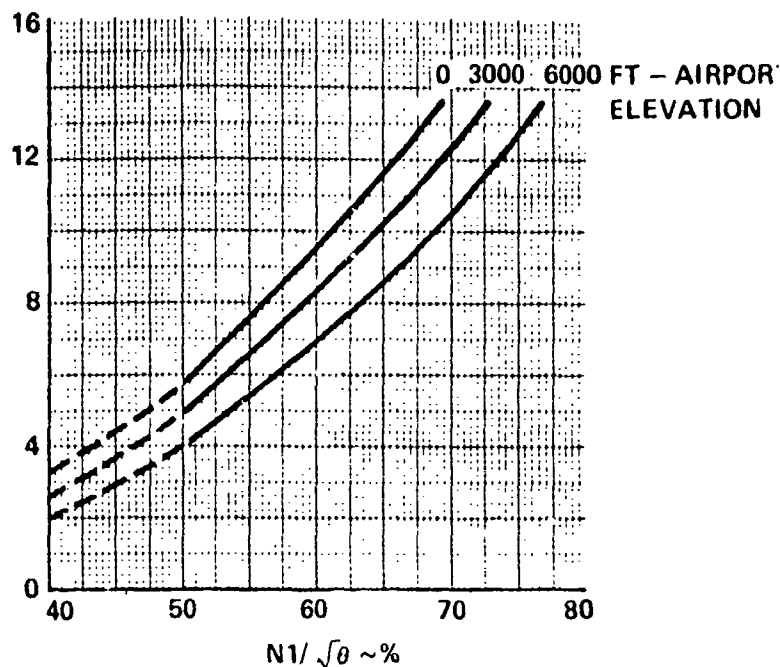


FIGURE 4-2 L-1011-1/RB.211-22B EPNL APPROACH NOMOGRAPH

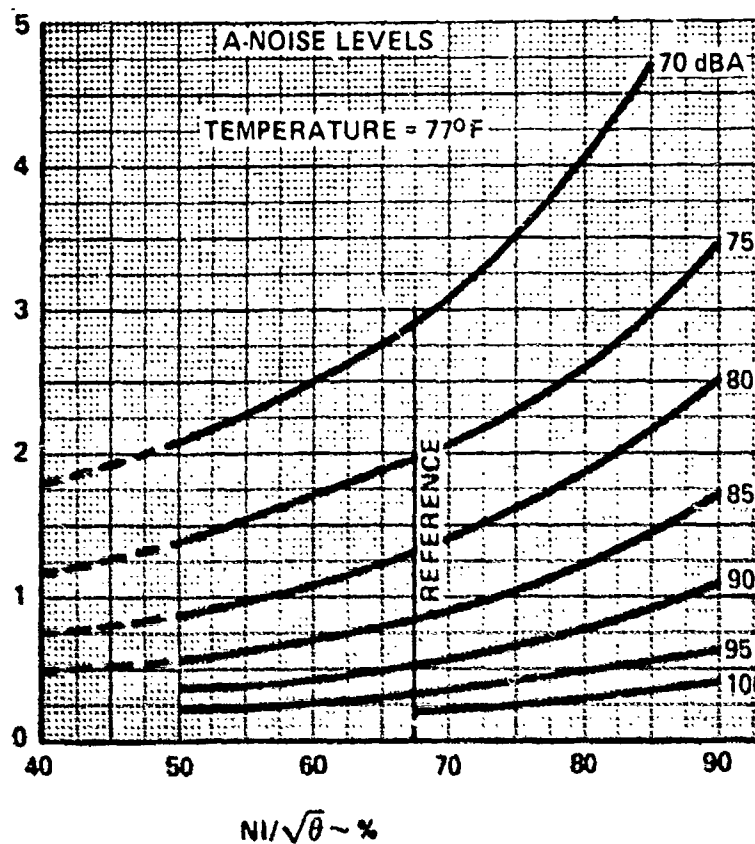
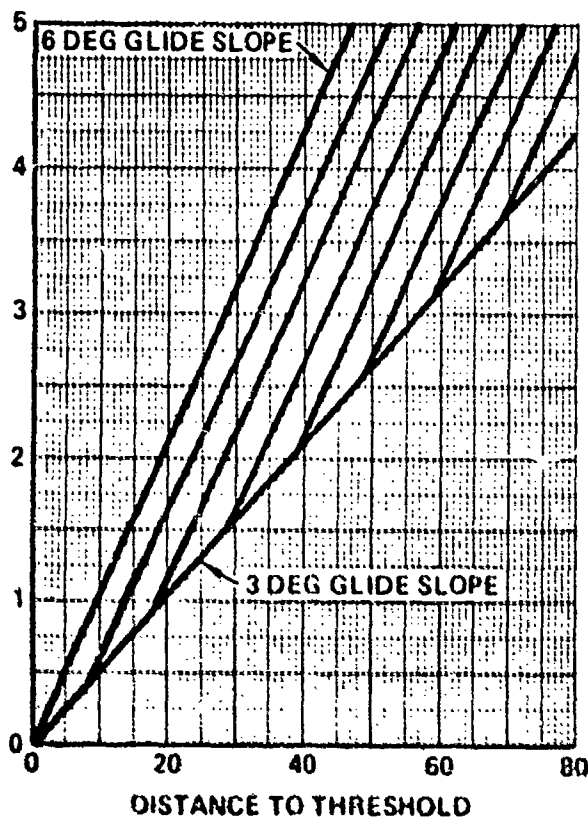
THRUST/ENGINE ~ 1000 LBS

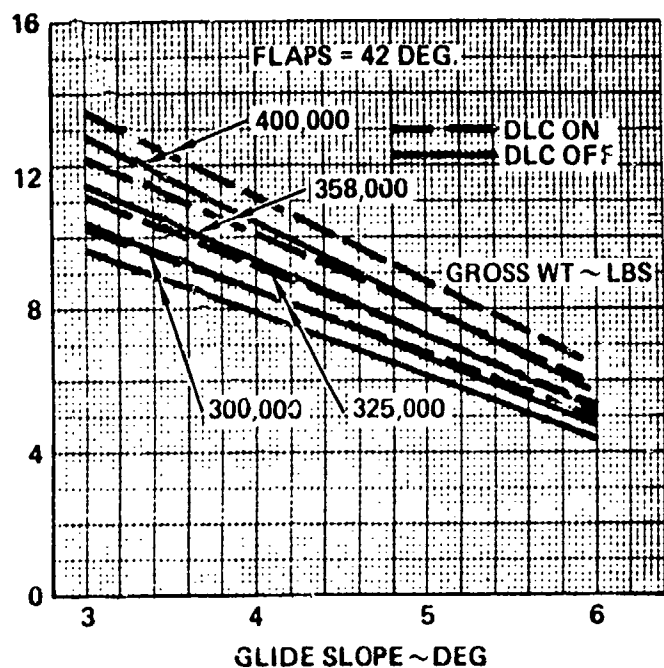
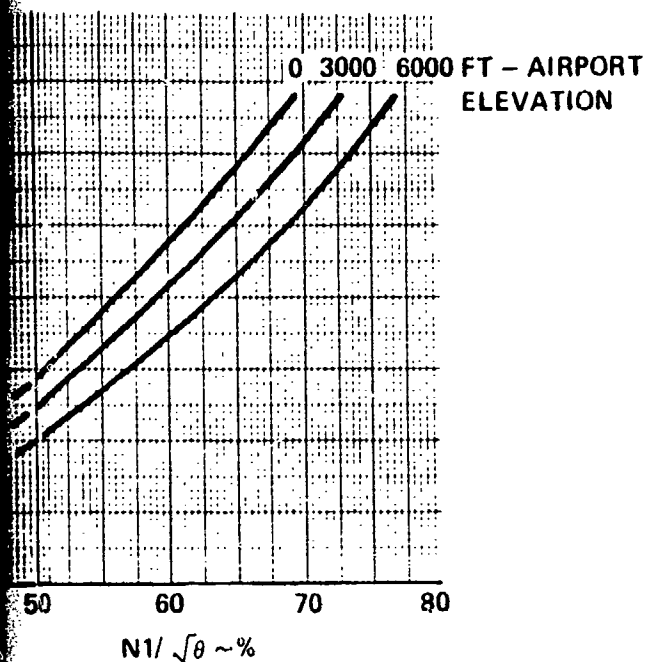


THRUST/ENGINE ~ 1000 LBS



HEIGHT ABOVE RUNWAY ~ 1000 FT





$$N_1/\sqrt{\theta} = 67.4\%$$

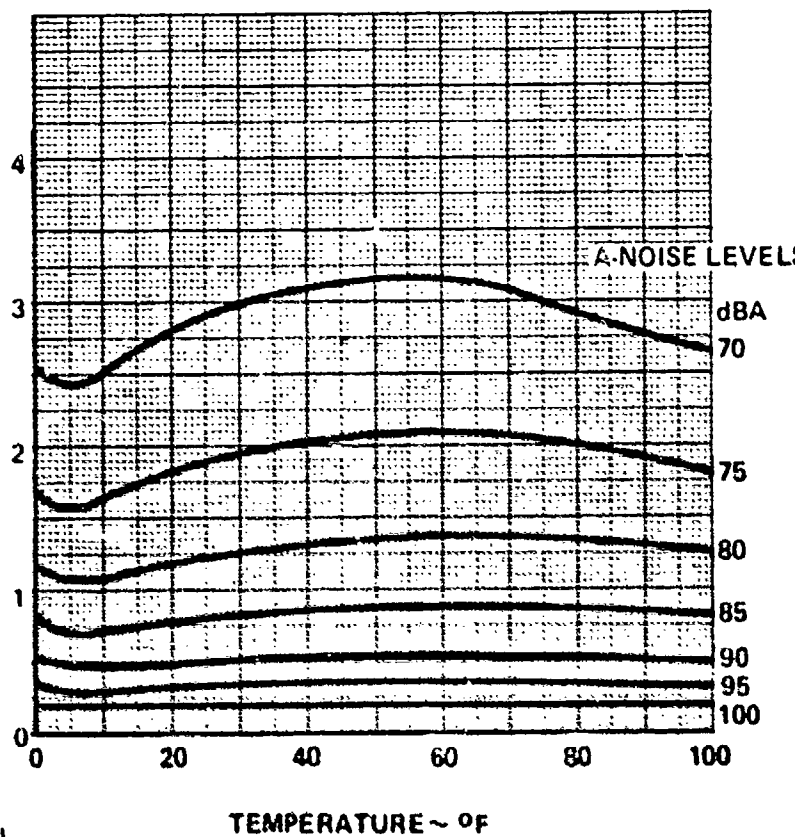
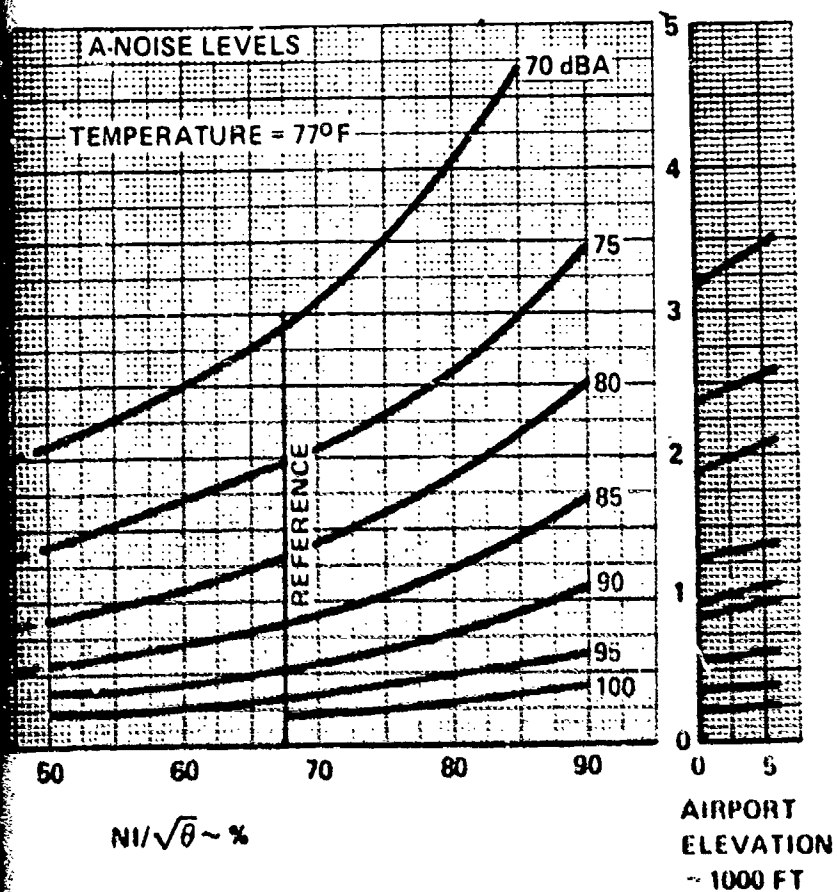


FIGURE 43 L 1011 1/RB 211 228 A NOISE LEVEL APPROACH NOMOGRAPH

SECTION V NOISE FOOTPRINTS

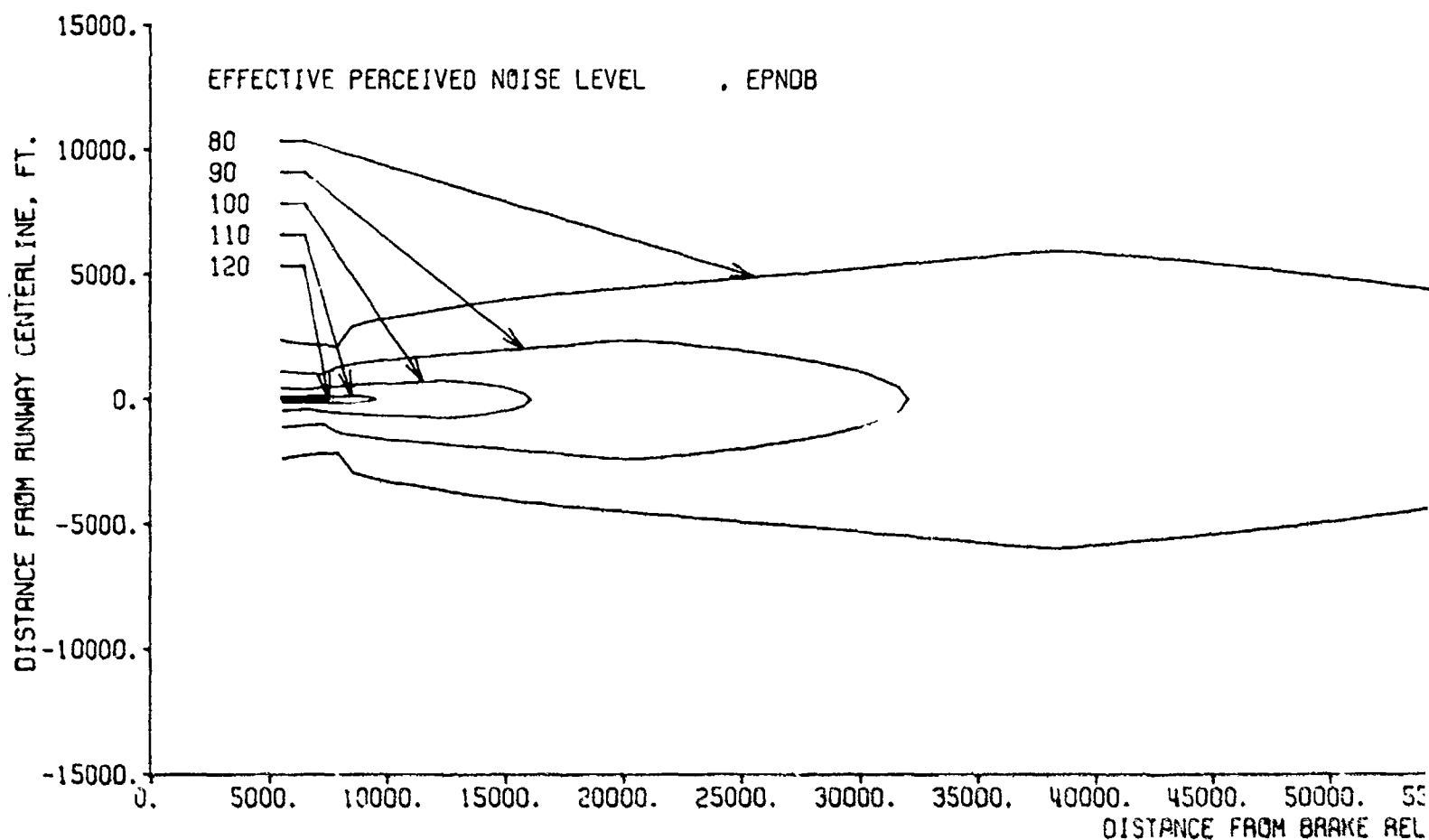


FIGURE 5-1 CONTOUR PLOTS
 L-1011-1 / A8211-22B EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

CONTOUR

AREA

EPNdB

SQ. MILES

80

19.76

90

3.29

100

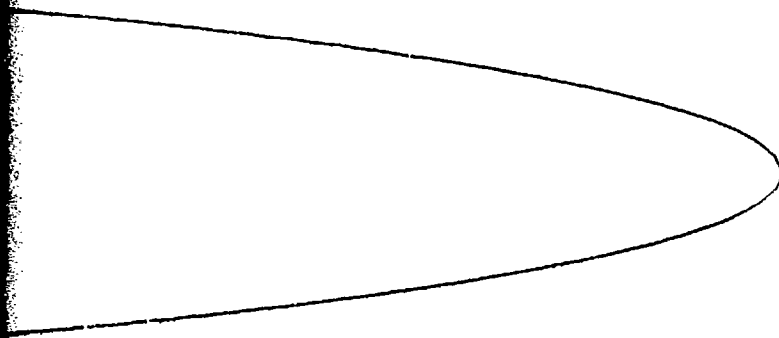
0.43

110

0.07

120

0.00



00. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000.
DISTANCE FROM BRAKE RELEASE, FT.

TAKEOFF THRUST

5-1

6

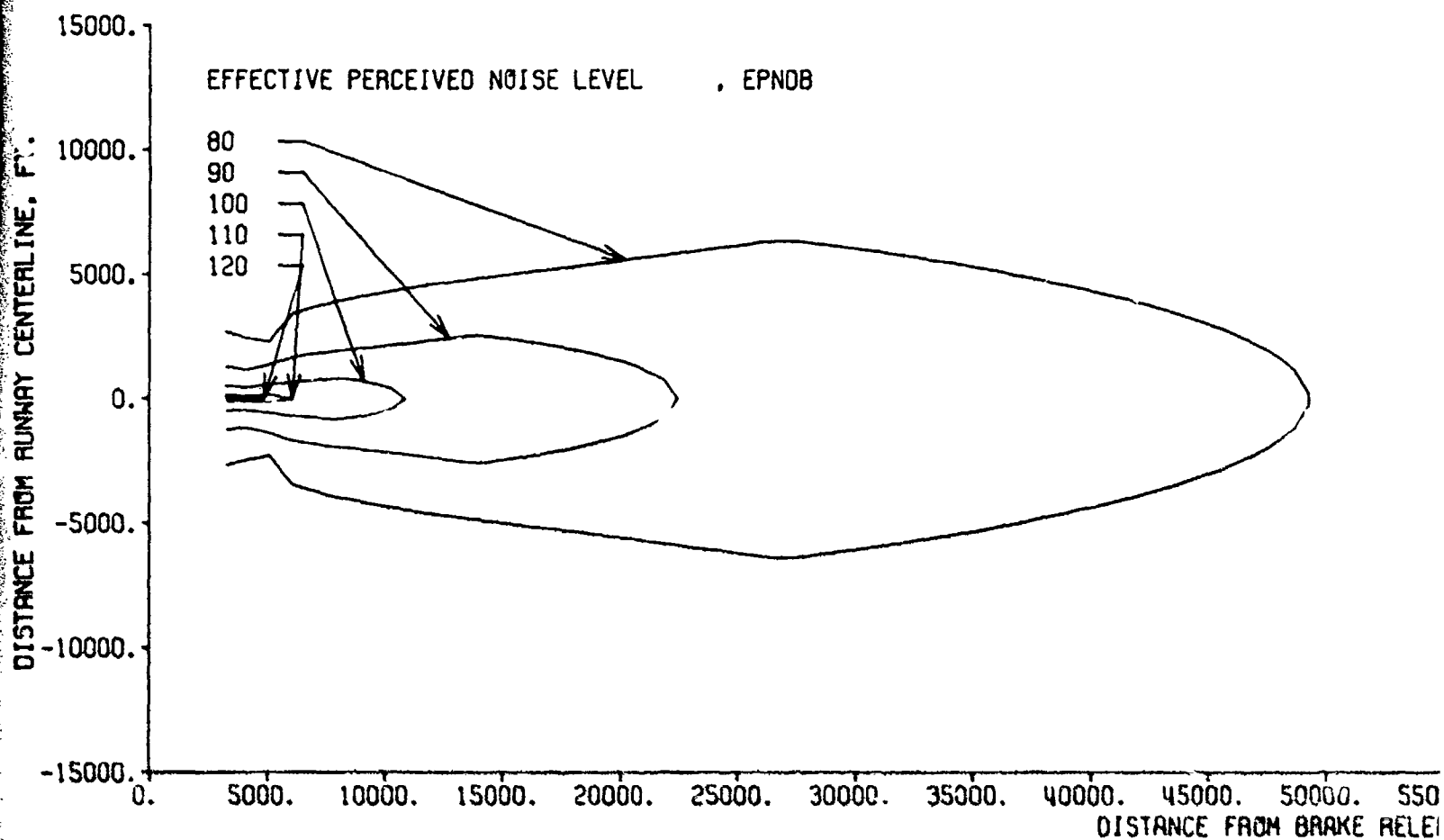


FIGURE 5-2 CONTOUR PLOTS
 L-1011-1 / RB211-22B EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 350,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 15.27 |
| 90 | 2.58 |
| 100 | 0.33 |
| 110 | 0.02 |
| 120 | 0.00 |

0. 4000. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000
 SE DISTANCE FROM BRAKE RELEASE, FT.

EL
 THRUST

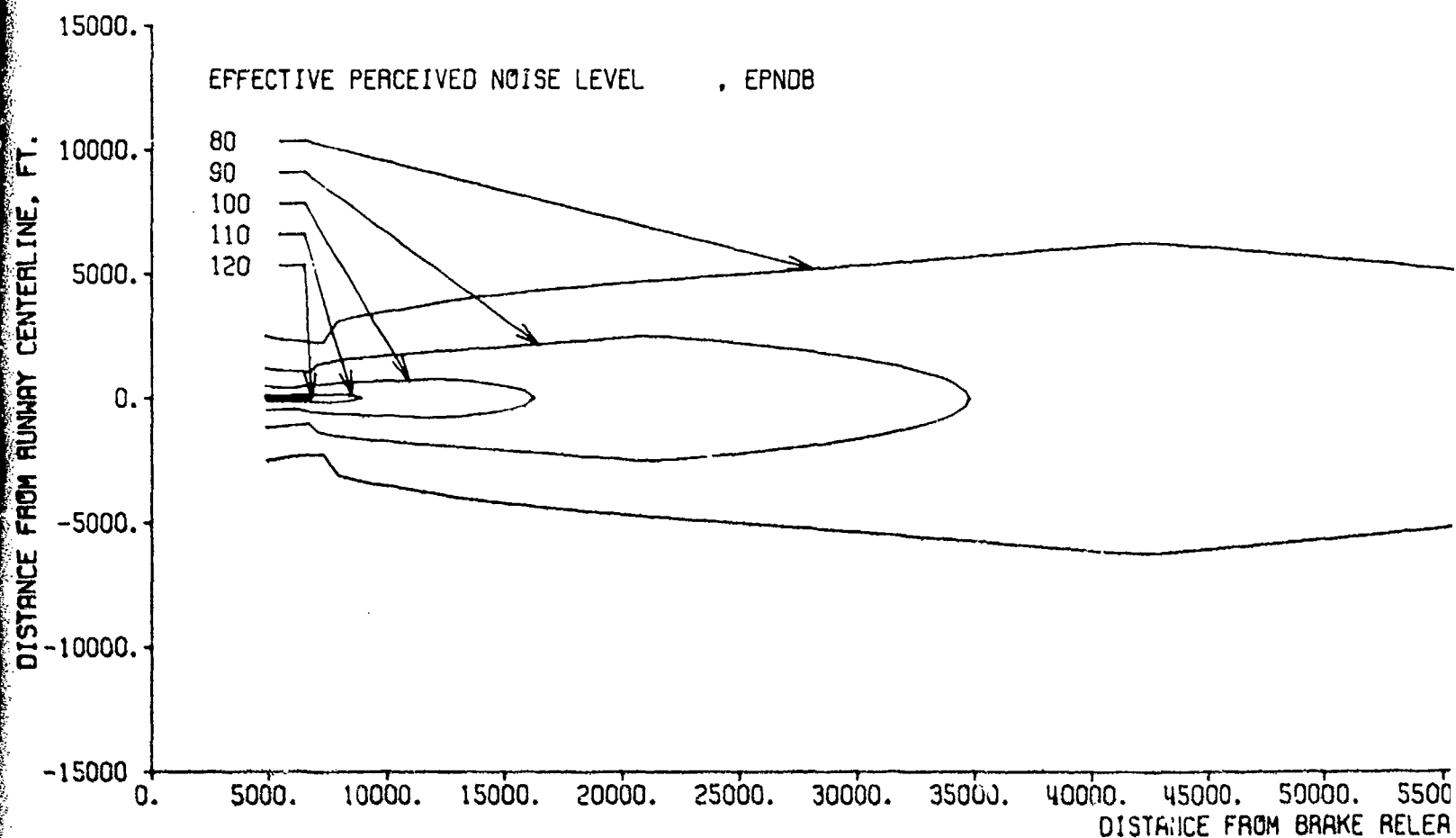
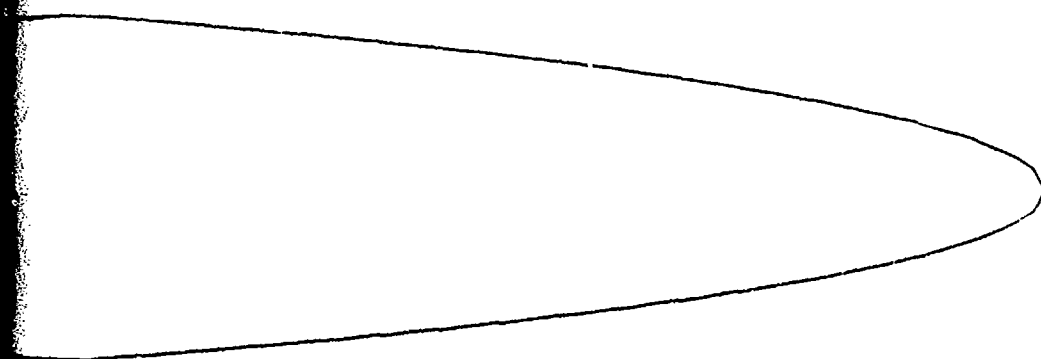


FIGURE 5-3 CONTOUR PLOTS
 L-1011-1 / A8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 24.21 |
| 90 | 3.93 |
| 100 | 0.43 |
| 110 | 0.03 |
| 120 | 0.00 |



00. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000
 DISTANCE FROM BRAKE RELEASE, FT.

TAKEOFF THRUST

5-3

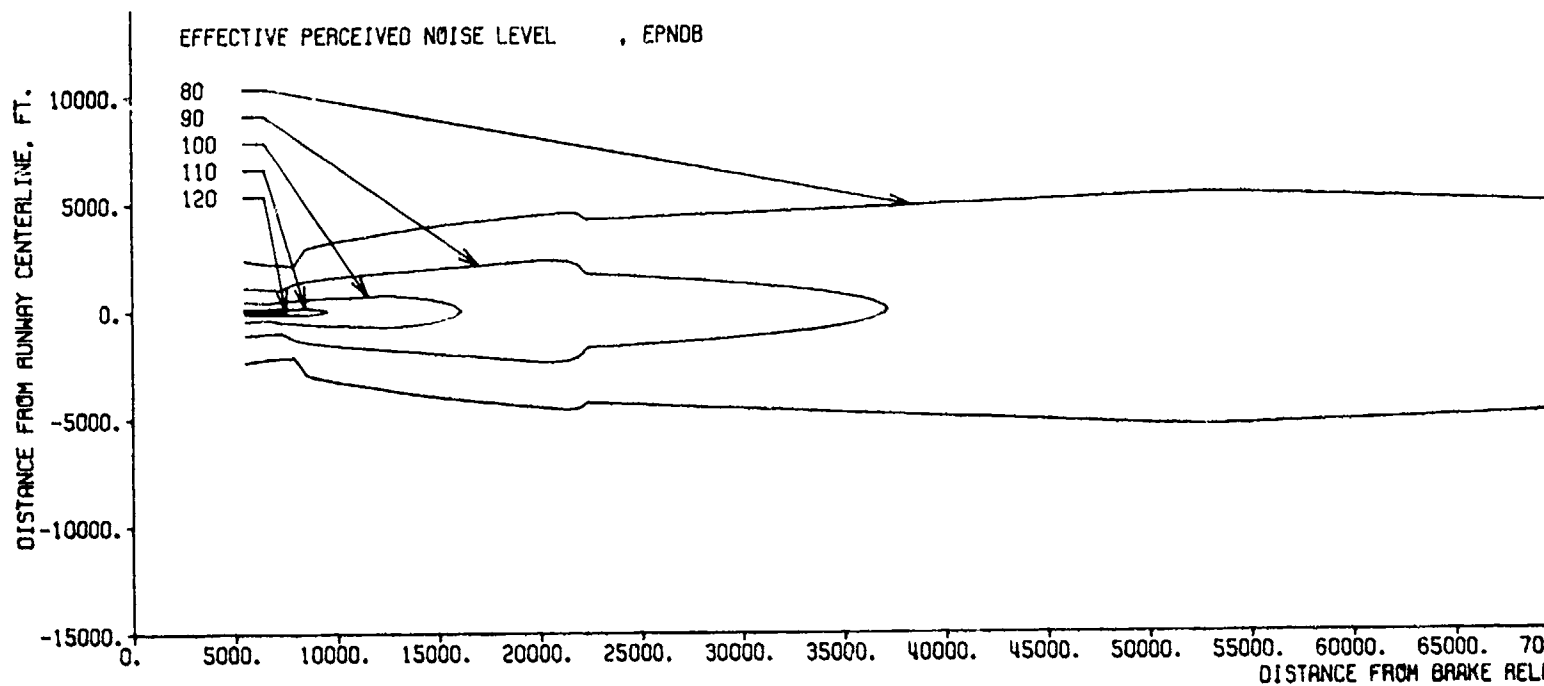


FIGURE 5-4 CONTOUR PLOTS
 L-1011-1 / A8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 34.68 |
| 90 | 3.46 |
| 100 | 0.57 |
| 110 | 0.03 |
| 120 | 0.00 |

5000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000. 105000. 110000. 115000. 120000. 125000. 130000.

DISTANCE FROM BRAKE RELEASE, FT.

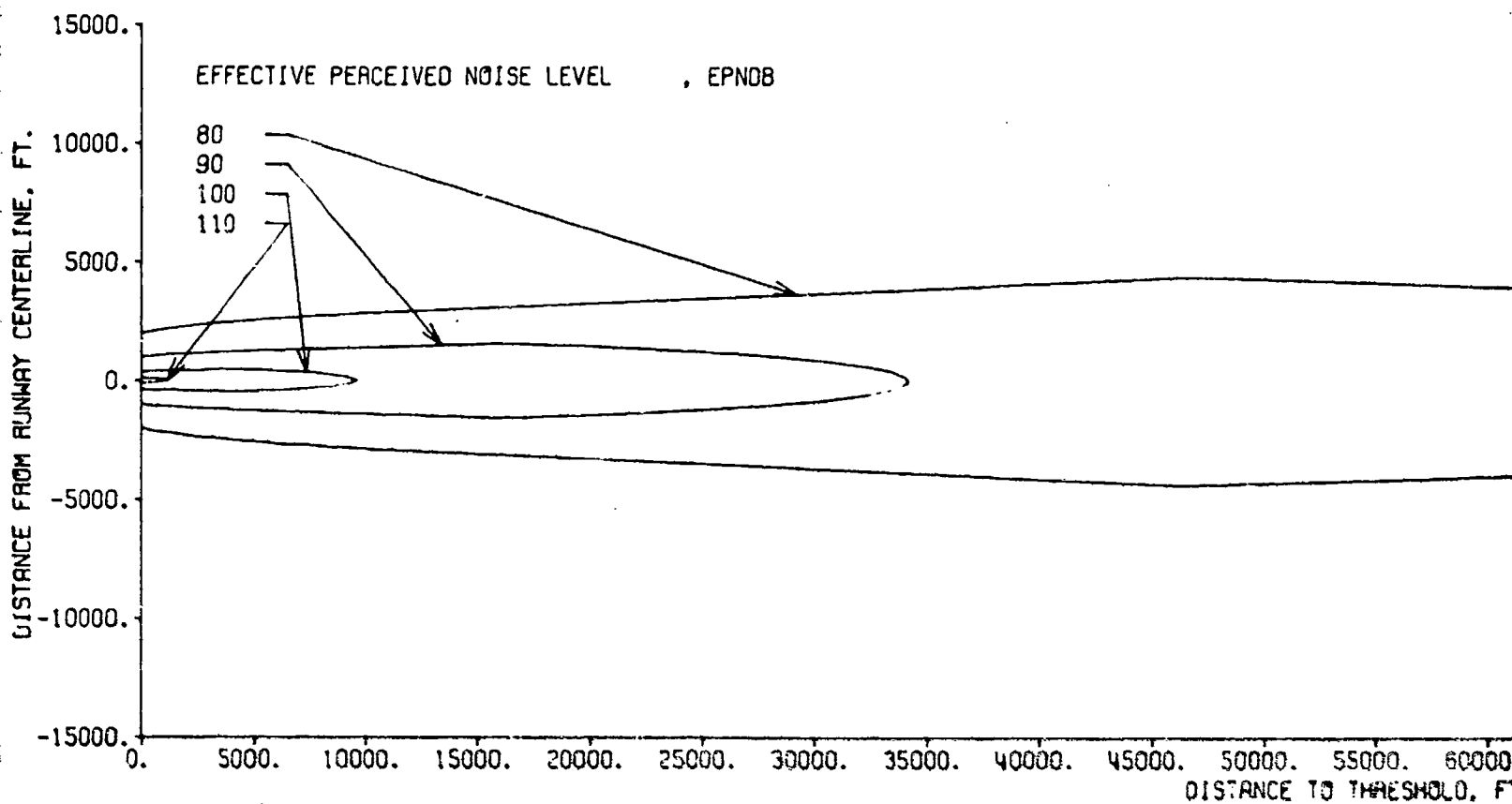


FIGURE 5-5 CONTOUR PLOTS
 L-1011-1 / A8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG F., 70% RELATIVE HUMIDITY
 MAXIMUM LANDING WEIGHT (358,000LB.), 42DEG. FLAPS, D/C, 3DEG GLIDE SLOPE

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 23.38 |
| 90 | 2.98 |
| 100 | 0.26 |
| 110 | 0.00 |

50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000. 105000. 110000.
 DISTANCE TO THRESHOLD, FT.

IDE SLOPE

5-5

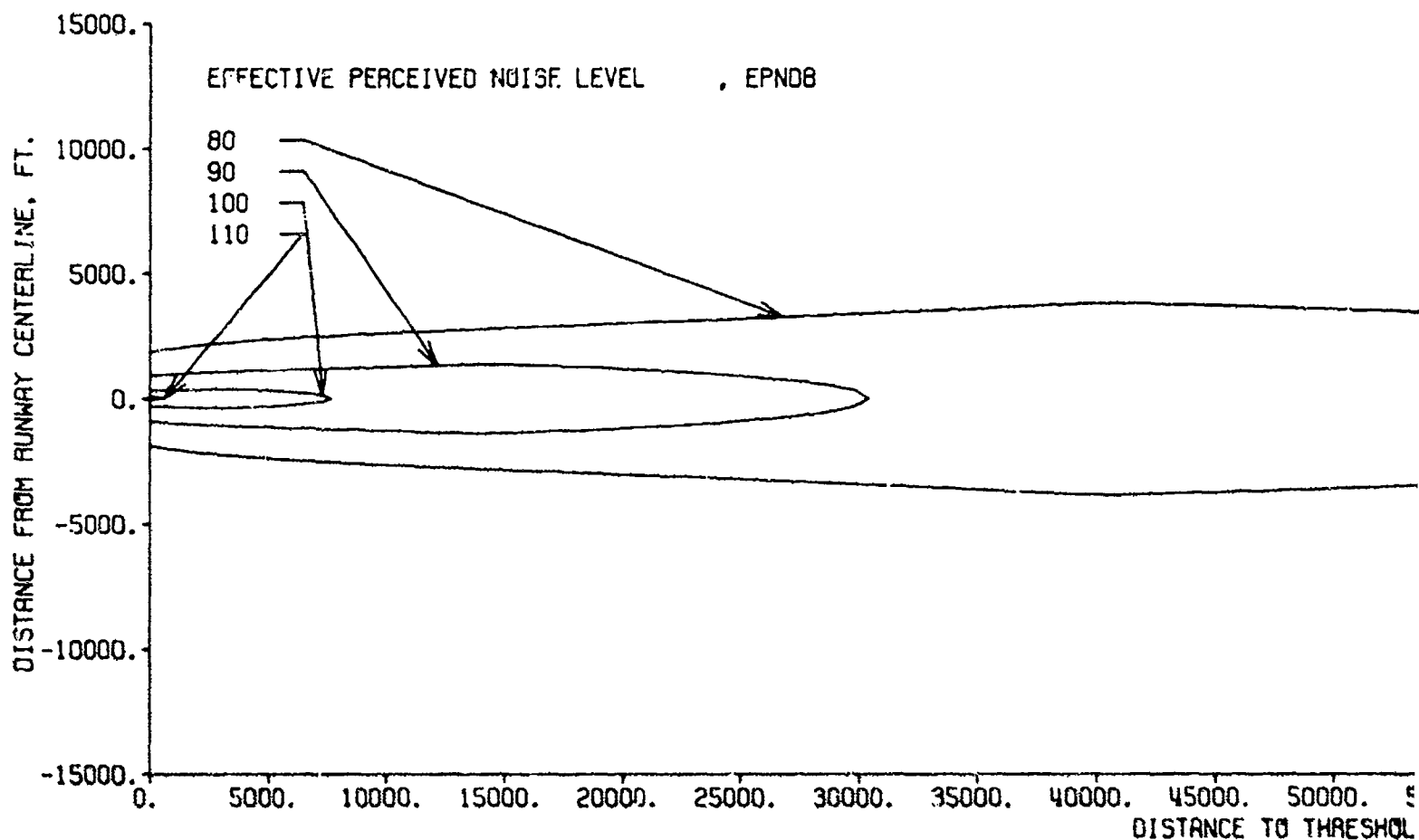
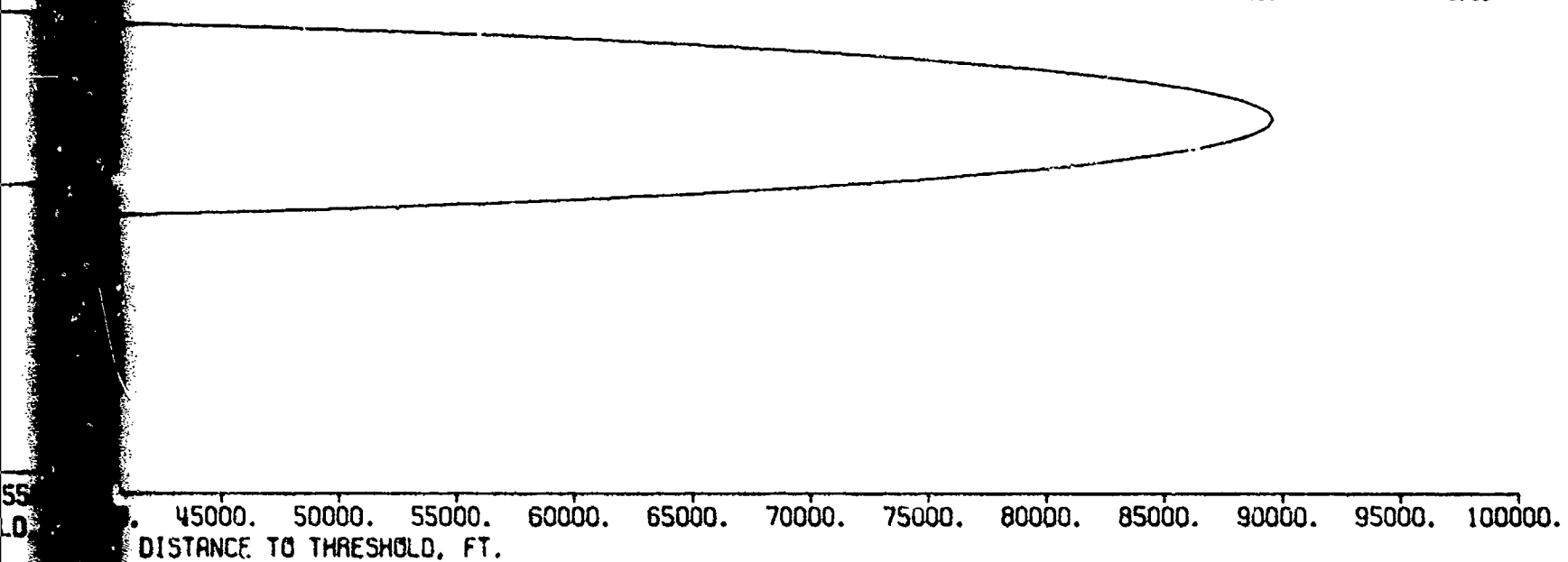


FIGURE 5-6 CONTOUR PLOTS
 L-1011-1 / AB211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 300,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 18.49 |
| 90 | 2.36 |
| 100 | 0.17 |
| 110 | 0.00 |



GLIDE SLOPE

5-6

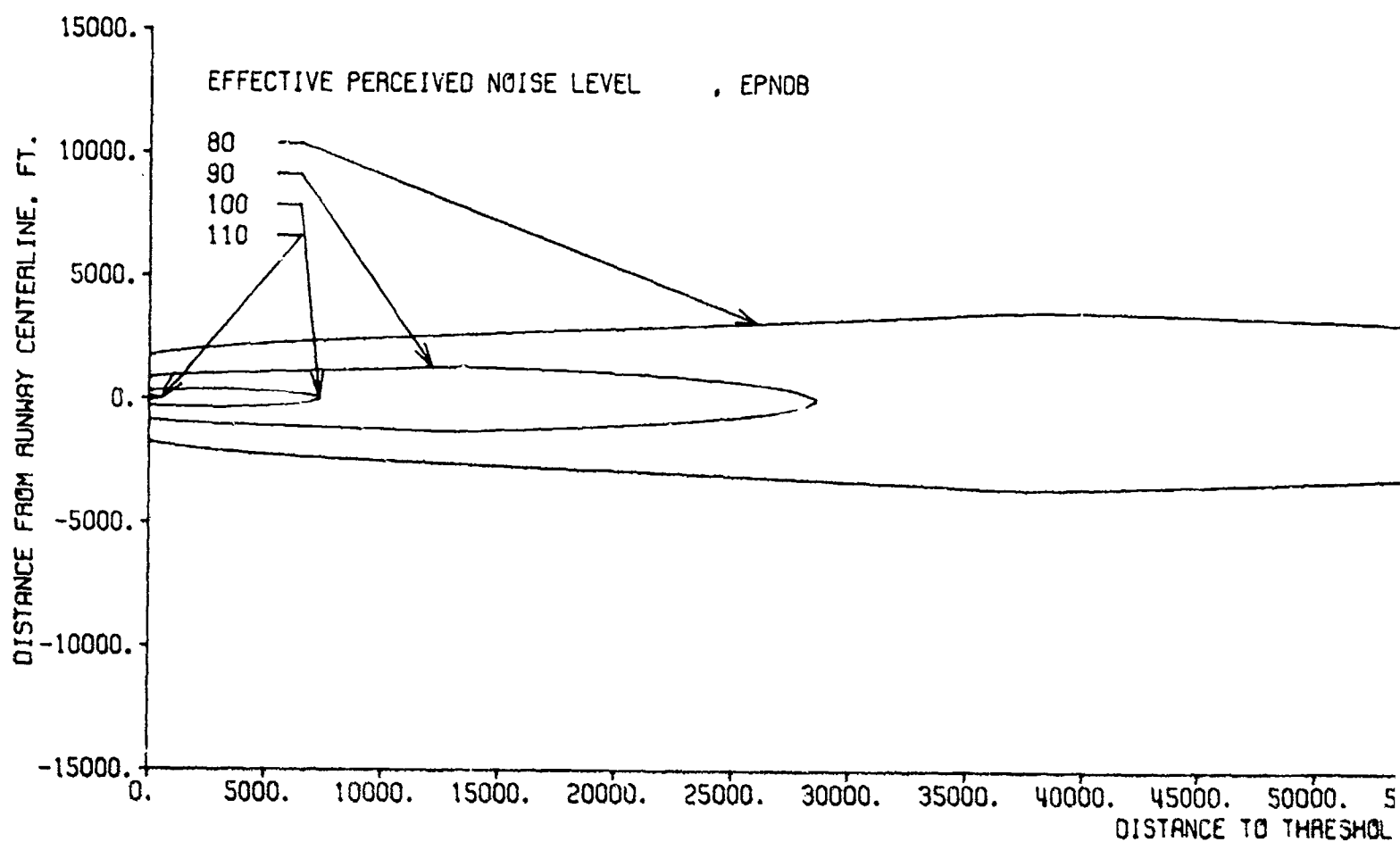


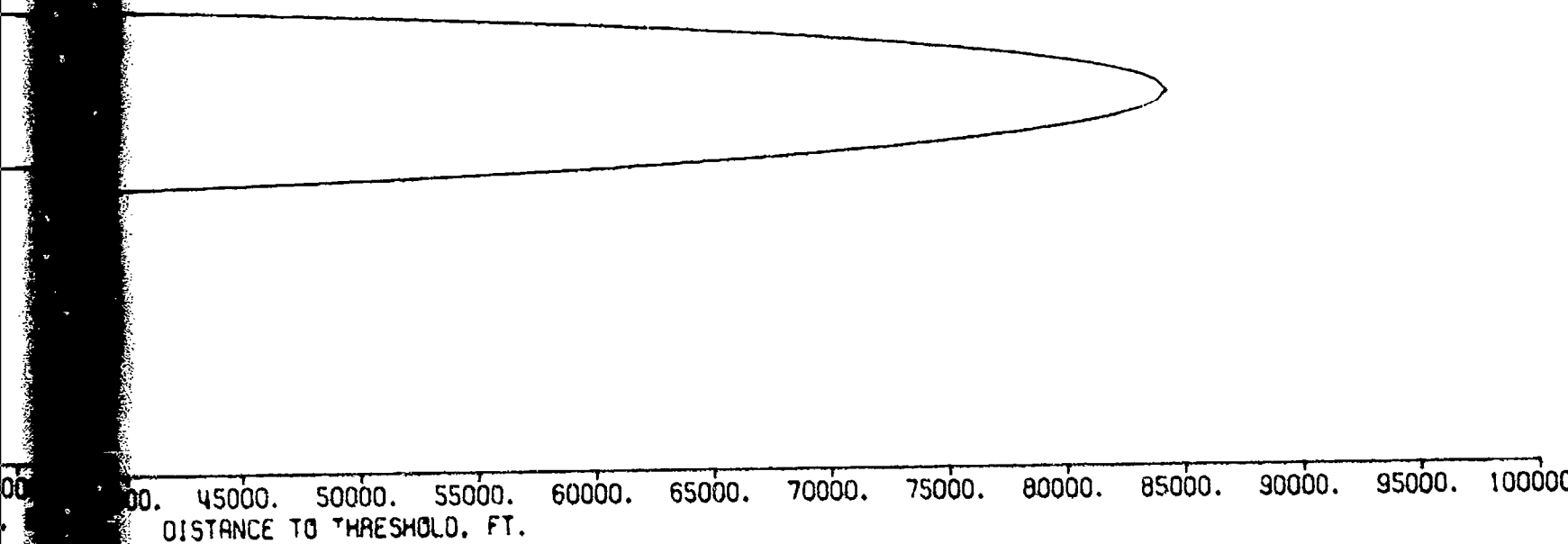
FIGURE 5-7 CONTOUR PLOTS

L-1011-1 / A8211-228 EFFECTIVE PERCEIVED NOISE LEVEL

SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY

MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, OLC, 3 DEG. GLIDE SLOPE

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 16.38 |
| 90 | 2.10 |
| 100 | 0.16 |
| 110 | 0.00 |



3 DEG. GLIDE SLOPE

5-7

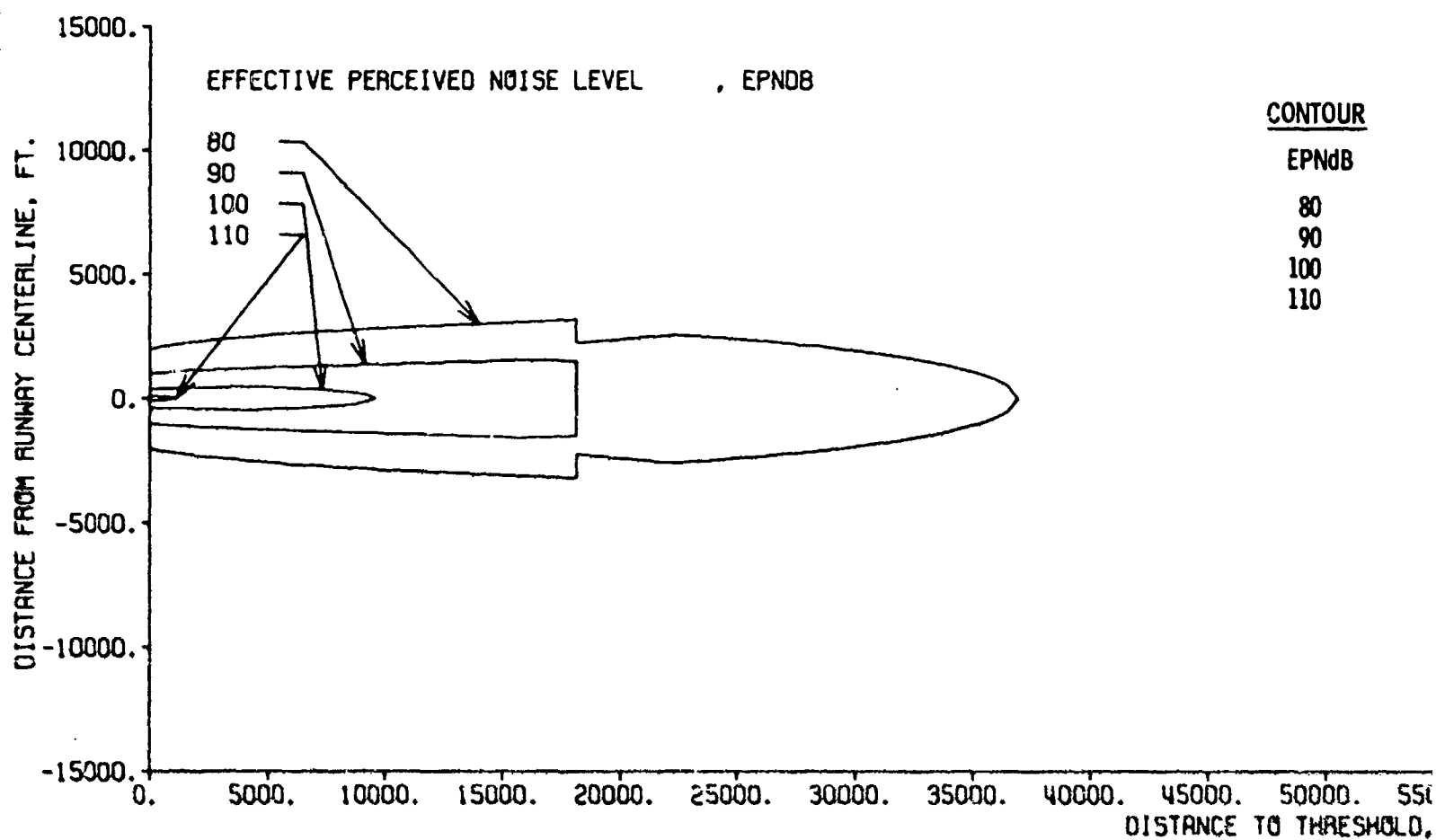


FIGURE 5-8 CONTOUR PLOTS
L-1011-1 / A8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS, OLC, 6/3 DEG. TWO SEGMENT • 1000 FEET

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| EPNdB | SQ. MILES |
| 80 | 6.22 |
| 90 | 1.76 |
| 100 | 0.26 |
| 110 | 0.00 |

00. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 10000
 DISTANCE TO THRESHOLD, FT.

SEGMENT • 1000 FEET

5-8

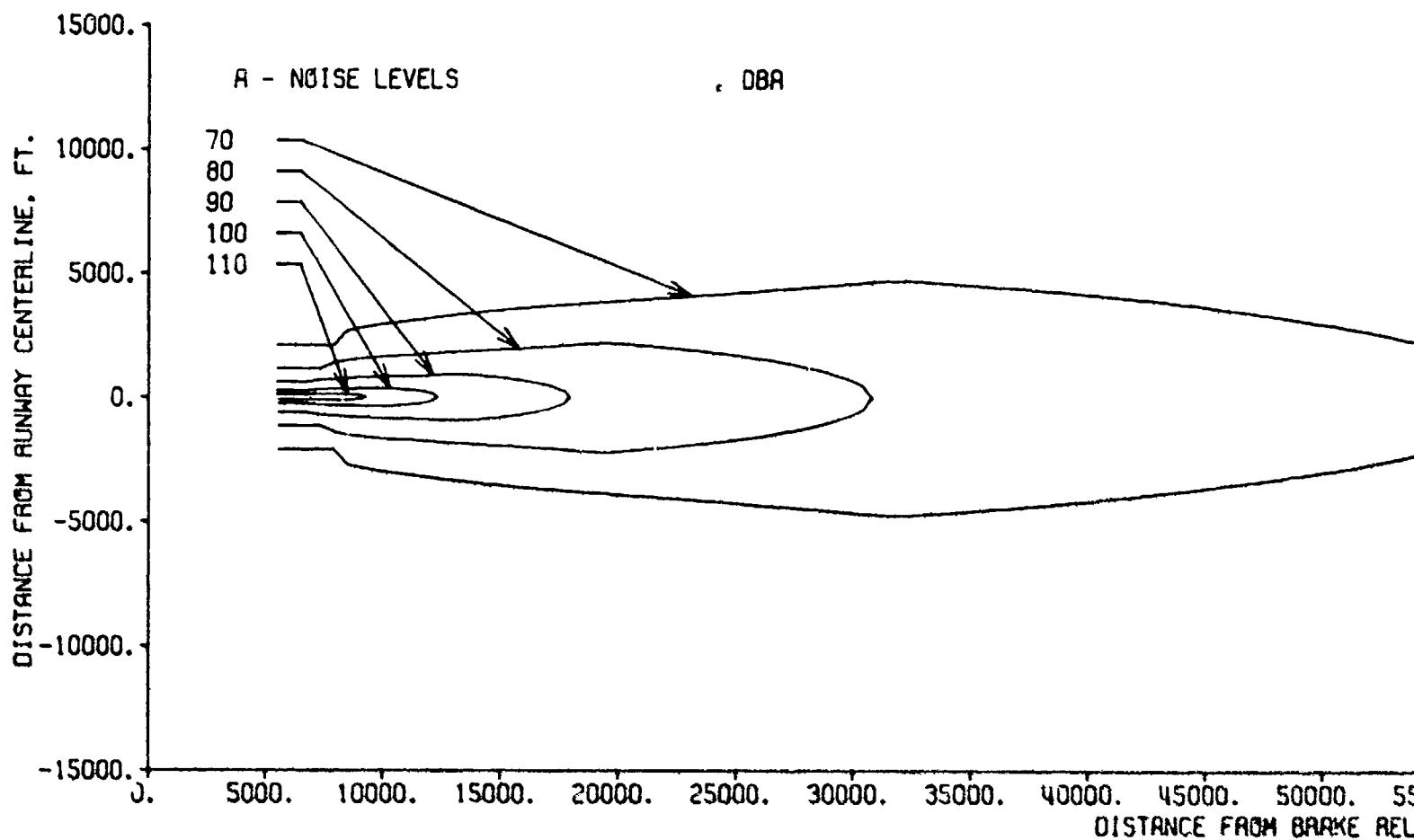


FIGURE 5-9 CONTOUR PLOTS
 L-1011-1 / A8211-228 A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBa | SQ. MILES |
| 70 | 13.46 |
| 80 | 3.00 |
| 90 | 0.66 |
| 100 | 0.14 |
| 110 | 0.03 |

0. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000.
 DISTANCE FROM BRAKE RELEASE, FT.

MEOFF THRUST

5-9

6

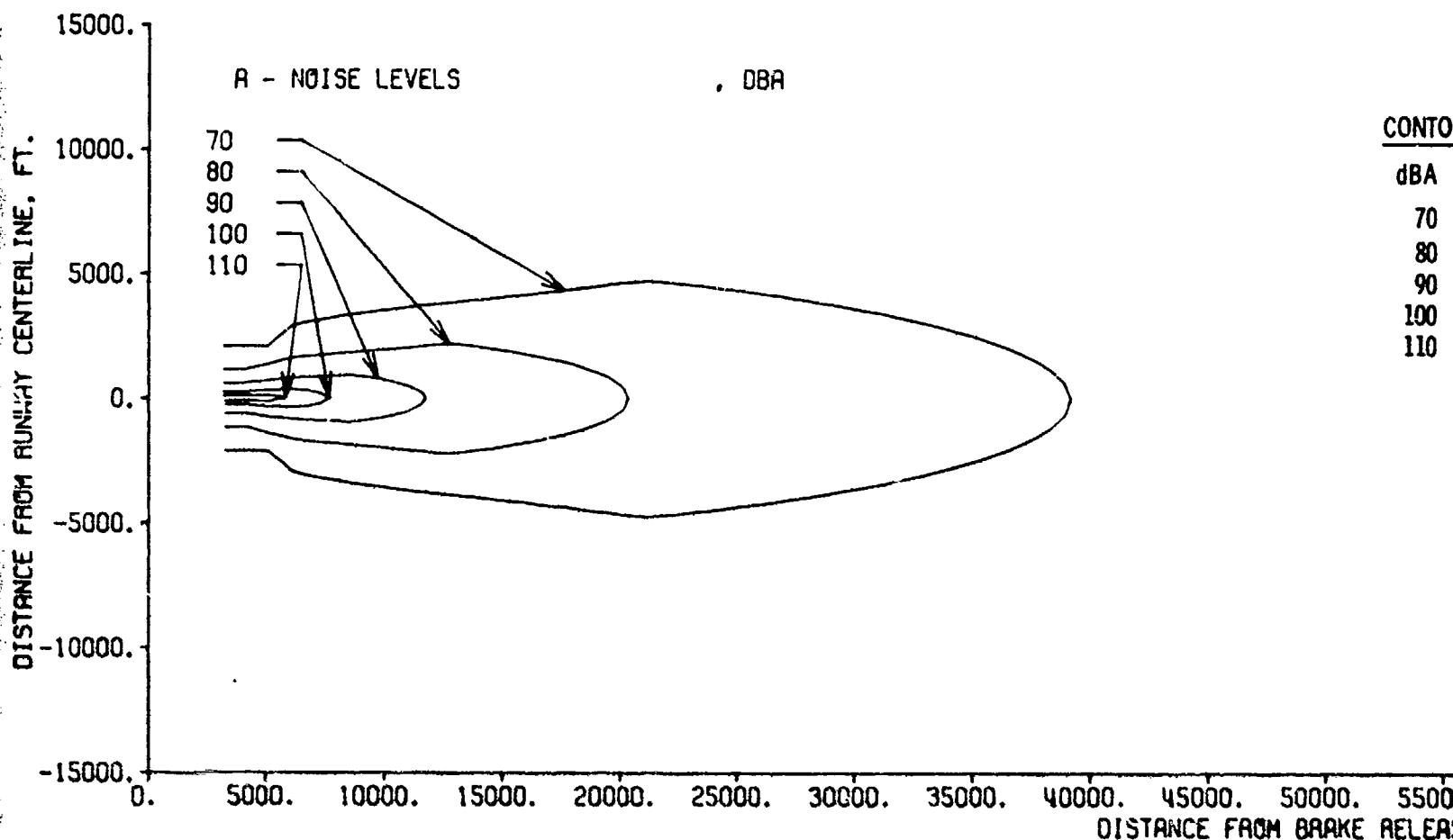


FIGURE 5-10 CONTOUR PLOTS
 L-1011-1 / AB211-22B A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 350,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBa | SQ. MILES |
| 70 | 9.01 |
| 80 | 2.03 |
| 90 | 0.44 |
| 100 | 0.09 |
| 110 | 0.02 |

45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000.
 DISTANCE FROM BRAKE RELEASE, FT.

JUST

5-10

6

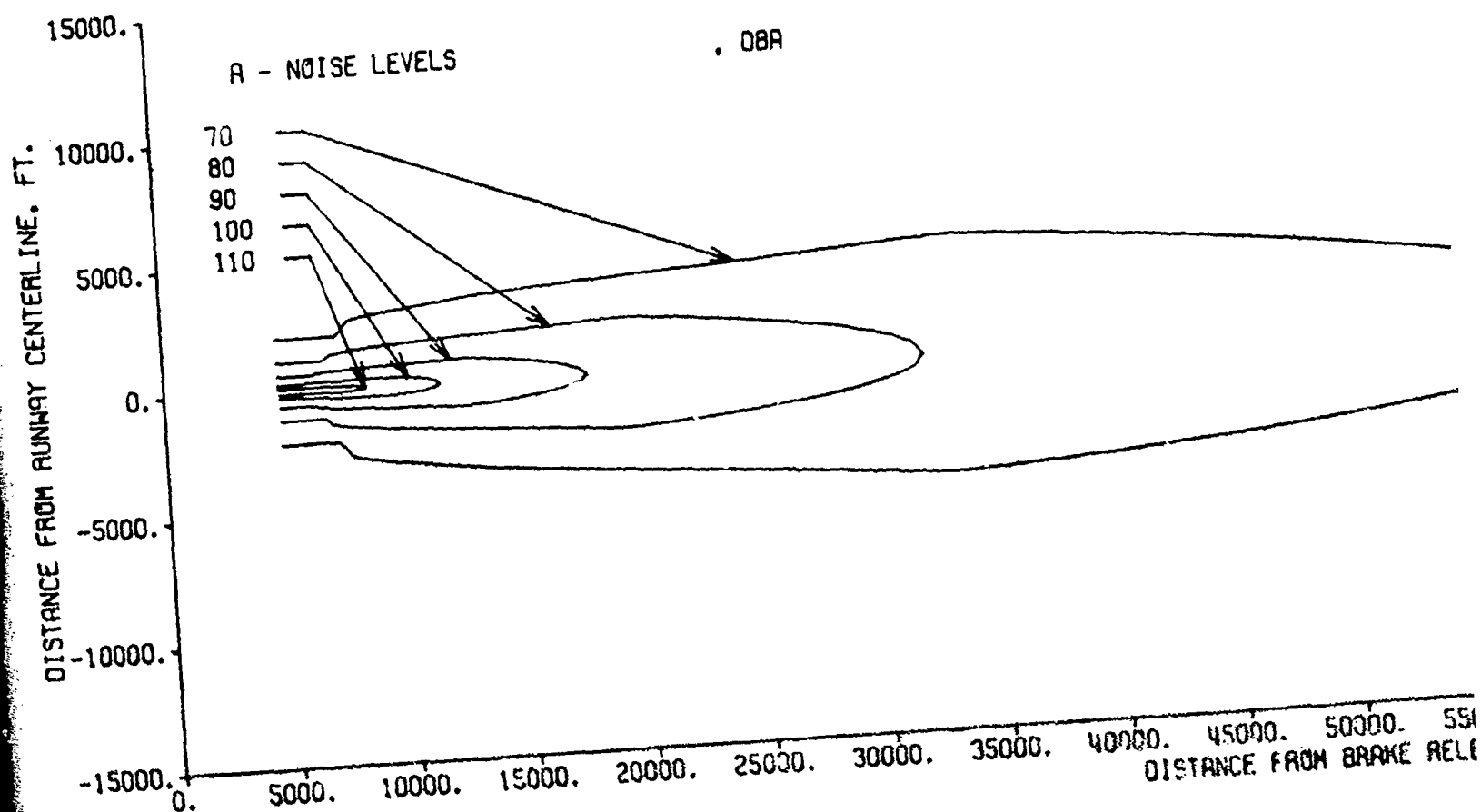


FIGURE 5-11 CONTOUR PLOTS
 L-1011-1 / AB211-228 A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT 1130,000 LB., 22 DEG. FLAPS, TAKEOFF THRUST

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBa | SQ. MILES |
| 70 | 14.86 |
| 80 | 3.25 |
| 90 | 0.69 |
| 100 | 0.14 |
| 110 | 0.03 |

000. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 10000
 DISTANCE FROM BRAKE RELEASE, FT.

TAKEOFF THRUST

5-11

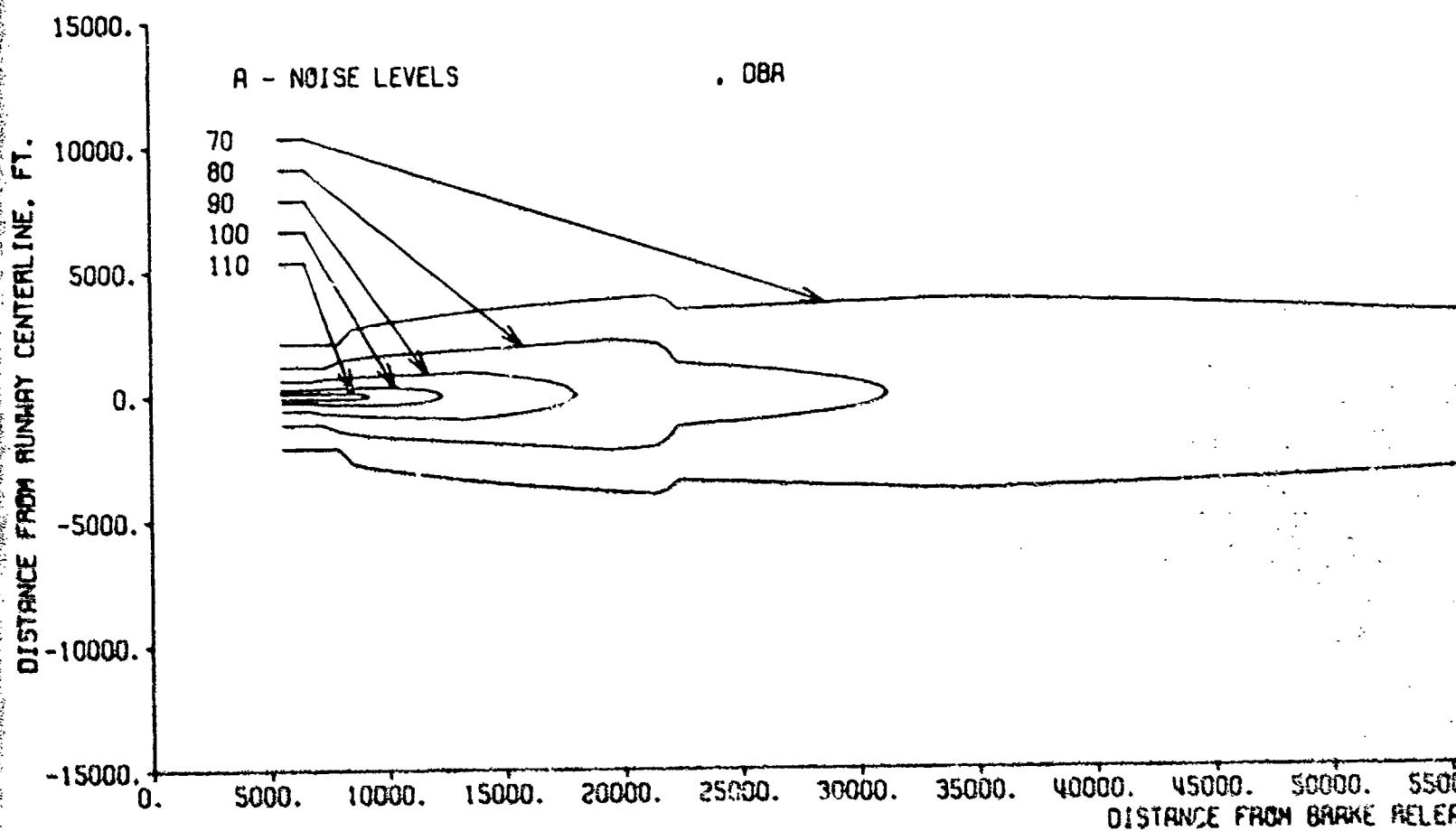


FIGURE 5-12 CONTOUR PLOTS
 L-1011-1 / RB211-22B A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBa | SQ. MILES |
| 70 | 17.10 |
| 80 | 2.69 |
| 90 | 0.66 |
| 100 | 0.14 |
| 110 | 0.03 |

0. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000.
 DISTANCE FROM BRAKE RELEASE, FT.

AT 3.5 N. MILES

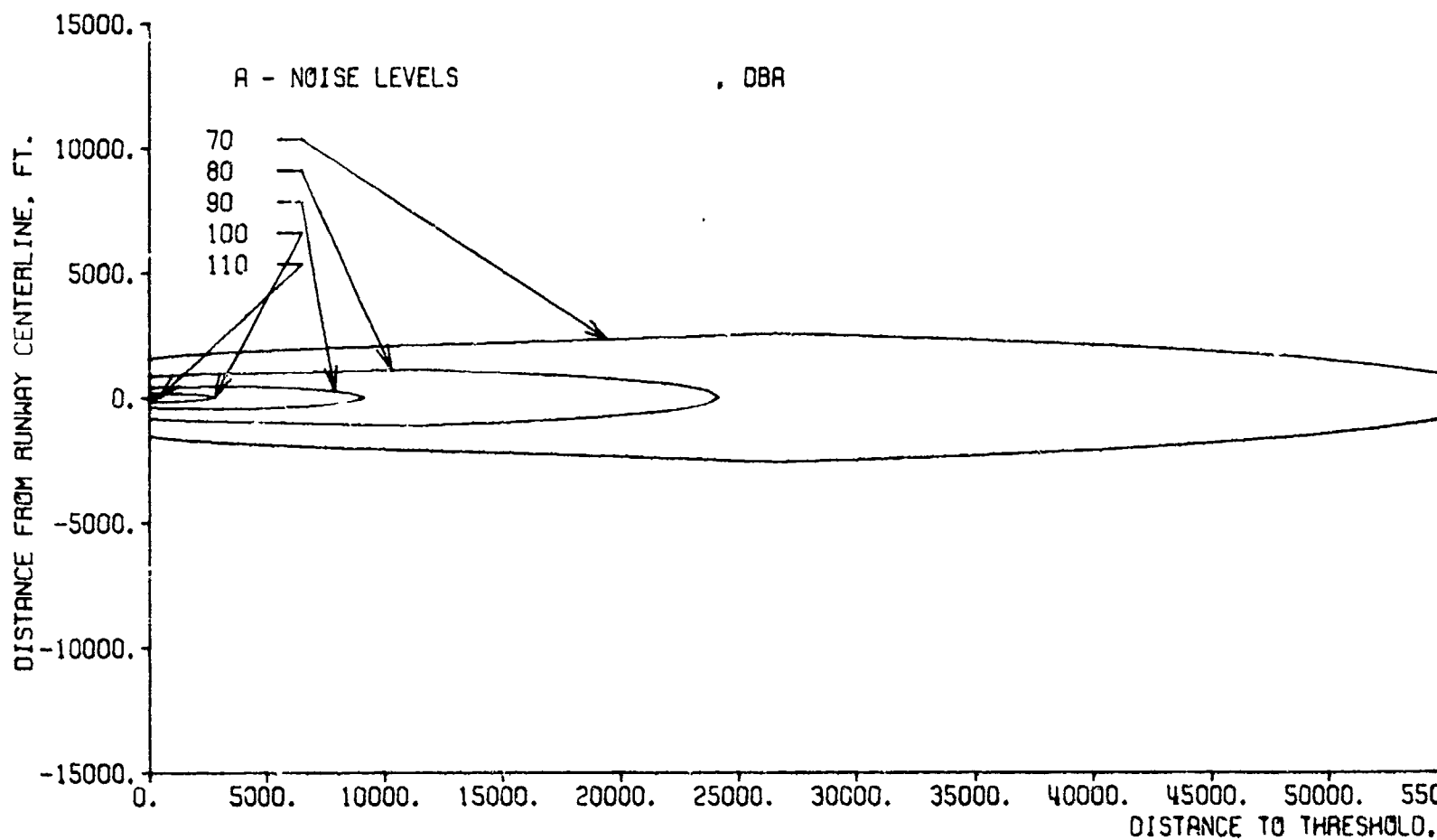


FIGURE 5-13 CONTOUR PLOTS
 L-1011-1 / A8211-228 A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM LANDING WEIGHT (358,000LB.), 42DEG. FLAPS, DLC, 30EG GLIDE SLOPE

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBA | SQ. MILES |
| 70 | 8.18 |
| 80 | 1.55 |
| 90 | 0.24 |
| 100 | 0.03 |
| 110 | 0.00 |

000. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 10000
 DISTANCE TO THRESHOLD, FT.

LC, 30EG GLIDE SLOPE

5-13

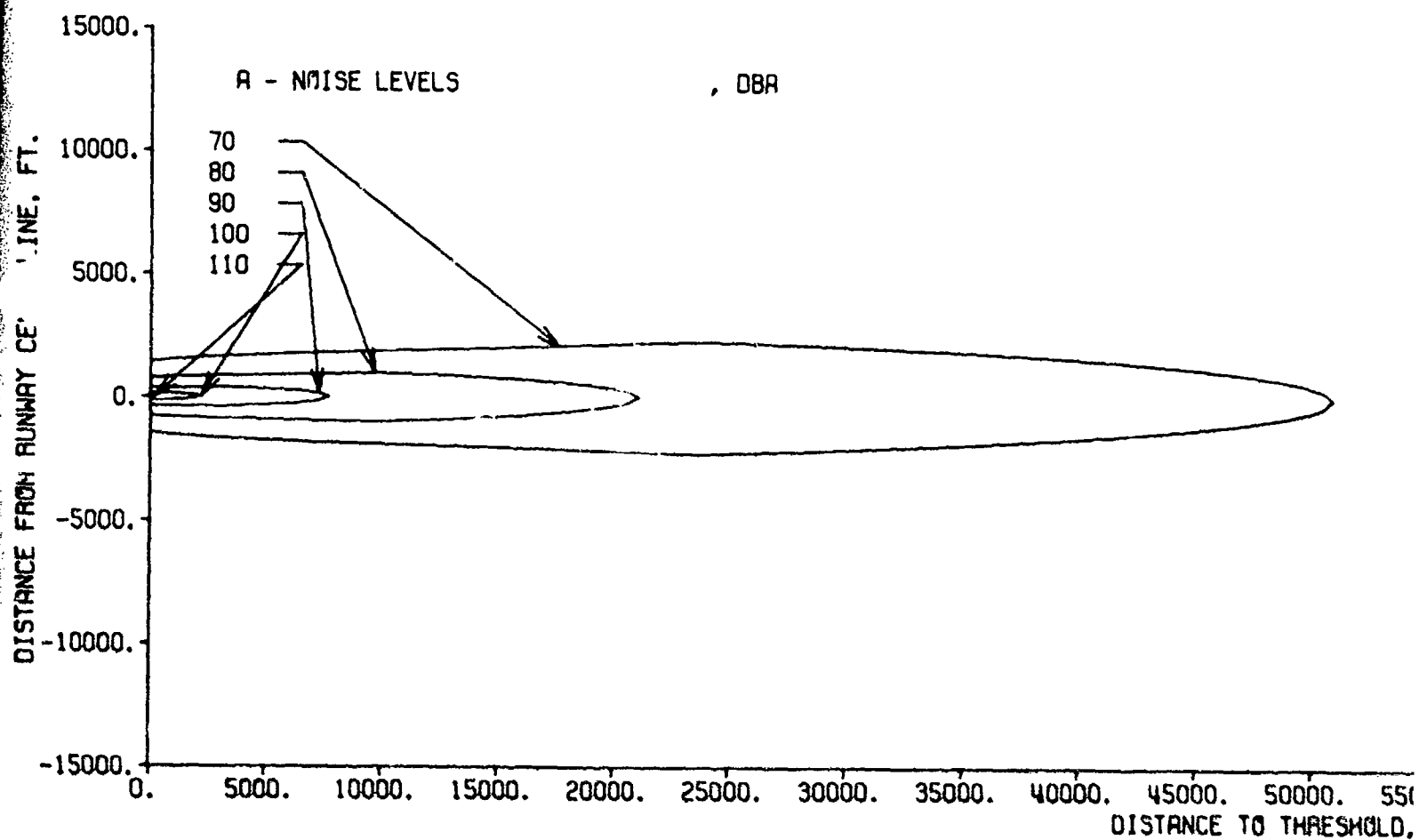


FIGURE 5-14 CONTOUR PLOTS
 L-1011-1 / AB211-228 A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 300,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, OLC, 3 DEG. GLIDE SLOPE

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBa | SQ. MILES |
| 70 | 6.47 |
| 80 | 1.20 |
| 90 | 0.18 |
| 100 | 0.02 |
| 110 | 0.00 |

000
F
00. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000
DISTANCE TO THRESHOLD, FT.

G. GLIDE SLOPE

5-14

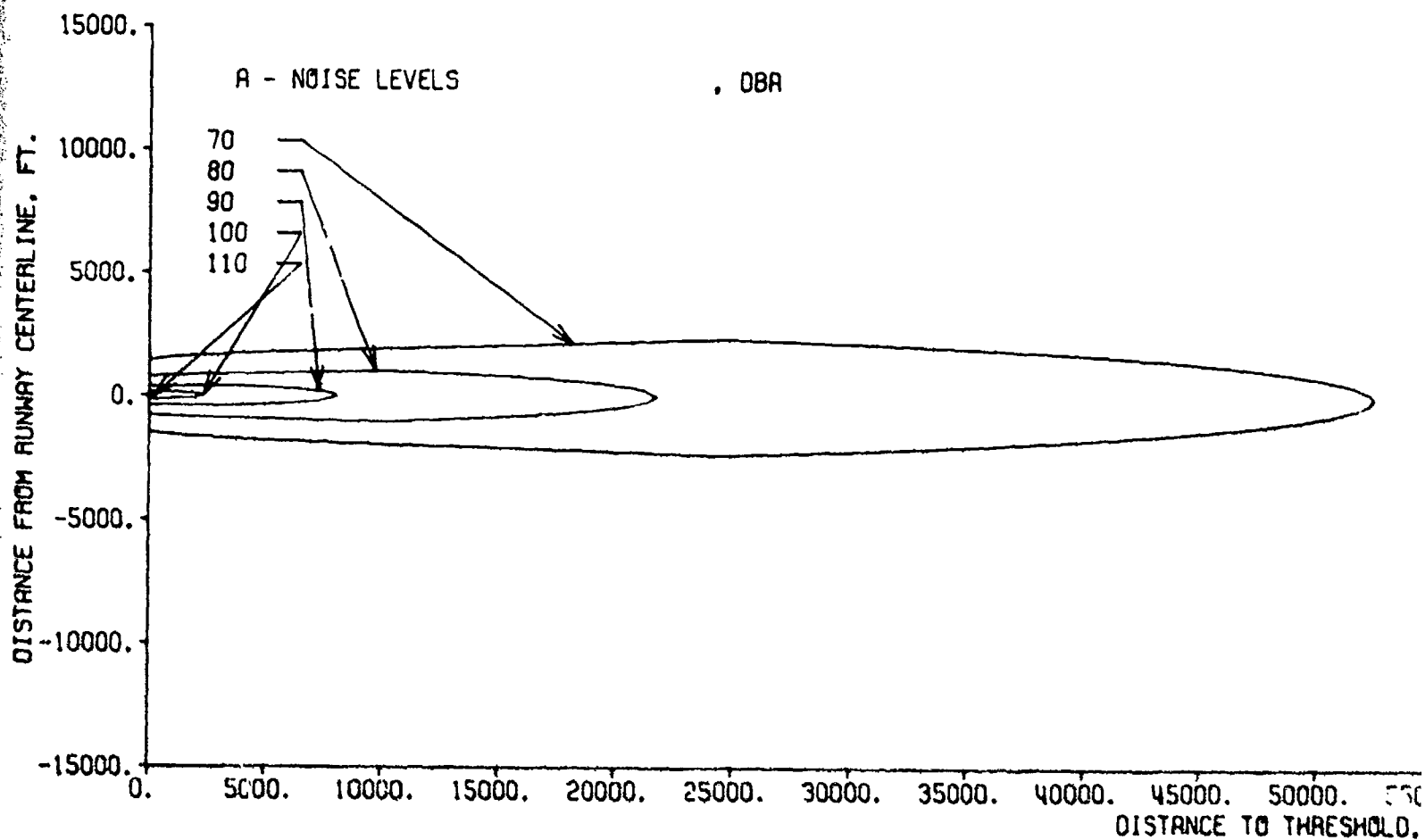


FIGURE 5-15 CONTOUR PLOTS
 L-1011-1 / B211-22B A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, OLC, 3 DEG. GLIDE SLOPE

| <u>CONTOUR</u> | <u>AREA</u> |
|----------------|-------------|
| dBa | SQ. MILES |
| 70 | 6.84 |
| 80 | 1.27 |
| 90 | 0.19 |
| 100 | 0.02 |
| 110 | 0.00 |

00
F 0000. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 10000
DISTANCE TO THRESHOLD, FT.

C, 3 DEG. GLIDE SLOPE

5-15

6

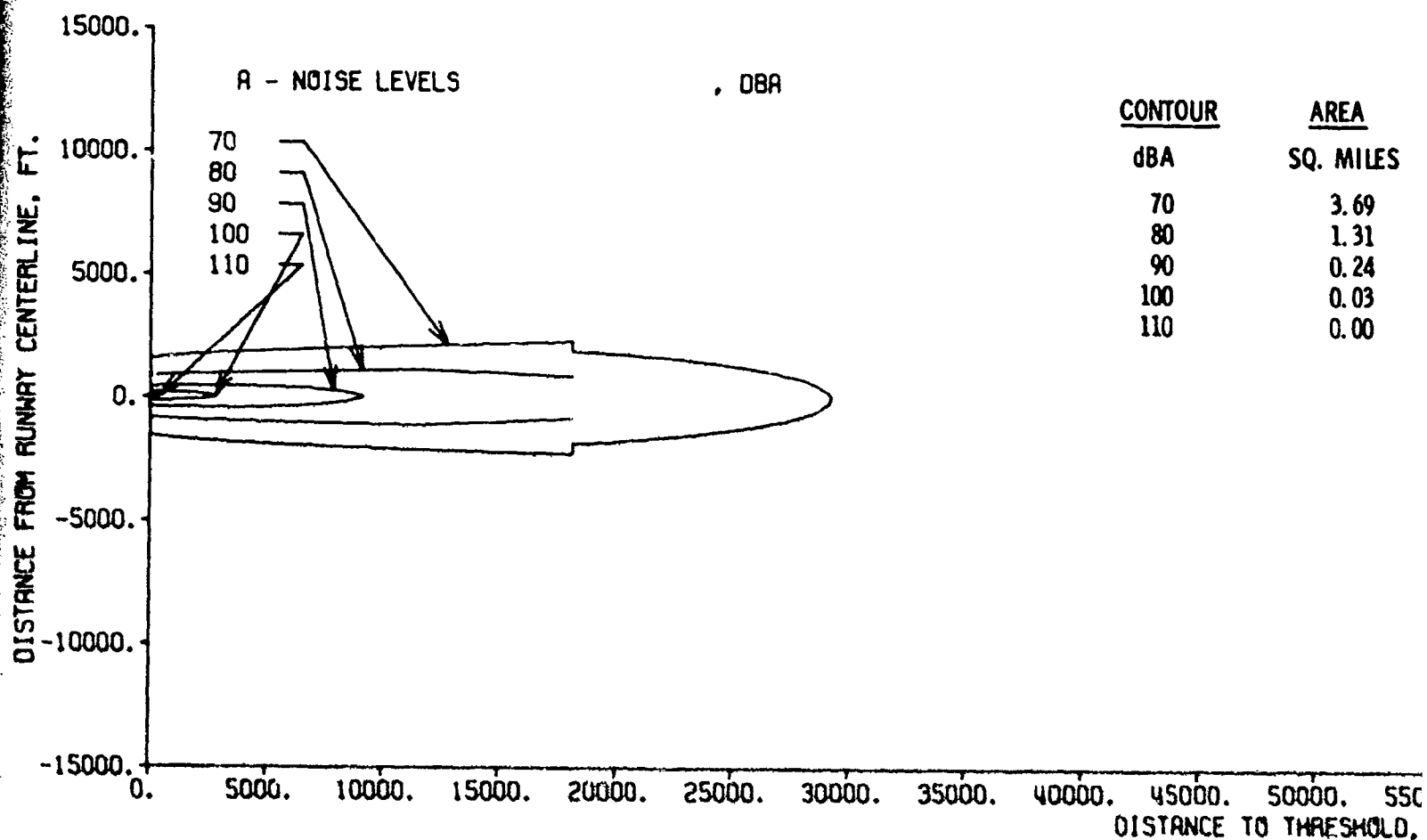


FIGURE 5-16 CONTOUR PLOTS
 L-1011-1 / AB211-22B A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAX LANDING WT., 42 DEG. FLAPS, OLC, 6/3 DEG. TWO SEGMENT • 1000 FEET

CONTOUR

AREA

dBA

SQ. MILES

| | |
|-----|------|
| 70 | 3.69 |
| 80 | 1.31 |
| 90 | 0.24 |
| 100 | 0.03 |
| 110 | 0.00 |

0000. 45000. 50000. 55000. 60000. 65000. 70000. 75000. 80000. 85000. 90000. 95000. 100000.
DISTANCE TO THRESHOLD, FT.

MENT • 1000 FEET

5-16

1 - 1941 1 - 1941 1 - 1941 1 - 1941

[illegible]

| | | |
|---------|---------|-----|
| 129.14 | 135.37 | 141.60 | 147.83 | 154.06 | 160.29 | 166.52 | 172.75 | 178.98 | 185.21 | 191.44 | 197.67 | 203.90 | 210.13 | 216.36 | 222.59 | 228.82 | 235.05 | 241.28 | 247.51 | 253.74 | 259.97 | 266.20 | 272.43 | 278.66 | 284.89 | 291.12 | 297.35 | 303.58 | 309.81 | 316.04 | 322.27 | 328.50 | 334.73 | 340.96 | 347.19 | 353.42 | 359.65 | 365.88 | 372.11 | 378.34 | 384.57 | 390.80 | 397.03 | 403.26 | 409.49 | 415.72 | 421.95 | 428.18 | 434.41 | 440.64 | 446.87 | 453.10 | 459.33 | 465.56 | 471.79 | 478.02 | 484.25 | 490.48 | 496.71 | 502.94 | 509.17 | 515.40 | 521.63 | 527.86 | 534.09 | 540.32 | 546.55 | 552.78 | 559.01 | 565.24 | 571.47 | 577.70 | 583.93 | 590.16 | 596.39 | 602.62 | 608.85 | 615.08 | 621.31 | 627.54 | 633.77 | 640.00 | 646.23 | 652.46 | 658.69 | 664.92 | 671.15 | 677.38 | 683.61 | 689.84 | 696.07 | 702.30 | 708.53 | 714.76 | 720.99 | 727.22 | 733.45 | 739.68 | 745.91 | 752.14 | 758.37 | 764.60 | 770.83 | 777.06 | 783.29 | 789.52 | 795.75 | 801.98 | 808.21 | 814.44 | 820.67 | 826.90 | 833.13 | 839.36 | 845.59 | 851.82 | 858.05 | 864.28 | 870.51 | 876.74 | 882.97 | 889.20 | 895.43 | 901.66 | 907.89 | 914.12 | 920.35 | 926.58 | 932.81 | 939.04 | 945.27 | 951.50 | 957.73 | 963.96 | 970.19 | 976.42 | 982.65 | 988.88 | 995.11 | 1001.34 | 1007.57 | 1013.80 | 1020.03 | 1026.26 | 1032.49 | 1038.72 | 1044.95 | 1051.18 | 1057.41 | 1063.64 | 1069.87 | 1076.10 | 1082.33 | 1088.56 | 1094.79 | 1101.02 | 1107.25 | 1113.48 | 1119.71 | 1125.94 | 1132.17 | 1138.40 | 1144.63 | 1150.86 | 1157.09 | 1163.32 | 1169.55 | 1175.78 | 1182.01 | 1188.24 | 1194.47 | 1200.70 | 1206.93 | 1213.16 | 1219.39 | 1225.62 | 1231.85 | 1238.08 | 1244.31 | 1250.54 | 1256.77 | 1263.00 | 1269.23 | 1275.46 | 1281.69 | 1287.92 | 1294.15 | 1300.38 | 1306.61 | 1312.84 | 1319.07 | 1325.30 | 1331.53 | 1337.76 | 1343.99 | 1350.22 | 1356.45 | 1362.68 | 1368.91 | 1375.14 | 1381.37 | 1387.60 | 1393.83 | 1400.06 | 1406.29 | 141 |
|---------|---------|-----|

129. 110. 100. 90.

TABLE 1. 21740. 1951-1952. 6000.

[illegible]

$\gamma_{\text{H}_2\text{O}} = 0.999$ $\gamma_{\text{H}_2\text{O}} = 0.999$ $\gamma_{\text{H}_2\text{O}} = 0.999$
 $\gamma_{\text{H}_2\text{O}} = 0.999$ $\gamma_{\text{H}_2\text{O}} = 0.999$ $\gamma_{\text{H}_2\text{O}} = 0.999$

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| | | | | | | |
|-----|------------|--------|--------|--------|--------|--------|
| FOR | 10005.0000 | 0.1000 | 0.2000 | 0.3000 | 0.4000 | 0.5000 |
| | 5000.0000 | 1.0590 | 1.0680 | 1.0770 | 1.0860 | 1.0950 |
| | 6000.0000 | 1.0850 | 1.1000 | 1.1150 | 1.1300 | 1.1450 |
| | 8000.0000 | 1.1140 | 1.1320 | 1.1500 | 1.1680 | 1.1860 |
| | 10000.0000 | 1.1450 | 1.1630 | 1.1810 | 1.1990 | 1.2170 |
| | 12000.0000 | 1.1710 | 1.1930 | 1.2150 | 1.2370 | 1.2590 |
| | 14000.0000 | 1.2000 | 1.2240 | 1.2480 | 1.2720 | 1.2960 |
| | 16000.0000 | 1.2260 | 1.2540 | 1.2820 | 1.3100 | 1.3380 |
| | 18000.0000 | 1.2550 | 1.2850 | 1.3160 | 1.3460 | 1.3760 |
| | 20000.0000 | 1.2830 | 1.3160 | 1.3490 | 1.3820 | 1.4150 |
| | 22000.0000 | 1.3110 | 1.3470 | 1.3820 | 1.4170 | 1.4520 |
| | 24000.0000 | 1.3340 | 1.3750 | 1.4160 | 1.4570 | 1.4980 |
| | 26000.0000 | 1.3570 | 1.4000 | 1.4420 | 1.4840 | 1.5260 |
| | 28000.0000 | 1.3760 | 1.4210 | 1.4640 | 1.5070 | 1.5500 |
| | 30000.0000 | 1.3950 | 1.4420 | 1.4860 | 1.5300 | 1.5730 |
| | 32000.0000 | 1.4140 | 1.4630 | 1.5080 | 1.5530 | 1.5980 |
| | 34000.0000 | 1.4330 | 1.4840 | 1.5300 | 1.5760 | 1.6220 |
| | 36000.0000 | 1.4520 | 1.5050 | 1.5520 | 1.6000 | 1.6460 |
| | 38000.0000 | 1.4710 | 1.5260 | 1.5740 | 1.6290 | 1.6730 |
| | 40000.0000 | 1.4900 | 1.5460 | 1.5950 | 1.6480 | 1.6960 |

RA

| | | | | | |
|----|--------|--------|--------|--------|--------|
| RA | 0.3807 | 0.0804 | 0.0873 | 0.0853 | 0.0913 |
| | 0.0677 | 0.0980 | 0.0985 | 0.1017 | 0.1091 |
| | 1.0000 | 1.1100 | 1.3000 | 1.1100 | 1.3000 |

RA1A

| | | | | | | |
|------|------------|---------|---------|---------|---------|----------|
| RA1A | 27005.0000 | 0.0 | 0.1000 | 0.2000 | 0.3000 | 0.4000 |
| | 1.1000 | 47.2000 | 47.2000 | 49.2000 | 51.2000 | 53.2000 |
| | 1.1200 | 51.3000 | 51.7000 | 52.8000 | 53.4000 | 54.9000 |
| | 1.1400 | 55.0000 | 55.4000 | 56.3000 | 57.0000 | 58.9000 |
| | 1.1600 | 58.5000 | 58.8000 | 59.8000 | 60.1000 | 61.9000 |
| | 1.1800 | 61.9000 | 62.1000 | 63.1000 | 63.3000 | 64.9000 |
| | 1.2000 | 65.1000 | 65.3000 | 66.3000 | 66.5000 | 68.1000 |
| | 1.2200 | 67.8000 | 68.0000 | 69.0000 | 69.2000 | 70.8000 |
| | 1.2400 | 70.2000 | 70.4000 | 71.2000 | 71.4000 | 73.0000 |
| | 1.2600 | 72.3000 | 72.6000 | 73.3000 | 73.6000 | 75.2000 |
| | 1.2800 | 74.3000 | 74.6000 | 75.2000 | 75.5000 | 77.1000 |
| | 1.3000 | 75.9000 | 76.2000 | 77.0000 | 77.3000 | 78.9000 |
| | 1.3200 | 77.5000 | 77.8000 | 78.6000 | 78.9000 | 80.5000 |
| | 1.3400 | 79.1000 | 79.3000 | 80.2000 | 80.5000 | 82.1000 |
| | 1.3600 | 80.5000 | 80.9000 | 81.7000 | 82.0000 | 83.6000 |
| | 1.3800 | 82.1000 | 82.3000 | 83.1000 | 83.4000 | 84.9000 |
| | 1.4000 | 83.4000 | 83.7000 | 84.6000 | 84.9000 | 86.4000 |
| | 1.4200 | 84.9000 | 85.0000 | 85.8000 | 86.1000 | 87.6000 |
| | 1.4400 | 86.4000 | 86.6000 | 87.3000 | 87.6000 | 89.1000 |
| | 1.4600 | 87.6000 | 87.8000 | 88.6000 | 88.9000 | 90.4000 |
| | 1.4800 | 89.1000 | 89.3000 | 90.2000 | 90.5000 | 91.9000 |
| | 1.5000 | 90.4000 | 90.6000 | 91.5000 | 91.8000 | 93.2000 |
| | 1.5200 | 91.8000 | 92.0000 | 93.0000 | 93.3000 | 94.6000 |
| | 1.5400 | 93.2000 | 93.4000 | 94.5000 | 94.8000 | 96.1000 |
| | 1.5600 | 94.6000 | 94.8000 | 95.9000 | 96.2000 | 97.6000 |
| | 1.5800 | 96.1000 | 96.3000 | 97.3000 | 97.6000 | 99.1000 |
| | 1.6000 | 97.6000 | 97.8000 | 98.9000 | 99.2000 | 100.0000 |

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| | | | | | | |
|--------|------------|---------|-----------|---------|-----------|-----------|
| DMFPU | 0001.0000 | 0.0 | 0.2500 | 0.3000 | 0.3000 | 0.4000 |
| | 1.1000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 1.2000 | 0.0 | -0.0000 | -0.0000 | 0.0 | 0.0 |
| | 1.3000 | 0.0 | -0.0000 | -1.3000 | 0.0 | 0.0 |
| | 1.4000 | 0.0 | -0.0000 | -1.2000 | 0.0 | 0.0 |
| | 1.5000 | 0.0 | -0.2000 | -0.6200 | 0.0 | 0.0 |
| | 1.6000 | 0.0 | 3.8000 | 1.0000 | 0.0 | 0.0 |
| DMALTA | 7005.0000 | 0.0 | 0.1000 | 0.2000 | 0.3000 | 0.4000 |
| | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 2030.0000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 4000.0000 | 1.0000 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6000.0000 | 2.0000 | 1.1000 | 0.0 | 0.0 | 0.0 |
| | 8000.0000 | 3.0000 | 1.9000 | 0.0 | 0.0 | 0.0 |
| | 10000.0000 | 4.0000 | 2.4000 | 0.0 | 0.0 | 0.0 |
| | 12000.0000 | 4.0000 | 3.0000 | 2.0000 | 1.0000 | 0.0 |
| DMTC | 7005.0000 | 0.0 | 0.1000 | 0.2000 | 0.3000 | 0.4000 |
| | 1.1000 | 47.4000 | 48.1000 | 49.4000 | 51.5000 | 54.7000 |
| | 1.1200 | 51.1000 | 51.1000 | 52.7000 | 54.9000 | 57.7000 |
| | 1.1400 | 54.7000 | 55.1000 | 56.1000 | 58.2000 | 60.8000 |
| | 1.1600 | 58.0000 | 58.4000 | 59.3000 | 61.3000 | 63.6000 |
| | 1.1800 | 61.2000 | 61.5000 | 62.5000 | 64.3000 | 66.2000 |
| | 1.2000 | 64.7000 | 64.5000 | 65.4000 | 66.9000 | 68.6000 |
| | 1.2200 | 68.4000 | 67.1000 | 68.0000 | 69.3000 | 70.6000 |
| | 1.2400 | 71.5000 | 69.6000 | 70.3000 | 71.5000 | 72.8000 |
| | 1.2600 | 73.5000 | 71.7000 | 72.4000 | 73.5000 | 74.8000 |
| | 1.2800 | 75.2000 | 73.5000 | 74.4000 | 75.5000 | 76.8000 |
| | 1.3000 | 76.9000 | 75.5000 | 76.2000 | 77.3000 | 78.5000 |
| | 1.3200 | 78.4000 | 77.2000 | 77.9000 | 79.0000 | 80.1000 |
| | 1.3400 | 79.9000 | 78.7000 | 79.4000 | 80.5000 | 81.5000 |
| | 1.3600 | 81.3000 | 80.1000 | 80.9000 | 81.9000 | 82.8000 |
| | 1.3800 | 82.7000 | 81.5000 | 82.3000 | 83.2000 | 84.0000 |
| | 1.4000 | 84.2000 | 83.0000 | 83.6000 | 84.5000 | 85.3000 |
| | 1.4200 | 85.6000 | 84.4000 | 85.0000 | 85.8000 | 86.6000 |
| | 1.4400 | 87.0000 | 85.8000 | 86.6000 | 87.1000 | 87.9000 |
| | 1.4600 | 88.4000 | 87.2000 | 87.7000 | 88.4000 | 89.2000 |
| | 1.4800 | 89.8000 | 88.6000 | 89.1000 | 89.8000 | 90.5000 |
| | 1.5000 | 91.2000 | 90.0000 | 90.5000 | 91.0000 | 91.7000 |
| | 1.5200 | 92.6000 | 91.3000 | 91.8000 | 92.4000 | 93.0000 |
| | 1.5400 | 94.0000 | 92.6000 | 93.1000 | 93.6000 | 94.2000 |
| | 1.5600 | 95.4000 | 93.9000 | 94.4000 | 94.8000 | 95.4000 |
| | 1.5800 | 96.8000 | 95.2000 | 95.7000 | 96.0000 | 96.4000 |
| | 1.6000 | 98.2000 | 96.5000 | 97.0000 | 97.1000 | 97.3000 |
| | 1.6200 | 99.6000 | 97.8000 | 97.5000 | 98.0000 | 98.4000 |
| DMALTA | 0.7 | 0.0 | 2000.0000 | 0.0400 | 4000.0000 | 0.0900 |
| | 10000.0000 | 0.0 | 0.0 | 0.0 | 6000.0000 | 0.1500 |
| | | | | | | 8000.0000 |
| | | | | | | 0.2200 |

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| | | | | | |
|------|--------|--------|--------|--------|--------|
| FLOW | 1300 | 1000 | 0.0 | 0.2000 | 0.4000 |
| | 1.1000 | 1.5000 | 1.5000 | 3.3500 | 3.2000 |
| | 1.1200 | 1.2500 | 3.2500 | 3.0750 | 2.9000 |
| | 1.1400 | 1.2000 | 1.2000 | 1.7750 | 1.5500 |
| | 1.1600 | 2.4000 | 2.4000 | 2.5250 | 2.2500 |
| | 1.1800 | 2.5000 | 2.5000 | 2.2000 | 1.9000 |
| | 1.2000 | 2.1000 | 2.1000 | 2.0500 | 1.8000 |
| | 1.2200 | 2.0500 | 2.0500 | 1.9250 | 1.6000 |
| | 1.2400 | 1.8000 | 1.8000 | 1.8000 | 1.4000 |
| | 1.2600 | 1.6000 | 1.6000 | 1.6000 | 1.3500 |
| | 1.2800 | 1.3500 | 1.3500 | 1.3500 | 1.1000 |
| | 1.3000 | 1.1000 | 1.1000 | 1.1000 | 1.0000 |
| | 1.3200 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| | 1.3400 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST 07-04-74 PAGE 6

FLAP=10. DEG TEMP=77.0 DEG F WIND= 0.0 KY SLOPE=0.0 ACCI = 0.0 KT/SEC

| SEGMENT | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | TOTAL TIME (SEC) | THRUST (LB) | SPEED (KTAS) | MACH | ALPHA (DEG) | PITCH (DEG) | CRAD | TEMP (DEG F) | TEPR | NI/ SORT (THETA) (PCT) | ROC (FPM) | FLAP (DEG) |
|----------|------------------------|-------------------------|---------------------|------------------|-------------|--------------|--------|-------------|-------------|------|--------------|-------|------------------------|-----------|------------|
| HP= | J. WEIGHT= | 430000. | IFPR= | 1.533 | ISA+ | 10.0 | DEG C. | RB.211-22B | BLFED OFF | **** | 77.0 | 1.521 | 92.41 | **** | 10. |
| RR-ROT | 0. | 0. | 5515. | 43.1 | 32076. | 156.7 | .233 | **** | **** | **** | 77.0 | 1.519 | 92.41 | **** | 10. |
| ROT-LOF | 0. | 0. | 6575. | 47.0 | 31643. | 167.1 | .248 | **** | **** | **** | 76.9 | 1.519 | 92.43 | **** | 10. |
| LOF-35FT | 34. | 35. | 7870. | 51.5 | 31333. | 174.1 | .259 | **** | **** | **** | 75.8 | 1.520 | 92.66 | **** | 10. |
| 35F-CU | 332. | 344. | 11739. | 64.5 | 31008. | 177.9 | .265 | **** | **** | **** | 74.6 | 1.523 | 92.94 | 2095. | 10. |
| GU+XXXX | 682. | 706. | 14731. | 74.5 | 30769. | 178.9 | .266 | 11.6 | 18.3 | .116 | 73.3 | 1.526 | 93.21 | 2075. | 10. |
| GU+XXXX | 1079. | 1065. | 17777. | 84.5 | 30531. | 179.8 | .268 | 11.6 | 18.2 | .114 | 72.1 | 1.529 | 93.48 | 2056. | 10. |
| GU+XXXX | 1372. | 1420. | 20819. | 94.5 | 30292. | 180.7 | .270 | 11.6 | 18.0 | .111 | 70.9 | 1.532 | 93.75 | 2036. | 10. |
| GU+XXXX | 1713. | 1773. | 23877. | 104.5 | 30054. | 181.6 | .271 | 11.6 | 17.9 | .109 | 69.7 | 1.534 | 94.01 | 2016. | 10. |
| GU+XXXX | 2049. | 2121. | 26950. | 114.5 | 29814. | 182.5 | .273 | 11.6 | 17.8 | .107 | 68.5 | 1.537 | 94.25 | 1994. | 10. |
| GU+XXXX | 2433. | 2467. | 30039. | 124.5 | 29565. | 183.5 | .275 | 11.6 | 17.7 | .106 | 67.3 | 1.539 | 94.49 | 1972. | 10. |
| GU+XXXX | 2712. | 2808. | 33143. | 134.5 | 29319. | 184.4 | .277 | 11.6 | 17.6 | .104 | 66.2 | 1.542 | 94.74 | 1950. | 10. |
| GU+XXXX | 3038. | 3146. | 36262. | 144.5 | 29077. | 185.3 | .278 | 11.6 | 17.5 | .102 | 65.0 | 1.544 | 94.99 | 1929. | 10. |
| GU+XXXX | 3361. | 3480. | 39397. | 154.5 | 28839. | 186.2 | .280 | 11.6 | 17.4 | .101 | 63.9 | 1.547 | 95.24 | 1907. | 10. |
| GU+XXXX | 3675. | 3810. | 42547. | 164.5 | 28604. | 187.1 | .281 | 11.6 | 17.3 | .099 | 62.8 | 1.549 | 95.50 | 1886. | 10. |
| GU+XXXX | 3995. | 4137. | 45712. | 174.5 | 28372. | 188.0 | .282 | 11.6 | 17.2 | .098 | 61.6 | 1.551 | 95.74 | 1865. | 10. |
| GU+XXXX | 4306. | 4460. | 48892. | 184.5 | 28142. | 188.9 | .283 | 11.6 | 17.1 | .096 | 60.5 | 1.554 | 95.99 | 1843. | 10. |
| GU+XXXX | 4614. | 4780. | 52087. | 194.5 | 27915. | 189.7 | .286 | 11.6 | 17.0 | .095 | 59.5 | 1.556 | 96.24 | 1822. | 10. |
| GU+XXXX | 4919. | 5096. | 55297. | 204.5 | 27692. | 190.6 | .288 | 11.6 | 16.9 | .093 | 58.4 | 1.558 | 96.49 | 1801. | 10. |
| GU+XXXX | 5220. | 5408. | 58522. | 214.5 | 27472. | 191.5 | .290 | 11.6 | 16.8 | .091 | 57.3 | 1.561 | 96.74 | 1781. | 10. |
| GU+XXXX | 5518. | 5717. | 61761. | 224.5 | 27256. | 192.4 | .291 | 11.6 | 16.7 | .089 | 56.3 | 1.563 | 96.99 | 1760. | 10. |
| GU+XXXX | 5812. | 6022. | 65016. | 234.5 | 27043. | 193.3 | .293 | 11.6 | 16.6 | .087 | 55.2 | 1.565 | 97.24 | 1739. | 10. |
| GU+XXXX | 6103. | 6324. | 68285. | 244.5 | 26831. | 194.1 | .295 | 11.6 | 16.6 | .087 | 54.2 | 1.567 | 97.49 | 1718. | 10. |
| GU+XXXX | 6390. | 6622. | 71568. | 254.5 | 26619. | 195.0 | .296 | 11.6 | 16.6 | .086 | 53.2 | 1.569 | 97.74 | 1698. | 10. |
| GU+XXXX | 6674. | 6916. | 74866. | 264.5 | 26412. | 195.8 | .298 | 11.6 | 16.5 | .084 | 52.2 | 1.571 | 97.99 | 1677. | 10. |
| GU+XXXX | 6954. | 7207. | 78178. | 274.5 | 26212. | 196.7 | .299 | 11.6 | 16.5 | .083 | 51.2 | 1.573 | 98.24 | 1658. | 10. |
| GU+XXXX | 7231. | 7495. | 81505. | 284.5 | 26016. | 197.5 | .301 | 11.6 | 16.4 | .082 | 50.2 | 1.576 | 98.48 | 1638. | 10. |
| GU+XXXX | 7505. | 7780. | 84846. | 294.5 | 25826. | 198.4 | .302 | 11.6 | 16.3 | .080 | 49.3 | 1.578 | 98.72 | 1620. | 10. |
| GU+XXXX | 7776. | 8061. | 88201. | 304.5 | 25641. | 199.2 | .304 | 11.6 | 16.2 | .079 | 48.3 | 1.580 | 98.97 | 1601. | 10. |
| GU+XXXX | 8043. | 8339. | 91570. | 314.5 | 25461. | 200.0 | .306 | 11.6 | 16.2 | .078 | 47.4 | 1.582 | 99.21 | 1583. | 10. |
| GU+XXXX | 8309. | 8614. | 94954. | 324.5 | 25286. | 200.9 | .307 | 11.6 | 16.1 | .077 | 46.5 | 1.584 | 99.45 | 1566. | 10. |
| GU+XXXX | 8570. | 8886. | 98351. | 334.5 | 25115. | 201.7 | .309 | 11.6 | 16.0 | .076 | 45.5 | 1.586 | 99.70 | 1549. | 10. |
| GU+XXXX | 8828. | 9155. | 101762. | 344.5 | 24949. | 202.5 | .310 | 11.6 | 16.0 | .074 | 44.6 | 1.589 | 99.95 | 1532. | 10. |
| GU+XXXX | 9084. | 9421. | 105187. | 354.5 | 24788. | 203.3 | .312 | 11.6 | 15.9 | .073 | 43.7 | 1.591 | 100.19 | 1516. | 10. |
| GU+XXXX | 9338. | 9684. | 108626. | 364.5 | 24631. | 204.1 | .313 | 11.6 | 15.8 | .072 | 42.8 | 1.593 | 100.44 | 1500. | 10. |
| GU+XXXX | 9588. | 9945. | 112078. | 374.5 | 24478. | 205.0 | .315 | 11.6 | 15.8 | .072 | 42.8 | 1.593 | 100.44 | 1500. | 10. |

CBFAC USED = 0.0

ACC = 0.0 KT/SEC

07-04-74

L-1011-1 / R8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

NOISE LEVELS ALONG THE FLIGHT PATH

| X | H | V | SQRT(THETA) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|-------------|--------|--------|-------|--------|-------|
| 5515. | 0. | 156.7 | 52.41 | 5515. | ***** | 1520. | 5515. | 85.30 |
| 6575. | 0. | 167.1 | 92.41 | 6575. | ***** | 1520. | 6575. | 85.02 |
| 7870. | 35. | 174.1 | 92.43 | 7870. | 118.40 | 1520. | 7870. | 87.45 |
| 11739. | 344. | 177.9 | 92.66 | 11739. | 106.19 | 1558. | 11739. | 91.13 |
| 14751. | 706. | 178.9 | 92.94 | 14751. | 101.79 | 1676. | 14751. | 93.47 |
| 17777. | 1065. | 179.8 | 93.21 | 17777. | 98.79 | 1856. | 17777. | 94.26 |
| 20819. | 1420. | 180.7 | 93.48 | 20819. | 96.54 | 2080. | 20819. | 93.18 |
| 21240. | 1474. | 183.8 | 93.52 | 21280. | 96.25 | 2117. | 21280. | 93.02 |
| 23177. | 1773. | 181.6 | 93.75 | 23877. | 94.65 | 2335. | 23877. | 92.09 |
| 26950. | 2121. | 182.5 | 94.01 | 26950. | 92.95 | 2610. | 26950. | 91.02 |
| 27360. | 2167. | 187.7 | 94.04 | 27160. | 92.75 | 2647. | 27360. | 90.88 |
| 30039. | 2467. | 183.5 | 94.25 | 30039. | 91.52 | 2897. | 30039. | 90.01 |
| 33143. | 2808. | 184.4 | 94.49 | 33143. | 90.27 | 3193. | 33143. | 89.06 |
| 33440. | 2840. | 184.4 | 94.52 | 33440. | 90.16 | 3221. | 33440. | 88.97 |
| 36262. | 3146. | 185.3 | 94.74 | 36262. | 89.16 | 3494. | 36262. | 88.12 |
| 39397. | 3480. | 186.2 | 94.99 | 39397. | 88.12 | 3797. | 39397. | 87.24 |
| 39520. | 3493. | 186.2 | 95.00 | 39520. | 88.08 | 3809. | 39520. | 87.21 |
| 42547. | 3810. | 187.1 | 95.24 | 42547. | 87.17 | 4102. | 42547. | 86.42 |
| 45600. | 4126. | 187.9 | 95.49 | 45600. | 86.33 | 4397. | 45600. | 85.69 |
| 45712. | 4137. | 188.0 | 95.50 | 45712. | 86.30 | 4408. | 45712. | 85.66 |
| 48892. | 4460. | 188.9 | 95.74 | 48892. | 85.50 | 4712. | 48892. | 84.95 |
| 51680. | 4739. | 189.6 | 95.96 | 51680. | 84.85 | 4977. | 51680. | 84.36 |
| 52087. | 4780. | 189.7 | 95.99 | 52087. | 84.76 | 5016. | 52087. | 84.28 |
| 55297. | 5096. | 190.6 | 96.24 | 55297. | 84.08 | 5318. | 55297. | 82.65 |
| 57760. | 5334. | 191.3 | 96.43 | 57760. | 83.59 | 5547. | 57760. | 83.19 |
| 58522. | 5408. | 191.5 | 96.49 | 58522. | 83.44 | 5616. | 58522. | 83.05 |
| 61761. | 5717. | 192.4 | 96.74 | 61761. | 82.84 | 5915. | 61761. | 82.49 |
| 63840. | 5912. | 192.9 | 96.90 | 63840. | 82.47 | 6104. | 63840. | 82.15 |
| 65016. | 6022. | 193.3 | 96.99 | 65016. | 82.27 | 6211. | 65016. | 81.96 |
| 68285. | 6324. | 194.1 | 97.24 | 68285. | 81.74 | 6504. | 68285. | 81.42 |
| 69920. | 6472. | 194.5 | 97.37 | 69920. | 81.46 | 6648. | 69920. | 81.14 |
| 71568. | 6622. | 195.0 | 97.49 | 71568. | 81.16 | 6794. | 71568. | 80.85 |
| 74866. | 6916. | 195.8 | 97.74 | 74866. | 80.60 | 7081. | 74866. | 80.31 |
| 76000. | 7016. | 196.1 | 97.83 | 76000. | 80.41 | 7179. | 76000. | 80.13 |
| 78178. | 7207. | 196.7 | 97.99 | 78178. | 80.06 | 7366. | 78178. | 79.79 |
| 81505. | 7495. | 197.5 | 98.24 | 81505. | 79.54 | 7648. | 81505. | 79.30 |
| 82080. | 7544. | 197.7 | 98.28 | 82080. | 79.46 | 7696. | 82080. | 79.21 |
| 84846. | 7780. | 198.4 | 98.48 | 84846. | 79.05 | 7927. | 84846. | 78.82 |
| 88160. | 8057. | 199.2 | 98.72 | 88160. | 78.58 | 8199. | 88160. | 78.37 |

07-04-74

L-1011-1 / RB211-22B EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

| EFFECTIVE PERCEIVED NOISE LEVEL | | | | 80. FPNDB | | | | | |
|---------------------------------|-------|-------|---------------------|-----------|-------|-------|----------|-----------|-------|
| X | H | V | NI /
SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
| 5515. | 0. | 156.7 | 92.41 | 8280. | 2364. | 2364. | 5515. | 2364. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 7768. | 2218. | 2218. | 6575. | 2218. | 0.17 |
| 7870. | 35. | 174.1 | 92.43 | 7451. | 2128. | 2128. | 7870. | 2127. | 0.38 |
| 11739. | 344. | 177.9 | 92.66 | 7280. | 2079. | 3530. | 11739. | 3514. | 1.16 |
| 14751. | 706. | 178.9 | 92.94 | 7228. | 2065. | 4032. | 14751. | 3970. | 1.97 |
| 17777. | 1065. | 179.8 | 93.21 | 7177. | 2051. | 4415. | 17777. | 4284. | 2.86 |
| 20819. | 1420. | 180.7 | 93.48 | 7117. | 2037. | 4761. | 20819. | 4544. | 3.83 |
| 21280. | 1474. | 180.8 | 93.52 | 7113. | 2035. | 4812. | 21280. | 4581. | 3.98 |
| 23877. | 1773. | 181.6 | 93.75 | 7077. | 2024. | 5103. | 23877. | 4785. | 4.85 |
| 26950. | 2121. | 182.5 | 94.01 | 7028. | 2010. | 5457. | 26950. | 5028. | 5.93 |
| 27360. | 2167. | 182.7 | 94.04 | 7022. | 2008. | 5505. | 27360. | 5061. | 6.08 |
| 30039. | 2467. | 183.5 | 94.25 | 6981. | 1997. | 5830. | 30039. | 5282. | 7.07 |
| 33143. | 2808. | 184.4 | 94.49 | 6935. | 1984. | 6221. | 33143. | 5551. | 8.28 |
| 33440. | 2840. | 184.4 | 94.52 | 6930. | 1983. | 6259. | 33440. | 5577. | 8.40 |
| 36262. | 3146. | 185.3 | 94.74 | 6889. | 1972. | 6617. | 36262. | 5821. | 9.55 |
| 39397. | 3480. | 186.2 | 94.99 | 6843. | 1959. | 6843. | 39397. | 5892. | 10.87 |
| 39520. | 3493. | 186.2 | 95.00 | 6841. | 1959. | 6841. | 39520. | 5882. | 10.92 |
| 42547. | 3810. | 187.1 | 95.24 | 6798. | 1947. | 6798. | 42547. | 5630. | 12.17 |
| 45600. | 4126. | 187.9 | 95.49 | 6755. | 1935. | 6755. | 45600. | 5349. | 13.37 |
| 45712. | 4137. | 188.0 | 95.50 | 6753. | 1935. | 6753. | 45712. | 5338. | 13.42 |
| 48842. | 4460. | 188.9 | 95.74 | 6710. | 1922. | 6710. | 48842. | 5012. | 14.60 |
| 51680. | 4739. | 189.6 | 95.96 | 6672. | 1912. | 6672. | 51680. | 4696. | 15.57 |
| 52087. | 4780. | 189.7 | 95.99 | 6666. | 1911. | 6666. | 52087. | 4647. | 15.70 |
| 55257. | 5096. | 191.6 | 96.24 | 6624. | 1899. | 6624. | 55257. | 4232. | 16.73 |
| 57760. | 5334. | 191.3 | 96.43 | 6591. | 1890. | 6591. | 57760. | 3872. | 17.44 |
| 58522. | 5408. | 191.5 | 96.49 | 6581. | 1887. | 6581. | 58522. | 3751. | 17.65 |
| 61761. | 5717. | 192.4 | 96.74 | 6540. | 1876. | 6540. | 61761. | 3176. | 18.46 |
| 63840. | 5912. | 192.9 | 96.90 | 6513. | 1869. | 6513. | 63840. | 2734. | 18.90 |
| 65016. | 6022. | 193.3 | 96.99 | 6499. | 1864. | 6499. | 65016. | 2443. | 19.12 |
| 68285. | 6324. | 194.1 | 97.24 | 6458. | 1853. | 6458. | 68285. | 1311. | 19.56 |
| 69920. | 6472. | 194.5 | 97.37 | 6438. | 1848. | 6438. | 69920. | 0. | 19.62 |

07-04-74

1-1011-1 / RB211-220 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 90. EPNDR

| X | H | V | SQR T (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------|-------|-------|-------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 3199. | 1101. | 1101. | 5515. | 1101. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 3001. | 1033. | 1033. | 6575. | 1033. | 0.08 |
| 7870. | 35. | 174.1 | 92.43 | 2879. | 991. | 1291. | 7870. | 1291. | 0.19 |
| 11739. | 344. | 177.9 | 92.66 | 2812. | 969. | 1758. | 11739. | 1724. | 0.61 |
| 14751. | 706. | 178.9 | 92.94 | 2792. | 964. | 2088. | 14751. | 1965. | 1.01 |
| 17777. | 1065. | 179.8 | 93.21 | 2772. | 959. | 2443. | 17777. | 2198. | 1.46 |
| 20819. | 1420. | 180.7 | 93.48 | 2753. | 954. | 2753. | 20819. | 2358. | 1.96 |
| 21280. | 1474. | 183.8 | 93.52 | 2750. | 953. | 2750. | 21280. | 2322. | 2.03 |
| 23877. | 1773. | 181.6 | 93.75 | 2733. | 949. | 2733. | 23877. | 2081. | 2.44 |
| 26950. | 2121. | 182.5 | 94.01 | 2714. | 944. | 2714. | 26950. | 1693. | 2.86 |
| 27360. | 2167. | 182.7 | 94.04 | 2712. | 943. | 2712. | 27360. | 1630. | 2.91 |
| 30039. | 2467. | 183.5 | 94.25 | 2696. | 939. | 2696. | 30039. | 1088. | 3.17 |
| 33143. | 2808. | 184.4 | 94.49 | 2678. | 934. | 2678. | 32020. | 0. | 3.25 |

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L-1011-1 / R211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 10 DEG. FLAPS, TAKEOFF THRUST
EFFECTIVE PERCEIVED NOISE LEVEL 100. FPNDB

| X | H | V | NI /
SORT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|------|------|------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 988. | 439. | 439. | 5515. | 439. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 927. | 412. | 412. | 6575. | 412. | 0.03 |
| 7870. | 35. | 174.1 | 92.43 | 889. | 395. | 530. | 7870. | 528. | 0.08 |
| 11739. | 344. | 177.9 | 92.66 | 872. | 387. | 790. | 11739. | 711. | 0.25 |
| 14751. | 706. | 178.9 | 92.94 | 868. | 385. | 868. | 14751. | 506. | 0.38 |
| 17777. | 1065. | 179.8 | 93.21 | 865. | 384. | 865. | 16109. | 0. | 0.40 |

07-04-74

L-1011-1 / R8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 110. EPND8

| X | H | V | NI /
SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|---------------------|------|------|------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 186. | 105. | 105. | 5515. | 105. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 175. | 98. | 98. | 6575. | 98. | 0.01 |
| 7870. | 35. | 174.1 | 92.43 | 168. | 94. | 136. | 7870. | 131. | 0.02 |
| 11739. | 344. | 177.9 | 92.66 | 165. | 93. | 115. | 9261. | 0. | 0.02 |

07-04-74

L-1011-1 / RQ211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 120. FPNDB

| X | M | V | NI /
SOR T (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|-----|-------|-----------------------|-----|-----|-----|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 28. | 24. | 24. | 5515. | 24. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 27. | 22. | 22. | 6575. | 22. | 0.00 |
| 7870. | 35. | 174.1 | 92.43 | 25. | 21. | 25. | 7481. | 0. | 0.00 |

RADIATION ANGLE (THETA) 90.
START = 21280. INCREMENT = 6080.

IPLTND = 0 ICL = 0 ISL = C IBOTH = 0 NSCLND = 0 IPLTFT = 0 NSCLFT = 0
350.000 LR. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

TYPEP = TAKE ENG = 22R OFF VMI = 0.0 W = 350000. HP = 0. FLAP = 10. TAMB = 77.0

OS = 1.0 ACCI = 0.0 SLOPE = 0.0 TFAC = 1.0 CBMT = 0.0 CBFAC = 0.0 DELV2 = 10.0

| 150,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST | | | | | | | | | | | | | | |
|--|------------------------|-------------------------|---------------------|------------|-------------|--------------|------|-------------|-------------|-----------|--------------|-----------------|-----------|------------|
| 07-04-74 | | | | | | | | | | | | | | |
| PAGE 14 | | | | | | | | | | | | | | |
| FLAP=10. DEG TEMP= 77.0 DEG F WIND= 0.0 KY SLOPE=0.0 ACCI = 0.0 KT/SEC | | | | | | | | | | | | | | |
| SEGMENT | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | TIME (SEC) | THRUST (LB) | SPEED (KTAS) | MACH | ALPHA (DEG) | PITCH (DEG) | GRAD | TEMP (DEG F) | IEPR SORT (PCT) | ROC (FPM) | FLAP (DEG) |
| MP= | 0. | WFLIGHT= 35000C. | IEPR= 1.533 | 15A+ | 10.0 | DEG C. | | | | | | | | |
| BP-RUT | 0. | 32A3. | 29.1 | 32879. | 13A.4 | .206 | | **** | **** | BLEED OFF | 77.0 | 1.524 | 92.46 | 10. |
| RUT-LUF | 0. | 4102. | 32.4 | 37322. | 151.0 | .224 | | **** | **** | **** | 77.0 | 1.522 | 92.42 | 10. |
| LUF-35FT | 34. | 5678. | 36.1 | 31833. | 162.0 | .241 | | **** | **** | **** | 76.9 | 1.520 | 92.44 | 10. |
| 35F-GU | 572. | 8404. | 45.9 | 31355. | 165.4 | .246 | | **** | **** | **** | 75.0 | 1.520 | 92.83 | 10. |
| XXXX | 1047. | 11765. | 59.9 | 31010. | 166.6 | .248 | | 10.9 | 20.6 | .169 | 73.3 | 1.528 | 93.20 | 10. |
| XXXX | 1516. | 14526. | 64.9 | 30667. | 167.7 | .251 | | 10.9 | 20.5 | .166 | 71.6 | 1.532 | 93.57 | 10. |
| XXXX | 1981. | 17316. | 79.9 | 30325. | 168.9 | .253 | | 10.9 | 20.3 | .163 | 69.9 | 1.536 | 93.93 | 10. |
| XXXX | 2449. | 20227. | 89.9 | 29974. | 170.1 | .255 | | 10.9 | 20.1 | .160 | 68.3 | 1.539 | 94.27 | 10. |
| GU+XXXX | 2893. | 2455. | 99.9 | 29628. | 171.2 | .257 | | 10.9 | 20.0 | .157 | 66.7 | 1.542 | 94.61 | 10. |
| GU+XXXX | 3342. | 3460. | 109.9 | 29289. | 172.4 | .259 | | 10.9 | 19.8 | .154 | 65.1 | 1.546 | 94.95 | 10. |
| GU+XXXX | 3784. | 3919. | 119.9 | 28955. | 173.5 | .261 | | 10.9 | 19.6 | .151 | 63.5 | 1.549 | 95.30 | 10. |
| GU+XXXX | 4227. | 4333. | 129.9 | 28627. | 174.7 | .263 | | 10.9 | 19.5 | .148 | 61.9 | 1.553 | 95.64 | 10. |
| GU+XXXX | 4654. | 4821. | 139.9 | 28303. | 175.8 | .265 | | 10.9 | 19.3 | .145 | 60.4 | 1.556 | 95.98 | 10. |
| GU+XXXX | 5081. | 5264. | 149.9 | 27986. | 177.0 | .268 | | 10.9 | 19.1 | .143 | 58.9 | 1.559 | 96.32 | 10. |
| GU+XXXX | 5503. | 5701. | 159.9 | 27675. | 178.1 | .270 | | 10.9 | 19.0 | .140 | 57.4 | 1.562 | 96.66 | 10. |
| GU+XXXX | 5919. | 6134. | 169.9 | 27365. | 179.3 | .272 | | 10.9 | 18.8 | .137 | 55.9 | 1.565 | 97.00 | 10. |
| GU+XXXX | 6331. | 6567. | 179.9 | 27062. | 180.4 | .274 | | 10.9 | 18.7 | .135 | 54.4 | 1.568 | 97.35 | 10. |
| GU+XXXX | 6737. | 6982. | 189.9 | 26762. | 181.6 | .276 | | 10.9 | 18.5 | .132 | 53.0 | 1.571 | 97.72 | 10. |
| GU+XXXX | 7137. | 7393. | 199.9 | 26473. | 182.7 | .278 | | 10.9 | 18.4 | .130 | 51.6 | 1.574 | 98.11 | 10. |
| GU+XXXX | 7533. | 7809. | 209.9 | 26193. | 183.8 | .280 | | 10.9 | 18.3 | .127 | 50.1 | 1.578 | 98.51 | 10. |
| GU+XXXX | 7924. | 8215. | 219.9 | 25922. | 184.9 | .282 | | 10.9 | 18.1 | .125 | 48.8 | 1.581 | 98.92 | 10. |
| GU+XXXX | 8310. | 8616. | 229.9 | 25661. | 186.0 | .284 | | 10.9 | 18.0 | .123 | 47.4 | 1.584 | 99.33 | 10. |
| GU+XXXX | 8642. | 8933. | 239.9 | 25408. | 187.2 | .287 | | 10.9 | 17.9 | .121 | 46.0 | 1.587 | 99.73 | 10. |
| GU+XXXX | 9042. | 9345. | 249.9 | 25164. | 188.3 | .289 | | 10.9 | 17.7 | .119 | 44.7 | 1.591 | 100.14 | 10. |
| GU+XXXX | 9411. | 9751. | 259.9 | 24979. | 189.4 | .291 | | 10.9 | 17.6 | .117 | 43.3 | 1.594 | 100.54 | 10. |
| GU+XXXX | | 10176. | 269.9 | 24701. | 190.5 | .293 | | 10.9 | 17.5 | .115 | 42.0 | 1.597 | 100.94 | 10. |
| ACC = 0.0 | KY/SEC | CONF C USED = 0.0 | | | | | | | | | | | | |

07-04-74

L-1011-1 / 00211-220 EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
340,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

NOISE LEVELS ALONG THE FLIGHT PATH

| M | V | SCRT(META) | XP | LCL | R | KPP | LSL |
|--------|-------|------------|--------|--------|-------|--------|-------|
| 1283. | 138.4 | 92.46 | 3283. | 1520. | 1520. | 3283. | 85.83 |
| 4102. | 151.0 | 92.42 | 4102. | 1520. | 1520. | 4102. | 85.46 |
| 5078. | 162.0 | 92.44 | 5078. | 118.71 | 1520. | 5078. | 87.76 |
| 8904. | 165.4 | 92.83 | 8904. | 103.22 | 1631. | 8904. | 92.98 |
| 11705. | 166.6 | 93.20 | 11705. | 98.98 | 1867. | 11705. | 94.53 |
| 14526. | 167.7 | 93.57 | 14526. | 96.09 | 2185. | 14526. | 93.05 |
| 17366. | 168.9 | 93.93 | 17366. | 93.61 | 2552. | 17366. | 91.57 |
| 20227. | 170.1 | 94.27 | 20227. | 91.63 | 2948. | 20227. | 90.18 |
| 21280. | 170.5 | 94.39 | 21280. | 90.99 | 3076. | 21280. | 89.70 |
| 23107. | 171.2 | 94.61 | 23107. | 84.98 | 3359. | 23107. | 88.86 |
| 26006. | 172.4 | 94.55 | 26006. | 88.51 | 3775. | 26006. | 87.62 |
| 27360. | 172.9 | 95.11 | 27360. | 87.89 | 3975. | 27360. | 87.09 |
| 28926. | 173.5 | 95.10 | 28926. | 87.20 | 4204. | 28926. | 86.50 |
| 31864. | 174.7 | 95.64 | 31864. | 86.05 | 4630. | 31864. | 85.47 |
| 33440. | 175.3 | 95.92 | 33440. | 85.48 | 4856. | 33440. | 84.96 |
| 34822. | 175.8 | 95.96 | 34822. | 85.01 | 5055. | 34822. | 84.53 |
| 37800. | 177.0 | 96.32 | 37800. | 84.07 | 5479. | 37800. | 83.66 |
| 39520. | 177.6 | 96.51 | 39520. | 83.56 | 5721. | 39520. | 83.19 |
| 40797. | 178.1 | 96.62 | 40797. | 83.20 | 5931. | 40797. | 82.86 |
| 43813. | 179.3 | 97.00 | 43813. | 82.41 | 6319. | 43813. | 82.11 |
| 45600. | 179.9 | 97.20 | 45600. | 81.47 | 6563. | 45600. | 81.64 |
| 46849. | 180.4 | 97.35 | 46849. | 81.63 | 6734. | 46849. | 81.31 |
| 49903. | 181.6 | 97.72 | 49903. | 80.81 | 7145. | 49903. | 80.53 |
| 51680. | 182.2 | 97.95 | 51680. | 80.37 | 7381. | 51680. | 80.10 |
| 52977. | 182.7 | 98.11 | 52977. | 80.05 | 7552. | 52977. | 79.80 |
| 56070. | 183.8 | 98.51 | 56070. | 79.33 | 7956. | 56070. | 79.11 |
| 57760. | 184.4 | 98.73 | 57760. | 78.96 | 8172. | 57760. | 78.75 |

07-04-74

L-1011-1 / 00211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
150,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 80.1 PMDB

| X | M | V | SCPT(META) | M1 | R2 | P | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|------------|-------|-------|-------|----------|-----------|-------|
| 1283. | 0. | 138.4 | 92.40 | 9375. | 2677. | 2677. | 1283. | 2677. | 0.0 |
| 4102. | 0. | 151.0 | 92.42 | 8592. | 2453. | 2453. | 102. | 2453. | 0.15 |
| 5078. | 15. | 162.0 | 92.44 | 8010. | 2287. | 2287. | 5078. | 2287. | 0.32 |
| 8924. | 502. | 165.4 | 92.83 | 7822. | 2235. | 4141. | 8904. | 4098. | 1.19 |
| 11765. | 1083. | 155.6 | 93.20 | 7747. | 2214. | 4645. | 11705. | 4568. | 2.06 |
| 14976. | 1509. | 167.7 | 93.57 | 7673. | 2194. | 5167. | 14526. | 4923. | 3.02 |
| 17366. | 2050. | 168.4 | 93.93 | 7601. | 2174. | 5636. | 17366. | 5250. | 4.06 |
| 20227. | 2526. | 170.1 | 94.27 | 7530. | 2154. | 6132. | 20227. | 5588. | 5.17 |
| 21280. | 2698. | 170.5 | 94.39 | 7505. | 2147. | 6171. | 21280. | 5717. | 5.60 |
| 23137. | 2956. | 171.2 | 94.61 | 7461. | 2135. | 6662. | 23107. | 5951. | 6.36 |
| 26006. | 3450. | 172.4 | 94.95 | 7393. | 2116. | 7201. | 26006. | 6315. | 7.64 |
| 27360. | 3673. | 172.9 | 95.11 | 7361. | 2108. | 7361. | 27360. | 6379. | 8.26 |
| 29226. | 3919. | 173.5 | 95.30 | 7325. | 2098. | 7325. | 28926. | 6109. | 8.96 |
| 31854. | 4373. | 174.7 | 95.64 | 7259. | 2080. | 7259. | 31864. | 5794. | 10.23 |
| 33460. | 4612. | 175.3 | 95.82 | 7224. | 2070. | 7224. | 33440. | 5561. | 10.87 |
| 34877. | 4821. | 175.3 | 95.98 | 7194. | 2062. | 7194. | 34822. | 5340. | 11.41 |
| 37900. | 5264. | 177.0 | 96.12 | 7130. | 2044. | 7130. | 37800. | 4809. | 12.49 |
| 39570. | 5415. | 177.6 | 96.51 | 7094. | 2034. | 7094. | 39570. | 4421. | 13.06 |
| 40797. | 5701. | 179.1 | 96.66 | 7067. | 2027. | 7067. | 40797. | 4176. | 13.46 |
| 41817. | 6134. | 174.1 | 97.00 | 7005. | 2010. | 7005. | 43813. | 3383. | 14.28 |
| 45000. | 6385. | 179.3 | 97.20 | 6968. | 2000. | 6968. | 45600. | 2792. | 14.67 |
| 45844. | 6500. | 180.4 | 97.35 | 6943. | 1993. | 6943. | 46449. | 2274. | 14.90 |
| 49003. | 6967. | 181.6 | 97.77 | 6881. | 1976. | 6881. | 49269. | 0. | 15.10 |

07-04-74

L-1011-1 / 48211-778 EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
150.000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 90. FPNDB

| L | H | V | MI / SQRT (HETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|------------------|-------|-------|-------|----------|-----------|------|
| 1203. | 0. | 136.4 | 57.40 | 3622. | 1247. | 1247. | 3283. | 1247. | 0.0 |
| 4102. | 0. | 151.0 | 97.42 | 3319. | 1142. | 1142. | 4102. | 1142. | 0.07 |
| 5078. | 35. | 162.0 | 97.44 | 3094. | 1065. | 1378. | 5078. | 1377. | 0.16 |
| 9036. | 597. | 165.4 | 92.03 | 3022. | 1043. | 2101. | 8904. | 2016. | 0.62 |
| 11705. | 1087. | 166.6 | 93.20 | 2997. | 1035. | 2565. | 11705. | 2325. | 1.06 |
| 14526. | 1569. | 167.7 | 93.57 | 2964. | 1028. | 2964. | 14526. | 2514. | 1.55 |
| 17166. | 2050. | 168.9 | 93.93 | 2935. | 1020. | 2935. | 17366. | 2101. | 2.02 |
| 21227. | 2526. | 170.1 | 94.27 | 2908. | 1013. | 2908. | 20227. | 1442. | 2.38 |
| 21280. | 2608. | 170.5 | 94.39 | 2898. | 1011. | 2898. | 21280. | 1060. | 2.48 |
| 21107. | 2706. | 171.7 | 94.61 | 2881. | 1006. | 2881. | 22443. | 0. | 2.52 |

07-04-74

L-1011-1 / R211-220 EFFECTIVE PERCEIVED NOISE LEVEL
 572 LEVEL, 77 DEG. F., 708 RELATIVE HUMIDITY
 150,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 100. FPNDB

| X | M | V | SOA T (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------|-------|------|------|----------|-----------|------|
| 3281. | 0. | 138.4 | 92.46 | 1120. | 497. | 497. | 3283. | 497. | 0.0 |
| 4107. | 0. | 151.0 | 92.42 | 1026. | 455. | 455. | 4102. | 455. | 0.03 |
| 5078. | 15. | 162.0 | 92.44 | 956. | 425. | 565. | 5078. | 564. | 0.06 |
| 8904. | 542. | 165.4 | 92.83 | 939. | 417. | 939. | 8904. | 728. | 0.24 |
| 11705. | 1081. | 166.6 | 53.70 | 934. | 414. | 934. | 10860. | 0. | 0.29 |

07-04-74

L-1011-1 / 20211-278 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
10,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 110. LPMDB

| E | H | V | $\frac{M}{V}$ | $\sqrt{\text{SQR}(\frac{M}{V})}$ | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|------|-------|---------------|----------------------------------|------|------|------|----------|-----------|------|
| 1701. | 0. | 130.4 | 0.0076 | 0.087 | 211. | 119. | 119. | 3283. | 119. | 0.0 |
| 4102. | 0. | 151.0 | 0.0066 | 0.081 | 193. | 109. | 109. | 4102. | 109. | 0.01 |
| 5078. | 25. | 162.0 | 0.0062 | 0.079 | 180. | 101. | 144. | 5078. | 140. | 0.02 |
| 8004. | 402. | 165.4 | 0.0063 | 0.080 | 177. | 100. | 177. | 5876. | 0. | 0.02 |

07-04-74

L-1011-1 / R0211-220 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
350,000 LB. TAKEOFF WEIGHT, 30 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 120. EPND8

| X | N | V | SQRT(10E1A) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|-----|-------|-------------|-----|-----|-----|----------|-----------|------|
| 3243. | 0. | 138.4 | 92.46 | 32. | 27. | 27. | 3283. | 27. | 0.0 |
| 4102. | 0. | 151.0 | 92.42 | 29. | 24. | 24. | 4102. | 24. | 0.00 |
| 5076. | 35. | 162.0 | 92.44 | 27. | 23. | 27. | 4847. | 0. | 0.00 |

RADIATION ANGLE (THETA) 90.
START= 21290. INCREMENT= 6080.

IPLTND = 0 ICL = 0 ISL = 0 IADTH = 0 NSCLND = 0 IPLTF = 0 NSCLFT = 0
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

TYPEP = TAKE ENG = 220 UFF VMI = 0.0 W = 430000. HP = 0. FLAP = 22. YAMB = 77.0
NS = 1.0 ACCI = 0.0 SLUPE = 0.0 TFAC = 1.0 CAHT = 0.0 CBFAC = 0.0 DELV2 = 10.0

MAXIMUM TAKEOFF WEIGHT (430,000 LB.) 22 DEG. FLAPS, TAKEOFF THRUST 07-04-74

FLAP-22. DEG TEMP= 77.0 DEG F WIND= 0.0 KX SLOPE=0.0 ACCI = 0.0 KT/SEC

PAGE 22

| SEGMENT | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL TIME (SEC) | THRUST (LBS) | SPEED (KTAS) | MACH | ALPHA (DEG) | PITCH (DEG) | GRAD | TEMP (DEG F) | IEPP | SOAT (PCT) | NI/ (PCT) | FLAP (DEG) |
|----------|------------------------|-------------------------|------------------|--------------|--------------|-------|-------------|-------------|------|--------------|-------|------------|-----------|------------|
| MP. | 0. | 0. | 1.533 | 154 | 10.0 | 0.220 | 0.00 | 0.00 | 0.00 | 77.0 | 1.522 | 92.43 | 0.00 | 22. |
| DR-INT | 0. | 0. | 40.1 | 32438. | 148.3 | 0.235 | 0.00 | 0.00 | 0.00 | 77.0 | 1.521 | 92.41 | 0.00 | 22. |
| ACT-COF | 0. | 0. | 43.7 | 32013. | 148.3 | 0.235 | 0.00 | 0.00 | 0.00 | 77.0 | 1.521 | 92.41 | 0.00 | 22. |
| LOF-15FT | 35. | 35. | 68.4 | 31698. | 165.2 | 0.246 | 0.00 | 0.00 | 0.00 | 76.9 | 1.520 | 92.44 | 0.00 | 22. |
| 15F-GU | 395. | 305. | 61.2 | 31375. | 169.2 | 0.252 | 0.00 | 0.00 | 0.00 | 75.9 | 1.524 | 92.63 | 0.00 | 22. |
| GU-XXXX | 598. | 619. | 71.2 | 31160. | 170.0 | 0.254 | 10.3 | 16.4 | 0.06 | 74.9 | 1.524 | 92.86 | 1816. | 22. |
| GU-XXXX | 698. | 630. | 81.2 | 30946. | 170.7 | 0.254 | 10.3 | 16.3 | 0.10 | 73.8 | 1.526 | 93.09 | 1798. | 22. |
| GU-XXXX | 1196. | 1238. | 91.2 | 30732. | 171.5 | 0.256 | 10.3 | 16.2 | 0.10 | 72.7 | 1.529 | 93.32 | 1781. | 22. |
| GU-XXXX | 1490. | 1543. | 101.2 | 30521. | 172.2 | 0.257 | 10.3 | 16.1 | 0.10 | 71.7 | 1.531 | 93.55 | 1763. | 22. |
| GU-XXXX | 1782. | 1844. | 111.7 | 30309. | 173.0 | 0.259 | 10.3 | 16.0 | 0.10 | 70.6 | 1.534 | 93.78 | 1745. | 22. |
| GU-XXXX | 2070. | 2143. | 121.2 | 30097. | 173.7 | 0.260 | 10.3 | 16.0 | 0.09 | 69.6 | 1.536 | 94.00 | 1727. | 22. |
| GU-XXXX | 2360. | 2439. | 131.2 | 29880. | 174.5 | 0.261 | 10.3 | 15.9 | 0.09 | 68.6 | 1.538 | 94.21 | 1708. | 22. |
| GU-XXXX | 2648. | 2731. | 141.2 | 29666. | 175.2 | 0.263 | 10.3 | 15.8 | 0.09 | 67.6 | 1.540 | 94.42 | 1689. | 22. |
| GU-XXXX | 2937. | 3021. | 151.2 | 29455. | 175.9 | 0.264 | 10.3 | 15.7 | 0.09 | 66.6 | 1.542 | 94.63 | 1670. | 22. |
| GU-XXXX | 3193. | 3307. | 161.2 | 29248. | 176.7 | 0.265 | 10.3 | 15.6 | 0.09 | 65.6 | 1.544 | 94.84 | 1651. | 22. |
| GU-XXXX | 3460. | 3569. | 171.2 | 29043. | 177.4 | 0.267 | 10.3 | 15.5 | 0.09 | 64.6 | 1.546 | 95.05 | 1633. | 22. |
| GU-XXXX | 3736. | 3864. | 181.2 | 28842. | 178.1 | 0.268 | 10.3 | 15.5 | 0.09 | 63.7 | 1.548 | 95.27 | 1615. | 22. |
| GU-XXXX | 4023. | 4166. | 191.2 | 28643. | 178.9 | 0.269 | 10.3 | 15.4 | 0.08 | 62.7 | 1.550 | 95.48 | 1596. | 22. |
| GU-XXXX | 4307. | 4469. | 201.2 | 28446. | 179.6 | 0.271 | 10.3 | 15.3 | 0.08 | 61.8 | 1.552 | 95.68 | 1578. | 22. |
| GU-XXXX | 4592. | 4760. | 211.2 | 28252. | 180.3 | 0.272 | 10.3 | 15.2 | 0.08 | 60.9 | 1.554 | 95.89 | 1560. | 22. |
| GU-XXXX | 4875. | 5057. | 221.2 | 28060. | 181.0 | 0.273 | 10.3 | 15.1 | 0.08 | 59.9 | 1.556 | 96.09 | 1542. | 22. |
| GU-XXXX | 5158. | 5351. | 231.2 | 27872. | 181.7 | 0.275 | 10.3 | 15.1 | 0.08 | 59.0 | 1.558 | 96.30 | 1524. | 22. |
| GU-XXXX | 5441. | 5642. | 241.2 | 27687. | 182.4 | 0.276 | 10.3 | 15.0 | 0.08 | 58.1 | 1.560 | 96.50 | 1506. | 22. |
| GU-XXXX | 5724. | 5930. | 251.2 | 27505. | 183.1 | 0.277 | 10.3 | 14.9 | 0.08 | 57.2 | 1.562 | 96.71 | 1489. | 22. |
| GU-XXXX | 6007. | 6213. | 261.2 | 27325. | 183.8 | 0.279 | 10.3 | 14.9 | 0.07 | 56.4 | 1.564 | 96.91 | 1472. | 22. |
| GU-XXXX | 6290. | 6500. | 271.2 | 27147. | 184.5 | 0.280 | 10.3 | 14.8 | 0.07 | 55.5 | 1.566 | 97.11 | 1454. | 22. |
| GU-XXXX | 6573. | 6783. | 281.2 | 26967. | 185.2 | 0.281 | 10.3 | 14.7 | 0.07 | 54.6 | 1.567 | 97.32 | 1437. | 22. |
| GU-XXXX | 6856. | 7067. | 291.2 | 26792. | 185.8 | 0.282 | 10.3 | 14.6 | 0.07 | 53.8 | 1.569 | 97.53 | 1419. | 22. |
| GU-XXXX | 7139. | 7350. | 301.2 | 26621. | 186.5 | 0.284 | 10.3 | 14.6 | 0.07 | 53.0 | 1.571 | 97.75 | 1402. | 22. |
| GU-XXXX | 7422. | 7633. | 311.2 | 26453. | 187.2 | 0.285 | 10.3 | 14.5 | 0.07 | 52.1 | 1.573 | 97.96 | 1385. | 22. |
| GU-XXXX | 7705. | 7916. | 321.2 | 26290. | 187.8 | 0.286 | 10.3 | 14.4 | 0.07 | 51.3 | 1.574 | 98.18 | 1369. | 22. |
| GU-XXXX | 7988. | 8199. | 331.2 | 26131. | 188.5 | 0.287 | 10.3 | 14.3 | 0.07 | 50.5 | 1.576 | 98.40 | 1353. | 22. |
| GU-XXXX | 8271. | 8482. | 341.2 | 25976. | 189.2 | 0.289 | 10.3 | 14.3 | 0.07 | 49.7 | 1.578 | 98.63 | 1337. | 22. |
| GU-XXXX | 8554. | 8765. | 351.2 | 25824. | 189.8 | 0.290 | 10.3 | 14.3 | 0.06 | 48.9 | 1.580 | 98.85 | 1322. | 22. |
| GU-XXXX | 8837. | 9048. | 361.2 | 25676. | 190.5 | 0.291 | 10.3 | 14.2 | 0.06 | 48.2 | 1.581 | 99.07 | 1307. | 22. |
| GU-XXXX | 9120. | 9331. | 371.2 | 25531. | 191.1 | 0.292 | 10.3 | 14.1 | 0.06 | 47.4 | 1.583 | 99.29 | 1292. | 22. |
| GU-XXXX | 9403. | 9614. | 381.2 | 25390. | 191.7 | 0.293 | 10.3 | 14.1 | 0.06 | 46.6 | 1.585 | 99.50 | 1277. | 22. |
| GU-XXXX | 9686. | 9895. | 391.2 | 25252. | 192.4 | 0.295 | 10.3 | 14.0 | 0.06 | 45.9 | 1.587 | 99.71 | 1263. | 22. |
| GU-XXXX | 9969. | 10178. | 401.2 | 25118. | 193.0 | 0.296 | 10.3 | 14.0 | 0.06 | 45.1 | 1.589 | 99.93 | 1249. | 22. |
| GU-XXXX | 10252. | 10427. | 411.2 | 24987. | 193.6 | 0.297 | 10.3 | 13.9 | 0.06 | 44.4 | 1.591 | 100.14 | 1236. | 22. |
| GU-XXXX | 10535. | 10742. | 421.2 | 24858. | 194.3 | 0.298 | 10.3 | 13.9 | 0.06 | 43.7 | 1.593 | 100.34 | 1222. | 22. |
| GU-XXXX | 10818. | 11058. | 431.2 | 24733. | 194.9 | 0.299 | 10.3 | 13.8 | 0.06 | 42.9 | 1.594 | 100.55 | 1209. | 22. |

(MEAN USED = 0.0)

L-1011-1 / R0211-220 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 INCH. P., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT 1430,000 LBS., 22 DEG. FLAPS, TAKEOFF THRUST

NOISE LEVELS ALONG THE FLIGHT PATH

| X | M | V | SQFT (THETA) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|--------------|--------|--------|-------|--------|-------|
| 4856. | 0. | 148.3 | 92.43 | 4856. | 00000 | 1520. | 4856. | 85.53 |
| 5774. | 0. | 158.3 | 97.41 | 5774. | 00000 | 1520. | 5774. | 85.25 |
| 7061. | 35. | 165.2 | 92.44 | 7061. | 118.63 | 1520. | 7061. | 87.67 |
| 10675. | 105. | 169.2 | 92.63 | 10675. | 107.05 | 1550. | 10675. | 91.08 |
| 13537. | 619. | 170.0 | 92.80 | 13537. | 102.83 | 1641. | 13537. | 93.04 |
| 16412. | 930. | 170.7 | 93.07 | 16412. | 100.06 | 1782. | 16412. | 94.85 |
| 19300. | 1218. | 171.5 | 93.37 | 19300. | 97.83 | 1960. | 19300. | 93.96 |
| 21240. | 1646. | 172.0 | 93.48 | 21240. | 96.61 | 2098. | 21240. | 93.32 |
| 22200. | 1543. | 172.2 | 93.55 | 22200. | 96.11 | 2168. | 22200. | 93.02 |
| 25113. | 1844. | 173.0 | 93.78 | 25113. | 94.49 | 2390. | 25113. | 92.08 |
| 27360. | 2074. | 173.5 | 93.95 | 27360. | 93.39 | 2571. | 27360. | 91.38 |
| 29014. | 2143. | 173.7 | 94.00 | 29014. | 93.07 | 2628. | 29014. | 91.17 |
| 30578. | 2439. | 174.5 | 94.71 | 30578. | 91.84 | 2874. | 30578. | 90.31 |
| 33440. | 2683. | 175.1 | 94.34 | 33440. | 90.93 | 3084. | 33440. | 89.62 |
| 35970. | 2731. | 175.7 | 94.42 | 35970. | 90.75 | 3126. | 35970. | 89.49 |
| 36842. | 3321. | 175.9 | 94.63 | 36842. | 89.78 | 3381. | 36842. | 88.68 |
| 39520. | 3273. | 176.0 | 94.87 | 39520. | 88.98 | 3609. | 39520. | 87.99 |
| 42456. | 3307. | 176.7 | 94.95 | 42456. | 88.87 | 3839. | 42456. | 87.91 |
| 45600. | 3589. | 177.4 | 95.05 | 45600. | 83.01 | 3898. | 45600. | 87.18 |
| 48556. | 3845. | 178.1 | 95.27 | 48556. | 87.29 | 4135. | 48556. | 86.50 |
| 51680. | 3809. | 178.9 | 95.48 | 51680. | 86.49 | 4157. | 51680. | 85.86 |
| 51893. | 4146. | 179.5 | 95.67 | 51893. | 85.86 | 4655. | 51893. | 85.29 |
| 54930. | 4419. | 179.6 | 95.68 | 54930. | 85.87 | 4673. | 54930. | 85.25 |
| 57760. | 4600. | 180.3 | 95.59 | 57760. | 85.18 | 4930. | 57760. | 84.68 |
| 57979. | 4918. | 180.9 | 96.08 | 57979. | 84.63 | 5166. | 57979. | 84.18 |
| 61040. | 4437. | 181.0 | 96.09 | 61040. | 84.54 | 5185. | 61040. | 84.14 |
| 63840. | 5221. | 181.7 | 96.30 | 63840. | 84.04 | 5438. | 63840. | 83.63 |
| 64112. | 5455. | 182.3 | 96.49 | 64112. | 83.56 | 5667. | 64112. | 83.18 |
| 67197. | 5482. | 182.4 | 96.50 | 67197. | 83.51 | 5689. | 67197. | 83.14 |
| 69920. | 5740. | 183.1 | 96.71 | 69920. | 83.01 | 5938. | 69920. | 82.67 |
| 70293. | 5965. | 183.7 | 96.89 | 70293. | 82.60 | 6185. | 70293. | 82.28 |
| 73400. | 5990. | 183.8 | 96.91 | 73400. | 82.54 | 6430. | 73400. | 82.23 |
| 76520. | 6248. | 184.5 | 97.11 | 76520. | 82.09 | 6632. | 76520. | 81.79 |
| 76520. | 6437. | 185.0 | 97.29 | 76520. | 81.72 | 6673. | 76520. | 81.39 |
| 79650. | 6743. | 185.2 | 97.32 | 79650. | 81.63 | 6913. | 79650. | 80.85 |
| 82080. | 6932. | 185.6 | 97.53 | 82080. | 80.79 | 7096. | 82080. | 80.50 |
| 82793. | 6987. | 186.4 | 97.70 | 82793. | 80.68 | 7150. | 82793. | 80.40 |
| 85946. | 7227. | 186.5 | 97.75 | 85946. | 80.24 | 7385. | 85946. | 79.98 |
| 88160. | 7393. | 187.2 | 97.96 | 88160. | 79.94 | 7548. | 88160. | 79.69 |
| 89111. | 7665. | 187.6 | 98.18 | 89111. | 79.81 | 7618. | 89111. | 79.57 |
| 92287. | 7730. | 188.5 | 98.40 | 92287. | 79.40 | 7848. | 92287. | 79.17 |
| 94240. | 7947. | 188.7 | 98.54 | 94240. | 79.16 | 7988. | 94240. | 78.94 |
| 95474. | 7437. | 189.2 | 98.63 | 95474. | 74.01 | 8076. | 95474. | 78.79 |
| 98672. | 8161. | 189.8 | 98.85 | 98672. | 78.63 | 8302. | 98672. | 78.42 |

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1-1011-1 / M211-22A EFFECTIVE PERCEIVED NOISE LEVEL
SIA LEVEL, 77 DEG. 4.0. THE RELATIVE HUMIDITY
MINIMUM TAKE-OFF WEIGHT (130,000 LB.), 22 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL NO. LPNDR

| A | M | V | NOISE /
SOUND INTENSITY | M1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|----------------------------|-------|-------|-------|----------|-----------|--------|
| 4840. | 0. | 149.3 | 92.43 | 8746. | 2497. | 2497. | 4856. | 2497. | 0.0 |
| 5774. | 0. | 156.3 | 92.41 | 8199. | 2341. | 2341. | 5774. | 2341. | 0.16 |
| 7081. | 35. | 165.2 | 92.44 | 7853. | 2242. | 2242. | 7061. | 2242. | 0.37 |
| 10575. | 105. | 169.2 | 92.43 | 7458. | 2187. | 3607. | 10675. | 3594. | 1.13 |
| 11417. | 119. | 170.0 | 92.86 | 7011. | 2174. | 4086. | 13537. | 4039. | 1.91 |
| 12187. | 130. | 171.7 | 93.09 | 7565. | 2162. | 4443. | 16412. | 4345. | 2.78 |
| 13100. | 146. | 171.5 | 93.12 | 7519. | 2149. | 4753. | 19300. | 4589. | 3.70 |
| 1446. | 158. | 172.0 | 93.48 | 7488. | 2140. | 4954. | 21230. | 4739. | 4.36 |
| 1543. | 173. | 172.2 | 93.55 | 7474. | 2137. | 5047. | 22200. | 4806. | 5.68 |
| 1644. | 184. | 173.0 | 93.78 | 7429. | 2124. | 5240. | 25113. | 5011. | 7.70 |
| 1735. | 195. | 173.5 | 93.95 | 7355. | 2115. | 5569. | 27360. | 5168. | 10.52 |
| 2074. | 207. | 173.7 | 94.00 | 7305. | 2112. | 5640. | 28039. | 5217. | 14.78 |
| 2143. | 214. | 173.7 | 94.00 | 7305. | 2112. | 5640. | 30978. | 5429. | 19.90 |
| 2419. | 241. | 174.5 | 94.21 | 7343. | 2101. | 5952. | 33440. | 5614. | 26.51 |
| 2683. | 268. | 175.1 | 94.39 | 7308. | 2091. | 6222. | 36192. | 5882. | 34.07 |
| 3192. | 319. | 175.2 | 94.42 | 7301. | 2089. | 6277. | 39520. | 6083. | 43.33 |
| 3287. | 328. | 175.9 | 94.63 | 7259. | 2078. | 6612. | 42856. | 6216. | 53.58 |
| 3570. | 357. | 176.6 | 94.82 | 7223. | 2068. | 6908. | 48864. | 6562. | 65.48 |
| 3789. | 378. | 176.7 | 94.84 | 7218. | 2066. | 6946. | 51690. | 6818. | 79.10 |
| 4169. | 416. | 177.4 | 95.05 | 7178. | 2055. | 7178. | 54930. | 7141. | 94.88 |
| 45600. | 456. | 178.1 | 95.25 | 7141. | 2045. | 7141. | 57760. | 7300. | 111.41 |
| 45846. | 458. | 178.1 | 95.27 | 7138. | 2044. | 7138. | 61040. | 7562. | 130.48 |
| 48844. | 488. | 178.9 | 95.48 | 7098. | 2033. | 7098. | 64117. | 7800. | 150.48 |
| 51630. | 516. | 179.5 | 95.67 | 7067. | 2023. | 7067. | 67197. | 8199. | 172.62 |
| 51843. | 518. | 179.6 | 95.68 | 7060. | 2023. | 7060. | 69920. | 8421. | 196.71 |
| 52910. | 529. | 180.3 | 95.89 | 7021. | 2012. | 7021. | 70293. | 8673. | 218.88 |
| 57760. | 577. | 180.4 | 96.08 | 6986. | 2002. | 6986. | 73400. | 8842. | 242.67 |
| 57979. | 579. | 181.0 | 96.39 | 6984. | 2002. | 6984. | 76000. | 8919. | 268.99 |
| 61040. | 610. | 181.7 | 96.30 | 6946. | 1991. | 6946. | 79520. | 9199. | 298.85 |
| 61840. | 618. | 182.3 | 96.49 | 6913. | 1982. | 6913. | 8199. | 9421. | 328.77 |
| 64112. | 641. | 182.4 | 96.50 | 6909. | 1981. | 6909. | 8421. | 9421. | 351.1 |
| 67197. | 671. | 183.1 | 96.71 | 6873. | 1971. | 6873. | 8673. | 9421. | 378.0 |
| 69920. | 699. | 183.7 | 96.89 | 6842. | 1963. | 6842. | 8842. | 9421. | 403.9 |
| 70293. | 702. | 183.8 | 96.91 | 6837. | 1961. | 6837. | 8919. | 9421. | 424.1 |
| 71400. | 714. | 184.5 | 97.11 | 6802. | 1952. | 6802. | 8919. | 9421. | 444.3 |
| 74000. | 740. | 185.0 | 97.29 | 6773. | 1944. | 6773. | 8919. | 9421. | 464.3 |
| 76520. | 765. | 185.2 | 97.32 | 6747. | 1942. | 6747. | 8919. | 9421. | 484.3 |
| 77650. | 776. | 185.8 | 97.53 | 6732. | 1932. | 6732. | 8919. | 9421. | 504.3 |

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L-1011-1 / 48211-220 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 708 RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 90. FPNDB

| X | M | V | SL /
SRT (METER) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------------|-------|-------|-------|----------|-----------|------|
| 4856. | 0. | 148.3 | 92.43 | 3379. | 1163. | 1163. | 4856. | 1163. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 3167. | 1090. | 1090. | 5774. | 1090. | 0.07 |
| 7061. | 35. | 165.2 | 92.44 | 3034. | 1044. | 1353. | 7061. | 1353. | 0.19 |
| 10675. | 105. | 169.2 | 92.63 | 2958. | 1019. | 1789. | 10675. | 1763. | 0.59 |
| 13537. | 219. | 170.0 | 92.47 | 2940. | 1015. | 2083. | 13537. | 1989. | 0.98 |
| 16412. | 310. | 170.7 | 93.09 | 2922. | 1010. | 2371. | 16412. | 2181. | 1.41 |
| 19300. | 1238. | 171.5 | 93.32 | 2904. | 1005. | 2697. | 19300. | 2346. | 1.88 |
| 21240. | 1446. | 172.0 | 93.40 | 2892. | 1002. | 2892. | 21240. | 2505. | 2.23 |
| 22710. | 1543. | 172.7 | 93.52 | 2887. | 1001. | 2977. | 22710. | 2440. | 2.34 |
| 24113. | 1844. | 173.0 | 93.76 | 2869. | 996. | 2869. | 24113. | 2198. | 2.88 |
| 27340. | 2074. | 173.5 | 93.95 | 2856. | 993. | 2856. | 27340. | 1964. | 3.21 |
| 29619. | 2143. | 173.7 | 94.00 | 2852. | 992. | 2852. | 29619. | 1882. | 3.31 |
| 32578. | 2439. | 173.5 | 94.21 | 2836. | 988. | 2836. | 32578. | 1447. | 3.66 |
| 36400. | 2683. | 174.1 | 94.39 | 2822. | 984. | 2822. | 36400. | 875. | 3.86 |
| 39278. | 2731. | 175.7 | 94.42 | 2820. | 983. | 2820. | 39278. | 699. | 3.89 |
| 40927. | 3021. | 175.9 | 94.63 | 2803. | 979. | 2803. | 40927. | 0. | 3.91 |

L-1011-1 / 44211-220 EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DB(A), 5% 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 22 DEG. FLAPS, TAKEOFF THRUST

| EFFECTIVE PERCEIVED NOISE LEVEL | | | | | | | | | | 100. FPNDB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--|--|--|--|-------------|--|--|--|--|------------|--|--|--|--|-------------|--|--|--|--|-------|--|--|--|--|----------|--|--|--|--|-----------|--|--|--|--|----------|--|--|--|--|-----------|--|--|--|--|------|--|--|--|--|
| N1/ | | | | | SCPT (MFTA) | | | | | R1 | | | | | R2 | | | | | R | | | | | DISTANCE | | | | | 1/2 WIDTH | | | | | AREA | | | | | | | | | | | | | | |
| K | | | | | M | | | | | V | | | | | SQRT (MFTA) | | | | | R1 | | | | | R2 | | | | | R | | | | | DISTANCE | | | | | 1/2 WIDTH | | | | | AREA | | | | |
| 4856. | | | | | 0. | | | | | 148.3 | | | | | 92.43 | | | | | 1044. | | | | | 464. | | | | | 4856. | | | | | 464. | | | | | 0.0 | | | | | | | | | |
| 5774. | | | | | 0. | | | | | 158.3 | | | | | 92.41 | | | | | 978. | | | | | 434. | | | | | 5774. | | | | | 434. | | | | | 0.03 | | | | | | | | | |
| 7061. | | | | | 35. | | | | | 165.2 | | | | | 92.44 | | | | | 938. | | | | | 436. | | | | | 7061. | | | | | 554. | | | | | 0.08 | | | | | | | | | |
| 10675. | | | | | 105. | | | | | 169.2 | | | | | 92.43 | | | | | 917. | | | | | 407. | | | | | 10675. | | | | | 718. | | | | | 0.24 | | | | | | | | | |
| 15117. | | | | | 619. | | | | | 173.0 | | | | | 92.46 | | | | | 914. | | | | | 405. | | | | | 15117. | | | | | 672. | | | | | 0.38 | | | | | | | | | |
| 16412. | | | | | 930. | | | | | 179.7 | | | | | 93.09 | | | | | 911. | | | | | 404. | | | | | 16412. | | | | | 0. | | | | | 0.45 | | | | | | | | | |

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L-1011-1 / 90211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 110. FPNDB

| X | H | V | NI/
SCRT (TMCTA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|---------------------|------|------|------|----------|-----------|------|
| 4856. | 0. | 144.3 | 92.43 | 197. | 111. | 111. | 4856. | 111. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 185. | 104. | 104. | 5774. | 104. | 0.01 |
| 7061. | 35. | 165.2 | 92.44 | 177. | 99. | 142. | 7061. | 138. | 0.02 |
| 10675. | 305. | 169.2 | 92.63 | 173. | 97. | 173. | 8679. | 0. | 0.03 |

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L-1011-1 / R0211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

EFFECTIVE PERCEIVED NOISE LEVEL 120. FPNDB

| R | H | V | $\frac{N1}{\text{SQRT}(IMEIA)}$ | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|-----|-------|---------------------------------|-----|-----|-----|----------|-----------|------|
| 4856. | 0. | 149.3 | 92.43 | 30. | 25. | 25. | 4856. | 25. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 28. | 23. | 23. | 5774. | 23. | 0.00 |
| 7061. | 35. | 165.2 | 92.44 | 27. | 22. | 27. | 6729. | 0. | 0.00 |

RADIATION ANGLE (DEGREES) 90.
START= 21280. INCREMENT= 6080.

IPLTND = 0 ICL = 0 YSL = 0 FAUTH = 0 NSCLND = 1 IPLTFT = 0 NSCLFT = 0
NEW SCALE FACTORS FOR NOISE LEVEL PLOTS
WMIN = 0. WMAX = 130000. DH = 10000. MSCL = 0.000100
VMIN = 40. VMAX = 200. DV = 20. VSCL = 0.0500 DINT = 0.
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

TYPEP = *AEF ENG = 720 OFF VWI = 0.0 W = 430000. HP = 0. FLAP = 10. TAMB = 77.0
OS = 1.0 ACCI = 3.0 SLOPE = 0.0 TFAC = 1.0 CBHT = 1422.0 CBFAC = 0.0 DELV2 = 10.0

L-1011-1 / 40711-220 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F.; 70% RELATIVE HUMIDITY
 MAXIMUM TAKEOFF WEIGHT, 10 DEC. FLAPS, FAR 30 CUTBACK

MISS LIVES WITH THE FIGHT PATH

[illegible]

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L-1011-1 / R8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

EFFECTIVE PERCEIVED NOISE LEVEL RO. EPNDB

| X | H | V | NI/
SQR(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|---------|-------|-------|-------------------|-------|-------|-------|----------|-----------|-------|
| 5515. | 0. | 156.7 | 92.41 | 8280. | 2364. | 2364. | 5515. | 2364. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 7768. | 2218. | 2218. | 6575. | 2218. | 0.17 |
| 7870. | 35. | 174.1 | 92.43 | 7451. | 2128. | 2128. | 7870. | 2127. | 0.38 |
| 11739. | 344. | 177.9 | 92.66 | 7280. | 2079. | 3530. | 11739. | 3514. | 1.16 |
| 14913. | 720. | 178.9 | 92.95 | 7226. | 2064. | 4048. | 14913. | 3983. | 2.01 |
| 18135. | 1096. | 179.9 | 93.23 | 7172. | 2050. | 4445. | 18135. | 4308. | 2.97 |
| 21280. | 1457. | 180.8 | 93.51 | 7121. | 2036. | 4796. | 21280. | 4570. | 3.97 |
| 21409. | 1472. | 180.8 | 93.52 | 7119. | 2035. | 4811. | 21409. | 4580. | 4.01 |
| 22326. | 1549. | 181.0 | 82.48 | 6294. | 1850. | 4531. | 22326. | 4258. | 4.31 |
| 27360. | 1807. | 181.7 | 82.60 | 6283. | 1846. | 4797. | 27360. | 4443. | 5.88 |
| 30403. | 1963. | 182.1 | 82.68 | 6275. | 1844. | 4964. | 30403. | 4559. | 6.86 |
| 33440. | 2114. | 182.5 | 82.74 | 6269. | 1841. | 5130. | 33440. | 4674. | 7.86 |
| 38714. | 2377. | 183.2 | 82.86 | 6257. | 1837. | 5431. | 38714. | 4883. | 9.67 |
| 39520. | 2416. | 183.3 | 82.88 | 6255. | 1837. | 5476. | 39520. | 4914. | 9.96 |
| 45600. | 2711. | 184.1 | 83.00 | 6240. | 1832. | 5828. | 45600. | 5159. | 12.15 |
| 47279. | 2792. | 184.3 | 83.03 | 6236. | 1830. | 5925. | 47279. | 5226. | 12.78 |
| 51680. | 2998. | 184.9 | 83.12 | 6226. | 1827. | 6158. | 51680. | 5378. | 14.45 |
| 56112. | 3206. | 185.4 | 83.21 | 6216. | 1824. | 6216. | 56112. | 5325. | 16.15 |
| 57760. | 3281. | 185.6 | 83.24 | 6212. | 1822. | 6212. | 57760. | 5275. | 16.78 |
| 63840. | 3558. | 186.4 | 83.37 | 6200. | 1818. | 6200. | 63840. | 5077. | 19.04 |
| 65228. | 3621. | 186.6 | 83.40 | 6197. | 1817. | 6197. | 65228. | 5029. | 19.54 |
| 69920. | 3827. | 187.1 | 83.49 | 6187. | 1814. | 6187. | 69920. | 4861. | 21.21 |
| 74646. | 4035. | 187.7 | 83.58 | 6177. | 1811. | 6177. | 74646. | 4677. | 22.82 |
| 76000. | 4093. | 187.8 | 83.61 | 6175. | 1810. | 6175. | 76000. | 4623. | 23.27 |
| 87080. | 4352. | 188.6 | 83.72 | 6162. | 1805. | 6162. | 87080. | 4363. | 25.23 |
| 84385. | 4450. | 188.8 | 83.76 | 6157. | 1804. | 6157. | 84385. | 4256. | 25.95 |
| 89160. | 4635. | 189.3 | 83.83 | 6150. | 1801. | 6150. | 89160. | 4076. | 27.08 |
| 94240. | 4855. | 190.0 | 83.94 | 6138. | 1797. | 6138. | 94240. | 3754. | 28.78 |
| 94468. | 4865. | 190.0 | 83.94 | 6137. | 1797. | 6137. | 94468. | 3741. | 28.84 |
| 100320. | 5097. | 190.6 | 84.04 | 6126. | 1793. | 6126. | 100320. | 3398. | 30.34 |
| 104917. | 5280. | 191.1 | 84.12 | 6117. | 1790. | 6117. | 104917. | 3089. | 31.41 |
| 106400. | 5336. | 191.3 | 84.14 | 6114. | 1789. | 6114. | 106400. | 2984. | 31.74 |
| 112480. | 5569. | 192.0 | 84.24 | 6102. | 1786. | 6102. | 112480. | 2495. | 32.93 |
| 115757. | 5695. | 192.3 | 84.29 | 6096. | 1783. | 6096. | 115757. | 2176. | 33.48 |
| 118560. | 5798. | 192.6 | 84.33 | 6091. | 1782. | 6091. | 118560. | 1867. | 33.89 |
| 124640. | 6022. | 193.3 | 84.43 | 6080. | 1778. | 6080. | 124640. | 837. | 34.48 |
| 127016. | 6110. | 193.5 | 84.47 | 6076. | 1777. | 6076. | 127016. | 0. | 34.52 |

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L-1011-1 / RB211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

EFFECTIVE PERCEIVED NOISE LEVEL 90. FPNDB

| K | M | V | NI /
SQR(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|--------------------|-------|-------|-------|----------|-----------|------|
| 5515. | 7. | 156.7 | 92.41 | 3199. | 1101. | 1101. | 5515. | 1101. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 3001. | 1033. | 1033. | 6575. | 1033. | 0.08 |
| 7870. | 35. | 174.1 | 92.43 | 2879. | 991. | 1291. | 7870. | 1291. | 0.19 |
| 11719. | 144. | 177.9 | 92.66 | 2812. | 969. | 1758. | 11739. | 1724. | 0.61 |
| 14913. | 720. | 178.9 | 92.95 | 2701. | 964. | 2101. | 14913. | 1973. | 1.03 |
| 14135. | 1096. | 179.9 | 93.23 | 2770. | 959. | 2476. | 18135. | 2221. | 1.51 |
| 21280. | 1457. | 183.8 | 93.51 | 2751. | 953. | 2751. | 21280. | 2333. | 2.03 |
| 21409. | 1472. | 180.8 | 93.52 | 2750. | 953. | 2750. | 21409. | 2323. | 2.05 |
| 22326. | 1549. | 181.0 | 82.48 | 2311. | 872. | 2311. | 22326. | 1714. | 2.18 |
| 27360. | 1807. | 181.7 | 82.60 | 2307. | 869. | 2307. | 27360. | 1434. | 2.75 |
| 30403. | 1963. | 182.1 | 82.68 | 2305. | 868. | 2305. | 30403. | 1208. | 3.04 |
| 33440. | 2114. | 182.5 | 82.74 | 2303. | 867. | 2303. | 33440. | 913. | 3.27 |
| 34714. | 2377. | 183.2 | 82.86 | 2299. | 864. | 2299. | 37168. | 0. | 3.39 |

L-1011-1 / R0211-720 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. E., 702 RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

EFFECTIVE PERCEIVED NOISE LEVEL 100. EPNDB

| E | M | V | NI/
SQRT(THE TAI) | R1 | R2 | R | DISTANCE
1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|------|------|------|-----------------------|------|
| 4515. | 0. | 156.7 | 92.41 | 988. | 439. | 439. | 5515. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 927. | 412. | 412. | 6575. | 0.03 |
| 1810. | 35. | 174.1 | 92.43 | 889. | 395. | 530. | 7070. | 0.08 |
| 11719. | 144. | 177.9 | 92.26 | 872. | 387. | 790. | 11730. | 0.25 |
| 14913. | 720. | 178.9 | 92.95 | 868. | 385. | 868. | 14913. | 0.38 |
| 18135. | 1096. | 179.9 | 93.23 | 865. | 384. | 865. | 16175. | 0.41 |

07-04-74

L-1011-1 / 80711-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 17 DEG. E., 702 RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

EFFECTIVE PERCEIVED NOISE LEVEL 110. EPNOB

| R | H | V | N1/
SQR(T(THETA)) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-----|-------|----------------------|------|-----|------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 186. | 105 | 105. | 5515. | 105. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 175. | 98. | 98. | 6575. | 98. | 0.01 |
| 7870. | 35. | 174.1 | 92.43 | 168. | 94. | 136. | 7870. | 131. | 0.02 |
| 11739. | 34. | 177.9 | 92.46 | 165. | 93. | 165. | 9261. | 0. | 0.02 |

07-04-74

L-1011-1 / 48211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

EFFECTIVE PERCEIVED NOISE LEVEL 120. EPND8

| X | H | V | NI/
SQRT(TMETA) | R1 | R2 | R | DISTANCE | L/2 | WIDTH | AREA |
|-------|-----|-------|--------------------|-----|-----|-----|----------|-----|-------|------|
| 5515. | 0. | 156.7 | 92.41 | 28. | 24. | 27. | 5515. | | 24. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 27. | 22. | 22. | 6575. | | 22. | 0.00 |
| 7870. | 35. | 174.1 | 92.43 | 25. | 21. | 25. | 7481. | | 0. | 0.00 |

RADIATION ANGLE (TNETA) 90.
START= 12100. INCREMENT= 6000.

IPLTND = 0 ICL = 0 ISL = 0 180TH = 0 NSCLMD = 1 1PLTFT = 0 NSCLFT = 0
NEW SCALE FACTORS FOR NOISE LEVEL PLOTS
MMIN = 0. MMAX = 110000. DM = 10000. MSCL = 0.000100
VMIN = 40. VMAX = 200. DV = 20. VSCL = 0.0500 DINT = 0.
MAXIMUM LANDING WEIGHT (358,000 LB.), 42DEG. FLAPS, DLC, 3DEG GLIDE SLOPE

TYPEP = APPR ENG = 22R VMI = 0.0 M = 358000. MP = 0. FLAP = 42. TAMB = 77.0

THT = 0. CAMWA = 0.0 DLC = 1.0 HELV = 10.00

07-04-74

MAXIMUM LANDING WEIGHT (158,000 LB.), 42 DEG. FLAPS, DLC, 30 DEG GLIDE SLOPE

| M(I) | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | THRUST (LBS) | SPEED (KTAS) | MACH | TEMP (DEG F) | IEPR | NI/ SORT (PCT) | FLAP (DEG) |
|-------|------------------------|-------------------------|---------------------|--------------|--------------|------|--------------|-------|----------------|------------|
| 50. | 40. | 50. | 0. | 12292. | 152.3 | .226 | 76.8 | 1.203 | 66.27 | 42. |
| 370. | 358. | 370. | 6000. | 12292. | 153.0 | .228 | 75.7 | 1.205 | 66.61 | 42. |
| 1417. | 1369. | 1417. | 26080. | 12292. | 155.3 | .232 | 72.1 | 1.213 | 67.69 | 42. |
| 2464. | 2380. | 2464. | 46080. | 12292. | 157.7 | .236 | 68.5 | 1.222 | 68.73 | 42. |
| 3515. | 3396. | 3515. | 66060. | 12292. | 160.1 | .241 | 64.9 | 1.231 | 69.78 | 42. |

07-04-74

L-1011-1 / 9A211-22A EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000LB.). 420EG. FLAPS, OLC, 3DEG GLIDE SLOPE

NOISE LEVELS ALONG THE FLIGHT PATH

| X | M | V | SCRT(META) | NP | LCL | R | XPP | LSL |
|---------|-------|-------|------------|---------|--------|-------|---------|-------|
| 0. | 50. | 152.3 | 65.27 | 0. | 114.31 | 1521. | 0. | 82.68 |
| 6080. | 370. | 153.0 | 65.61 | 6080. | 102.70 | 1564. | 6080. | 86.40 |
| 12160. | 688. | 153.7 | 66.94 | 12160. | 98.35 | 1669. | 12160. | 88.55 |
| 18240. | 1006. | 154.4 | 67.27 | 18240. | 95.27 | 1823. | 18240. | 89.73 |
| 24320. | 1325. | 155.1 | 67.60 | 24320. | 92.84 | 2016. | 24320. | 88.82 |
| 30400. | 1643. | 155.3 | 67.69 | 30400. | 92.25 | 2078. | 30400. | 88.55 |
| 36480. | 1961. | 155.8 | 67.92 | 36480. | 90.93 | 2238. | 36480. | 87.89 |
| 42560. | 2279. | 156.5 | 68.23 | 42560. | 89.27 | 2481. | 42560. | 86.96 |
| 48640. | 2598. | 157.2 | 68.55 | 48640. | 87.89 | 2740. | 48640. | 86.04 |
| 54720. | 2918. | 157.7 | 68.73 | 54720. | 87.18 | 2895. | 54720. | 85.27 |
| 60800. | 3237. | 158.0 | 68.86 | 60800. | 86.71 | 3010. | 60800. | 84.49 |
| 66880. | 3557. | 158.7 | 69.18 | 66880. | 85.68 | 3290. | 66880. | 83.72 |
| 72960. | 3876. | 159.4 | 69.51 | 72960. | 84.76 | 3576. | 72960. | 83.10 |
| 79040. | 4196. | 160.1 | 69.78 | 79040. | 84.00 | 3829. | 79040. | 83.01 |
| 85120. | 4515. | 160.2 | 69.83 | 85120. | 83.89 | 3868. | 85120. | 82.33 |
| 91200. | 4835. | 160.9 | 70.15 | 91200. | 83.02 | 4164. | 91200. | 81.67 |
| 97280. | 5154. | 161.6 | 70.47 | 97280. | 82.32 | 4462. | 97280. | 81.06 |
| 103360. | 5474. | 162.4 | 70.79 | 103360. | 81.62 | 4764. | 103360. | 80.48 |
| 109440. | 5793. | 163.1 | 71.11 | 109440. | 80.97 | 5068. | 109440. | 79.94 |
| 115520. | 6113. | 163.9 | 71.43 | 115520. | 80.37 | 5374. | 115520. | 79.43 |
| | | 164.6 | 71.76 | | 79.81 | 5681. | | 78.95 |
| | | 165.3 | 72.08 | | 79.29 | 5989. | | 78.49 |
| | | 166.1 | 72.40 | | 78.80 | 6299. | | |

07-04-74

L-1011-1 / R8211-770 EFFECTIVE PERCEIVED NOISE LEVEL
 SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM LANDING WEIGHT (358,000 LB.), 420 DEG. FLAPS, D/LC, 3 DEG GLIDE SLOPE
 EFFECTIVE PERCEIVED NOISE LEVEL 80. EPND8

| X | Y | M | N1 /
SCPT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|---------|-------|-------|----------------------|-------|-------|-------|----------|-----------|-------|
| 4000. | 152.3 | 50. | 66.27 | 4734. | 1526. | 2002. | 0. | 2001. | 0.0 |
| 12160. | 153.0 | 170. | 66.61 | 4776. | 1533. | 2664. | 6080. | 2639. | 1.01 |
| 18240. | 153.7 | 608. | 66.94 | 4816. | 1539. | 3036. | 12160. | 2957. | 2.23 |
| 24370. | 154.4 | 1006. | 67.27 | 4857. | 1545. | 3363. | 18240. | 3209. | 3.58 |
| 26040. | 155.1 | 1775. | 67.60 | 4896. | 1551. | 3692. | 24320. | 3446. | 5.03 |
| 30400. | 155.3 | 1417. | 67.69 | 4908. | 1553. | 3790. | 26080. | 3515. | 5.47 |
| 36440. | 155.8 | 1443. | 67.92 | 4934. | 1557. | 4040. | 30400. | 3691. | 6.58 |
| 42560. | 156.5 | 1741. | 68.23 | 4970. | 1563. | 4415. | 36480. | 3956. | 8.25 |
| 44080. | 157.2 | 2279. | 68.56 | 5007. | 1568. | 4807. | 42560. | 4234. | 10.04 |
| 54720. | 157.7 | 2444. | 68.73 | 5029. | 1571. | 5012. | 46080. | 4365. | 11.12 |
| 60800. | 158.0 | 2593. | 69.06 | 5045. | 1574. | 5045. | 48640. | 4375. | 11.92 |
| 66080. | 158.7 | 2918. | 69.18 | 5083. | 1580. | 5093. | 54720. | 4163. | 13.77 |
| 66080. | 159.4 | 3237. | 69.51 | 5122. | 1585. | 5122. | 60800. | 3970. | 15.55 |
| 66080. | 160.1 | 3515. | 69.78 | 5156. | 1590. | 5156. | 66080. | 3773. | 17.01 |
| 66080. | 160.7 | 3657. | 69.83 | 5162. | 1591. | 5162. | 66880. | 3741. | 17.23 |
| 70040. | 160.9 | 3876. | 70.15 | 5192. | 1596. | 5192. | 72960. | 3454. | 18.80 |
| 70040. | 161.6 | 4196. | 70.47 | 5211. | 1599. | 5211. | 79040. | 3090. | 20.22 |
| 85120. | 162.4 | 4515. | 70.79 | 5230. | 1602. | 5230. | 85120. | 2640. | 21.47 |
| 91200. | 163.1 | 4835. | 71.11 | 5250. | 1606. | 5250. | 91200. | 2047. | 22.50 |
| 97200. | 163.9 | 5154. | 71.43 | 5270. | 1609. | 5270. | 97280. | 1098. | 23.18 |
| 101360. | 164.6 | 5474. | 71.76 | 5290. | 1612. | 5290. | 99628. | 0. | 23.27 |

07-04-74

L-1311-1 / P-211-22B EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000LB.), 42DEG. FLAPS, DLC, 3DEG GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 90. FPNDB

| V | M | V | N1/
SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|--------------------|-------|------|-------|----------|-----------|------|
| 0. | 50. | 152.3 | 66.27 | 1775. | 763. | 1001. | 0. | 1000. | 0.0 |
| 6080. | 370. | 153.0 | 66.61 | 1787. | 768. | 1333. | 6080. | 1281. | 0.50 |
| 12160. | 688. | 153.7 | 66.94 | 1798. | 772. | 1606. | 12160. | 1451. | 1.09 |
| 18240. | 1006. | 154.4 | 67.27 | 1810. | 777. | 1810. | 18240. | 1504. | 1.74 |
| 24320. | 1325. | 155.1 | 67.60 | 1822. | 781. | 1822. | 24320. | 1251. | 2.34 |
| 30400. | 1617. | 155.3 | 67.69 | 1825. | 782. | 1825. | 30400. | 1151. | 2.49 |
| 36480. | 1943. | 155.8 | 67.82 | 1833. | 784. | 1833. | 36480. | 813. | 2.79 |
| | 1961. | 156.5 | 68.23 | 1845. | 788. | 1845. | 34171. | 0. | 2.90 |

07-04-74

L-1011-1 / 98211-278 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LFWFL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000 LB.), 42 DEG. FLAPS, DLC, 3 DEG GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LFWFL 100. EPNDR

| X | M | V | N1/
SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|--------------------|------|------|------|----------|-----------|------|
| 0. | 50. | 152.3 | 65.27 | 543. | 270. | 377. | 0. | 374. | 0.0 |
| 4040. | 370. | 153.0 | 66.61 | 549. | 273. | 549. | 6080. | 406. | 0.17 |
| 12160. | 628. | 153.7 | 66.94 | 555. | 276. | 555. | 9570. | 0. | 0.22 |

07-04-74

L-1011-1 / R0211-220 EFFECTIVE PERCEIVED NOISE LEVEL
 SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM LANDING WEIGHT (350,000 LB.), 42 DEG. FLAPS, D/C, 3 DEG GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 110. EPND8

| X | M | V | N1 /
SQRT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|------|-------|----------------------|------|-----|------|----------|-----------|------|
| | | | | | | | | | |
| 0. | 50. | 152.3 | 66.27 | 106. | 70. | 105. | 0. | 92. | 0.0 |
| 6000. | 170. | 153.0 | 66.61 | 107. | 71. | 107. | 1047. | 0. | 0.00 |

07-04-74

RADIATION ANGLE (TMEI) 9C.
 START= 12160. INCREMENT= 6080.
 IPLTMD = 0 ICL = 0 ISL = 0 180TM = 0 NSCIND = 0 IPLTYI = 0 NSCLFT = 0
 300,000 LA. LANDING WEIGHT, 47 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE
 TYPEP : APPR ENG = 22R OFF VWI = 0.0 W = 300000. HP = 0. FLAP = 42. YAMB = 77.0
 YHT = 0. GAMMA = 0.3 DLC = 1.0 DELV = 10.00

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100,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, D/LC, 3 DEG. GLIDE SLOPE

| H(1) | PRESSURE GEOMETRIC | | TOTAL
DISTANCE
(FT) | THRUST
(LB) | SPEED
(KTAS) | MACH | TEMP
(DEG F) | IEPR | NIV
SQRT(META)
(PCT) | FLAP
(DEG) |
|-------|--------------------|------------------|---------------------------|----------------|-----------------|------|-----------------|-------|----------------------------|---------------|
| | ALTITUDE
(FT) | ALTITUDE
(FT) | | | | | | | | |
| 40. | 48. | 50. | 0. | 10366. | 141.6 | .210 | 76.8 | 1.170 | 61.09 | 42. |
| 370. | 358. | 370. | 6080. | 10366. | 142.2 | .212 | 75.7 | 1.172 | 61.42 | 42. |
| 1417. | 1367. | 1417. | 26080. | 10366. | 144.4 | .216 | 72.1 | 1.179 | 62.51 | 42. |
| 2404. | 2390. | 2404. | 46080. | 10366. | 146.6 | .220 | 68.5 | 1.186 | 63.65 | 42. |
| 3515. | 3324. | 3515. | 60080. | 10366. | 148.8 | .224 | 64.9 | 1.193 | 64.83 | 42. |

07-04-74

L-1011-1 / R8211-22B EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
300,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

NOISE LEVELS ALONG THE FLIGHT PATH

| X | H | V | NI /
SQRT(THETA) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|---------------------|--------|--------|-------|--------|-------|
| 0. | 50. | 141.6 | 61.09 | 0. | 112.67 | 1521. | 0. | 80.91 |
| 6080. | 370. | 142.2 | 61.42 | 6080. | 101.09 | 1554. | 6080. | 84.77 |
| 12160. | 688. | 142.9 | 61.75 | 12160. | 96.85 | 1609. | 12160. | 87.02 |
| 18240. | 1006. | 143.5 | 62.08 | 18240. | 93.80 | 1655. | 18240. | 88.24 |
| 24320. | 1325. | 144.2 | 62.42 | 24320. | 91.39 | 2016. | 24320. | 87.30 |
| 26080. | 1417. | 144.4 | 62.51 | 26080. | 90.81 | 2078. | 26080. | 87.02 |
| 30400. | 1643. | 144.9 | 62.76 | 30400. | 89.50 | 2238. | 30400. | 86.33 |
| 36480. | 1961. | 145.5 | 63.11 | 36480. | 87.79 | 2481. | 36480. | 85.38 |
| 42560. | 2279. | 146.2 | 63.45 | 42560. | 86.36 | 2740. | 42560. | 84.48 |
| 46080. | 2464. | 146.6 | 63.65 | 46080. | 85.62 | 2895. | 46080. | 83.98 |
| 48640. | 2598. | 146.9 | 63.80 | 48640. | 85.13 | 3010. | 48640. | 83.63 |
| 54720. | 2918. | 147.6 | 64.16 | 54720. | 84.06 | 3290. | 54720. | 82.82 |
| 60800. | 3237. | 148.2 | 64.52 | 60800. | 83.11 | 3576. | 60800. | 82.05 |
| 66880. | 3557. | 148.8 | 64.83 | 66880. | 82.34 | 3829. | 66880. | 81.44 |
| 72960. | 3876. | 149.6 | 65.24 | 72960. | 81.45 | 4164. | 72960. | 81.35 |
| 79040. | 4196. | 150.3 | 65.60 | 79040. | 80.74 | 4462. | 79040. | 80.69 |
| 85120. | 4515. | 151.0 | 65.96 | 85120. | 80.10 | 4764. | 85120. | 80.09 |
| 91200. | 4835. | 151.7 | 66.32 | 91200. | 79.51 | 5068. | 91200. | 79.53 |
| 97280. | 5154. | 152.4 | 66.68 | 97280. | 78.97 | 5374. | 97280. | 79.01 |
| | | | | | | | | 78.53 |

07-04-74

L-1311-1 / R8211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 300,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, D/C, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 80. EPND8

| X | H | V | NI /
SQRT(H/FT) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|-------|-------|--------------------|-------|-------|-------|----------|-----------|-------|
| 4000. | 50. | 141.6 | 61.09 | 4197. | 1429. | 1865. | 0. | 1865. | 0.0 |
| 4080. | 370. | 142.2 | 61.42 | 4229. | 1436. | 2468. | 6080. | 2440. | 0.94 |
| 4160. | 488. | 142.9 | 61.75 | 4261. | 1442. | 2811. | 12160. | 2726. | 2.07 |
| 4240. | 1006. | 143.5 | 62.08 | 4294. | 1448. | 3122. | 18240. | 2956. | 3.30 |
| 4320. | 1375. | 144.2 | 62.42 | 4327. | 1454. | 3446. | 24320. | 3181. | 4.64 |
| 4400. | 1417. | 144.6 | 62.51 | 4336. | 1456. | 3545. | 26080. | 3249. | 5.05 |
| 4480. | 1643. | 144.9 | 62.76 | 4361. | 1461. | 3799. | 30400. | 3426. | 6.08 |
| 4560. | 1961. | 145.5 | 63.11 | 4396. | 1468. | 4179. | 36480. | 3690. | 7.64 |
| 4640. | 2279. | 146.2 | 63.45 | 4432. | 1475. | 4432. | 42560. | 3801. | 9.27 |
| 4720. | 2644. | 146.6 | 63.65 | 4453. | 1479. | 4453. | 46080. | 3709. | 10.22 |
| 4800. | 2998. | 146.9 | 63.80 | 4469. | 1482. | 4469. | 48640. | 3636. | 10.89 |
| 4880. | 3217. | 147.6 | 64.16 | 4507. | 1489. | 4507. | 54720. | 3435. | 12.43 |
| 4960. | 3517. | 148.2 | 64.52 | 4545. | 1497. | 4545. | 60800. | 3190. | 13.88 |
| 5040. | 3857. | 148.8 | 64.83 | 4579. | 1503. | 4579. | 66080. | 2935. | 15.04 |
| 5120. | 3976. | 149.4 | 64.88 | 4584. | 1504. | 4584. | 66880. | 2892. | 15.21 |
| 5200. | 4190. | 149.6 | 65.24 | 4626. | 1512. | 4626. | 72960. | 2525. | 16.39 |
| 5280. | 4515. | 150.3 | 65.60 | 4671. | 1519. | 4671. | 79040. | 2053. | 17.39 |
| 5360. | 4815. | 151.0 | 65.96 | 4716. | 1526. | 4716. | 85120. | 1361. | 18.13 |
| 5440. | 4915. | 151.7 | 66.32 | 4761. | 1534. | 4761. | 89575. | 0. | 18.35 |

07-04-74

L-1011-1 / R0211-22R EFFECTIVE PERCEIVED NOISE LEVEL
 514 LEVEL, 77 DEG. F., 108 RELATIVE HUMIDITY
 20,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 90. EPNDB

| X | M | V | W1/50M(THETA) | P1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------|-------|------|-------|----------|-----------|------|
| 0. | 50. | 141.6 | 61.09 | 1577. | 691. | 911. | 0. | 909. | 0.0 |
| 6000. | 170. | 142.2 | 61.42 | 1590. | 695. | 1223. | 6080. | 1166. | 0.45 |
| 12160. | 648. | 142.9 | 61.75 | 1603. | 700. | 1507. | 12160. | 1340. | 1.00 |
| 18240. | 1036. | 143.5 | 62.08 | 1616. | 705. | 1616. | 18240. | 1264. | 1.57 |
| 24320. | 1325. | 144.2 | 62.42 | 1629. | 709. | 1629. | 24320. | 948. | 2.05 |
| 26080. | 1617. | 144.4 | 62.51 | 1633. | 711. | 1633. | 26080. | 811. | 2.16 |
| 30400. | 1641. | 144.9 | 62.76 | 1643. | 714. | 1643. | 30394. | 0. | 2.29 |

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1-1211-1 / 08211-220 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
100,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

| EFFECTIVE PERCEIVED NOISE LEVEL | | | | 100. FPNDB | | | | |
|---------------------------------|------|-------|-----------------------|------------|------|------|--------------------|------|
| Z | M | V | N1 /
SCR T (TMFIA) | K1 | K2 | K | DISTANCE 1/2 WIDTH | AREA |
| 0. | 50. | 141.6 | 61.09 | 446. | 224. | 318. | 0. | 0.0 |
| 4000. | 175. | 142.2 | 61.42 | 451. | 227. | 451. | 6080. | 0.13 |
| 12100. | 688. | 147.9 | 61.75 | 458. | 230. | 458. | 7667. | 0.14 |

07-04-74

L-1011-1 / 4P211-720 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
100,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, OLC, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 110. FPNDB

| X | H | V | N1/
SQRT(MFTAS) | q1 | q2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|------|-------|--------------------|-----|-----|-----|----------|-----------|------|
| | | | | | | | | | |
| 0. | 50. | 141.6 | 61.09 | 92. | 58. | 82. | 0. | 64. | 0.0 |
| AC80. | 375. | 142.2 | 61.47 | 83. | 59. | 83. | 602. | 0. | 0.00 |

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RADIATION ANGLE (METER) 90.
START 12160. INCREMENT 2080.

PLTNG = 0 ICL = 0 ISL = C IBOTH = 0 NSCLND = 0 IPLYFT = 0 NSCLFT = 0
MAX LANDING WEIGHT (150,000 LB.) 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

TYPEP = APPW ENG = 228 OFF VWI = 0.0 W = 350000. MP = 0. FLAP = 33. YAMB = 77.0
TUT = C. GAMMA = 0.0 DLC = 1.0 NELV = 10.00

07-04-74

MAX LANDING WEIGHT (58,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

| H(1) | PRESSURE GEOMETRIC | | TOTAL | THRUST | SPEED | MACH | TEMP | IEPR | N1/ | FLAP |
|-------|--------------------|----------|----------|--------|--------|------|---------|-------|-------|-------|
| | ALTITUDE | ALTITUDE | DISTANCE | | | | | | | |
| (FT) | (FT) | (FT) | (FT) | (LB) | (KTAS) | | (DEG F) | | (PCT) | (DEG) |
| 50. | 44. | 50. | 0. | 10481. | 157.4 | .234 | 76.8 | 1.176 | 62.32 | 33. |
| 370. | 158. | 170. | 6080. | 10481. | 158.1 | .235 | 75.7 | 1.178 | 62.66 | 33. |
| 1417. | 1365. | 1417. | 26080. | 10481. | 160.5 | .240 | 72.1 | 1.185 | 63.80 | 33. |
| 2464. | 2100. | 2464. | 46080. | 10481. | 162.9 | .244 | 68.5 | 1.192 | 64.97 | 33. |
| 3515. | 3144. | 3515. | 66080. | 10481. | 165.4 | .249 | 64.9 | 1.200 | 66.18 | 33. |

07-04-74

L-1011-1 / RB211-22N EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

NOISE LEVELS ALONG THE FLIGHT PATH

| K | H | V | SQRT(THETA) | XP | LCL | R | XPP | LSL |
|---------|-------|-------|-------------|---------|--------|-------|---------|-------|
| 6080. | 50. | 157.4 | 62.32 | 0. | 112.69 | 1521. | 0. | 80.96 |
| 12160. | 170. | 158.1 | 62.66 | 6080. | 101.11 | 1564. | 6080. | 84.78 |
| 18240. | 688. | 158.8 | 63.00 | 12160. | 96.84 | 1669. | 12160. | 87.01 |
| 24320. | 1006. | 159.5 | 63.35 | 18240. | 93.79 | 1823. | 18240. | 88.22 |
| 30400. | 1325. | 160.3 | 63.70 | 24320. | 91.38 | 2016. | 24320. | 87.30 |
| 36480. | 1643. | 160.5 | 63.80 | 26080. | 90.80 | 2078. | 26080. | 87.02 |
| 42560. | 1961. | 161.0 | 64.05 | 30400. | 89.49 | 2238. | 30400. | 86.34 |
| 48640. | 2279. | 161.8 | 64.41 | 36480. | 87.80 | 2481. | 36480. | 85.40 |
| 54720. | 2597. | 162.5 | 64.77 | 42560. | 86.37 | 2740. | 42560. | 84.50 |
| 60800. | 2915. | 162.9 | 64.97 | 46090. | 85.65 | 2895. | 46080. | 84.01 |
| 66880. | 3233. | 163.2 | 65.13 | 48640. | 85.16 | 3010. | 48640. | 83.66 |
| 72960. | 3551. | 164.0 | 65.49 | 54720. | 84.11 | 3290. | 54720. | 82.88 |
| 79040. | 3869. | 164.8 | 65.86 | 60800. | 83.18 | 3576. | 60800. | 82.13 |
| 85120. | 4187. | 165.4 | 66.18 | 66880. | 82.43 | 3829. | 66880. | 81.53 |
| 91200. | 4505. | 165.5 | 66.23 | 72960. | 82.32 | 3868. | 66880. | 81.44 |
| 97280. | 4823. | 166.3 | 66.60 | 79040. | 81.55 | 4164. | 72960. | 80.79 |
| 103360. | 5141. | 167.1 | 66.96 | 85120. | 80.85 | 4462. | 79040. | 80.20 |
| | 5459. | 167.8 | 67.33 | 91200. | 80.21 | 4764. | 85120. | 79.65 |
| | 5777. | 168.6 | 67.70 | 97280. | 79.62 | 5068. | 91200. | 79.13 |
| | 6095. | 169.3 | 68.07 | 103360. | 79.08 | 5374. | 97280. | 78.64 |
| | 6413. | 170.1 | 68.43 | | 78.58 | 5681. | 103360. | 78.19 |

07-04-74

L-1011-1 / RA211-22N EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT (350,000 LB.), 33 DEG. FLAPS, D/LC, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 80. EPNDR

| X | N | V | NI /
SQRT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|-------|-------|----------|-----------|-------|
| 0. | 50. | 157.4 | 62.32 | 3950. | 1329. | 1753. | 0. | 1752. | 0.0 |
| 4080. | 370. | 158.1 | 62.66 | 3981. | 1335. | 2338. | 6080. | 2308. | 0.89 |
| 12160. | 685. | 158.9 | 63.00 | 4014. | 1341. | 2676. | 12160. | 2586. | 1.95 |
| 19740. | 1006. | 159.5 | 63.35 | 4046. | 1348. | 2990. | 18240. | 2816. | 3.13 |
| 24720. | 1325. | 160.3 | 63.70 | 4079. | 1354. | 3322. | 24320. | 3046. | 4.41 |
| 26000. | 1417. | 160.5 | 63.80 | 4089. | 1356. | 3424. | 26080. | 3117. | 4.80 |
| 31200. | 1643. | 161.0 | 64.05 | 4114. | 1361. | 3686. | 30400. | 3300. | 5.79 |
| 36400. | 1961. | 161.8 | 64.41 | 4148. | 1368. | 4067. | 36480. | 3563. | 7.29 |
| 42560. | 2279. | 162.5 | 64.77 | 4184. | 1374. | 4184. | 42560. | 3508. | 8.83 |
| 46000. | 2464. | 162.9 | 64.97 | 4204. | 1378. | 4204. | 46080. | 3407. | 9.71 |
| 49640. | 2598. | 163.2 | 65.13 | 4221. | 1381. | 4221. | 48640. | 3327. | 10.32 |
| 54720. | 2914. | 164.0 | 65.49 | 4263. | 1388. | 4263. | 54720. | 3108. | 11.73 |
| 60600. | 3237. | 164.8 | 65.86 | 4305. | 1395. | 4305. | 60800. | 2838. | 13.02 |
| 66380. | 3515. | 165.4 | 66.18 | 4342. | 1401. | 4342. | 66080. | 2550. | 14.04 |
| 72440. | 3557. | 165.5 | 66.23 | 4348. | 1402. | 4348. | 66880. | 2501. | 14.19 |
| 79600. | 3876. | 166.3 | 66.60 | 4391. | 1410. | 4391. | 72960. | 2064. | 15.18 |
| 86400. | 4196. | 167.1 | 66.96 | 4435. | 1417. | 4435. | 79040. | 1437. | 15.95 |
| 85120. | 4515. | 167.8 | 67.33 | 4479. | 1424. | 4479. | 84329. | 0. | 16.22 |

07-04-74

L-1011-1 / 4R211-22B EFFECTIVE PERCEIVED NOISE LFVEL
SIA LFVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 90. EPNDB

| X | II | V | SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|-------------|-------|------|-------|----------|-----------|------|
| 0. | 50. | 157.4 | 62.32 | 1487. | 648. | 861. | 0. | 860. | 0.0 |
| 1000. | 570. | 158.1 | 62.66 | 1499. | 652. | 1168. | 6080. | 1108. | 0.43 |
| 12140. | 680. | 158.8 | 63.00 | 1512. | 657. | 1461. | 12160. | 1288. | 0.95 |
| 10240. | 1000. | 159.5 | 63.35 | 1525. | 662. | 1525. | 18240. | 1146. | 1.48 |
| 24320. | 1325. | 160.3 | 63.70 | 1538. | 666. | 1538. | 24320. | 782. | 1.90 |
| 26080. | 1417. | 160.5 | 63.80 | 1542. | 668. | 1542. | 26080. | 609. | 1.99 |
| 30400. | 1643. | 161.0 | 64.05 | 1552. | 671. | 1552. | 28386. | 0. | 2.05 |

07-04-74

L-1011-1 / 48211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT 1358,000 LB-1, 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 100. EPNDB

| X | M | V | NI/
SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|--------------------|------|------|------|----------|-----------|------|
| 0. | 50. | 157.4 | 62.32 | 428. | 215. | 307. | 0. | 303. | 0.0 |
| 6080. | 170. | 158.1 | 62.66 | 434. | 218. | 434. | 6080. | 227. | 0.12 |
| 12160. | 688. | 158.8 | 63.00 | 440. | 221. | 440. | 7328. | 0. | 0.13 |

07-04-74

L-1011-1 / RB711-22R EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

EFFECTIVE PERCEIVED NOISE LEVEL 110. EPNDB

| Y | M | V | N1 /
SRT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|------|-------|---------------------|-----|-----|-----|----------|-----------|------|
| | | | | | | | | | |
| 0. | 50. | 157.4 | 62.32 | 80. | 56. | 80. | 0. | 62. | 0.0 |
| 6080. | 370. | 158.1 | 62.66 | 81. | 57. | 81. | 564. | 0. | 0.00 |

RADIATION ANGLE (THETA) 9C.
 START= 17100. INCREMENT= 6080.

IPLTND = 0 ICL = 0 ISL = 0 IROTH = 0 NSCLND = 0 IPLTFT = 0 NSCLFT = 0
 MAX LANDING WT.: 42 DEG. FLAPS, DLC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

TYPE9 = APPR ENG = 220 OFF VM1 = 0.0 M = 358000. HP = 0. FLAP = 42. YAMB = 77.0
 YMT = 1000. GAMMA = 0.0 DLC = 1.0 DELV = 10.00

MAX LANDING WT.: 42 DEG. FLAPS, QLC, 2/3 DEG. TWO SEGMENT AT 1000 FT.

| WIC | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | THRUST (LB) | SPEED (KTAS) | MACH | TFMP (DEG F) | IEPR | NI/ SORT (PCT) | FLAP (DEG) |
|-------|------------------------|-------------------------|---------------------|-------------|--------------|------|--------------|-------|----------------|------------|
| 50. | 48. | 50. | 0. | 12292. | 152.3 | .226 | 76.8 | 1-203 | 66.27 | 42. |
| 170. | 158. | 170. | 6480. | 12292. | 153.0 | .228 | 75.7 | 1-205 | 66.61 | 42. |
| 1000. | 946. | 1000. | 18116. | 12292. | 154.4 | .230 | 73.6 | 1-210 | 67.27 | 42. |
| 1090. | 968. | 1090. | 19117. | 5856. | 154.4 | .230 | 73.6 | 1-106 | 50.79 | 42. |
| 6041. | 5810. | 6041. | 66080. | 5856. | 166.1 | .252 | 50.2 | 1-128 | 54.87 | 42. |

07-04-74

L-1011-1 / RR211-228 EFFECTIVE PERCEIVED NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAX LANDING WT., 42 DEG. FLAPS, DLC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

NOISE LEVELS ALONG THE FLIGHT PATH

| X | H | V | SQRT(THETA) | XP | LCL | R | XP | LSL |
|--------|-------|-------|-------------|--------|--------|-------|--------|-------|
| 0. | 50. | 152.3 | 66.27 | 0. | 114.31 | 1521. | 0. | 82.68 |
| 6080. | 370. | 153.0 | 66.61 | 6080. | 102.70 | 1564. | 6080. | 86.40 |
| 12160. | 688. | 153.7 | 68.94 | 12160. | 98.35 | 1669. | 12160. | 88.55 |
| 18116. | 1000. | 154.4 | 67.27 | 18116. | 95.33 | 1819. | 18116. | 89.75 |
| 18117. | 1000. | 154.4 | 50.79 | 18117. | 89.39 | 1819. | 18117. | 84.03 |
| 18240. | 1013. | 154.4 | 50.80 | 18240. | 89.28 | 1827. | 18240. | 84.00 |
| 24320. | 1652. | 155.9 | 51.32 | 24320. | 85.06 | 2245. | 24320. | 82.24 |
| 30400. | 2291. | 157.4 | 51.84 | 30400. | 82.18 | 2749. | 30400. | 80.49 |
| 36480. | 2930. | 158.9 | 52.35 | 36480. | 80.00 | 3301. | 36480. | 78.85 |
| 42560. | 3569. | 160.4 | 52.87 | 42560. | 78.10 | 3879. | 42560. | 77.20 |

07-04-74

L-1011-1 / 40211-228 EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS, DLC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

EFFECTIVE PERCEIVED NOISE LEVEL 80. EPNDB

| X | M | V | NI /
SORT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|-------|-------|----------|-----------|------|
| 0. | 50. | 152.3 | 66.27 | 4734. | 1526. | 2002. | 0. | 2001. | 0.0 |
| 6080. | 370. | 153.0 | 66.61 | 4776. | 1533. | 2664. | 6080. | 2639. | 1.01 |
| 12160. | 688. | 153.7 | 66.94 | 4817. | 1539. | 3036. | 12160. | 2957. | 2.23 |
| 14116. | 1000. | 154.4 | 67.27 | 4857. | 1545. | 3357. | 14116. | 3204. | 3.55 |
| 14117. | 1000. | 154.4 | 50.74 | 2545. | 1042. | 2460. | 14117. | 2247. | 3.55 |
| 18240. | 1013. | 154.4 | 53.80 | 2946. | 1042. | 2473. | 18240. | 2256. | 3.57 |
| 24370. | 1452. | 155.9 | 51.32 | 2955. | 1044. | 2955. | 24370. | 2450. | 4.59 |
| 30400. | 2791. | 157.4 | 51.84 | 2965. | 1046. | 2965. | 30400. | 1882. | 5.54 |
| 36480. | 2930. | 158.9 | 52.35 | 2975. | 1048. | 2975. | 36480. | 515. | 6.06 |
| 42540. | 3569. | 160.4 | 52.87 | 2985. | 1050. | 2985. | 36914. | 0. | 6.07 |

L-1011-1 / R0211-22R EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY TWO SEGMENT AT 1000 FT.
MAX LANDING 41. 42 DEG. FLAPS, OLC, 6/3 DEC.

90. E PND8

| EFFECTIVE FREQUENCY | NOISE LEVEL | 90. £PNDB | R2 | K | DISTANCE | 1/2 WIDTH | AREA |
|---------------------|-------------|-----------|------|-------|----------|-----------|------|
| 0.0 | 152.3 | 1775. | 763. | 1001. | 0. | 1000. | 0.0 |
| 60HQ. | 153.0 | 1787. | 768. | 1333. | 6080. | 1281. | 0.50 |
| 12160. | 153.7 | 1799. | 772. | 1606. | 12160. | 1451. | 1.09 |
| 19116. | 154.4 | 1810. | 777. | 1810. | 18116. | 1509. | 1.73 |

07-04-74

L-1011-1 / 00211-22A EFFECTIVE PERCEIVED NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS, DLC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

EFFECTIVE PERCEIVED NOISE LEVEL 100. EPND8

| K | H | V | NI /
SQRT(THFTA) | R1 | R2 | R | DISTANCE 1/2 WIDTH | AREA |
|--------|------|-------|---------------------|------|------|------|--------------------|------|
| 0. | 50. | 152.3 | 66.27 | 543. | 270. | 377. | 374. | 6.0 |
| 6040. | 370. | 153.0 | 66.61 | 549. | 273. | 549. | 406. | 0.17 |
| 12160. | 608. | 153.7 | 66.94 | 555. | 276. | 555. | 0. | 0.22 |

07-04-74

L-1011-1 / 80211-22B EFFECTIVE PERCEIVED NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS, D/C, 6/3 DEG. TWO SEGMENT AT 1000 FT.

EFFECTIVE PERCEIVED NOISE LEVEL 110. EPND8

| X | D. | NO. | H | V | SCR | T | THETA | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|---|----|-----|------|-------|-------|---|-------|------|-----|------|----------|-----------|------|
| | | | | | | | | | | | | | |
| | | | | 152.3 | 66.27 | | | 106. | 70. | 105. | 0. | 92. | 0.0 |
| | | | 170. | 153.0 | 66.61 | | | 107. | 71. | 107. | 1047. | 0. | 0.00 |

07-04-74

1-1011-1 / 00211-770 A-NOISE LEVEL
SPL LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
A - NOISE LEVELS
MIL SQFT (THETA) 10 NOISE 7 IFPNL = 0

| DISTANCE | 200. | 370. | 400. | 1400. | 3200. | 6400. | 12800. |
|------------------|-------|-------|-------|----------|--------|--------|--------|
| MIL SQFT (THETA) | | | | WITH FGA | | | |
| 55.0000 | 12.15 | 65.27 | 74.60 | 42.40 | 51.81 | 42.78 | 32.50 |
| 61.0000 | 51.67 | 66.69 | 75.91 | 63.57 | 53.05 | 44.21 | 34.30 |
| 67.0000 | 51.24 | 66.21 | 77.34 | 64.97 | 54.52 | 45.86 | 36.24 |
| 73.0000 | 51.98 | 66.94 | 78.06 | 65.69 | 55.28 | 46.69 | 37.17 |
| 79.0000 | 52.15 | 67.12 | 78.23 | 66.50 | 56.13 | 47.59 | 38.16 |
| 85.0000 | 52.32 | 67.29 | 78.40 | 67.31 | 56.94 | 48.50 | 39.13 |
| 91.0000 | 52.49 | 67.46 | 78.57 | 68.12 | 57.75 | 49.41 | 40.10 |
| 97.0000 | 52.66 | 67.63 | 78.74 | 68.93 | 58.56 | 50.32 | 41.07 |
| 103.0000 | 52.83 | 67.80 | 78.91 | 69.74 | 59.37 | 51.23 | 42.04 |
| 109.0000 | 53.00 | 67.97 | 79.08 | 70.55 | 60.18 | 52.14 | 43.01 |
| 115.0000 | 53.17 | 68.14 | 79.25 | 71.36 | 60.99 | 53.05 | 43.98 |
| 121.0000 | 53.34 | 68.31 | 79.42 | 72.17 | 61.80 | 53.96 | 44.95 |
| 127.0000 | 53.51 | 68.48 | 79.59 | 72.98 | 62.61 | 54.87 | 45.92 |
| 133.0000 | 53.68 | 68.65 | 79.76 | 73.79 | 63.42 | 55.78 | 46.89 |
| 139.0000 | 53.85 | 68.82 | 79.93 | 74.60 | 64.23 | 56.69 | 47.86 |
| 145.0000 | 54.02 | 68.99 | 80.10 | 75.41 | 65.04 | 57.60 | 48.83 |
| 151.0000 | 54.19 | 69.16 | 80.27 | 76.22 | 65.85 | 58.51 | 49.80 |
| 157.0000 | 54.36 | 69.33 | 80.44 | 77.03 | 66.66 | 59.42 | 50.77 |
| 163.0000 | 54.53 | 69.50 | 80.61 | 77.84 | 67.47 | 60.33 | 51.74 |
| 169.0000 | 54.70 | 69.67 | 80.78 | 78.65 | 68.28 | 61.24 | 52.71 |
| 175.0000 | 54.87 | 69.84 | 80.95 | 79.46 | 69.09 | 62.15 | 53.68 |
| 181.0000 | 55.04 | 70.01 | 81.12 | 80.27 | 69.90 | 63.06 | 54.65 |
| 187.0000 | 55.21 | 70.18 | 81.29 | 81.08 | 70.71 | 63.97 | 55.62 |
| 193.0000 | 55.38 | 70.35 | 81.46 | 81.89 | 71.52 | 64.88 | 56.59 |
| 199.0000 | 55.55 | 70.52 | 81.63 | 82.70 | 72.33 | 65.79 | 57.56 |
| 205.0000 | 55.72 | 70.69 | 81.80 | 83.51 | 73.14 | 66.70 | 58.53 |
| 211.0000 | 55.89 | 70.86 | 81.97 | 84.32 | 73.95 | 67.61 | 59.50 |
| 217.0000 | 56.06 | 71.03 | 82.14 | 85.13 | 74.76 | 68.52 | 60.47 |
| 223.0000 | 56.23 | 71.20 | 82.31 | 85.94 | 75.57 | 69.43 | 61.44 |
| 229.0000 | 56.40 | 71.37 | 82.48 | 86.75 | 76.38 | 70.34 | 62.41 |
| 235.0000 | 56.57 | 71.54 | 82.65 | 87.56 | 77.19 | 71.25 | 63.38 |
| 241.0000 | 56.74 | 71.71 | 82.82 | 88.37 | 78.00 | 72.16 | 64.35 |
| 247.0000 | 56.91 | 71.88 | 82.99 | 89.18 | 78.81 | 73.07 | 65.32 |
| 253.0000 | 57.08 | 72.05 | 83.16 | 89.99 | 79.62 | 73.98 | 66.29 |
| 259.0000 | 57.25 | 72.22 | 83.33 | 90.80 | 80.43 | 74.89 | 67.26 |
| 265.0000 | 57.42 | 72.39 | 83.50 | 91.61 | 81.24 | 75.80 | 68.23 |
| 271.0000 | 57.59 | 72.56 | 83.67 | 92.42 | 82.05 | 76.71 | 69.20 |
| 277.0000 | 57.76 | 72.73 | 83.84 | 93.23 | 82.86 | 77.62 | 70.17 |
| 283.0000 | 57.93 | 72.90 | 84.01 | 94.04 | 83.67 | 78.53 | 71.14 |
| 289.0000 | 58.10 | 73.07 | 84.18 | 94.85 | 84.48 | 79.44 | 72.11 |
| 295.0000 | 58.27 | 73.24 | 84.35 | 95.66 | 85.29 | 80.35 | 73.08 |
| 301.0000 | 58.44 | 73.41 | 84.52 | 96.47 | 86.10 | 81.26 | 74.05 |
| 307.0000 | 58.61 | 73.58 | 84.69 | 97.28 | 86.91 | 82.17 | 75.02 |
| 313.0000 | 58.78 | 73.75 | 84.86 | 98.09 | 87.72 | 83.08 | 75.99 |
| 319.0000 | 58.95 | 73.92 | 85.03 | 98.90 | 88.53 | 83.99 | 76.96 |
| 325.0000 | 59.12 | 74.09 | 85.20 | 99.71 | 89.34 | 84.90 | 77.93 |
| 331.0000 | 59.29 | 74.26 | 85.37 | 100.52 | 90.15 | 85.81 | 78.90 |
| 337.0000 | 59.46 | 74.43 | 85.54 | 101.33 | 90.96 | 86.72 | 79.87 |
| 343.0000 | 59.63 | 74.60 | 85.71 | 102.14 | 91.77 | 87.63 | 80.84 |
| 349.0000 | 59.80 | 74.77 | 85.88 | 102.95 | 92.58 | 88.54 | 81.81 |
| 355.0000 | 59.97 | 74.94 | 86.05 | 103.76 | 93.39 | 89.45 | 82.78 |
| 361.0000 | 60.14 | 75.11 | 86.22 | 104.57 | 94.20 | 90.36 | 83.75 |
| 367.0000 | 60.31 | 75.28 | 86.39 | 105.38 | 95.01 | 91.27 | 84.72 |
| 373.0000 | 60.48 | 75.45 | 86.56 | 106.19 | 95.82 | 92.18 | 85.69 |
| 379.0000 | 60.65 | 75.62 | 86.73 | 107.00 | 96.63 | 93.09 | 86.66 |
| 385.0000 | 60.82 | 75.79 | 86.90 | 107.81 | 97.44 | 94.00 | 87.63 |
| 391.0000 | 60.99 | 75.96 | 87.07 | 108.62 | 98.25 | 94.91 | 88.60 |
| 397.0000 | 61.16 | 76.13 | 87.24 | 109.43 | 99.06 | 95.82 | 89.57 |
| 403.0000 | 61.33 | 76.30 | 87.41 | 110.24 | 99.87 | 96.73 | 90.54 |
| 409.0000 | 61.50 | 76.47 | 87.58 | 111.05 | 100.68 | 97.64 | 91.51 |
| 415.0000 | 61.67 | 76.64 | 87.75 | 111.86 | 101.49 | 98.55 | 92.48 |
| 421.0000 | 61.84 | 76.81 | 87.92 | 112.67 | 102.30 | 99.46 | 93.45 |
| 427.0000 | 62.01 | 76.98 | 88.09 | 113.48 | 103.11 | 100.37 | 94.42 |
| 433.0000 | 62.18 | 77.15 | 88.26 | 114.29 | 103.92 | 101.28 | 95.39 |
| 439.0000 | 62.35 | 77.32 | 88.43 | 115.10 | 104.73 | 102.19 | 96.36 |
| 445.0000 | 62.52 | 77.49 | 88.60 | 115.91 | 105.54 | 103.10 | 97.33 |
| 451.0000 | 62.69 | 77.66 | 88.77 | 116.72 | 106.35 | 104.01 | 98.30 |
| 457.0000 | 62.86 | 77.83 | 88.94 | 117.53 | 107.16 | 104.92 | 99.27 |
| 463.0000 | 63.03 | 78.00 | 89.11 | 118.34 | 107.97 | 105.83 | 100.24 |
| 469.0000 | 63.20 | 78.17 | 89.28 | 119.15 | 108.78 | 106.74 | 101.21 |
| 475.0000 | 63.37 | 78.34 | 89.45 | 120.00 | 109.59 | 107.65 | 102.18 |
| 481.0000 | 63.54 | 78.51 | 89.62 | 120.81 | 110.40 | 108.56 | 103.15 |
| 487.0000 | 63.71 | 78.68 | 89.79 | 121.62 | 111.21 | 109.47 | 104.12 |
| 493.0000 | 63.88 | 78.85 | 89.96 | 122.43 | 112.02 | 110.38 | 105.09 |
| 499.0000 | 64.05 | 79.02 | 90.13 | 123.24 | 112.83 | 111.29 | 106.06 |
| 505.0000 | 64.22 | 79.19 | 90.30 | 124.05 | 113.64 | 112.20 | 107.03 |
| 511.0000 | 64.39 | 79.36 | 90.47 | 124.86 | 114.45 | 113.11 | 108.00 |
| 517.0000 | 64.56 | 79.53 | 90.64 | 125.67 | 115.26 | 114.02 | 108.97 |
| 523.0000 | 64.73 | 79.70 | 90.81 | 126.48 | 116.07 | 114.93 | 109.94 |
| 529.0000 | 64.90 | 79.87 | 90.98 | 127.29 | 116.88 | 115.84 | 110.91 |
| 535.0000 | 65.07 | 80.04 | 91.15 | 128.10 | 117.69 | 116.75 | 111.88 |
| 541.0000 | 65.24 | 80.21 | 91.32 | 128.91 | 118.50 | 117.66 | 112.85 |
| 547.0000 | 65.41 | 80.38 | 91.49 | 129.72 | 119.31 | 118.57 | 113.82 |
| 553.0000 | 65.58 | 80.55 | 91.66 | 130.53 | 120.12 | 119.48 | 114.79 |
| 559.0000 | 65.75 | 80.72 | 91.83 | 131.34 | 120.93 | 120.39 | 115.76 |
| 565.0000 | 65.92 | 80.89 | 92.00 | 132.15 | 121.74 | 121.30 | 116.73 |
| 571.0000 | 66.09 | 81.06 | 92.17 | 132.96 | 122.55 | 122.21 | 117.70 |
| 577.0000 | 66.26 | 81.23 | 92.34 | 133.77 | 123.36 | 123.12 | 118.67 |
| 583.0000 | 66.43 | 81.40 | 92.51 | 134.58 | 124.17 | 124.03 | 119.64 |
| 589.0000 | 66.60 | 81.57 | 92.68 | 135.39 | 124.98 | 124.94 | 120.61 |
| 595.0000 | 66.77 | 81.74 | 92.85 | 136.20 | 125.79 | 125.85 | 121.58 |
| 601.0000 | 66.94 | 81.91 | 93.02 | 137.01 | 126.60 | 126.76 | 122.55 |
| 607.0000 | 67.11 | 82.08 | 93.19 | 137.82 | 127.41 | 127.67 | 123.52 |
| 613.0000 | 67.28 | 82.25 | 93.36 | 138.63 | 128.22 | 128.58 | 124.49 |
| 619.0000 | 67.45 | 82.42 | 93.53 | 139.44 | 129.03 | 129.49 | 125.46 |
| 625.0000 | 67.62 | 82.59 | 93.70 | 140.25 | 129.84 | 130.40 | 126.43 |
| 631.0000 | 67.79 | 82.76 | 93.87 | 141.06 | 130.65 | 131.31 | 127.40 |
| 637.0000 | 67.96 | 82.93 | 94.04 | 141.87 | 131.46 | 132.22 | 128.37 |
| 643.0000 | 68.13 | 83.10 | 94.21 | 142.68 | 132.27 | 133.13 | 129.34 |
| 649.0000 | 68.30 | 83.27 | 94.38 | 143.49 | 133.08 | 134.04 | 130.31 |
| 655.0000 | 68.47 | 83.44 | 94.55 | 144.30 | 133.89 | 134.95 | 131.28 |
| 661.0000 | 68.64 | 83.61 | 94.72 | 145.11 | 134.70 | 135.86 | 132.25 |
| 667.0000 | 68.81 | 83.78 | 94.89 | 145.92 | 135.51 | 136.77 | 133.22 |
| 673.0000 | 68.98 | 83.95 | 95.06 | 146.73 | 136.32 | 137.68 | 134.19 |
| 679.0000 | 69.15 | 84.12 | 95.23 | 147.54 | 137.13 | 138.59 | 135.16 |
| 685.0000 | 69.32 | 84.29 | 95.40 | 148.35 | 137.94 | 139.50 | 136.13 |
| 691.0000 | 69.49 | 84.46 | 95.57 | 149.16 | 138.75 | 140.41 | 137.10 |
| 697.0000 | 69.66 | 84.63 | 95.74 | 150.00 | 139.56 | 141.32 | 138.07 |
| 703.0000 | 69.83 | 84.80 | 95.91 | 150.81 | 140.37 | 142.23 | 139.04 |
| 709.0000 | 70.00 | 84.97 | 96.08 | 151.62 | 141.18 | 143.14 | 140.01 |
| 715.0000 | 70.17 | 85.14 | 96.25 | 152.43 | 141.99 | 144.05 | 140.98 |
| 721.0000 | 70.34 | 85.31 | 96.42 | 153.24 | 142.80 | 144.96 | 141.95 |
| 727.0000 | 70.51 | 85.48 | 96.59 | 154.05 | 143.61 | 145.87 | 142.92 |
| 733.0000 | 70.68 | 85.65 | 96.76 | 154.86 | 144.42 | 146.78 | 143.89 |
| 739.0000 | 70.85 | 85.82 | 96.93 | 155.67 | 145.23 | 147.69 | 144.86 |
| 745.0000 | 71.02 | 86.00 | 97.10 | 156.48 | 146.04 | 148.60 | 145.83 |
| 751.0000 | 71.19 | 86.17 | 97.27 | 157.29 | 146.85 | 149.51 | 146.80 |
| 757.0000 | 71.36 | 86.34 | 97.44 | 158.10 | 147.66 | 150.42 | 147.77 |
| 763.0000 | 71.53 | 86.51 | 97.61 | 158.91 | 148.47 | 151.33 | 148.74 |
| 769.0000 | 71.70 | 86.68 | 97.78 | 159.72 | 149.28 | 152.24 | 149.71 |
| 775.0000 | 71.87 | 86.85 | 97.95 | 160.53 | 150.09 | 153.15 | 150.68 |
| 781.0000 | 72.04 | 87.02 | 98.12 | 161.34 | 150.90 | 154.06 | 151.65 |
| 787.0000 | 72.21 | 87.19 | 98.29 | 162.15 | 151.71 | 154.97 | 152.62 |
| 793.0000 | 72.38 | 87.36 | 98.46 | 162.96 | 152.52 | 155.88 | 153.59 |
| 799.0000 | 72.55 | 87.53 | 98.63 | 163.77 | 153.33 | 156.79 | 154.56 |
| 805.0000 | 72.72 | 87.70 | 98.80 | 164.58 | 154.14 | 157.70 | 155.53 |
| 811.0000 | 72.89 | 87.87 | 98.97 | 165.39 | 154.95 | 158.61 | 156.50 |
| 817.0000 | 73.06 | 88.04 | 99.14 | 166.20 | 155.76 | 159.52 | 157.47 |
| 823.0000 | 73.23 | 88.21 | 99.31 | 167.01 | 156.57 | 160.43 | 158.44 |
| 829.0000 | 73.40 | 88.38 | 99.48 | 167.82 | 157.38 | 161.34 | 159.41 |
| 835.0000 | 73.57 | 88.55 | 99.65 | 168.63 | 158.19 | 162.25 | 160.38 |
| 841.0000 | 73.74 | 88.72 | 99.82 | 169.44 | 159.00 | 163.16 | 161.35 |

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| | | | | | |
|------------|--------|--------|--------|--------|--------|
| 19005.0000 | 0.1000 | 0.2000 | 0.3000 | 0.4000 | 0.5000 |
| 4300.0000 | 1.0540 | 1.0680 | 1.0770 | 1.0810 | 1.0830 |
| 6000.0000 | 1.0850 | 1.1000 | 1.1150 | 1.1190 | 1.1220 |
| 8000.0000 | 1.1140 | 1.1320 | 1.1440 | 1.1530 | 1.1580 |
| 10000.0000 | 1.1450 | 1.1630 | 1.1760 | 1.1860 | 1.1940 |
| 12000.0000 | 1.1710 | 1.1930 | 1.2100 | 1.2210 | 1.2260 |
| 14000.0000 | 1.2000 | 1.2240 | 1.2430 | 1.2550 | 1.2600 |
| 16000.0000 | 1.2260 | 1.2540 | 1.2750 | 1.2880 | 1.2940 |
| 18000.0000 | 1.2550 | 1.2850 | 1.3060 | 1.3210 | 1.3280 |
| 20000.0000 | 1.2810 | 1.3100 | 1.3400 | 1.3550 | 1.3630 |
| 22000.0000 | 1.3110 | 1.3470 | 1.3720 | 1.3890 | 1.3970 |
| 24000.0000 | 1.3440 | 1.3950 | 1.4060 | 1.4230 | 1.4320 |
| 26000.0000 | 1.3740 | 1.4110 | 1.4400 | 1.4580 | 1.4650 |
| 28000.0000 | 1.4060 | 1.4450 | 1.4740 | 1.4930 | 1.5000 |
| 30000.0000 | 1.4350 | 1.4780 | 1.5070 | 1.5260 | 1.5330 |
| 32000.0000 | 1.4650 | 1.5080 | 1.5400 | 1.5600 | 1.5680 |
| 34000.0000 | 1.4970 | 1.5400 | 1.5730 | 1.5930 | 1.6020 |
| 36000.0000 | 1.5280 | 1.5720 | 1.6050 | 1.6270 | 1.6360 |
| 38000.0000 | 1.5570 | 1.6050 | 1.6390 | 1.6590 | 1.6670 |
| 40000.0000 | 1.5860 | 1.6380 | 1.6720 | 1.6920 | 1.7000 |

| | | | | |
|--------|--------|--------|--------|--------|
| 0.3809 | 0.0823 | 0.0853 | 0.0913 | 0.0913 |
| 0.3933 | 0.0985 | 0.1017 | 0.1091 | 0.1091 |
| 1.1100 | 1.3000 | 1.1100 | 1.3000 | 1.3000 |

| | | | | | |
|------------|---------|---------|---------|---------|----------|
| 27005.0000 | 0.0 | 0.1000 | 0.2000 | 0.3000 | 0.4000 |
| 1.1400 | 47.3000 | 47.7000 | 49.2000 | 51.8000 | 55.4000 |
| 1.1500 | 51.3000 | 51.7000 | 52.9000 | 55.4000 | 58.9000 |
| 1.1600 | 55.0000 | 55.4000 | 56.3000 | 58.8000 | 62.1000 |
| 1.1700 | 58.5000 | 58.8000 | 59.8000 | 62.1000 | 65.1000 |
| 1.1800 | 61.8000 | 62.1000 | 63.1000 | 65.1000 | 67.9000 |
| 1.1900 | 65.1000 | 65.3000 | 66.3000 | 68.2000 | 70.5000 |
| 1.2000 | 67.8000 | 68.0000 | 68.9000 | 70.6000 | 72.6000 |
| 1.2100 | 70.2000 | 70.4000 | 71.2000 | 72.7000 | 74.7000 |
| 1.2200 | 72.3000 | 72.6000 | 73.3000 | 74.8000 | 76.6000 |
| 1.2300 | 74.3000 | 74.5000 | 75.2000 | 76.7000 | 78.5000 |
| 1.2400 | 75.9000 | 76.2000 | 77.0000 | 78.5000 | 80.2000 |
| 1.2500 | 77.5000 | 77.8000 | 78.6000 | 80.1000 | 81.7000 |
| 1.2600 | 79.1000 | 79.3000 | 80.2000 | 81.6000 | 83.2000 |
| 1.2700 | 80.5000 | 80.8000 | 81.7000 | 83.1000 | 84.6000 |
| 1.2800 | 82.0000 | 82.3000 | 83.1000 | 84.4000 | 85.9000 |
| 1.2900 | 83.4000 | 83.8000 | 84.6000 | 85.8000 | 87.2000 |
| 1.3000 | 84.7000 | 85.0000 | 85.8000 | 87.0000 | 88.4000 |
| 1.3100 | 86.0000 | 86.3000 | 87.0000 | 88.2000 | 89.5000 |
| 1.3200 | 87.4000 | 87.6000 | 88.2000 | 89.3000 | 90.6000 |
| 1.3300 | 88.7000 | 88.9000 | 89.4000 | 90.5000 | 91.7000 |
| 1.3400 | 90.0000 | 90.1000 | 90.6000 | 91.6000 | 92.9000 |
| 1.3500 | 91.4000 | 91.4000 | 91.8000 | 92.8000 | 94.0000 |
| 1.3600 | 92.8000 | 92.6000 | 93.0000 | 93.9000 | 95.1000 |
| 1.3700 | 94.1000 | 93.9000 | 94.2000 | 95.1000 | 96.3000 |
| 1.3800 | 95.5000 | 95.1000 | 95.4000 | 96.3000 | 97.4000 |
| 1.3900 | 96.8000 | 96.4000 | 96.6000 | 97.4000 | 98.5000 |
| 1.4000 | 98.1000 | 97.9000 | 98.2000 | 98.9000 | 100.0000 |

[illegible]

07-04-74

| | | | | |
|------|------------|--------|--------|--------|
| FLIM | 13003-0000 | 0.0 | 0.2000 | 0.4000 |
| | 1-1000 | 3.5000 | 3.3500 | 3.2000 |
| | 1-1200 | 3.7500 | 3.0750 | 2.9000 |
| | 1-1400 | 3.0000 | 1.7750 | 1.5500 |
| | 1-1600 | 2.4000 | 2.5250 | 2.2500 |
| | 1-1800 | 2.5000 | 2.7000 | 1.9000 |
| | 1-2000 | 2.3000 | 2.0500 | 1.8000 |
| | 1-2200 | 2.0500 | 1.9250 | 1.9000 |
| | 1-2400 | 1.9000 | 1.8000 | 1.8000 |
| | 1-2600 | 1.6000 | 1.6000 | 1.6000 |
| | 1-2800 | 1.3500 | 1.3500 | 1.3500 |
| | 1-3000 | 1.1000 | 1.1000 | 1.1000 |
| | 1-3200 | 1.0000 | 1.0000 | 1.0000 |
| | 1-3400 | 1.0000 | 1.0000 | 1.0000 |

| MAXIMUM TAKEOFF WEIGHT (430,000LBS.), 10 DEG. FLAPS, TAKEOFF THRUST | | | | | | | | | | | | | | | |
|---|------------------------|-------------------------|---------------------|------------|-------------|--------------|--------|-------------|-------------|------|--------------|-------|-------------------|-----------|------------|
| PAGE 70 | | | | | | | | | | | | | | | |
| 07-04-74 | | | | | | | | | | | | | | | |
| ACCI = 0.0 KT/SEC | | | | | | | | | | | | | | | |
| FLAP=10. DEG TEMP= 77.0 DEG F WIND= .0 KX SLOPE=0.0 | | | | | | | | | | | | | | | |
| SEGMENT | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | TIME (SEC) | THRUST (LB) | SPEED (KTAS) | MACH | ALPHA (DEG) | PITCH (DEG) | GRAD | TEMP (DEG F) | IEPR | SQRT(THETA) (PCT) | ROC (FPM) | FLAP (DEG) |
| 0. | WEIGHT= | 430000. | IEPR= | 1.533 | ISA+ | 10.0 | DEG C. | 88.211-228 | BLEED OFF | | | | | | |
| 0. | | 5515. | | 43.1 | 32076. | 156.7 | .233 | **** | **** | **** | 77.0 | 1.521 | 92.41 | ***** | 10. |
| 0. | | 6575. | | 47.0 | 31643. | 167.1 | .248 | **** | **** | **** | 77.0 | 1.519 | 92.41 | ***** | 10. |
| 36. | | 7870. | | 51.5 | 31333. | 174.1 | .259 | **** | **** | **** | 76.9 | 1.519 | 92.43 | ***** | 10. |
| 332. | | 11739. | | 64.5 | 31008. | 177.9 | .265 | **** | **** | **** | 75.8 | 1.520 | 92.66 | ***** | 10. |
| 682. | | 14751. | | 74.5 | 30769. | 178.9 | .266 | 11.6 | 18.3 | 116 | 74.6 | 1.523 | 92.94 | 2095. | 10. |
| 1029. | | 17777. | | 84.5 | 30531. | 179.8 | .268 | 11.6 | 18.2 | 114 | 73.3 | 1.526 | 93.21 | 2075. | 10. |
| 1372. | | 20819. | | 94.5 | 30292. | 180.7 | .270 | 11.6 | 18.1 | 112 | 72.1 | 1.529 | 93.48 | 2056. | 10. |
| 1713. | | 23877. | | 104.5 | 30054. | 181.6 | .271 | 11.6 | 18.0 | 111 | 70.9 | 1.532 | 93.75 | 2036. | 10. |
| 2044. | | 26950. | | 114.5 | 29814. | 182.5 | .273 | 11.6 | 17.9 | 109 | 69.7 | 1.534 | 94.01 | 2016. | 10. |
| 2383. | | 30039. | | 124.5 | 29565. | 183.5 | .275 | 11.6 | 17.8 | 107 | 68.5 | 1.537 | 94.25 | 1994. | 10. |
| 2712. | | 33143. | | 134.5 | 29319. | 184.4 | .277 | 11.6 | 17.7 | 106 | 67.3 | 1.539 | 94.49 | 1972. | 10. |
| 3038. | | 36262. | | 144.5 | 29077. | 185.3 | .278 | 11.6 | 17.6 | 104 | 66.2 | 1.542 | 94.74 | 1950. | 10. |
| 3361. | | 39347. | | 154.5 | 28839. | 186.2 | .280 | 11.6 | 17.5 | 102 | 65.0 | 1.544 | 94.99 | 1929. | 10. |
| 3679. | | 42454. | | 164.5 | 28604. | 187.1 | .281 | 11.6 | 17.4 | 101 | 63.9 | 1.547 | 95.24 | 1907. | 10. |
| 3995. | | 45512. | | 174.5 | 28372. | 188.0 | .283 | 11.6 | 17.3 | 099 | 62.8 | 1.549 | 95.50 | 1886. | 10. |
| 4306. | | 48592. | | 184.5 | 28142. | 188.9 | .285 | 11.6 | 17.2 | 098 | 61.6 | 1.551 | 95.74 | 1865. | 10. |
| 4614. | | 51693. | | 194.5 | 27915. | 189.7 | .286 | 11.6 | 17.1 | 096 | 60.5 | 1.554 | 95.99 | 1843. | 10. |
| 4919. | | 54747. | | 204.5 | 27692. | 190.6 | .288 | 11.6 | 17.1 | 095 | 59.5 | 1.556 | 96.24 | 1822. | 10. |
| 5220. | | 57822. | | 214.5 | 27472. | 191.5 | .290 | 11.6 | 17.0 | 093 | 58.4 | 1.558 | 96.49 | 1801. | 10. |
| 5514. | | 60811. | | 224.5 | 27256. | 192.4 | .291 | 11.6 | 16.9 | 091 | 57.3 | 1.561 | 96.74 | 1781. | 10. |
| 5812. | | 63816. | | 234.5 | 27043. | 193.3 | .293 | 11.6 | 16.8 | 090 | 56.3 | 1.563 | 96.99 | 1760. | 10. |
| 6103. | | 66845. | | 244.5 | 26831. | 194.1 | .295 | 11.6 | 16.7 | 089 | 55.2 | 1.565 | 97.24 | 1739. | 10. |
| 6390. | | 69868. | | 254.5 | 26619. | 195.0 | .296 | 11.6 | 16.6 | 087 | 54.2 | 1.567 | 97.49 | 1718. | 10. |
| 6674. | | 72866. | | 264.5 | 26412. | 195.8 | .298 | 11.6 | 16.6 | 086 | 53.2 | 1.569 | 97.74 | 1698. | 10. |
| 6954. | | 75864. | | 274.5 | 26212. | 196.7 | .299 | 11.6 | 16.5 | 084 | 52.2 | 1.571 | 97.99 | 1677. | 10. |
| 7231. | | 78862. | | 284.5 | 26016. | 197.5 | .301 | 11.6 | 16.4 | 083 | 51.2 | 1.573 | 98.24 | 1658. | 10. |
| 7505. | | 81860. | | 294.5 | 25826. | 198.4 | .302 | 11.6 | 16.3 | 082 | 50.2 | 1.576 | 98.48 | 1638. | 10. |
| 7776. | | 84861. | | 304.5 | 25641. | 199.2 | .304 | 11.6 | 16.2 | 080 | 49.3 | 1.578 | 98.72 | 1620. | 10. |
| 8043. | | 87861. | | 314.5 | 25461. | 200.0 | .306 | 11.6 | 16.1 | 079 | 48.3 | 1.580 | 98.97 | 1601. | 10. |
| 8319. | | 90861. | | 324.5 | 25286. | 200.9 | .307 | 11.6 | 16.1 | 078 | 47.4 | 1.582 | 99.21 | 1583. | 10. |
| 8595. | | 93861. | | 334.5 | 25115. | 201.7 | .309 | 11.6 | 16.0 | 077 | 46.5 | 1.584 | 99.45 | 1566. | 10. |
| 8871. | | 96861. | | 344.5 | 24949. | 202.5 | .310 | 11.6 | 16.0 | 076 | 45.5 | 1.586 | 99.70 | 1549. | 10. |
| 9147. | | 99861. | | 354.5 | 24788. | 203.3 | .312 | 11.6 | 15.9 | 074 | 44.6 | 1.589 | 99.95 | 1532. | 10. |
| 9423. | | 102861. | | 364.5 | 24631. | 204.1 | .313 | 11.6 | 15.8 | 073 | 43.7 | 1.591 | 100.19 | 1516. | 10. |
| 9699. | | 105861. | | 374.5 | 24478. | 205.0 | .315 | 11.6 | 15.8 | 072 | 42.8 | 1.593 | 100.44 | 1500. | 10. |
| CRFAC USED = 0.0 | | | | | | | | | | | | | | | |
| ACCI = 0.0 KT/SEC | | | | | | | | | | | | | | | |

L-1011-1 / #6211-228 A-NOISE LEVEL
SLA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (433,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

NOISE LEVELS ALONG THE FLIGHT PATH

| X | H | V | SCRT (THE TA) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|---------------|--------|--------|-------|--------|-------|
| 5515. | 0. | 156.7 | 92.41 | 5515. | ***** | 1520. | 5515. | 75.01 |
| 4575. | 0. | 167.1 | 92.41 | 6575. | ***** | 1520. | 6575. | 75.01 |
| 7870. | 35. | 174.1 | 92.43 | 7870. | 123.37 | 1520. | 7870. | 77.60 |
| 11739. | 344. | 177.9 | 92.60 | 11739. | 101.81 | 1558. | 11739. | 81.27 |
| 14751. | 706. | 178.9 | 92.94 | 14751. | 94.63 | 1676. | 14751. | 83.38 |
| 17777. | 1065. | 179.8 | 93.21 | 17777. | 90.21 | 1856. | 17777. | 83.86 |
| 20819. | 1420. | 180.7 | 93.48 | 20819. | 87.03 | 2080. | 20819. | 82.47 |
| 21240. | 1474. | 180.8 | 93.52 | 21280. | 86.63 | 2117. | 21280. | 82.26 |
| 21877. | 1773. | 181.6 | 93.75 | 23877. | 84.46 | 2335. | 23877. | 81.06 |
| 26550. | 2121. | 182.5 | 94.01 | 26953. | 82.26 | 2610. | 26950. | 79.70 |
| 27360. | 2167. | 182.7 | 94.04 | 27360. | 82.00 | 2647. | 27360. | 79.53 |
| 30039. | 2467. | 183.5 | 94.25 | 30039. | 80.41 | 2897. | 30039. | 78.42 |
| 33143. | 2809. | 184.4 | 94.49 | 33143. | 78.82 | 3193. | 33143. | 77.23 |
| 33440. | 2840. | 184.5 | 94.52 | 33440. | 78.68 | 3221. | 33440. | 77.11 |
| 36262. | 3146. | 185.3 | 94.74 | 36262. | 77.42 | 3494. | 36262. | 76.02 |
| 39397. | 3480. | 186.2 | 94.99 | 39397. | 76.04 | 3797. | 39397. | 74.90 |
| 39520. | 3493. | 186.2 | 95.00 | 39520. | 76.04 | 3809. | 39520. | 74.86 |
| 42547. | 3810. | 187.1 | 95.24 | 42547. | 74.86 | 4102. | 42547. | 73.87 |
| 45600. | 4126. | 187.9 | 95.49 | 45600. | 73.80 | 4397. | 45600. | 72.93 |
| 45712. | 4137. | 188.0 | 95.50 | 45712. | 73.76 | 4408. | 45712. | 72.90 |
| 48892. | 4460. | 188.5 | 95.74 | 48892. | 72.74 | 4712. | 48892. | 72.00 |
| 51680. | 4739. | 189.6 | 95.96 | 51680. | 71.93 | 4977. | 51680. | 71.26 |
| 52087. | 4780. | 189.7 | 95.99 | 52087. | 71.81 | 5016. | 52087. | 71.16 |
| 55247. | 5076. | 190.6 | 96.24 | 55247. | 70.95 | 5318. | 55247. | 70.37 |
| 57260. | 5334. | 191.3 | 96.43 | 57260. | 70.33 | 5547. | 57260. | 69.80 |
| 58522. | 5408. | 191.5 | 96.49 | 58522. | 70.14 | 5618. | 58522. | 69.63 |
| 61761. | 5717. | 192.4 | 96.74 | 61761. | 69.39 | 5915. | 61761. | 68.93 |
| 63840. | 5917. | 192.9 | 96.90 | 63840. | 68.94 | 6104. | 63840. | 68.50 |

07-04-74

L-1011-1 / R211-220 A-NOISE LEVEL
SEA LEVEL, 7 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT 1430, COOLING, 10 DEG. FLAPS, TAKEOFF THRUST

70.08A

4 - NOISE LEVELS

| R | " | V | NI /
SQRT (TAFTA) | K1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|-------|-------|----------|-----------|-------|
| 5515. | 0. | 156.7 | 92.41 | 5440. | 2090. | 2090. | 5515. | 2090. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 5440. | 2090. | 2090. | 6575. | 2090. | 0.16 |
| 7810. | 15. | 174.1 | 92.43 | 5440. | 2090. | 2090. | 7870. | 2090. | 0.35 |
| 11739. | 144. | 177.9 | 92.60 | 5441. | 2091. | 3185. | 11739. | 317. | 1.08 |
| 14741. | 706. | 178.9 | 92.64 | 5443. | 2092. | 3578. | 14751. | 317. | 1.80 |
| 17777. | 1065. | 179.6 | 93.21 | 5445. | 2093. | 3893. | 17777. | 3744. | 2.59 |
| 21816. | 1620. | 180.7 | 93.48 | 5446. | 2095. | 4197. | 20819. | 3949. | 3.43 |
| 21240. | 1474. | 187.8 | 93.52 | 5447. | 2095. | 4243. | 21280. | 3979. | 3.56 |
| 21877. | 1773. | 181.6 | 93.75 | 5448. | 2096. | 4516. | 23877. | 4154. | 4.32 |
| 24960. | 2121. | 187.5 | 94.01 | 5450. | 2097. | 4865. | 26950. | 4378. | 5.26 |
| 27340. | 2167. | 187.7 | 94.24 | 5450. | 2097. | 4913. | 27360. | 4409. | 5.39 |
| 30339. | 2467. | 183.5 | 94.25 | 5451. | 2098. | 5236. | 30339. | 4619. | 6.26 |
| 31157. | 2800. | 185.4 | 94.49 | 5453. | 2099. | 5453. | 33143. | 4674. | 7.29 |
| 33400. | 2940. | 184.4 | 94.52 | 5453. | 2099. | 5453. | 33440. | 4655. | 7.39 |
| 36267. | 3142. | 185.3 | 94.74 | 5454. | 2100. | 5454. | 36262. | 4456. | 8.31 |
| 37307. | 3480. | 184.2 | 94.99 | 5456. | 2101. | 5456. | 39397. | 4202. | 9.29 |
| 39600. | 3493. | 184.2 | 95.00 | 5456. | 2101. | 5456. | 39520. | 4191. | 9.32 |
| 42567. | 3810. | 187.1 | 95.24 | 5457. | 2103. | 5457. | 42547. | 3907. | 10.20 |
| 45630. | 4126. | 187.9 | 95.44 | 5459. | 2104. | 5459. | 45600. | 3575. | 11.02 |
| 48492. | 4137. | 184.0 | 95.50 | 5459. | 2104. | 5459. | 45712. | 3561. | 11.05 |
| 51640. | 4660. | 182.9 | 95.74 | 5460. | 2105. | 5460. | 48992. | 3150. | 11.82 |
| 52087. | 4739. | 182.6 | 95.96 | 5462. | 2106. | 5462. | 51640. | 2715. | 12.40 |
| 55247. | 4750. | 189.7 | 95.99 | 5462. | 2106. | 5462. | 52087. | 2643. | 12.48 |
| 57760. | 5096. | 192.6 | 96.24 | 5463. | 2107. | 5463. | 55297. | 1970. | 13.01 |
| 58522. | 5334. | 191.3 | 96.43 | 5465. | 2108. | 5465. | 57760. | 1186. | 13.29 |
| 61761. | 5608. | 191.5 | 96.44 | 5465. | 2108. | 5465. | 58522. | 787. | 13.34 |
| | 5717. | 192.4 | 96.74 | 5466. | 2109. | 5466. | 59122. | 0. | 13.36 |

07-06-74

1-1011-1 / 48211-22A A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT 1430,000 L.P.J., 10 OFG. FLAPS, TAKEOFF THRUST

* - NOISE LEVELS

80. DBA

| N | DL | V | SCRT (THETA) | A1 | A2 | N | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|--------------|-------|-------|-------|----------|-----------|------|
| 5515. | 0. | 150.7 | 97.41 | 2531. | 1139. | 1139. | 5515. | 1139. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 2531. | 1139. | 1139. | 6575. | 1139. | 0.09 |
| 7870. | 35. | 174.1 | 92.43 | 2531. | 1139. | 1381. | 7870. | 1380. | 0.20 |
| 11719. | 144. | 177.9 | 92.46 | 2533. | 1139. | 1777. | 11739. | 1744. | 0.64 |
| 14741. | 106. | 178.9 | 92.44 | 2536. | 1141. | 2051. | 14751. | 1926. | 1.03 |
| 17777. | 1065. | 179.8 | 93.21 | 2539. | 1152. | 2365. | 17777. | 2111. | 1.47 |
| 20819. | 1470. | 180.7 | 93.48 | 2542. | 1153. | 2542. | 20819. | 2108. | 1.93 |
| 21700. | 1474. | 182.8 | 93.57 | 2542. | 1153. | 2542. | 21700. | 2072. | 2.00 |
| 21477. | 1773. | 181.6 | 93.75 | 2545. | 1164. | 2545. | 21477. | 1875. | 2.36 |
| 26940. | 2121. | 187.5 | 94.01 | 2547. | 1165. | 2547. | 26950. | 1410. | 2.72 |
| 27380. | 2167. | 187.7 | 94.04 | 2548. | 1165. | 2548. | 27380. | 1339. | 2.76 |
| 30019. | 2467. | 187.5 | 94.25 | 2550. | 1166. | 2550. | 30039. | 646. | 2.95 |
| 31141. | 2468. | 184.4 | 94.49 | 2552. | 1147. | 2552. | 31141. | 0. | 2.97 |

07-04-74

L-1011-1 / R8211-22H A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 10 DEG. FLAPS, TAKEOFF THRUST

A - NOISE LEVELS

90. DBA

| X | H | V | NI /
SORT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|------|-------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 1079. | 595. | 595. | 5515. | 595. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 1079. | 595. | 595. | 6575. | 595. | 0.05 |
| 7870. | 35. | 174.1 | 92.43 | 1079. | 595. | 719. | 7870. | 718. | 0.11 |
| 11739. | 344. | 177.9 | 92.66 | 1081. | 596. | 939. | 11739. | 874. | 0.33 |
| 14751. | 706. | 178.9 | 92.94 | 1083. | 597. | 1083. | 14751. | 822. | 0.51 |
| 17777. | 1065. | 179.8 | 93.21 | 1086. | 598. | 1086. | 17777. | 211. | 0.62 |
| 20819. | 1420. | 180.7 | 93.48 | 1088. | 599. | 1088. | 17955. | 0. | 0.62 |

07-04-74

L-1011-1 / R211-208 A-NOISE LEVEL
SEA LEVEL, 77 DEG. S., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 10 DEG. FLAPS, TAKEOFF THRUST

100. NPA

A - NOISE LEVELS

| R | W | V | SCR (THETA) | RI | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|-------------|------|------|------|----------|-----------|------|
| 5515. | 0. | 156.1 | 92.41 | 412. | 262. | 262. | 5515. | 262. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 412. | 262. | 262. | 6575. | 262. | 0.02 |
| 7870. | 35. | 174.1 | 92.43 | 413. | 262. | 320. | 7870. | 318. | 0.05 |
| 11710. | 146. | 177.9 | 92.60 | 413. | 262. | 413. | 11739. | 230. | 0.12 |
| 14751. | 706. | 176.6 | 92.64 | 415. | 263. | 415. | 12319. | 0. | 0.13 |

07-04-74

L-1011-1 / M3211-228 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 10 DEG. FLAPS, TAKEOFF THRUST

A - NOISE LEVELS 110. DBA

| X | H | V | SR T (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|--------------|------|------|------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 144. | 104. | 104. | 5515. | 104. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 144. | 104. | 104. | 6575. | 104. | 0.01 |
| 7870. | 35. | 174.1 | 92.43 | 144. | 104. | 128. | 7870. | 124. | 0.02 |
| 11719. | 344. | 177.9 | 92.66 | 145. | 104. | 145. | 9104. | 0. | 0.02 |

07-04-74

DEPARTURE ANGLE (THETA) 90.
STAPT= 21240. INCREMENT= 6000.

IMTID = 0 ICL = 0 ICL = 0 NSCLND = 0 IPLIFT = 0 NSCLFT = 0
350.000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

TYPE = TAKE ENG = 225 OFF W1 = 0.0 W = 350000. HP = 0. FLAP = 10. YAMB = 77.0

MS = 1.0 ACC1 = 0.0 SLOPE = 0.0 TFAC = 1.0 CRHT = 0.0 CBFAC = 0.0 DELV2 = 10.0

| 350,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST | | | | | | | | | | | | | |
|---|------------------------|-------------------------|---------------------|------------------|-------------|--------------|------------|-------------|-------------|-------|--------------|-------|------------|
| FLAP=10. DEG. WIND= 77.0 DEG F WIND= 0.0 KY SLOPE=0.0 ACCI = 0.0 KT/SEC | | | | | | | | | | | | | |
| PAGE 78 | | | | | | | | | | | | | |
| SYGMENT | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | TOTAL TIME (SEC) | THRUST (LB) | SPEED (KTAS) | MACH | ALPHA (DEG) | PITCH (DEG) | GRAD | TEMP (DEG F) | IEPR | FLAP (DEG) |
| 0. WFLIGHT= | 350000. | IEPR= | 1.533 | ISA+ | 10.0 | DEG C+ | RB-211-228 | BLEED | OFF | | | | |
| RE-QUI | 0. | 3263. | 29.1 | 32879. | 138.4 | .206 | **** | **** | 77.0 | 1.524 | 92.46 | ***** | 10. |
| RE-QUI | 0. | 4102. | 32.4 | 32322. | 151.0 | .224 | **** | **** | 77.0 | 1.522 | 92.42 | ***** | 10. |
| RE-QUI | 0. | 5078. | 36.1 | 31833. | 162.0 | .241 | **** | **** | 76.9 | 1.520 | 92.44 | ***** | 10. |
| RE-QUI | 0. | 6004. | 40.9 | 31345. | 165.4 | .246 | **** | **** | 75.0 | 1.524 | 92.83 | ***** | 10. |
| RE-QUI | 0. | 6904. | 45.9 | 31010. | 166.6 | .248 | 10.9 | 20.6 | 73.3 | 1.528 | 93.20 | 2839. | 10. |
| RE-QUI | 0. | 7800. | 50.9 | 30687. | 167.7 | .251 | 10.4 | 20.5 | 71.6 | 1.532 | 93.57 | 2809. | 10. |
| RE-QUI | 0. | 8700. | 55.9 | 30325. | 168.9 | .253 | 10.9 | 20.3 | 69.9 | 1.536 | 93.93 | 2778. | 10. |
| RE-QUI | 0. | 9600. | 60.9 | 29974. | 170.1 | .255 | 10.9 | 20.1 | 68.3 | 1.539 | 94.27 | 2746. | 10. |
| RE-QUI | 0. | 10500. | 65.9 | 29628. | 171.2 | .257 | 10.9 | 20.0 | 66.7 | 1.542 | 94.61 | 2714. | 10. |
| RE-QUI | 0. | 11400. | 70.9 | 29289. | 172.4 | .259 | 10.9 | 19.8 | 65.1 | 1.546 | 94.95 | 2681. | 10. |
| RE-QUI | 0. | 12300. | 75.9 | 28955. | 173.5 | .261 | 10.9 | 19.6 | 63.5 | 1.549 | 95.30 | 2649. | 10. |
| RE-QUI | 0. | 13200. | 80.9 | 28627. | 174.7 | .263 | 10.9 | 19.5 | 61.9 | 1.553 | 95.64 | 2617. | 10. |
| RE-QUI | 0. | 14100. | 85.9 | 28303. | 175.8 | .265 | 10.9 | 19.3 | 60.4 | 1.556 | 95.98 | 2586. | 10. |
| RE-QUI | 0. | 15000. | 90.9 | 27986. | 177.0 | .268 | 10.9 | 19.1 | 58.9 | 1.559 | 96.32 | 2554. | 10. |
| RE-QUI | 0. | 15900. | 95.9 | 27675. | 178.1 | .270 | 10.9 | 19.0 | 57.4 | 1.562 | 96.66 | 2522. | 10. |
| RE-QUI | 0. | 16800. | 100.9 | 27369. | 179.3 | .272 | 10.9 | 18.8 | 55.9 | 1.565 | 97.00 | 2491. | 10. |
| RE-QUI | 0. | 17700. | 105.9 | 27062. | 180.4 | .274 | 10.9 | 18.7 | 54.4 | 1.568 | 97.35 | 2460. | 10. |
| RE-QUI | 0. | 18600. | 110.9 | 26762. | 181.6 | .276 | 10.9 | 18.5 | 53.0 | 1.571 | 97.72 | 2428. | 10. |
| RE-QUI | 0. | 19500. | 115.9 | 26473. | 182.7 | .278 | 10.9 | 18.4 | 51.6 | 1.574 | 98.11 | 2397. | 10. |
| RE-QUI | 0. | 20400. | 120.9 | 26193. | 183.8 | .280 | 10.9 | 18.3 | 50.1 | 1.578 | 98.51 | 2367. | 10. |
| RE-QUI | 0. | 21300. | 125.9 | 25922. | 184.9 | .282 | 10.9 | 18.1 | 48.8 | 1.581 | 98.92 | 2339. | 10. |
| RE-QUI | 0. | 22200. | 130.9 | 25661. | 186.0 | .284 | 10.9 | 18.0 | 47.4 | 1.584 | 99.33 | 2311. | 10. |
| RE-QUI | 0. | 23100. | 135.9 | 25408. | 187.2 | .287 | 10.9 | 17.9 | 46.0 | 1.587 | 99.73 | 2283. | 10. |
| RE-QUI | 0. | 24000. | 140.9 | 25164. | 188.3 | .289 | 10.9 | 17.7 | 44.7 | 1.591 | 100.14 | 2257. | 10. |
| RE-QUI | 0. | 24900. | 145.9 | 24929. | 189.4 | .291 | 10.9 | 17.6 | 43.3 | 1.594 | 100.54 | 2232. | 10. |
| RE-QUI | 0. | 25800. | 150.9 | 24701. | 190.5 | .293 | 10.9 | 17.5 | 42.0 | 1.597 | 100.94 | 2207. | 10. |
| CRBAC USED = 0.0 | | | | | | | | | | | | | |

07-04-74

L-1011-1 / 28211-228 A-NUISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
150,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

NOISE LEVELS ALONG THE FLIGHT PATH

| X | M | V | SCRT(THETA) | NP | LCL | R | XPP | LSL |
|--------|-------|-------|-------------|--------|--------|-------|--------|-------|
| 3243. | 0. | 134.4 | 92.44 | 3283. | ***** | 1520. | 3283. | 75.01 |
| 4102. | 0. | 151.0 | 92.42 | 4102. | ***** | 1520. | 4102. | 75.01 |
| 5078. | 35. | 162.0 | 92.44 | 5078. | 123.37 | 1520. | 5078. | 77.60 |
| 8904. | 592. | 165.4 | 92.43 | 8904. | 96.39 | 1631. | 8904. | 82.65 |
| 11705. | 1081. | 166.6 | 91.70 | 11705. | 90.02 | 1867. | 11705. | 83.79 |
| 14526. | 1569. | 167.7 | 91.57 | 14526. | 85.93 | 2185. | 14526. | 81.87 |
| 17366. | 2030. | 168.9 | 91.93 | 17366. | 82.68 | 2552. | 17366. | 79.97 |
| 20227. | 2526. | 170.1 | 94.27 | 20227. | 80.12 | 2948. | 20227. | 78.21 |
| 21280. | 2648. | 171.5 | 94.39 | 21280. | 79.31 | 3096. | 21280. | 77.60 |
| 23107. | 2990. | 171.2 | 94.61 | 23107. | 78.02 | 3359. | 23107. | 76.55 |
| 24326. | 3400. | 172.4 | 94.92 | 24326. | 76.16 | 3779. | 24326. | 74.97 |
| 27360. | 3673. | 172.9 | 95.11 | 27360. | 75.36 | 3975. | 27360. | 74.29 |
| 28926. | 3917. | 173.5 | 95.30 | 28926. | 74.48 | 4204. | 28926. | 73.54 |
| 31844. | 4373. | 174.7 | 95.24 | 31844. | 73.01 | 4630. | 31844. | 72.24 |
| 33440. | 4612. | 175.3 | 95.92 | 33440. | 72.29 | 4856. | 33440. | 71.59 |
| 34872. | 4821. | 175.8 | 95.98 | 34872. | 71.69 | 5055. | 34872. | 71.05 |
| 37800. | 5264. | 177.0 | 96.32 | 37800. | 70.51 | 5479. | 37800. | 69.96 |
| 39520. | 5515. | 177.6 | 96.51 | 39520. | 69.88 | 5721. | 39520. | 69.38 |
| 40797. | 5731. | 178.1 | 96.66 | 40797. | 69.43 | 5901. | 40797. | 68.56 |
| 43813. | 6134. | 179.3 | 97.00 | 43813. | 68.44 | 6319. | 43813. | 68.03 |

07-04-74

L-1011-17 8011-228 A-NH SE LEVEL
SEA LEVEL, 77 DEG. E., 70% RELATIVE HUMIDITY
15,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

1 - NOISE LEVELS

70. DBA

| F | M | V | SLIP (M/T) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|------------|-------|-------|-------|----------|-----------|------|
| 17.3. | 0. | 130.4 | 92.46 | 5440. | 2090. | 2090. | 3233. | 2090. | 0.0 |
| 41.2. | 0. | 151.0 | 92.47 | 5440. | 2090. | 2090. | 4102. | 2090. | 0.12 |
| 5010. | 35. | 162.0 | 92.44 | 5440. | 2090. | 2090. | 5078. | 2090. | 0.27 |
| 8075. | 542. | 165.4 | 92.83 | 5443. | 2092. | 3468. | 8904. | 3417. | 1.02 |
| 11775. | 1081. | 166.6 | 93.20 | 5445. | 2093. | 3909. | 11705. | 3755. | 1.75 |
| 14570. | 1649. | 167.7 | 93.57 | 5447. | 2095. | 4329. | 14526. | 4034. | 2.53 |
| 17344. | 2250. | 168.9 | 93.93 | 5449. | 2097. | 4791. | 17366. | 4330. | 3.39 |
| 21277. | 2526. | 170.1 | 94.27 | 5451. | 2098. | 5300. | 20227. | 4659. | 4.31 |
| 25170. | 2777. | 171.5 | 94.39 | 5452. | 2099. | 5450. | 21330. | 4715. | 4.66 |
| 29226. | 2996. | 171.2 | 94.61 | 5453. | 2100. | 5453. | 23107. | 4557. | 5.27 |
| 33300. | 3400. | 172.4 | 94.95 | 5455. | 2101. | 5455. | 26006. | 4218. | 6.18 |
| 37300. | 3673. | 172.9 | 95.11 | 5456. | 2102. | 5456. | 27340. | 4035. | 6.55 |
| 41464. | 3910. | 173.5 | 95.40 | 5458. | 2103. | 5458. | 28926. | 3798. | 7.03 |
| 45400. | 4173. | 174.7 | 95.64 | 5460. | 2104. | 5460. | 31864. | 3269. | 7.77 |
| 49220. | 4412. | 175.1 | 95.82 | 5461. | 2105. | 5461. | 33440. | 2925. | 8.12 |
| 52820. | 4621. | 175.6 | 95.98 | 5462. | 2106. | 5462. | 34922. | 2567. | 8.39 |
| 56500. | 4764. | 177.0 | 96.32 | 5464. | 2107. | 5464. | 37800. | 1464. | 8.82 |
| 60470. | 5515. | 177.6 | 96.51 | 5465. | 2108. | 5465. | 39176. | 0. | 8.90 |

L-1011-1 / RB211-22B A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
150,000 LB. TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

07-04-74

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A - NOISE LEVELS

80. DBA

| C | M | V | SL /
SCRT (TIME) | M1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------------|-------|-------|-------|----------|-----------|------|
| 1237. | 0. | 135.4 | 92.46 | 231. | 1139. | 1139. | 3283. | 1139. | 0.0 |
| 4102. | 0. | 151.0 | 92.42 | 231. | 1139. | 1139. | 4102. | 1139. | 0.07 |
| 5078. | 15. | 163.3 | 92.44 | 231. | 1139. | 1381. | 5078. | 1380. | 0.16 |
| 4004. | 592. | 165.4 | 92.43 | 235. | 1140. | 1965. | 8904. | 1874. | 0.60 |
| 11725. | 1283. | 166.6 | 93.70 | 239. | 1142. | 2383. | 11705. | 2122. | 1.00 |
| 16326. | 1569. | 167.7 | 91.57 | 2541. | 1143. | 2543. | 14576. | 2001. | 1.42 |
| 17366. | 2053. | 168.9 | 93.43 | 2546. | 1145. | 2546. | 17366. | 1510. | 1.78 |
| 23227. | 2626. | 170.1 | 94.27 | 2550. | 1146. | 2550. | 20227. | 350. | 1.97 |
| 41290. | 2698. | 170.5 | 94.39 | 2551. | 1146. | 2551. | 20376. | 0. | 1.97 |

07-04-74

1-1011-1 / 86711-220 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
150,000 LB., TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

90. DBA

A - NOISE LEVELS

| E | M | V | SCR (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|-------------|-------|------|-------|----------|-----------|------|
| 1783. | 0. | 138.4 | 92.46 | 1079. | 595. | 595. | 3283. | 595. | 0.0 |
| 4107. | 0. | 151.0 | 92.42 | 1079. | 595. | 595. | 4102. | 595. | 0.03 |
| 5070. | 15. | 162.0 | 92.44 | 1079. | 595. | 719. | 5078. | 718. | 0.08 |
| 8904. | 592. | 165.4 | 92.83 | 1082. | 596. | 1082. | 8904. | 906. | 0.30 |
| 11705. | 1083. | 166.6 | 93.20 | 1085. | 598. | 1085. | 11705. | 66. | 0.40 |
| 14478. | 1569. | 167.7 | 93.57 | 1089. | 599. | 1089. | 11716. | 0. | 0.40 |

07-04-74

L 1011-1 / R4211-720 A-NOISE LFVFL
SFA LFVFL, 17 DEG. F., 70% RELATIVE HUMIDITY
152,000 LB., TAKEOFF WEIGHT, 10 DEG. FLAPS, TAKEOFF THRUST

100. DBA

A - NOISE LFVFL

| X | M | V | NI /
SCRT(MGT) | Q1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|------|-------|-------------------|------|------|------|----------|-----------|------|
| 1703. | 0. | 136.4 | 92.46 | 413. | 262. | 262. | 3283. | 262. | 0.0 |
| 4102. | 0. | 151.0 | 92.62 | 413. | 262. | 262. | 4102. | 262. | 0.02 |
| 5078. | 35. | 162.0 | 92.44 | 413. | 262. | 320. | 5078. | 318. | 0.04 |
| 7432. | 597. | 165.4 | 92.83 | 414. | 263. | 414. | 7432. | 0. | 0.06 |

1-1311-1 / 40211-320 A-MOISE LEVL
SFA FUEL, 77 DEG. F., 70% RELATIVE HUMIDITY
15,000 LB. TAKEOFF WGT., 10 DEG. FLAPS, TAKEOFF THRUST

A - WISE LEVELS 110. DBA

| I | U | V | AI/
SQRT(IMFVA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|------|-------|--------------------|------|------|------|----------|-----------|------|
| 1741. | 0. | 130.4 | 92.46 | 144. | 104. | 104. | 3283. | 104. | 0.0 |
| 1742. | 0. | 151.7 | 92.42 | 144. | 104. | 104. | 4102. | 104. | 0.01 |
| 5078. | 15. | 162.0 | 92.44 | 144. | 104. | 128. | 5078. | 124. | 0.01 |
| 5079. | 502. | 165.4 | 92.43 | 145. | 104. | 145. | 5739. | 0. | 0.02 |

07-04-74

RADIATION ANGLE (THETA) 90.
START: 1240. INCREMENT= 6000.

INSTANT = 0. ICL = 0. ISL = 0. HOTH = 0. NSCLND = 0. IPLIFT = 0. NSCLFT = 0.
MAXIMUM TAKEOFF WEIGHT (430,000 LBS.), 22 DEG. FLAPS, TAKEOFF THRUST

THRST = 1450 FNG = 220 OFF VWL = 0.0 W = 430000. HP = 0. FLAP = 22. TAMB = 77.0
W1 = 1.0 ACC1 = 0.0 SLJPE = 0.0 IFAC = 1.0 CBHT = 0.0 CRFAC = 0.0 DELV2 = 10.0

07-04-74

L-1011-1 / 48711-228 4-NOISE LFVFL
SPL LFVFL 77 DEC. 6.4 FOR RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEC. FLAPS, TAKEOFF THRUST

NOISE LEVELS ALONG THE FLIGHT PATH
M/S

| E | H | V | SCRIPT (M/T) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|--------------|--------|--------|-------|--------|-------|
| 4856. | 0. | 148.3 | 42.43 | 4856. | 00000 | 1520. | 4856. | 75.01 |
| 5774. | 0. | 154.3 | 42.41 | 5774. | 00000 | 1520. | 5774. | 75.01 |
| 7061. | 35. | 165.2 | 42.44 | 7061. | 123.37 | 1520. | 7061. | 77.60 |
| 10675. | 305. | 169.2 | 42.63 | 10675. | 102.95 | 1550. | 10675. | 81.02 |
| 13537. | 619. | 170.0 | 42.86 | 13537. | 95.96 | 1641. | 13537. | 82.80 |
| 16412. | 930. | 170.7 | 43.09 | 16412. | 91.71 | 1782. | 16412. | 84.35 |
| 19300. | 1238. | 171.5 | 43.32 | 19300. | 88.55 | 1920. | 19300. | 83.19 |
| 21280. | 1440. | 172.0 | 43.48 | 21280. | 86.84 | 2098. | 21280. | 82.37 |
| 22200. | 1543. | 172.2 | 43.55 | 22200. | 86.12 | 2166. | 22200. | 81.98 |
| 25113. | 1844. | 173.0 | 43.76 | 25113. | 83.77 | 2490. | 25113. | 80.78 |
| 27360. | 2074. | 173.5 | 43.85 | 27360. | 82.54 | 2571. | 27360. | 79.88 |
| 28039. | 2143. | 173.7 | 44.00 | 28039. | 82.13 | 2628. | 28039. | 79.62 |
| 30478. | 2439. | 174.5 | 44.21 | 30478. | 80.55 | 2874. | 30478. | 78.52 |
| 33420. | 2693. | 175.1 | 44.39 | 33420. | 79.38 | 3084. | 33420. | 77.65 |
| 36929. | 2731. | 176.2 | 44.42 | 36929. | 79.16 | 3126. | 36929. | 77.49 |
| 39520. | 3021. | 176.9 | 44.63 | 39520. | 77.92 | 3381. | 39520. | 76.46 |
| 42856. | 3273. | 178.0 | 44.82 | 42856. | 76.91 | 3609. | 42856. | 75.59 |
| 45600. | 3307. | 178.7 | 44.84 | 45600. | 76.77 | 3639. | 45600. | 75.47 |
| 48566. | 3589. | 177.4 | 45.05 | 48566. | 75.67 | 3898. | 48566. | 74.55 |
| 51680. | 3845. | 178.1 | 45.25 | 51680. | 74.74 | 4135. | 51680. | 73.76 |
| 54930. | 4140. | 178.9 | 45.48 | 54930. | 73.73 | 4416. | 54930. | 72.87 |
| 57760. | 4400. | 179.5 | 45.67 | 57760. | 72.93 | 4655. | 57760. | 72.16 |
| 60440. | 4619. | 179.6 | 45.68 | 60440. | 72.87 | 4673. | 60440. | 72.11 |
| 63840. | 4680. | 180.3 | 45.80 | 63840. | 72.07 | 4930. | 63840. | 71.39 |
| 67197. | 4838. | 180.9 | 46.08 | 67197. | 71.37 | 5166. | 67197. | 70.76 |
| 69920. | 5057. | 181.0 | 46.09 | 69920. | 71.32 | 5185. | 69920. | 70.71 |
| | 5221. | 181.7 | 46.30 | | 70.62 | 5438. | | 70.06 |
| | 5459. | 182.3 | 46.49 | | 70.01 | 5667. | | 69.51 |
| | 5687. | 182.4 | 46.50 | | 69.96 | 5889. | | 69.45 |
| | 5760. | 183.1 | 46.71 | | 69.33 | 5930. | | 68.87 |
| | 5985. | 183.7 | 46.89 | | 68.81 | 6156. | | 68.39 |

07-04-74

L-1011-1 / R8211-228 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

4 - NOISE LEVELS 70. DBA

| X | H | V | NI /
SQRT(THETA) | RI | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------------|-------|-------|-------|----------|-----------|-------|
| 4856. | 0. | 148.3 | 92.43 | 5440. | 2090. | 2090. | 4856. | 2090. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 5440. | 2090. | 2090. | 5774. | 2090. | 0.14 |
| 7061. | 35. | 165.2 | 92.44 | 5440. | 2090. | 2090. | 7061. | 2090. | 0.33 |
| 10675. | 305. | 164.2 | 92.63 | 5441. | 2091. | 3132. | 10675. | 3117. | 1.01 |
| 13537. | 619. | 170.0 | 92.86 | 5443. | 2092. | 3494. | 13537. | 3439. | 1.68 |
| 16412. | 930. | 170.7 | 93.09 | 5444. | 2093. | 3777. | 16412. | 3661. | 2.41 |
| 19300. | 1238. | 171.5 | 93.32 | 5446. | 2094. | 4039. | 19300. | 3845. | 3.19 |
| 21280. | 1446. | 172.0 | 93.48 | 5447. | 2095. | 4219. | 21280. | 3963. | 3.74 |
| 22200. | 1543. | 172.2 | 93.55 | 5447. | 2095. | 4304. | 22200. | 4019. | 4.01 |
| 25112. | 1844. | 173.0 | 93.78 | 5448. | 2096. | 4585. | 25112. | 4198. | 4.86 |
| 27360. | 2074. | 173.5 | 93.95 | 5449. | 2097. | 4815. | 27360. | 4346. | 5.55 |
| 28029. | 2143. | 173.7 | 94.00 | 5450. | 2097. | 4884. | 28029. | 4393. | 5.77 |
| 40578. | 2439. | 174.5 | 94.21 | 5451. | 2098. | 5206. | 40578. | 4600. | 6.71 |
| 33440. | 2683. | 175.1 | 94.39 | 5452. | 2099. | 5443. | 33440. | 4736. | 7.54 |
| 33925. | 2731. | 175.2 | 94.42 | 5452. | 2099. | 5452. | 33925. | 4719. | 7.70 |
| 35892. | 3021. | 175.9 | 94.63 | 5454. | 2100. | 5454. | 35892. | 4541. | 8.69 |
| 39520. | 3273. | 176.6 | 94.82 | 5455. | 2101. | 5455. | 39520. | 4363. | 9.53 |
| 39868. | 3397. | 176.7 | 94.84 | 5455. | 2101. | 5455. | 39868. | 4238. | 9.64 |
| 42856. | 3569. | 177.4 | 95.05 | 5456. | 2102. | 5456. | 42856. | 4109. | 10.54 |
| 45607. | 3845. | 178.1 | 95.25 | 5457. | 2103. | 5457. | 45607. | 3872. | 11.33 |
| 45856. | 3869. | 178.1 | 95.27 | 5457. | 2103. | 5457. | 45856. | 3849. | 11.40 |
| 49809. | 4146. | 178.9 | 95.48 | 5459. | 2104. | 5459. | 49809. | 3551. | 12.20 |
| 51640. | 4400. | 179.5 | 95.67 | 5460. | 2104. | 5460. | 51640. | 3233. | 12.88 |
| 51893. | 4419. | 179.6 | 95.68 | 5460. | 2105. | 5460. | 51893. | 3207. | 12.93 |
| 54936. | 4690. | 180.3 | 95.89 | 5461. | 2105. | 5461. | 54936. | 2799. | 13.59 |
| 57720. | 4938. | 180.9 | 96.08 | 5462. | 2106. | 5462. | 57720. | 2336. | 14.11 |
| 57579. | 4957. | 181.0 | 96.09 | 5462. | 2106. | 5462. | 57579. | 2295. | 14.14 |
| 61040. | 5221. | 181.7 | 96.30 | 5464. | 2107. | 5464. | 61040. | 1610. | 14.57 |
| 63840. | 5459. | 182.3 | 96.49 | 5465. | 2108. | 5465. | 63840. | 251. | 14.76 |
| 64112. | 5482. | 182.4 | 96.50 | 5465. | 2108. | 5465. | 64112. | 0. | 14.76 |

07-04-74

U-1011-1 / 40211-229 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 100% RELATIVE HUMIDITY
MINIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

4 - NOISE LEVELS

80. DBA

| R | H | V | SL/ | SL/ | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|-------|-------|-------|-------|----------|-----------|------|
| 4056. | 0. | 148.3 | 92.43 | 2531. | 1139. | 1139. | 4856. | 1135. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 2531. | 1139. | 1138. | 5774. | 1138. | 0.08 |
| 7061. | 35. | 165.2 | 92.44 | 2531. | 1139. | 1381. | 7061. | 1380. | 0.19 |
| 10675. | 305. | 167.2 | 92.43 | 2533. | 1139. | 1745. | 10675. | 1718. | 0.59 |
| 14537. | 610. | 173.0 | 92.86 | 2535. | 1140. | 1985. | 13537. | 1886. | 0.96 |
| 16412. | 930. | 170.7 | 92.09 | 2538. | 1141. | 2237. | 16412. | 2035. | 1.37 |
| 19331. | 1238. | 171.5 | 93.32 | 2540. | 1142. | 2529. | 19300. | 2206. | 1.61 |
| 21235. | 1446. | 172.0 | 93.48 | 2542. | 1147. | 2542. | 21280. | 2091. | 2.11 |
| 22210. | 1543. | 172.2 | 93.55 | 2543. | 1143. | 2543. | 22200. | 2021. | 2.25 |
| 25113. | 1644. | 173.0 | 93.78 | 2545. | 1144. | 2545. | 25113. | 1753. | 2.64 |
| 27120. | 2074. | 173.5 | 93.95 | 2547. | 1145. | 2547. | 27160. | 1478. | 2.90 |
| 28019. | 2143. | 173.7 | 94.00 | 2547. | 1145. | 2547. | 28039. | 1376. | 2.97 |
| 30078. | 2433. | 174.5 | 94.21 | 2549. | 1146. | 2549. | 30078. | 742. | 3.20 |
| 31460. | 2683. | 175.1 | 94.39 | 2551. | 1146. | 2551. | 32100. | 0. | 3.23 |

07-04-74

C-1011-1 / R0711-228 A-NUISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 22 DEG. FLAPS, TAKEOFF THRUST

A - NOISE LEVELS

90. DBA

| A | M | V | SCR 1 (THETA) | R1 | R2 | R | DISTANCE | L/2 WIDTH | AREA |
|--------|-------|-------|---------------|-------|------|-------|----------|-----------|------|
| 1850. | 0. | 148.3 | 92.43 | 1079. | 595. | 595. | 4856. | 595. | 0.0 |
| 1714. | 0. | 158.3 | 92.41 | 1079. | 595. | 595. | 5774. | 595. | 0.04 |
| 7051. | 35. | 165.2 | 92.44 | 1079. | 595. | 719. | 7061. | 718. | 0.10 |
| 10675. | 305. | 169.2 | 92.63 | 1081. | 595. | 915. | 10675. | 863. | 0.30 |
| 13537. | 619. | 173.0 | 92.80 | 1083. | 596. | 1083. | 13537. | 889. | 0.48 |
| 16412. | 930. | 170.7 | 93.09 | 1085. | 597. | 1085. | 16412. | 559. | 0.63 |
| 19100. | 1238. | 171.5 | 93.32 | 1086. | 598. | 1086. | 17874. | 0. | 0.66 |

07-04-74

L-1011-1 / RB211-220 A-NOISE LEVEL
SIA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000 LB.), 22 DEG. FLAPS, TAKEOFF THRUST

A - NOISE LEVELS 100. DB

| X | H | V | SCR T (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|---------------|------|------|------|----------|-----------|------|
| 4856. | 0. | 149.3 | 92.43 | 413. | 262. | 262. | 4856. | 262. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 412. | 262. | 262. | 5774. | 262. | 0.02 |
| 7061. | 35. | 165.2 | 92.44 | 413. | 262. | 320. | 7061. | 318. | 0.04 |
| 10675. | 305. | 169.2 | 92.63 | 413. | 262. | 413. | 10675. | 279. | 0.12 |
| 13537. | 619. | 170.0 | 92.86 | 414. | 263. | 414. | 11667. | 0. | 0.13 |

07-04-74

L-1011-1 / R211-218 A-NUISE LEVEL
SEA LEVEL, 77 DEG. F., FCZ RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT (430,000LB.), 22 DEG. FLAPS, TAKEOFF THRUST

A - NUISE LEVELS 110. DBA

| I | W | V | NI /
SQRT (TMFTA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|----------------------|------|------|------|----------|-----------|------|
| 4856. | 0. | 148.3 | 92.43 | 144. | 104. | 104. | 4856. | 104. | 0.0 |
| 5774. | 0. | 158.3 | 92.41 | 144. | 104. | 104. | 5774. | 104. | 0.01 |
| 7041. | 35. | 165.2 | 92.44 | 144. | 104. | 128. | 7061. | 124. | 0.02 |
| 17674. | 105. | 169.2 | 92.63 | 144. | 104. | 144. | 8391. | 0. | 0.02 |

07-04-74

WACIATION ANGLE (TPFIA) 90.
 PART 21280. INCREMENT= 6000.

TPFIA = 0 ICI = 0 ISI = 0 NSCLND = 0 IPITFT = 0 NSCLFT = 0
 MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

TYPE P TAKE ENG = 228 OFF VMI = 0.0 W = 430000. HP = 0. FLAP = 10. TAMB = 77.0
 NS 1.0 ACCL = 0.0 SLOPY = 0.0 TFAC = 1.0 CBHT = 1422.0 CBFAC = 0.0 DELVZ = 10.0

MAXIMUM TAKEOFF WEIGHT, 10 DFC. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILFS 07-04-74 PAGE 94

FLAP=10. DFC TEMP= 77.0 DEG F WIND= 0.0 KY SLOPE=0.0 ACC1 = 0.0 KT/SEC

| SEGMENT | ALTITUDE (FT) | PRESSURE | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | TOTAL TIME (SEC) | THRUST (LB) | SPEED (KTAS) | MACH | ALPHA (DEG) | PITCH (DEG) | GRAD | TEMP (DEG F) | IEPR | NI/ SQR(THETA) (PCT) | ROC (FPM) | FLAP (DEG) |
|------------|---------------|----------|-------------------------|---------------------|------------------|-------------|--------------|------|-------------|-------------|------|--------------|------|----------------------|-----------|------------|
| 0. WFLIGHT | 0. | 430000 | IFPR= | 1.513 | ISA+ | 10.0 | DEG C. | | | | | | | | | |
| 0. WFLIGHT | 0. | 5515. | 41.1 | 32076. | 156.7 | .233 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 6575. | 47.0 | 31643. | 167.1 | .248 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 7870. | 51.5 | 31313. | 174.1 | .259 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 11739. | 64.5 | 31008. | 177.9 | .265 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 14913. | 75.0 | 30760. | 178.9 | .266 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 18115. | 85.6 | 30510. | 179.9 | .268 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 21406. | 96.3 | 30250. | 180.8 | .270 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 24726. | 99.3 | 30093. | 181.0 | .270 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 28074. | 102.6 | 29937. | 183.2 | .274 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 31412. | 106.2 | 29788. | 185.4 | .278 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 34728. | 110.2 | 29646. | 187.7 | .283 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 38053. | 114.6 | 29510. | 190.0 | .287 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 41385. | 119.1 | 29376. | 192.3 | .291 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 44717. | 123.7 | 29243. | 194.7 | .296 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 48053. | 128.4 | 29110. | 197.1 | .300 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 51385. | 133.1 | 28976. | 199.6 | .305 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 54717. | 137.7 | 28843. | 202.1 | .309 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 58053. | 142.4 | 28710. | 204.7 | .314 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 61385. | 147.1 | 28576. | 206.0 | .317 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 64717. | 151.7 | 28443. | 208.5 | .321 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 68053. | 156.4 | 28310. | 211.0 | .325 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 71385. | 161.1 | 28176. | 213.5 | .329 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 74717. | 165.7 | 28043. | 216.0 | .333 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 78053. | 170.4 | 27910. | 218.5 | .337 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 81385. | 175.1 | 27776. | 221.0 | .341 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 84717. | 179.7 | 27643. | 223.5 | .345 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 88053. | 184.4 | 27510. | 226.0 | .349 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 91385. | 189.1 | 27376. | 228.5 | .353 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 94717. | 193.7 | 27243. | 231.0 | .357 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 98053. | 198.4 | 27110. | 233.5 | .361 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 101385. | 203.1 | 26976. | 236.0 | .365 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 104717. | 207.7 | 26843. | 238.5 | .369 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 108053. | 212.4 | 26710. | 241.0 | .373 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 111385. | 217.1 | 26576. | 243.5 | .377 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 114717. | 221.7 | 26443. | 246.0 | .381 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 118053. | 226.4 | 26310. | 248.5 | .385 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 121385. | 231.1 | 26176. | 251.0 | .389 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 124717. | 235.7 | 26043. | 253.5 | .393 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 128053. | 240.4 | 25910. | 256.0 | .397 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 131385. | 245.1 | 25776. | 258.5 | .401 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 134717. | 249.7 | 25643. | 261.0 | .405 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 138053. | 254.4 | 25510. | 263.5 | .409 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 141385. | 259.1 | 25376. | 266.0 | .413 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 144717. | 263.7 | 25243. | 268.5 | .417 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 148053. | 268.4 | 25110. | 271.0 | .421 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 151385. | 273.1 | 24976. | 273.5 | .425 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 154717. | 277.7 | 24843. | 276.0 | .429 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 158053. | 282.4 | 24710. | 278.5 | .433 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 161385. | 287.1 | 24576. | 281.0 | .437 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 164717. | 291.7 | 24443. | 283.5 | .441 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 168053. | 296.4 | 24310. | 286.0 | .445 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 171385. | 301.1 | 24176. | 288.5 | .449 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 174717. | 305.7 | 24043. | 291.0 | .453 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 178053. | 310.4 | 23910. | 293.5 | .457 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 181385. | 315.1 | 23776. | 296.0 | .461 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 184717. | 319.7 | 23643. | 298.5 | .465 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 188053. | 324.4 | 23510. | 301.0 | .469 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 191385. | 329.1 | 23376. | 303.5 | .473 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 194717. | 333.7 | 23243. | 306.0 | .477 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 198053. | 338.4 | 23110. | 308.5 | .481 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 201385. | 343.1 | 22976. | 311.0 | .485 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 204717. | 347.7 | 22843. | 313.5 | .489 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 208053. | 352.4 | 22710. | 316.0 | .493 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 211385. | 357.1 | 22576. | 318.5 | .497 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 214717. | 361.7 | 22443. | 321.0 | .501 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 218053. | 366.4 | 22310. | 323.5 | .505 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 221385. | 371.1 | 22176. | 326.0 | .509 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 224717. | 375.7 | 22043. | 328.5 | .513 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 228053. | 380.4 | 21910. | 331.0 | .517 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 231385. | 385.1 | 21776. | 333.5 | .521 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 234717. | 389.7 | 21643. | 336.0 | .525 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 238053. | 394.4 | 21510. | 338.5 | .529 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 241385. | 399.1 | 21376. | 341.0 | .533 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 244717. | 403.7 | 21243. | 343.5 | .537 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 248053. | 408.4 | 21110. | 346.0 | .541 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 251385. | 413.1 | 20976. | 348.5 | .545 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 254717. | 417.7 | 20843. | 351.0 | .549 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 258053. | 422.4 | 20710. | 353.5 | .553 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 261385. | 427.1 | 20576. | 356.0 | .557 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 264717. | 431.7 | 20443. | 358.5 | .561 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 268053. | 436.4 | 20310. | 361.0 | .565 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 271385. | 441.1 | 20176. | 363.5 | .569 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 274717. | 445.7 | 20043. | 366.0 | .573 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 278053. | 450.4 | 19910. | 368.5 | .577 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 281385. | 455.1 | 19776. | 371.0 | .581 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 284717. | 459.7 | 19643. | 373.5 | .585 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 288053. | 464.4 | 19510. | 376.0 | .589 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 291385. | 469.1 | 19376. | 378.5 | .593 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 294717. | 473.7 | 19243. | 381.0 | .597 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 298053. | 478.4 | 19110. | 383.5 | .601 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 301385. | 483.1 | 18976. | 386.0 | .605 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 304717. | 487.7 | 18843. | 388.5 | .609 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 308053. | 492.4 | 18710. | 391.0 | .613 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 311385. | 497.1 | 18576. | 393.5 | .617 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 314717. | 501.7 | 18443. | 396.0 | .621 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 318053. | 506.4 | 18310. | 398.5 | .625 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 321385. | 511.1 | 18176. | 401.0 | .629 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 324717. | 515.7 | 18043. | 403.5 | .633 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 328053. | 520.4 | 17910. | 406.0 | .637 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 331385. | 525.1 | 17776. | 408.5 | .641 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 334717. | 529.7 | 17643. | 411.0 | .645 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 338053. | 534.4 | 17510. | 413.5 | .649 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 341385. | 539.1 | 17376. | 416.0 | .653 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 344717. | 543.7 | 17243. | 418.5 | .657 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 348053. | 548.4 | 17110. | 421.0 | .661 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 351385. | 553.1 | 16976. | 423.5 | .665 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 354717. | 557.7 | 16843. | 426.0 | .669 | | | | | | | | | | |
| 0. WFLIGHT | 0. | 358053. | 562.4 | 16710. | 428.5 | .673 | | | | | | | | | | |

07-04-74

1-1011-1 / 10211-22R A-NOISE LEVEL
SEA LEVEL, 17 DEG. F., 10% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 1C DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

NOISE LEVELS ALONG THE FLIGHT PATH

| R | M | V | SCR(TIME/T) | XP | LCL | R | XPP | LSL |
|---------|-------|-------|-------------|---------|--------|-------|---------|-------|
| 5515. | 0. | 154.7 | 92.41 | 5515. | 00000 | 1520. | 5515. | 75.01 |
| 6575. | 0. | 167.1 | 92.41 | 6575. | 00000 | 1520. | 6575. | 75.01 |
| 7870. | 35. | 174.1 | 92.43 | 7870. | 123.37 | 1520. | 7870. | 77.60 |
| 11710. | 344. | 177.9 | 92.66 | 11739. | 101.81 | 1558. | 11739. | 81.27 |
| 14913. | 720. | 178.0 | 92.66 | 14913. | 94.44 | 1682. | 14913. | 83.48 |
| 19115. | 1056. | 179.9 | 93.23 | 18135. | 89.90 | 1874. | 18135. | 83.74 |
| 21200. | 1457. | 180.8 | 93.51 | 21280. | 86.75 | 2106. | 21280. | 82.32 |
| 21639. | 1572. | 183.6 | 93.52 | 21429. | 86.64 | 2116. | 21409. | 82.26 |
| 27126. | 1549. | 181.0 | 92.48 | 22376. | 83.06 | 2170. | 22376. | 78.93 |
| 32413. | 1807. | 181.7 | 92.60 | 27300. | 81.23 | 2361. | 27360. | 77.93 |
| 33440. | 1943. | 182.1 | 92.66 | 30403. | 80.24 | 2483. | 30403. | 77.34 |
| 39520. | 2114. | 182.5 | 92.74 | 33440. | 79.35 | 2604. | 33440. | 76.78 |
| 41274. | 2377. | 193.2 | 92.86 | 38714. | 77.94 | 2822. | 38714. | 75.83 |
| 45600. | 2416. | 193.3 | 92.88 | 39520. | 77.75 | 2855. | 39520. | 75.69 |
| 47279. | 2711. | 184.1 | 93.00 | 45600. | 76.38 | 3108. | 45600. | 74.69 |
| 51580. | 2998. | 184.3 | 93.03 | 47279. | 76.02 | 3179. | 47279. | 74.42 |
| 56112. | 3204. | 184.9 | 93.12 | 51680. | 75.18 | 3362. | 51680. | 73.72 |
| 57750. | 3281. | 185.4 | 93.21 | 56112. | 74.38 | 3548. | 56112. | 73.03 |
| 58100. | 3558. | 185.6 | 93.24 | 57750. | 74.08 | 3616. | 57750. | 72.79 |
| 64278. | 3671. | 186.4 | 93.37 | 63840. | 73.06 | 3669. | 63840. | 71.94 |
| 69920. | 3827. | 187.1 | 93.49 | 65228. | 72.83 | 3927. | 65228. | 71.75 |
| 74646. | 4035. | 187.7 | 93.52 | 69920. | 72.13 | 4118. | 69920. | 71.16 |
| 76000. | 4352. | 187.8 | 93.61 | 74646. | 71.46 | 4312. | 74646. | 70.58 |
| 82080. | 4450. | 188.6 | 93.72 | 76000. | 71.28 | 4366. | 76000. | 70.42 |
| 84160. | 4605. | 189.3 | 93.76 | 82080. | 70.50 | 4610. | 82080. | 69.74 |
| 94240. | 4755. | 190.0 | 93.83 | 84160. | 70.22 | 4850. | 84160. | 69.49 |
| 94468. | 4965. | 190.0 | 93.94 | 88160. | 69.79 | 5084. | 88160. | 69.11 |
| 103320. | 5057. | 190.6 | 94.04 | 94240. | 69.13 | 5097. | 94240. | 68.51 |
| | | | | 94468. | 67.10 | 5319. | 94468. | 68.48 |
| | | | | 103320. | 68.52 | | 103320. | 67.95 |

07-04-74

(1111-1 / R211-22K 4-NOISE LEVEL
SFA 14VPL, 77 OFG. E., 702 RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

70. DHA

4 - NOISE LEVELS

| S | H | V | SCAT (THEAT) | K1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|---------|-------|-------|--------------|-------|-------|-------|----------|-----------|-------|
| 5515. | 0. | 55.7 | 92.41 | 5440. | 2090. | 2090. | 5515. | 2090. | 0.0 |
| 6574. | 0. | 67.1 | 92.41 | 5440. | 2090. | 2090. | 6575. | 2090. | 0.16 |
| 7813. | 35. | 174.1 | 92.43 | 5440. | 2090. | 2090. | 7870. | 2090. | 0.35 |
| 11719. | 144. | 177.9 | 92.66 | 5441. | 2091. | 3185. | 11739. | 3167. | 1.08 |
| 14511. | 720. | 178.0 | 92.95 | 5443. | 2092. | 3591. | 14913. | 3518. | 1.84 |
| 14115. | 1096. | 179.0 | 93.23 | 5445. | 2093. | 3919. | 18135. | 3763. | 2.68 |
| 212 0. | 1657. | 180.8 | 93.51 | 5447. | 2095. | 4229. | 21240. | 3970. | 3.56 |
| 216 19. | 1472. | 182.6 | 93.52 | 5447. | 2095. | 4242. | 21609. | 3978. | 3.59 |
| 223 20. | 1549. | 181.0 | 97.46 | 4371. | 1735. | 3758. | 22326. | 3424. | 3.84 |
| 271 1. | 1107. | 181.7 | 87.60 | 4386. | 1740. | 4027. | 27360. | 3598. | 5.11 |
| 324 13. | 1763. | 182.1 | 82.68 | 4395. | 1743. | 4191. | 30403. | 3710. | 5.90 |
| 336 12. | 2114. | 182.2 | 82.74 | 4403. | 1746. | 4356. | 33440. | 3808. | 6.72 |
| 347 16. | 2177. | 183.2 | 82.76 | 4416. | 1751. | 4416. | 34714. | 3722. | 8.15 |
| 352 13. | 2418. | 183.3 | 82.78 | 4418. | 1751. | 4418. | 39520. | 3699. | 8.36 |
| 356 13. | 2711. | 184.1 | 81.80 | 4433. | 1756. | 4433. | 45600. | 3508. | 9.93 |
| 371 19. | 2798. | 184.3 | 83.03 | 4437. | 1757. | 4437. | 47279. | 3449. | 10.35 |
| 376 10. | 3226. | 184.4 | 83.12 | 4448. | 1761. | 4448. | 51680. | 3285. | 11.41 |
| 381 12. | 3726. | 185.4 | 83.21 | 4458. | 1764. | 4458. | 56112. | 3098. | 12.43 |
| 377 10. | 3741. | 185.6 | 83.24 | 4462. | 1766. | 4462. | 57760. | 3025. | 12.75 |
| 384 10. | 3558. | 186.4 | 83.17 | 4478. | 1771. | 4478. | 63340. | 2719. | 14.04 |
| 387 10. | 3921. | 186.6 | 83.40 | 4481. | 1772. | 4481. | 65228. | 2640. | 14.31 |
| 390 10. | 3827. | 187.1 | 83.49 | 4492. | 1776. | 4492. | 69920. | 2352. | 15.15 |
| 396 10. | 4715. | 187.7 | 83.54 | 4504. | 1779. | 4504. | 74646. | 2000. | 15.89 |
| 400 10. | 4043. | 187.8 | 83.61 | 4507. | 1780. | 4507. | 76000. | 1886. | 16.08 |
| 403 10. | 4112. | 188.0 | 83.72 | 4520. | 1785. | 4520. | 82080. | 1222. | 16.76 |
| 404 10. | 4550. | 188.8 | 83.76 | 4526. | 1787. | 4526. | 84385. | 823. | 16.92 |
| 411 10. | 4635. | 189.3 | 83.83 | 4534. | 1789. | 4534. | 86372. | 0. | 16.98 |

07-04-74

1-1011-1 / R211-220 A-MDISE LEVEL
SFA 11VFL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

80. DBA

A - A-11SE LEVELS

| R | M | V | SCRT (MFT) | Q1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|------------|-------|-------|-------|----------|-----------|------|
| 5515. | 0. | 156.7 | 42.41 | 2531. | 1139. | 1139. | 5515. | 1139. | 0.0 |
| 6575. | 0. | 167.1 | 42.41 | 2531. | 1139. | 1139. | 6575. | 1139. | 0.09 |
| 7870. | 35. | 174.1 | 42.43 | 2531. | 1139. | 1381. | 7870. | 1380. | 0.20 |
| 11710. | 144. | 177.9 | 42.66 | 2533. | 1139. | 1777. | 11739. | 1744. | 0.64 |
| 14913. | 720. | 178.9 | 42.95 | 2536. | 1141. | 2062. | 14913. | 1932. | 1.06 |
| 19114. | 1096. | 179.4 | 43.23 | 2539. | 1142. | 2395. | 18135. | 2130. | 1.53 |
| 21260. | 1457. | 180.8 | 43.51 | 2542. | 1143. | 2542. | 21280. | 2083. | 2.00 |
| 22372. | 1472. | 181.8 | 43.52 | 2542. | 1143. | 2542. | 21409. | 2073. | 2.02 |
| 23360. | 1449. | 181.0 | 42.48 | 1941. | 966. | 1991. | 22326. | 1251. | 2.13 |
| 30403. | 1807. | 181.7 | 42.60 | 1998. | 969. | 1998. | 27360. | 852. | 2.51 |
| 33440. | 1963. | 182.1 | 42.68 | 2002. | 970. | 2002. | 30403. | 393. | 2.64 |
| | 2114. | 182.5 | 42.74 | 2006. | 971. | 2006. | 31206. | 0. | 2.66 |

07-04-74

L-1011-1 / R0211-228 A-NOISE LFVEL
SFA LFVEL, 77 DEG. F., 708 RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

A - NOISE LEVELS

90. DBA

| Z | M | V | MI/
SQR(TIME/TA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|---------------------|-------|------|-------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 1079. | 595. | 595. | 5515. | 595. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 1079. | 595. | 595. | 6575. | 595. | 0.05 |
| 7870. | 35. | 174.1 | 92.43 | 1079. | 595. | 719. | 7870. | 718. | 0.11 |
| 11739. | 144. | 177.9 | 92.66 | 1081. | 596. | 939. | 11739. | 874. | 0.33 |
| 14913. | 720. | 178.9 | 92.45 | 1083. | 597. | 1083. | 14913. | 810. | 0.52 |
| 19115. | 1046. | 179.9 | 91.23 | 1086. | 598. | 1086. | 19040. | 0. | 0.61 |

07-04-74

1-1011-1 / R0211-22R A-NUISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 M. MILES

100. ORA

A - NUISE LEVELS

| C | M | V | W1 /
SQRT (THIFTA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|-----------------------|------|------|------|----------|-----------|------|
| 5515. | 0. | 156.7 | 92.41 | 412. | 262. | 262. | 5515. | 262. | 0.0 |
| 0975. | 0. | 161.1 | 92.41 | 412. | 262. | 262. | 6575. | 262. | 0.02 |
| 7870. | 35. | 174.1 | 92.43 | 413. | 262. | 320. | 7870. | 318. | 0.05 |
| 11739. | 144. | 177.9 | 92.60 | 413. | 262. | 413. | 11739. | 230. | 0.12 |
| 14713. | 759. | 174.9 | 92.95 | 415. | 263. | 415. | 12728. | 0. | 0.13 |

07-04-74

L-1011-1 / M0211-270 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM TAKEOFF WEIGHT, 10 DEG. FLAPS, FAR 36 CUTBACK AT 3.5 N. MILES

110. DBA

A - NOISE LEVELS

| F | M | V | SCAT (THETA) | N1/ | K1 | K2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|--------------|------|------|------|------|----------|-----------|------|
| | | | | | | | | | | |
| 5515. | 0. | 156.7 | 92.41 | 144. | 104. | 104. | 104. | 5515. | 104. | 0.0 |
| 6575. | 0. | 167.1 | 92.41 | 144. | 104. | 104. | 104. | 6575. | 104. | 0.01 |
| 7870. | 35. | 174.1 | 92.43 | 144. | 104. | 104. | 128. | 7870. | 124. | 0.02 |
| 11779. | 144. | 177.9 | 92.66 | 145. | 104. | 104. | 145. | 9104. | 0. | 0.02 |

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PAGE 101

PERCENTAGE ANGLE (PERCENT) 90.
START= 1210. INCREMENT= 4000.

PLTID = 0 ICL = 0 ISL = 0 ISOTM = 0 NSCLND = 0 IPLTFT = 0 NSCLFT = 0
MAXIMUM LANDING WEIGHT (158,000 LBS.), 42000. FLAPS, DLC, 3000 GROSS SLOPE

TYPE = APPR VNC = 220 VMI = 0.0 M = 358000. MP = 0. FLAP = 42. YAMB = 77.0
TUT = 0. GAMMA = 0.0 DLE = 1.0 DELV = 10.00

| H(1) | PRESSURE ALTITUDE
(FT) | GEOMETRIC ALTITUDE
(FT) | TOTAL DISTANCE
(FT) | THRUST
(LB) | SPEED
(KTAS) | MACH | TEMP
(DEG F) | IEPR | SORT(THETA)
(PCT) | FLAP
(DEG) |
|-------|---------------------------|----------------------------|------------------------|----------------|-----------------|------|-----------------|-------|----------------------|---------------|
| 50. | 48. | 50. | 0. | 12292. | 152.3 | .226 | 76.8 | 1.203 | 66.27 | 42. |
| 370. | 358. | 370. | 6080. | 12292. | 153.0 | .228 | 75.7 | 1.205 | 66.61 | 42. |
| 1417. | 1369. | 1417. | 26080. | 12292. | 155.3 | .232 | 72.1 | 1.213 | 67.69 | 42. |
| 2464. | 2380. | 2464. | 46080. | 12292. | 157.7 | .236 | 68.5 | 1.222 | 68.73 | 42. |
| 3515. | 3394. | 3515. | 66080. | 12292. | 160.1 | .241 | 64.9 | 1.231 | 69.78 | 42. |

07-04-74

L-1011-1 / RB211-228 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000 LB.), 42 DEG. FLAPS, D/C, 3 DEG GLIDE SLOPE

NOISE LEVELS ALONG THE FLIGHT PATH

| X | H | V | SQRT(THETA) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|-------------|--------|--------|-------|--------|-------|
| 0. | 50. | 152.3 | 66.27 | 0. | 113.40 | 1521. | 0. | 69.41 |
| 6080. | 370. | 153.0 | 66.61 | 6080. | 93.79 | 1564. | 6080. | 73.04 |
| 12160. | 688. | 153.7 | 66.94 | 12160. | 87.27 | 1669. | 12160. | 75.03 |
| 18240. | 1006. | 154.4 | 67.27 | 18240. | 83.07 | 1823. | 18240. | 75.97 |
| 24320. | 1325. | 155.1 | 67.60 | 24320. | 79.94 | 2016. | 24320. | 74.79 |
| 26080. | 1417. | 155.3 | 67.69 | 26080. | 79.18 | 2078. | 26080. | 74.44 |
| 30400. | 1643. | 155.8 | 67.92 | 30400. | 77.48 | 2238. | 30400. | 73.57 |
| 36480. | 1961. | 156.5 | 68.23 | 36480. | 75.33 | 2481. | 36480. | 72.36 |
| 42560. | 2279. | 157.2 | 68.55 | 42560. | 73.52 | 2740. | 42560. | 71.20 |
| 46080. | 2464. | 157.7 | 68.73 | 46080. | 72.59 | 2895. | 46080. | 70.55 |
| 49640. | 2598. | 158.0 | 68.86 | 48640. | 71.96 | 3010. | 48640. | 70.10 |
| 54720. | 2918. | 158.7 | 69.18 | 54720. | 70.59 | 3290. | 54720. | 69.04 |
| 63800. | 3237. | 159.4 | 69.51 | 60800. | 69.36 | 3576. | 60800. | 68.01 |
| 66080. | 3515. | 160.1 | 69.78 | 66080. | 68.33 | 3829. | 66080. | 67.17 |

07-04-74

L-1011-1 / RB211-22R A-NOISE LEVEL
SFA LEVEL, 77 DEC. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000LB.), 42DEC. FLAPS, DLC, 3 DEG GLIDE SLOPE

70. DBA

A - NOISE LEVELS

| X | H | V | NI/
SRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|-------------------|-------|-------|-------|----------|-----------|------|
| 0. | 50. | 152.3 | 66.27 | 2857. | 1233. | 1545. | 0. | 1544. | 0.0 |
| 6040. | 370. | 153.0 | 66.61 | 2879. | 1240. | 1970. | 6080. | 1935. | 0.76 |
| 12160. | 688. | 153.7 | 66.94 | 2901. | 1247. | 2232. | 12160. | 2124. | 1.64 |
| 18240. | 1006. | 154.4 | 67.27 | 2922. | 1254. | 2506. | 18240. | 2295. | 2.61 |
| 24320. | 1325. | 155.1 | 67.60 | 2945. | 1261. | 2877. | 24320. | 2498. | 3.65 |
| 26080. | 1417. | 155.3 | 67.69 | 2951. | 1263. | 2921. | 26080. | 2554. | 3.97 |
| 30400. | 1643. | 155.8 | 67.92 | 2967. | 1268. | 2967. | 30400. | 2470. | 4.75 |
| 36480. | 1961. | 156.5 | 68.23 | 2989. | 1275. | 2989. | 36480. | 2255. | 5.78 |
| 42560. | 2279. | 157.2 | 68.55 | 3011. | 1282. | 3011. | 42560. | 1967. | 6.70 |
| 46080. | 2464. | 157.7 | 68.73 | 3024. | 1286. | 3024. | 46080. | 1753. | 7.17 |
| 43640. | 2598. | 158.0 | 68.86 | 3033. | 1289. | 3033. | 48640. | 1566. | 7.48 |
| 54720. | 2918. | 158.7 | 69.18 | 3056. | 1296. | 3056. | 54720. | 910. | 8.02 |
| 60800. | 3237. | 159.4 | 69.51 | 3079. | 1303. | 3079. | 57564. | 0. | 8.11 |

07-04-74

L-1011-1 / RB211-22B A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000 LB.), 42 DEG. FLAPS, D/LC, 3 DEG GLIDE SLOPE

80. DBA

A - NOISE LEVELS

| X | H | V | NL /
SQRT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|------|-------|----------|-----------|------|
| | | | | | | | | | |
| 0. | 5.0. | 152.3 | 66.27 | 1275. | 681. | 845. | 0. | 844. | 0.0 |
| 6000. | 370. | 153.0 | 66.61 | 1285. | 686. | 1085. | 6080. | 1020. | 0.41 |
| 12160. | 688. | 153.7 | 66.94 | 1296. | 690. | 1296. | 12160. | 1098. | 0.87 |
| 18240. | 1006. | 154.4 | 67.27 | 1307. | 695. | 1307. | 18240. | 833. | 1.29 |
| 24320. | 1325. | 155.1 | 67.60 | 1318. | 700. | 1318. | 24178. | 0. | 1.47 |

07-04-74

L-1011-1 / KB211-22B A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000 LBS.), 42 DEG. FLAPS, DLC, 3 DEG GLIDE SLOPE

90. DHA

A - NOISE LEVELS

| X | H | V | N1 /
SCRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|---------------------|------|------|------|----------|-----------|------|
| | | | | | | | | | |
| 0. | 50. | 152.3 | 66.27 | 523. | 327. | 407. | 0. | 404. | 0.0 |
| 6080. | 370. | 153.0 | 66.61 | 528. | 330. | 528. | 6080. | 376. | 0.17 |
| 12160. | 688. | 153.7 | 66.94 | 533. | 333. | 533. | 9143. | 0. | 0.21 |

07-04-74

L-1011-1 / RB211-72A 4-NOISE LEVEL
 SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAXIMUM LANDING WEIGHT (358,000LB.), 42000G. FLAPS, 0LC, 3DEG GLIDE SLOPE

100. DBA

A - NOISE LEVELS

| X | H | V | P1/
SORT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | ARFA |
|-------|------|-------|---------------------|------|------|------|----------|-----------|------|
| | | | | | | | | | |
| 0- | 50. | 152.3 | 66.27 | 195. | 137. | 173. | 0. | 166. | 0.0 |
| 6000. | 370. | 153.0 | 66.61 | 197. | 138. | 197. | 2528. | 0. | 0.02 |

07-04-74

I-1011-1 / RB211-228 A-NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAXIMUM LANDING WEIGHT (358,000 LB.), 42 DEG. FLAPS, D/C, 30 DEG GLIDE SLOPE

A - NOISE LEVELS 110. DBA

| X | H | V | N1 /
SCR T (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|------|------|-------|-----------------------|-----|-----|-----|----------|-----------|------|
| | | | | | | | | | |
| 0. | 50. | 152.3 | 66.27 | 71. | 57. | 71. | 0. | 50. | 0.0 |
| 600. | 370. | 153.0 | 66.61 | 71. | 57. | 71. | 393. | 0. | 0.00 |

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RADIATION ANGLE (THETA) 9C.
START= 12160. INCREMENT= 6080.

IPLTNO = 0 ICL = 0 ISL = 0 IROTH = 0 NSCLND = 0 IPLIFT = 0 NSCLFT = 0
300.000 LB. LANDING WEIGHT, 42 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

TYPEP = APPR ENG = 22M OFF VWI = 0.0 W = 300000. HP = 0. FLAP = 42. TAMB = 77.0

THT = 0. GAMMA = 0.0 DLC = 1.0 DELV = 10.00

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170,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, OLC, 3 DEG. GLIDF SLOPE

| M(I) | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | THRUST (LB) | SPEED (KTAS) | MACH | TEMP (NFG F) | TEPR SQRT(THETA) (PCT) | N1/ (DEG) | FLAP (DEG) |
|-------|------------------------|-------------------------|---------------------|-------------|--------------|------|--------------|------------------------|-----------|------------|
| 50. | 4F. | 50. | 0. | 10366. | 141.6 | .210 | 76.8 | 1.170 | 61.09 | 42. |
| 170. | 158. | 170. | 6080. | 10366. | 142.2 | .212 | 75.7 | 1.172 | 61.42 | 42. |
| 1417. | 1365. | 1417. | 26080. | 10366. | 144.4 | .216 | 72.1 | 1.179 | 62.51 | 42. |
| 246. | 2380. | 246. | 46000. | 10366. | 146.6 | .220 | 68.5 | 1.186 | 63.65 | 42. |
| 3515. | 1394. | 3515. | 60000. | 10366. | 148.8 | .224 | 64.9 | 1.193 | 64.83 | 42. |

07-04-74

L-1711-1 / 98211-278 A-MUSE LEVEL
 56A LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 300,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, DLE, 3 DEG. GLIDE SLOPE

MUSE LEVELS ALONG THE FLIGHT PATH

| X | M | V | SR T (THETA) | XP | LCL | R | XPP | LSL |
|-------|-------|-------|--------------|--------|-------|--------|-------|-----|
| 50. | 141.6 | 61.09 | 0. | 111.68 | 1521. | 0. | 67.95 | |
| 370. | 142.2 | 61.42 | 6040. | 92.20 | 1564. | 6080. | 71.59 | |
| 688. | 142.9 | 61.75 | 12160. | 85.74 | 1664. | 12160. | 73.59 | |
| 1306. | 143.5 | 62.06 | 18240. | 81.58 | 1823. | 18240. | 74.55 | |
| 1325. | 144.2 | 62.42 | 24320. | 78.48 | 2016. | 24320. | 73.37 | |
| 1617. | 144.5 | 62.51 | 26080. | 77.72 | 2078. | 26080. | 73.01 | |
| 1643. | 144.9 | 62.76 | 30400. | 76.04 | 2241. | 30400. | 72.14 | |
| 1961. | 145.5 | 63.11 | 36480. | 73.90 | 2441. | 36480. | 70.93 | |
| 2279. | 146.2 | 63.45 | 42560. | 72.09 | 2740. | 42560. | 69.77 | |
| 2663. | 146.7 | 63.76 | 48640. | 71.16 | 2896. | 48640. | 69.12 | |
| 2998. | 146.9 | 63.80 | 54720. | 73.53 | 3110. | 54720. | 68.67 | |
| 2915. | 147.2 | 64.16 | 60800. | 69.15 | 3290. | 60800. | 67.61 | |
| 3217. | 148.7 | 64.57 | 60730. | 57.42 | 1577. | | 66.55 | |

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1-1011-1 / 40211-770 A-NOISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 100,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, D/C, 3 DEG. GLIDE SLOPE

70. DPA

A - NOISE LEVELS

| K | H | V | SL /
SCRT (IMPTA) | R1 | R2 | R | DISTANCE | L/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|-------|-------|----------|-----------|-------|
| 0. | 50. | 141.0 | 61.09 | 2561. | 1134. | 1422. | 0. | 1421. | 0.0 |
| 5000. | 370. | 142.2 | 61.62 | 2579. | 1140. | 1814. | 6080. | 1776. | 0.70 |
| 12160. | 648. | 142.9 | 61.75 | 2597. | 1146. | 2066. | 12160. | 1948. | 1.51 |
| 18240. | 1006. | 143.5 | 62.08 | 2614. | 1152. | 2345. | 18240. | 2118. | 2.46 |
| 24320. | 1325. | 144.2 | 62.42 | 2632. | 1159. | 2632. | 24320. | 2275. | 3.45 |
| 30400. | 1617. | 144.4 | 62.51 | 2638. | 1160. | 2638. | 30400. | 2725. | 4.64 |
| 36480. | 1861. | 144.9 | 62.76 | 2651. | 1165. | 2651. | 36480. | 2881. | 6.31 |
| 42560. | 2279. | 145.5 | 63.11 | 2670. | 1171. | 2670. | 42560. | 3040. | 8.15 |
| 48640. | 2644. | 146.2 | 63.45 | 2689. | 1178. | 2689. | 48640. | 3200. | 10.26 |
| 54720. | 2991. | 146.6 | 63.65 | 2700. | 1181. | 2700. | 54720. | 3360. | 12.58 |
| | | 146.9 | 63.80 | 2708. | 1184. | 2708. | | 3520. | 15.15 |
| | | 147.0 | 64.10 | 2728. | 1191. | 2728. | | 3680. | 17.91 |

07-04-74

L-1011-1 / R0711-22R A-NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
100,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, OLC, 3 DEG. GLIDE SLOPE

A - NOISE LEVELS

89. DBA

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY | CZ | DA | DB | DC | DD | DE | DF | DG | DH | DI | DJ | DK | DL | DM | DN | DO | DP | DQ | DR | DS | DT | DU | DV | DW | DX | DY | DZ | EA | EB | EC | ED | EE | EF | EG | EH | EI | EJ | EK | EL | EM | EN | EO | EP | EQ | ER | ES | ET | EU | EV | EW | EX | EY | EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FK | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GG | GH | GI | GJ | GK | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HH | HI | HJ | HK | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IK | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | JC | JD | JE | JF | JG | JH | JI | IJ | JK | KL | JM | JN | JO | JP | JQ | JR | JS | JT | JU | JV | JW | JX | JY | JZ | KA | KB | KC | KD | KE | KF | KG | KH | KI | KJ | KK | KL | KM | KN | KO | KP | KQ | KR | KS | KT | KU | KV | KW | KX | KY | KZ | LA | LB | LC | LD | LE | LF | LG | LH | LI | LJ | LK | LM | LN | LO | LP | LQ | LR | LS | LT | LU | LV | LW | LX | LY | LZ | MA | MB | MC | MD | ME | MF | MG | MH | MI | MJ | MK | ML | MM | MN | MO | MP | MQ | MR | MS | MT | MU | MV | MW | MX | MY | MZ | NA | NB | NC | ND | NE | NF | NG | NH | NI | NJ | NK | NL | NM | NN | NO | NP | NQ | NR | NS | NT | NU | NV | NW | NX | NY | NZ | OA | OB | OC | OD | OE | OF | OG | OH | OI | OJ | OK | OL | OM | ON | OO | OP | OQ | OR | OS | OT | OU | OV | OW | OX | OY | OZ | PA | PB | PC | PD | PE | PF | PG | PH | PI | PJ | PK | PL | PM | PN | PO | PP | PQ | PR | PS | PT | PU | PV | PW | PX | PY | PZ | QA | QB | QC | QD | QE | QF | QG | QH | QI | QJ | QK | QL | QM | QN | QO | QP | QQ | QR | QS | QT | QU | QV | QW | QX | QY | QZ | RA | RB | RC | RD | RE | RF | RG | RH | RI | RJ | RK | RL | RM | RN | RO | RP | RQ | RR | RS | RT | RU | RV | RW | RX | RY | RZ | SA | SB | SC | SD | SE | SF | SG | SH | SI | SJ | SK | SL | SM | SN | SO | SP | SQ | SR | SS | ST | SU | SV | SW | SX | SY | SZ | TA | TB | TC | TD | TE | TF | TG | TH | TI | TJ | TK | TL | TM | TN | TO | TP | TQ | TR | TS | TT | TU | TV | TW | TX | TY | TZ | UA | UB | UC | UD | UE | UF | UG | UH | UI | UJ | UK | UL | UM | UN | UO | UP | UQ | UR | US | UT | UU | UV | UW | UX | UY | UZ | VA | VB | VC | VD | VE | VF | VG | VH | VI | VJ | VK | VL | VM | VN | VO | VP | VQ | VR | VS | VT | VU | VV | VW | VX | VY | VZ | WA | WB | WC | WD | WE | WF | WG | WH | WI | WJ | WK | WL | WM | WN | WO | WP | WQ | WR | WS | WT | WU | WV | WW | WX | WY | WZ | XA | XB | XC | XD | XE | XF | XG | XH | XI | XJ | XK | XL | XM | XN | XO | XP | XQ | XR | XS | XT | XU | XV | XW | XX | XY | XZ | YA | YB | YC | YD | YE | YF | YG | YH | YI | YJ | YK | YL | YM | YN | YO | YP | YQ | YR | YS | YT | YU | YV | YW | YX | YY | YZ | ZA | ZB | ZC | ZD | ZE | ZF | ZG | ZH | ZI | ZJ | ZK | ZL | ZM | ZN | ZO | ZP | ZQ | ZR | ZS | ZT | ZU | ZV | ZW | ZX | ZY | ZZ |
|----|----|
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07-04-74

L-1011-1 / R0211-27R 4-NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
300,000 LB. LANDING WEIGHT, 42 DEG. FLAPS, OLC, 3 DEG. GLIDE SLOPE

90. DBA

4 - NOISE LEVELS

| U. | H | V | AL /
SOP (THL T2) | R1 | R2 | R | DISTANCE 1/2 WIDTH | AREA |
|--------|------|-------|----------------------|------|------|------|--------------------|------|
| | | | | | | | | |
| AC20. | 50. | 141.0 | 61.04 | 451. | 285. | 356. | 0. | 0.0 |
| 12160. | 370. | 142.2 | 61.42 | 455. | 287. | 455. | 353. | 0.13 |
| | 688. | 142.9 | 61.75 | 460. | 290. | 460. | 265. | 0.15 |
| | | | | | | | 0. | |

07-04-74

1. 1011-1 / 0011-220 A-DRISE LEVEL
 2. 1011-1 / 0011-220 A-DRISE LEVEL
 3. 1011-1 / 0011-220 A-DRISE LEVEL
 4. 1011-1 / 0011-220 A-DRISE LEVEL
 5. 1011-1 / 0011-220 A-DRISE LEVEL
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 97. 1011-1 / 0011-220 A-DRISE LEVEL
 98. 1011-1 / 0011-220 A-DRISE LEVEL
 99. 1011-1 / 0011-220 A-DRISE LEVEL
 100. 1011-1 / 0011-220 A-DRISE LEVEL

A - DRISE LEVELS 100.000

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 |
|---|---|---|---|---|---|---|---|---|-----|------|
|---|---|---|---|---|---|---|---|---|-----|------|

L-1011-1 / RB211-22A A-NUISE LEVEL
SFA 1FVL, 77 DEG. F., 10% RELATIVE HUMIDITY
300.000 LB. LANDING WEIGHT, 42 DEG. FLAPS, OLC, 3 DFG. GLIDE SLOPE

110. DEB

| Z | H | V | W | SCRT (INCHES) | R1 | R2 | R | DISTANCE | L/2 WIDTH | AREA |
|------|-----|-------|---|---------------|-----|-----|-----|----------|-----------|------|
| 0. | 50. | 141.5 | | 61.09 | 59. | 49. | 59. | 0. | 32. | 0.0 |
| 600. | 10. | 142.2 | | 61.42 | 60. | 49. | 60. | 178. | 0. | 0.00 |

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RADIATION ANGLE (MFT) 9C.
START= 12100. INCREMENT= 2080.

IM TNC = 0 ICL = 0 ISL = 0 ISLTH = 0 NSCLN = 0 IPLTFT = 0 NSCLFT = 0
MAX LANDING WEIGHT (LBS) 150000 (P-7) 33 DEG. FLAPS, DLC, 3 D.G. GIDE SLOPE

TYPE = APPR FNC = 22R OFF VMT = 0.0 W = 358000 HP = 0. FLAP = 33. TAMB = 77.0

THF = 0. GAMMA = 0.0 DEL = 1.0 DELV = 10.00

07-04-74

MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

| HI) | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | THRUST (LB) | SPEED (KTAS) | MACH | TEMP (DEG F) | IEPR SQRT (THETA) (PCT) | NI/ | FLAP (DEG) |
|-------|------------------------|-------------------------|---------------------|-------------|--------------|------|--------------|-------------------------|-------|------------|
| 50. | 48. | 50. | 0. | 10481. | 157.4 | .234 | 76.8 | 1.176 | 62.32 | 33. |
| 370. | 358. | 370. | 6380. | 10481. | 158.1 | .235 | 75.7 | 1.178 | 62.66 | 33. |
| 1417. | 1365. | 1417. | 26080. | 10481. | 160.5 | .240 | 72.1 | 1.185 | 63.80 | 33. |
| 2464. | 2180. | 2464. | 46080. | 10481. | 162.9 | .244 | 68.5 | 1.192 | 64.97 | 33. |
| 3514. | 3394. | 3514. | 66080. | 10481. | 165.4 | .249 | 64.9 | 1.200 | 66.18 | 33. |

07-04-74

1-1011-1 / 00211-228 A-NOISE LEVEL
SFA LEVFL, 77 DEG. F., 708 RELATIVE HUMIDITY
MAX LANDING WEIGHT (358,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

NOISE LEVELS ALONG THE FLIGHT PATH

| X | H | V | SCPTLTH (TA) | XP | LCL | R | XPP | LSL |
|--------|-------|-------|--------------|--------|--------|-------|--------|-------|
| 0. | 90. | 157.4 | 62.32 | 0. | 112.10 | 1521. | 0. | 68.29 |
| 6080. | 370. | 158.1 | 67.66 | 6080. | 92.58 | 1564. | 6080. | 71.93 |
| 12160. | 668. | 158.0 | 63.00 | 12160. | 86.10 | 1669. | 12160. | 73.93 |
| 13240. | 1006. | 159.5 | 63.35 | 18240. | 81.93 | 1823. | 18240. | 74.88 |
| 24320. | 1325. | 160.3 | 63.70 | 24320. | 78.83 | 2016. | 24320. | 73.70 |
| 26080. | 1417. | 160.5 | 63.80 | 26080. | 78.07 | 2078. | 26080. | 73.35 |
| 30400. | 1643. | 161.0 | 64.04 | 30400. | 76.38 | 2238. | 30400. | 72.48 |
| 36480. | 1761. | 161.8 | 64.41 | 36480. | 74.24 | 2481. | 36480. | 71.27 |
| 42560. | 2270. | 162.5 | 64.77 | 42560. | 72.43 | 2740. | 42560. | 70.10 |
| 46560. | 2444. | 167.9 | 64.97 | 46560. | 71.50 | 2895. | 46560. | 69.46 |
| 46640. | 2598. | 163.2 | 65.13 | 48640. | 70.87 | 3010. | 48640. | 69.01 |
| 54720. | 2918. | 164.0 | 65.49 | 54720. | 69.51 | 3290. | 54720. | 67.96 |
| 60800. | 3217. | 164.6 | 65.86 | 60800. | 68.29 | 3576. | 60800. | 66.93 |

07-04-74

1-1011-1 / NR211-229 A-401SE LEVEL
SEA LEVEL, 77 DEG. F., 708 RELATIVE HUMIDITY
MAX LANDING WEIGHT (150,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

70. DBA

4 - NOISE LEVELS

| B | H | V | W1 /
SORT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-----|-----|-------|----------------------|-------|-------|-------|----------|-----------|------|
| 50. | 50. | 157.4 | 62.32 | 2627. | 1157. | 1450. | 0. | 1449. | 0.0 |
| 50. | 50. | 158.1 | 62.66 | 2645. | 1163. | 1849. | 6080. | 1812. | 0.71 |
| 50. | 50. | 158.8 | 63.00 | 2664. | 1169. | 2103. | 12100. | 1988. | 1.54 |
| 50. | 50. | 159.5 | 63.35 | 2683. | 1176. | 2381. | 19240. | 2158. | 2.44 |
| 50. | 50. | 160.2 | 63.70 | 2702. | 1182. | 2696. | 24320. | 2348. | 3.43 |
| 50. | 50. | 160.9 | 64.05 | 2721. | 1189. | 2708. | 26080. | 2308. | 3.72 |
| 50. | 50. | 161.6 | 64.41 | 2740. | 1196. | 2722. | 30600. | 2171. | 4.41 |
| 50. | 50. | 162.3 | 64.77 | 2759. | 1203. | 2747. | 36480. | 1917. | 5.31 |
| 50. | 50. | 163.0 | 65.13 | 2778. | 1210. | 2762. | 42360. | 1560. | 6.06 |
| 50. | 50. | 163.7 | 65.49 | 2797. | 1217. | 2774. | 46080. | 1275. | 6.42 |
| 50. | 50. | 164.4 | 65.85 | 2816. | 1224. | 2784. | 48640. | 999. | 6.63 |
| 50. | 50. | 165.1 | 66.21 | 2835. | 1231. | 2807. | 52440. | 0. | 6.77 |

07-04-74

L-1011-1 / H0211-228 A-NOISE LEVEL
SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT (158,000 LB.), 33 DEG. FLAPS, D/LC. 3 DEG. GLIDE SLOPE

80. DBA

A - NOISE LEVELS

| R | M | V | SCAT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|--------------|-------|------|-------|----------|-----------|------|
| 0. | 50. | 157.4 | 62.32 | 1159. | 627. | 780. | 0. | 779. | 0.0 |
| 6040. | 170. | 158.1 | 62.66 | 1168. | 631. | 1011. | 6080. | 940. | 0.37 |
| 12160. | 688. | 158.8 | 63.00 | 1178. | 636. | 1178. | 12160. | 956. | 0.79 |
| 14240. | 1004. | 159.5 | 63.35 | 1188. | 640. | 1188. | 14240. | 631. | 1.13 |
| 24120. | 1125. | 160.1 | 63.70 | 1197. | 645. | 1197. | 21813. | 0. | 1.22 |

07-04-74

L-1011-1 / 80211-228 A-NUISE LEVEL
 SEA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAX LANDING WEIGHT (158,000 LB.), 33 DEG. FLAPS, DLC, 3 DEG. GLIDE SLOPE

90. DPA

| A - NOISE LEVELS | | | | | | | | | |
|------------------|------|-------|--------------|------|------|------|----------|-----------|------|
| | W | V | SCAT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
| 4 | 50. | 157.4 | 62.32 | 467. | 294. | 368. | 0. | 364. | 0.0 |
| 4080. | 170. | 158.1 | 62.66 | 472. | 297. | 472. | 6080. | 293. | 0.14 |
| 12150. | 688. | 158.8 | 63.00 | 476. | 300. | 476. | 8053. | 0. | 0.16 |

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L-1011-1 / R2211-22A A-NOISE LEV
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WEIGHT (158,000 LB.), 33 DEG. FLAPS, D/C, 3 DEG. GLIDE SLOPE

A - NOISE LEVELS 100. DBA

| V | M | V | SL /
SQRT(META) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|-----|-------|--------------------|------|------|------|----------|-----------|------|
| 0. | 50. | 151.4 | 11.32 | 172. | 122. | 155. | 0. | 147. | 0.0 |
| 4000. | 70. | 159.1 | 62.66 | 174. | 123. | 174. | 2123. | 0. | 0.01 |

07-04-74

L-1011-1 / M211-228 A-NOISE LEVEL
 SEA LEVEL, 7 DEG. F. 708 RELATIVE HUMIDITY
 MAX LANDING WEIGHT 1350,000 LB., 33 DEG. FLAPS, DLC, 3 DEG. CLINE SLOPE

110.004

A - NOISE LEVELS

| | M | V | NI/
SQRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | ARFA |
|-------|------|-------|--------------------|-----|-----|-----|----------|-----------|------|
| Q. | 50. | 157.4 | 62.12 | 62. | 51. | 62. | 0. | 37. | 0.0 |
| ACRO. | 170. | 158.1 | 67.66 | 63. | 51. | 63. | 227. | 0. | 0.00 |

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RADIATION ANGLE (THETA) 90.
START= 17100. INCREMENT= 6080.

IN TND = 0 ICL = 0 ISL = 0 EROTH = 0 NSCLND = 0 IPLIFT = 0 NSCLFT = 0
MAX LEADING WT = 42 DEG. FLAPS, DFC. 6/3 DEG. TWO SEGMENT AT 1000 FT.

TYPED = APP4 ENG = 220 GFT VMI = 0.0 W = 358000. HP = 0. FLAP = 42. TANB = 77.0
THR = 1000. GAMMA = 0.0 DFC = 1.0 DELV = 10.00

07-04-74

MAC LANDING WT.: 42 DEG. FLAPS, DEC. 6/3 DEG. TWO SEGMENT AT 1000 FT.

| MAC | PRESSURE ALTITUDE (FT) | GEOMETRIC ALTITUDE (FT) | TOTAL DISTANCE (FT) | THRUST (LB) | SPEED (KTAS) | MACH | TEMP (DEG F) | IEPR | NI/ SORT (PCT) | FLAP (DEG) |
|-------|------------------------|-------------------------|---------------------|-------------|--------------|------|--------------|-------|----------------|------------|
| 50. | 48. | 50. | 0. | 12292. | 152.3 | .226 | 76.8 | 1.203 | 66.27 | 42. |
| 170. | 358. | 170. | 6080. | 12292. | 153.0 | .228 | 75.7 | 1.205 | 66.61 | 42. |
| 1000. | 966. | 1000. | 14116. | 12292. | 154.4 | .230 | 73.6 | 1.210 | 67.27 | 42. |
| 1000. | 966. | 1000. | 14117. | 5856. | 154.4 | .230 | 73.6 | 1.106 | 50.79 | 42. |
| 6041. | 5810. | 6041. | 60080. | 5856. | 166.1 | .252 | 56.2 | 1.128 | 54.87 | 42. |

07-04-74

1-1011-1 / RB211-22H A-NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS. DYC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

A - NOISE LEVELS 70. DBA

| X | H | V | SCRT(THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|-------------|-------|-------|-------|----------|-----------|------|
| 0. | 50. | 152.3 | 66.27 | 2857. | 1233. | 1545. | 0. | 1544. | 0.0 |
| 6080. | 370. | 153.0 | 66.61 | 2879. | 1240. | 1970. | 6080. | 1935. | 0.76 |
| 12160. | 688. | 153.7 | 66.94 | 2901. | 1247. | 2232. | 12160. | 2124. | 1.64 |
| 18116. | 1000. | 154.4 | 67.27 | 2922. | 1254. | 2500. | 18116. | 2292. | 2.55 |
| 18117. | 1000. | 154.4 | 50.79 | 2138. | 983. | 2093. | 18117. | 1839. | 2.59 |
| 18240. | 1013. | 154.4 | 50.80 | 2135. | 983. | 2105. | 18240. | 1846. | 2.60 |
| 24320. | 1652. | 155.9 | 51.32 | 2157. | 990. | 2157. | 24320. | 1387. | 3.31 |
| 30400. | 2291. | 157.4 | 51.84 | 2177. | 997. | 2177. | 29276. | 0. | 3.56 |

07-04-74

L-1011-1 / KH211-22H A-NUISF LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS, DLC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

80. DBA

A - NUISF LEVELS

| X | H | V | NI /
SQRT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|-------|-------|----------------------|-------|------|-------|----------|-----------|------|
| 0. | 50. | 152.3 | 66.27 | 1275. | 581. | 845. | 0. | 844. | 0.0 |
| 6080. | 370. | 153.0 | 66.61 | 1285. | 686. | 1085. | 6080. | 1020. | 0.41 |
| 12160. | 638. | 153.7 | 66.94 | 1296. | 690. | 1296. | 12160. | 1098. | 0.87 |
| 18116. | 1000. | 154.4 | 67.27 | 1307. | 695. | 1307. | 18116. | 841. | 1.28 |

07-04-74

L 1011-1 / RA211-22A A-NOISE LEVEL
SFA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
MAX LANDING WT., 42 DEG. FLAPS, DIC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

90. DBA

A - NOISE LEVELS

| X | H | V | NI /
SORT (THETA) | R1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|--------|------|-------|----------------------|------|------|------|----------|-----------|------|
| | | | | | | | | | |
| 0. | 50. | 152.3 | 66.27 | 523. | 327. | 407. | 0. | 404. | 0.0 |
| 6000. | 370. | 153.0 | 66.61 | 528. | 330. | 528. | 6060. | 376. | 0.17 |
| 12100. | 680. | 153.7 | 66.74 | 533. | 333. | 533. | 9143. | 0. | 0.21 |

07-04-74

L 1011-1 / R0211-226 A-NOISE LF-VFL
 SFA LEVEL: 77 DEG. F., 70% RELATIVE HUMIDITY
 MAX LANDING WT.: 42 DEG. FLAPS, OLC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

100. DBA

A - NOISE LVLFLS

| | | N. / | | R | | DISTANCE 1/2 WIDTH | | AREA | |
|----|--|--------------|--|------|--|--------------------|--|------|--|
| | | SCRT (THETA) | | R2 | | 0. | | 0.0 | |
| | | 66.27 | | 137. | | 0. | | 166. | |
| | | 66.61 | | 138. | | 2528. | | 0. | |
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07-04-74

L-1011-1 / R0211-220 A-401SE LEVEL
 SPA LEVEL, 77 DEG. F., 70% RELATIVE HUMIDITY
 MAX LANDING WIND 42 UFG. FLAPS, DEC, 6/3 DEG. TWO SEGMENT AT 1000 FT.

A - 401SE LEVELS 110. DUA

| A | U. | M | V | N1 /
SQRTH(TAI) | P1 | R2 | R | DISTANCE | 1/2 WIDTH | AREA |
|-------|-----|------|-------|--------------------|-----|-----|-----|----------|-----------|------|
| | | | | | | | | | | |
| 401SE | 50. | 170. | 152.3 | 66.27 | 71. | 57. | 71. | 0. | 50. | 0.0 |
| | | | 153.0 | 66.61 | 71. | 57. | 71. | 393. | 0. | 0.00 |