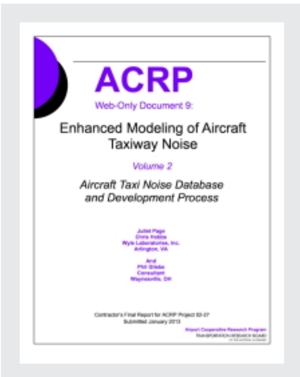

Enhanced Modeling of Aircraft Taxiway Noise, Volume 2: Aircraft Taxi Noise Database and Development Process

DETAILS

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Enhanced Modeling of Aircraft Taxiway Noise

Volume 2

Aircraft Taxi Noise Database and Development Process

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Contractor's Final Report for ACRP Project 02-27
Submitted January 2013

Airport Cooperative Research Program
TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

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AUTHOR'S ACKNOWLEDGMENTS

The Principal Investigator expresses her gratitude to Georgia Tech for providing calibrated flight noise ANOPP datasets, to Casey Burley, Jeff Berton and John Rawls at NASA for their invaluable assistance pushing the boundaries of ANOPP and last but certainly not least to her Wyle colleagues for their hours of dedication to this research.

The opinions and conclusions expressed or implied in this paper are those of the researchers. They are not necessarily those of the TRB, the National Research Council, the FAA, the AOC, or the U.S. Government.

EXECUTIVE SUMMARY

This aircraft taxi noise modeling research funded by the Airport Cooperative Research Program of the National Academy of Science is in response to a growing understanding that continuing reduction of noise levels related to aircraft flight operations means that previously ignored noise from aircraft ground operations (such as taxiing), now has potentially more of an effect on nearby communities. Taxiing and idling in runway queues, especially during peak hour operations or at night, can significantly contribute to noise contours and Day-Night Average Sound Levels (DNL). This is particularly true when taxiways are very close to the airport property lines and near neighborhoods or other noise sensitive locations. The Federal Aviation Administration's (FAA) Integrated Noise Model (INM) is the agency's required tool for environmental impact statements, environmental assessments (Boeker, et al., 2008), and Part 150 studies. Under FAA development is the Aviation Environmental Design Tool (AEDT) (Koopmann, et al., 2012) which will eventually replace INM for such purposes. Currently, noise modelers who need to assess the contribution of noise from aircraft ground operations must develop a workaround approach within the models or externally. This report documents the procedures developed and employed in the creation of a Taxi Noise Database for INM / AEDT.

Under ACRP project 11-02 (Page, et al., 2009, Page & Hobbs, 2010) aircraft taxi noise acoustic sensitivity studies were conducted, to document the importance of the modeling elements within INM and AEDT in three areas: source noise, operations, and environmental propagation. The key recommendation was the development of a new taxi source noise database for INM / AEDT. The current project, ACRP 02-27, built on the taxi noise and INM/AEDT modeling understanding developed under the prior project, developed a methodology for creation of a Taxi Noise dataset and applied it to the full fleet of commercial Turbofan (Jet) and Turbo-prop aircraft in the INM/AEDT database.

Modeling fixed wing Turbofan (Jet) and Turboprop commercial transport taxi noise data in INM / AEDT requires three fundamental database components:

- Noise-Power-Distance tables for the taxi operating condition for each aircraft;
- Spectral Classes for the taxi operating condition; and
- Turbofan (Jet) and Turboprop Directivity Functions for the taxi operating condition.

A prioritized hierarchy of three technical processes were developed and are documented. The hierarchical process is necessary due to limited data availability for each specific aircraft-engine configuration. Thrust-noise sensitivity trends were developed from first principles modeling via NASA's Aircraft Noise Prediction Program (ANOPP) applied to the taxi operating condition.

For a given aircraft, there are three possible database methods, based on the availability of data:

Method I. Empirical Taxi Noise Data and ANOPP data;

Method II. Empirical Taxi Noise Data Only; and

Method III. No Empirical Taxi Noise Data.

Method I is a hybrid technique that uses the empirical taxi noise data, assigns a thrust value based on FDR data, applies an ANOPP delta-dB vs. delta-Thrust relationship to develop the Taxi thrust-noise sensitivity and the taxi NPD curve. Method II is similar to method I, in that the “nominal Taxi Thrust” is based on empirical data, then adjusted to other thrust levels based on a generalized ANOPP delta-dB vs. delta-thrust relationship to obtain the taxi noise-thrust sensitivity. The generalized ANOPP noise-thrust relationship is based on aircraft size. Methodology III is the least accurate of the three methods because it has no aircraft specific empirical taxi noise data. This method utilizes generalized empirical noise data and ANOPP thrust-noise sensitivity data.

CHAPTER 1. INTRODUCTION

1.1. Project Goals and Overview

This aircraft taxi noise modeling research funded by the Airport Cooperative Research Program of the National Academy of Science is in response to a growing understanding that continuing reduction of noise levels related to aircraft flight operations means that previously ignored noise from aircraft ground operations (such as taxiing), now has potentially more of an effect on nearby communities. Taxiing and idling in runway queues, especially during peak hour operations or at night, can significantly contribute to noise contours and Day-Night Average Sound Levels (DNL). This is particularly true when taxiways are very close to the airport property lines and near neighborhoods or other noise sensitive locations. The Federal Aviation Administration's (FAA) Integrated Noise Model (INM) is the agency's required tool for environmental impact statements, environmental assessments (Boeker, et al., 2008), and Part 150 studies. Under FAA development is the Aviation Environmental Design Tool (AEDT) (Koopmann, et al., 2012) which will eventually replace INM for such purposes. Currently, INM users who need to assess the contribution of noise from aircraft ground operations must develop a workaround approach within the model or externally.

Under ACRP project 11-02 (Page, et al., 2009, Page & Hobbs, 2010), aircraft taxi noise acoustic sensitivity studies were conducted, to document the importance of the modeling elements within INM and AEDT in three areas: source noise, operations, and environmental propagation. Sensitivity studies decoupled the taxi noise into the three areas and exercised each element independently. Under project 11-02, limited opportunistic commercial aircraft taxi operation acoustic measurements were conducted. Independent taxi flight data recorder (FDR) information was queried to determine statistical engine and aircraft operational parameters. The current project, ACRP 02-27, described in this Final Report, builds on the taxi noise and INM/AEDT modeling understanding developed under the prior project.

This report documents the technical approach, development, application and the INM / AEDT taxi noise dataset.

1.2. Technical Approach

The database developed includes three fundamental components for the INM / AEDT fixed wing Turbofan (Jet) and Turboprop commercial transport fleet:

- Noise-Power-Distance tables for the taxi operating condition for each aircraft;
- Spectral Classes for the taxi operating condition; and
- Fleet-wide Jet and Prop Directivity Functions for the taxi operating condition.

Three sources of information from which the taxi noise datasets were developed include empirical taxi noise acoustic data (spectra and directivity), Major European carrier historical Flight Data Recorder (FDR) data, CAEP/8 Best Practice Database - subset of the ICAO NoisedB V2.6.1 (ICAO/CAEP8, 2008), EASA certificated noise database (EASA, 2011) and NASA's Aircraft Noise Prediction Program, ANOPP (Zorumski, 2006) first principles modeling datasets developed for the Environmental Design Space Model (Kirby, Mavris, 2008 and Barrow et al., 2008).

This report describes a prioritized hierarchy of three technical processes which are used to develop a taxi noise-power-distance database for INM and AEDT. The hierarchical process is necessary due to the variability in data availability for each specific aircraft-engine configuration. The INM aircraft types for which the taxi NPD and spectral class data is to be generated will fall into one of three possible NPD development methods:

Method I. Empirical Taxi Noise Data and ANOPP data;

Method II. Empirical Taxi Noise Data Only; and

Method III. No Empirical Taxi Noise Data.

Method I is a hybrid technique that uses the empirical taxi noise data, assigns a thrust value based on FDR data, applies an ANOPP delta-dB vs. delta-Thrust relationship to develop the Taxi thrust-noise sensitivity and the taxi NPD curve. For this process the empirical taxi noise data trumps any analytical process.

Method II is similar to method I, in that the "nominal Taxi Thrust" is based on empirical data, then adjusted to other thrust levels based on a "scaled" ANOPP delta-dB vs. delta-Thrust relationship to obtain a Taxi noise-thrust sensitivity. The scaled ANOPP noise-thrust relationship is based on engine types, categorized by thrust class and bypass ratio.

Method III is perhaps the least accurate of the three methods because it has no empirical taxi noise data on which to rely for the absolute level of the "nominal" taxi noise. However, as will be shown in Section 5, it is remarkably successful. This method utilizes combined empirical noise data and ANOPP thrust noise sensitivity data from which a relationship between Max Takeoff Gross Weight and taxi thrust is derived. Applied to this is the thrust-noise relationship between taxi SEL and thrust. The genesis of this method was an inability to correct and extrapolate the existing INM flight noise NPD data to the taxi condition despite exhaustive attempts using a multitude of approaches. Contained in Section 4 are several of attempted procedures to extrapolate the INM flight noise NPD data to the taxi condition.

1.2.1 Report Contents

Section 2 describes the assumptions necessary for incorporation of taxi noise within the INM/AEDT modeling framework. Section 3 details the various empirical and analytical taxi data sources utilized in this project. Section 4 lays out the proposed methodology for a taxi noise NPD data set and applies it to a limited subset of aircraft types. Section 5 explains how the taxi NPD development process was extended across the complete INM aircraft fleet. In order to understand the implications of the modeling assumptions, Section 6 describes the uncertainty associated with single spectral class modeling, the chosen process for thrust-noise sensitivity, and application of a hybrid model for those aircraft for which empirical taxi data does not exist. Section 7 documents the NPD process for propeller aircraft NPDs. Section 8 contains the composite directivity pattern development procedures and resultant directivity patterns for both Turbofan (Jet) aircraft and Turboprop aircraft.

CHAPTER 2. TAXI DATABASE INM / AEDT INTEGRATION ASSUMPTIONS

In order to add taxiing aircraft modeling capability to the INM/AEDT, changes were recommended (Page, et al., 2009) to four key elements, namely:

1. NPD Taxi Reference Speed;
2. Lateral Directivity;
3. Spectral Class (current classes are based on departure or approach flight conditions); and
4. Ground Effect (air-to-ground propagation for flight vs. ground-to-ground for taxi).

This chapter itemizes the assumptions that were made in the development of the NPD datasets and the rationale behind the assumptions. Longitudinal directivity was also recommended to be changed in INM/AEDT for taxi noise modeling (Page et al., 2009).

2.1. Reference Speed

The current INM and AEDT flight noise-power-distance (NPD) database includes integrated metrics Sound Exposure Level (SEL, dBA) and Effective Tone-corrected Perceived Noise Level (EPNL) and maximum level metrics Maximum A-weighted sound level (Lmax, dBA) and Maximum Tone-corrected Perceived Noise Level (PNLT, dB). These in flight metric values (approach and departure) are integrated based on a dipole moving along an infinite segment at 160 knots. The duration adjustment programmed into INM and AEDT is provided in Equation 2-1:

$$DURADJ = 10Log10(160/ASseg) \qquad \text{Eq. 2-1}$$

where DURADJ is the NPD adjustment in dB and ASseg is the aircraft speed along the flight segment in knots. The same duration adjustment is used for both SEL and EPNL integrated metrics.

The prior taxi study conducted for ACRP (Page, et al., 2009) examined flight recorder data for one year of operations for a major European commercial carrier. For this dataset, it was found that typical taxi ground speeds ranged from 9 to 16 knots with a standard deviation of 3-5 knots. Analysis of data published by University of Madrid, (Asensio et al., 2007, Lopez et al., 2008) indicated that most measured aircraft moved at constant speed ranging from 15-23 knots with an average taxi speed of 19.8 knots. The database development process for this project established a reference speed for NPD integrated metrics of 16 knots taxi ground speed. This reflects an exact difference of 10.0 dB in SEL and EPNL from the existing INM/AEDT 160 knot flight speed based on Equation 2-1.

2.2. Lateral and Longitudinal Directivity

INM and AEDT account for source lateral directivity (Boeker et al., 2008) as part of the lateral attenuation algorithms (Figure 2-1). For airborne flight this correction can be up to 3dB in the plane of the wings. We recommend the lateral directivity adjustment be *disabled* for taxiing aircraft mode in INM and AEDT, and that the empirical and/or and predicted taxi NPD data be used directly in the prediction of taxi noise.

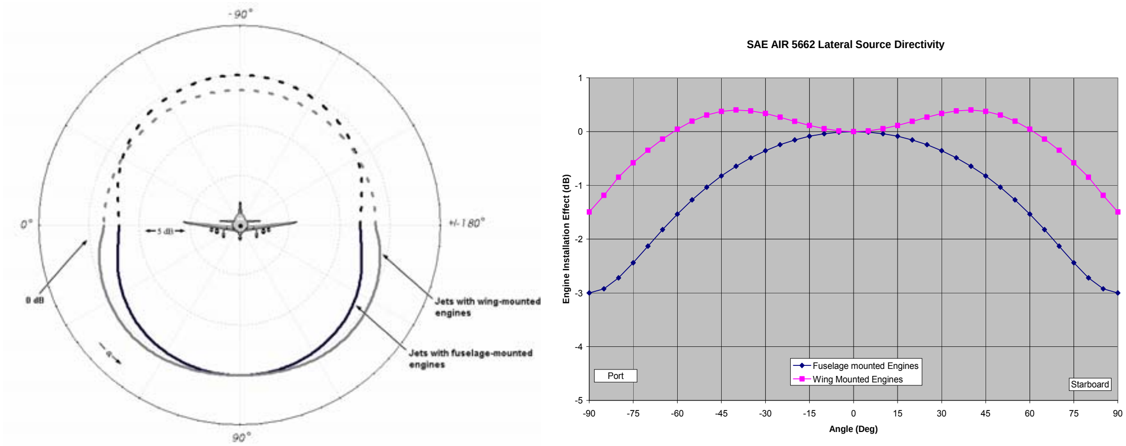

FIGURE 2-1 Aircraft lateral directivity from Boeker et al. (2009).

Both INM and AEDT include algorithms to model longitudinal aircraft directivity (Figure 2-2). These are applied behind the start of takeoff roll and for operations where the aircraft is "on the ground". In the prior ACRP Taxi scoping study (Page et al., 2009) it was suggested that the existing INM / AEDT directivity behind start of takeoff roll be *disabled* and *replaced* with suitable taxi directivity. Different directivity shapes have been developed for two classes of aircraft: Turbofan (Jet) and Propeller. The taxi directivity source functions also include the region in front of the aircraft and are representative of noise emissions for taxiing operations. These are described in detail in Section 7.

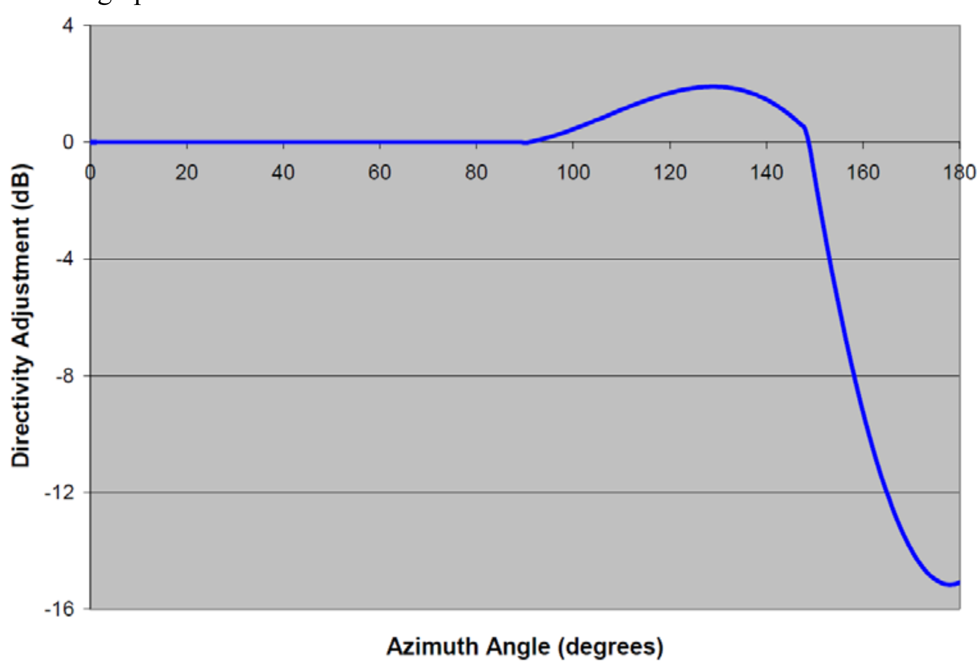

FIGURE 2-2 Aircraft longitudinal directivity from Boeker et al. (2009).

2.3. Taxi Spectral Class

INM / AEDT spectral data for departure and approach is generally provided by the aircraft manufacturer to the FAA as part of the INM data package and are based on procedures detailed in FAR Part 36. The source of the aircraft spectra is certification flight measurements captured at the maximum A-weighted level for the flight operation. Generally this is reflective of the vehicle noise spectra near the point of closest approach to the microphone, and represents noise emission at about 90° from the nose of aircraft. In reality the vehicle spectra varies with directivity angle. Measured taxi data permits the modeling of spectra as a function of emission angle; however this level of detail is beyond the capability of the INM / AEDT modeling structure at this point in time. For consistency with the flight spectral class data, taxi spectral classes were developed using the same criteria: namely taxi spectra at the point of maximum A-weighted noise level.

Spectral classes are general shapes across the one-third octave bands normalized to 70 dB at 1000 Hz. Multiple aircraft types can have the same spectral shape with the absolute levels adjusted to produce the desired level. The existing flight spectral classes (Volpe, 1999) and the processes whereby the spectral classes are determined have been previously described (Roof, Guilding, Fleming, 2003). This same process, which includes the steps summarized below, was employed in the development of the Taxi spectral classes.

- Grouping of aircraft including airframe, engine type, number of engines, engine location and engine bypass ratio;
- Visual inspection of the potential spectral class data including assessment of general shape, location of tones;
- Verification of suitability of the spectral class by comparing actual spectra with spectral class propagated data over soft ground for a 1000 m range and several elevation angles and comparing against a +/- 1dB criteria; and
- Verification of sensitivity of spectral class within 3dB to atmospheric absorption effects over the following four atmospheric conditions: 59°F, 70%RH; 77°F, 70%RH; 59°F, 55%RH; 77°F, 55%RH for all the standard distances in the NPD dataset.

2.4. Ground Effect

Development of the NPD dataset was performed using taxiing aircraft geometry. The noise source was placed at the engine height above the ground, and, to be consistent with INM and AEDT, the receiver was placed 4 ft above the ground. The intervening terrain was acoustically soft, flat ground modeled with an effective flow resistivity of 150 cgs/rayls consistent with the methodology applied for INM / AEDT database development (Roof et al., 2003).

CHAPTER 3. DATA SOURCES

In our previous taxi noise study for ACRP (Page et al., 2009b) we conducted a comprehensive search for noise data measured at the low thrust levels associated with the taxiing operation. As expected, the amount of available data is extremely limited because taxi noise has not received the same attention as has the noise from flight operations. The most useful data was from the following sources:

- Taxi noise spectral and directivity data measured for a wide variety of aircraft by the Universidad Politenica de Madrid (Arsensio et al, 2003), (Lopez et al., 2004);
- In-house turboprop noise and directivity data measured by Wyle; and
- Taxiing noise data collected by Wyle in 2008 at Providence Airport as part of a PARTNER study on emissions, headed by Harvard University.

In order to supplement this database for the ACRP project, Wyle conducted three sets of measurements, namely:

- Taxi idle and acceleration noise measurements at Ronald Reagan National Airport (DCA); and
- Taxi "breakaway" noise and noise directivity measurements at Washington Dulles International Airport (IAD) in 2008; and
- Taxiing noise directivity measurements targeting large international aircraft (B777) at Washington Dulles International Airport (IAD) in 2010.

The resulting noise database in terms of aircraft types measured is shown in Table 3-1.

TABLE 3-1 Available Noise Data for Aircraft Taxi Operations

Organization	Airport	Aircraft Measured
University of Madrid	Madrid Barajas (MAD)	A-310-300, A319, A320, A321, A340-300, B717 (-300, -400, -500), B737 (-600, -700, -800), B747, B757-200, B767, MD-82, MD-83, MD-87, MD-88, ATR-72-500, CRJ, DHC8Q3, Fokker 50
Wyle	DCA	CRJ, B737 (-300, -700, -800), E145, MD88, A319, B727
Wyle	IAD	A320, B757-222, B777
Wyle	PVD	CRJ, B737-700, Embraer 170, ERJ-145
HMMH	ANC	B747, B767
Boeing	--	B737-300

3.1. Measured Taxi Noise Data

Under ACRP Project 02-27 a procedure was developed by which the acoustic power description of the taxiing aircraft described in Lopez (2004) can be processed into free-field spectral sources with longitudinal directivity using the appropriate ISO standards. These free field noise sources may then be utilized in a simulation model such as the Advanced Acoustic Model (AAM) (Page, et al., 2009a) in order to develop NPD curves for the reference 16 knot taxi condition.

This section describes the technical basis for noise sphere creation from the acoustic measurement data and highlights its application to specific aircraft. Comparisons between processed taxi acoustic power data and independent measurement data demonstrate the validity of this process and justify further use of the Wyle and Madrid empirical data in the development of an INM/AEDT NPD dataset.

The "Madrid data" presented by Lopez et al. (2008) provides acoustic sound power output and directivity indices of several aircraft types measured while taxiing at the Madrid-Bajaras airport in Spain. The authors calculated sound power by utilizing two different methods. One of the methods employed, method B in the report, used the ISO standards (ISO, 1993) (ISO, 1996), to depropagate the measured sound levels to calculate the sound power level of the taxiing aircraft. This methodology is a good approximation of the acoustic repropagation technique (Page et al., 2009a), (Hobbs, Page, Schultz, 2010) and accounts for air absorption. The sound power levels resulting from method B were chosen for creating noise spheres representing taxiing aircraft. Further details about this process have been described by Hobbs, Sharp and Page (2010b) but are repeated in Appendix A for completeness.

The taxi noise measurements conducted by Wyle and itemized in Table 3-1 were also processed using the acoustic repropagation technique in order to develop taxi NPD data. A comparison of the various taxi B737 longitudinal directivity empirical noise source data is provided in Figure 3-1. Appendix B contains a description of the B777 2010 IAD Taxi measurements and data processing used to obtain empirical taxi noise NPDs.

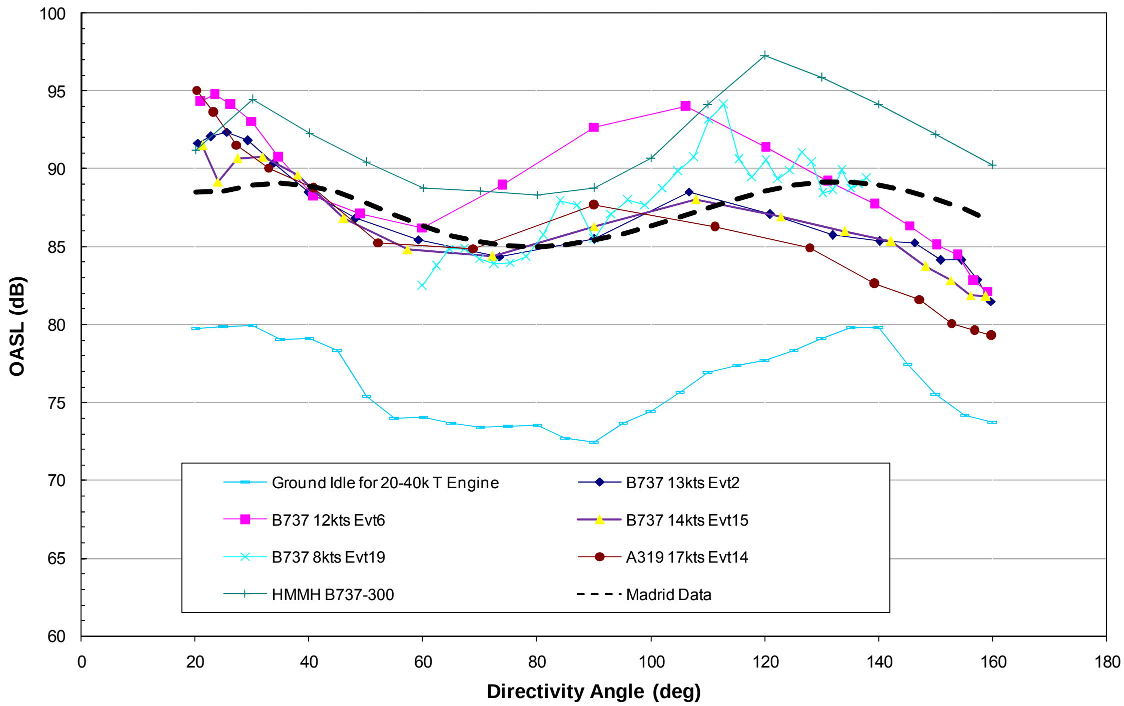

FIGURE 3-1 Comparison of B737 measurement noise directivity data.

Table 3-2, taken from Hobbs et al. (2010b), itemizes the comparison of the measured SEL levels (Ave. Meas. SEL column) with those predicted SEL data based on the noise spheres created from the Madrid dataset (Madrid SEL column). The difference in SEL has been averaged for each vehicle category and listed in the Average SEL Difference column. Overall the SEL comparisons are within 3dB, while individual events might vary more. Given the number of variables in the measurement taxi operations, this demonstrates the suitability of use of the Madrid dataset for taxi noise NPD dataset development.

TABLE 3-2 Comparison of SEL Levels

AC Type	Speed (knots)	Distance From Source (m)	Ave. Meas. SEL	Madrid SEL	Average SEL Difference (Pred-Meas)
A319	18	78	91	94	-1
A319	17	22	104	99	
B737-300	12	22	107	101	-3
B737-300	8	78	97	103	
B737-700	14	22	102	101	
B737-800	2	22	104	101	
B737-800	13	22	104	95	
CRJ	16	22	98	99	2
CRJ	12	78	88	93	
CRJ	15	78	96	92	
CRJ 200	10	22	99	101	
CRJ 200	15	22	99	100	
CRJ 200	14	22	98	100	
CRJ 200	12	78	92	93	
CRJ 200	14	78	89	93	
E135	9	22	101	102	
E145	6	78	88	94	
B717-200	18	78	100	94	-2
MD88	8	22	104	105	
MD88	12	78	91	95	
MD88	23	22	105	100	

3.2. Taxi Operational Data

None of the empirical taxi noise data collected under ACRP funding or itemized in Table 3-1 have concurrent information on engine operating state. This necessitates an assumption of the engine operating condition under which the acoustic data was gathered. Under ACRP Project 11-02 Task 8, analysis of one year of flight data recorder (FDR) data[1] was performed (Page et al., 2009b) in order to obtain nominal taxi conditions. The results of this analysis are presented in Table 3-3. Additional sources of taxi data include results from a number of surveys of power settings used during normal taxi operations currently under consideration by the International Civil Aviation Organization - Committee on Aviation Environmental Protection Alternative Emissions Methodology Task Group (ICAO/CAEP7, 2006). One additional source of data identified under the current effort and leveraged in this study includes the ICAO Best Practices Certification Database (BPDB) (ICAO/CAEP8) which lists aircraft takeoff gross weight, and maximum thrust, from which nominal percentage taxi thrust may be assumed.

[1] The Event Measurement System (EMS) developed by Austin Digital performs uses a combination high-frequency component from “dead reckoning” with a low-frequency component from GPS latitude and longitude or inertial lat/long. Positions are determined by combining position estimates based on ILS deviations, marker over flight times and recorded lat/long. The altitude component combines estimates from runway elevation + height AGL, integrated vertical speed and barometric corrected altitude. http://www.ausdig.com.

TABLE 3-3 FDR Data Engine Operating Parameters from Page et al. (2009b)

Engine Operating Parameters - Stationary, Departure Taxi Operations

Aircraft	Average N1average	Standard Dev. N1avg	Average %Thrust	Standard Dev. %Thrust	Average EMS Thrust (lbs)	Standard Dev. EMS Thrust (lbs)	Average EMS Enhanced (lbs)	Standard Dev. EMS Enhanced (lbs)
A319	19.42	1.41	8.41	1.18	1975.24	278.42	1975.24	278.42
A320	19.16	1.29	7.45	1.34	2011.77	361.01	2011.77	361.01
A321	20.06	1.55	6.15	1.15	1843.61	345.29	1843.61	345.29
A330	21.16	3.08			3845.13	2484.18		
A340	19.50	4.73			2210.70	1027.83		
B757	20.47	1.51	2.68	0.67	1077.75	268.58	1077.75	268.58
B767	23.78	2.66	5.74	1.24	3565.83	772.65		
B777	19.89	2.30	4.86	0.86	5615.41	989.00		
RJ100	22.67	1.80			1518.85	139.30		
RJ85	22.32	1.59			1500.55	120.04		

Engine Operating Parameters - Stationary, Arrival Taxi Operations

Aircraft	Average N1average	Standard Dev. N1avg	Average %Thrust	Standard Dev. %Thrust	Average EMS Thrust (lbs)	Standard Dev. EMS Thrust (lbs)	Average EMS Enhanced (lbs)	Standard Dev. EMS Enhanced (lbs)
A319	17.37	3.98	8.62	2.20	2026.47	516.45	2026.47	516.45
A320	17.51	3.04	7.72	1.89	2083.66	510.60	2083.66	510.60
A321	18.21	3.82	6.78	1.97	2034.77	591.40	2034.77	591.40
A330	21.51	4.25	5.80	4.46	3947.56	3035.05	2815.96	3582.02
A340	19.20	3.93	6.38	2.85	2590.74	839.84	1516.45	1520.39
B757	19.64	2.50	1.39	0.87	560.33	347.74	1077.75	347.74
B767	26.79	1.56	6.09	4.47	3781.28	2777.72	560.33	
B777	21.41	0.91	5.46	0.43	6312.84	496.08		
RJ100	17.51	6.52			1157.97	449.01		
RJ85	18.03	5.69			1194.22	381.76		

Engine Operating Parameters - Stationary, Arrival Taxi Operations

Aircraft	Average N1average	Standard Dev. N1avg	Average %Thrust	Standard Dev. %Thrust	Average EMS Thrust (lbs)	Standard Dev. EMS Thrust (lbs)	Average EMS Enhanced (lbs)	Standard Dev. EMS Enhanced (lbs)
A319	19.56	3.34	9.20	1.92	2162.66	451.69	2162.66	451.69
A320	19.71	3.29	8.22	1.85	2220.48	498.40	2220.48	498.40
A321	20.32	3.13	6.89	1.43	2066.97	429.37	2066.97	429.37
A330	22.28	3.30			4261.80	2792.32		
A340	20.45	4.08			2407.10	1008.95		
B757	23.28	2.20	3.73	1.01	1500.41	405.07	1500.41	405.07
B767	26.14	1.71	6.58	1.14	4085.75	708.94		
B777	20.08	1.94	5.16	0.77	5960.23	884.92		
RJ100	25.49	2.45			1722.56	172.80		
RJ85	24.59	2.11			1669.50	166.76		

Engine Operating Parameters - Stationary, Arrival Taxi Operations

Aircraft	Average N1average	Standard Dev. N1avg	Average %Thrust	Standard Dev. %Thrust	Average EMS Thrust (lbs)	Standard Dev. EMS Thrust (lbs)	Average EMS Enhanced (lbs)	Standard Dev. EMS Enhanced (lbs)
A319	19.94	1.05	9.89	0.70	2323.04	164.33	2323.04	164.33
A320	19.62	1.38	8.70	1.32	2350.22	355.09	2350.02	355.09
A321	20.72	1.55	7.62	0.57	2284.95	169.66	2284.95	169.66
A330	23.15	2.23	6.56	4.26	4459.99	2892.61	2886.91	3742.11
A340	20.03	2.55	7.04	2.54	2862.06	555.44	1672.96	1585.15
B757	22.29	1.79	3.34	0.61	1341.46	245.01	1341.46	245.01
B767	27.17	2.13	6.65	0.89	4130.46	549.77		
B777	21.53	0.45	5.48	0.31	6336.52	359.74		
RJ100	23.84	6.19			1599.68	431.08		
RJ85	23.44	6.67			1578.58	463.89		

Note: Some A330, A340, RJ100 and RJ85 values were erroneous in the FDR dataset and removed. Blank fields indicate that specific data is not available.

3.3. ANOPP First Principles Modeling Data

The Aircraft Noise Prediction Program (ANOPP) developed by NASA (Zorumski, 2006) may be used to physically model engine noise as a function of thrust, and exercise the engine noise model to develop noise-thrust sensitivity curves for low thrust levels. The ANOPP software was used to develop noise spheres for use in the Advanced Acoustic Model (AAM). The inputs required for ANOPP are extensive and generally proprietary for specific engine models, but public domain input decks have been developed as part of the Environmental Design Space (EDS) project (Kirby & Mavris, 2008), (Barros, Kirby & Mavris, 2008) funded by the FAA, and were made available to the ACRP researchers by Georgia Tech for the following aircraft/engine combinations:

- B737-800/CFM56-7B27 (Narrow Body, 2-Engine);
- B777-200ER with GE90-94B and PW4090 engines (Wide Body, 2-Engine);
- B747-400/PW 4056 (Wide Body, 4-Engine);
- B767-300 ER (CF6-80C2); and
- CRJ-900/CF34-8C5 (Narrow Body, 2-Engine, Tail Mounted).

The EDS estimated performance maps for these engines have not been validated at extremely low thrust levels, but were acquired believing that they could be used in the range of 8 to 10 percent of maximum rated power for the purposes of developing level and spectral trends with thrust changes (Berton, 2009). Fortunately, the predicted taxi noise levels from ANOPP are remarkably close to measured values, supporting our assessment of the suitability of such data in the development of the taxi NPD noise-thrust relationship. (Comparisons of ANOPP and empirical data are provided in Appendix C, Figures C-1 through C-5 and also in Section 4 of this report).

The process employed utilizes a physics-based approach based on ANOPP modeling to build noise spheres representative of the taxi condition to account for physical elements: thrust changes, and spectral content and directivity changes. ANOPP was also used to explore the following areas and ensure proper modeling application to the taxi condition. The following modeling concepts were explored using ANOPP.

Ground vortex ingestion: A narrow band analysis of measured taxi data was performed to determine the fan rotation speeds and infer engine operating state. A vortex ingestion model based on stream tube was developed to determine relationship between engine operating state, forward speed and presence of ground vortex ingestion. It was determined that for aircraft with wing mounted engines a ground vortex is ingested under nearly all taxi and idle operating conditions. Therefore ANOPP modeling applied inflow distortion for the taxi condition. As part of this investigation the taxi team recommends that NASA develop an improved empirical vortex ingestion model for ANOPP. An empirical approach, which leverages a planned static engine test, could utilize "Ground Vortex Destroyers" and Turbulence Control Screens separately and together to identify vortex ingestion impact. The empirical data may then be used to develop an additional vortex ingestion source noise model for the Fan method of ANOPP. Additional details may be found in Appendix D.

Extrapolation of engine state tables to idle/low thrust using NPSS. Engine state tables were extended to idle conditions (5% thrust) by Georgia Tech and utilized in the ANOPP analyses. Comparisons of the default ANOPP extrapolation procedure with the use of the extended engine state tables showed that ANOPP extrapolation provides a reasonable approximation.

Exploration of airframe noise using ANOPP and removal of airframe noise from INM approach NPDs. This process is detailed in Section 4.1 of this report and includes both geometric and logarithmic methods for airframe noise subtraction. Unfortunately, this technique was not particularly successful. A complete set of comparison plots are also provided in Appendix E.

Component "balancing" using general suppression tables. See Appendix C for a discussion of the general suppression tables in the flight ANOPP input files and the justification for removing them when using ANOPP to model the taxi condition.

CHAPTER 4. Hybrid Methods for Estimating Turbofan (Jet) Aircraft Taxi Noise Levels

There are three sources of aircraft noise level information that can provide a basis for estimating aircraft taxi noise levels, as follows:

1. INM NPD data – provides various flight noise levels as a function of power setting and distance for several classes of certified aircraft;
2. ANOPP Predictions – A NASA code which can predict flight noise levels based on engine performance predictions (NPSS code) and aircraft flight performance (NASA FLOPS code) and definitions of aircraft and engine geometry, cycle parameters, etc.; and
3. Empirical data – e.g., Madrid, IAD, etc., from airport survey measurements, corrected to some reference condition using the Wyle AAM code.

Sufficient data was made available by Georgia Tech, to run predictions of taxi noise for five different aircraft configurations using the NASA ANOPP procedure. Taxi noise predictions were carried out over a range of engine thrust settings and distances from aircraft taxi path to microphone/observer for these configurations. The aircraft taxi predictions were made using ANOPP and EDS representations of the following aircraft:

- Boeing B737-800 with CFM56-7B engines;
- Boeing B777-200 with both GE90-90B and PW4098 engines;
- Boeing B747-400 with PW4062 engines;
- Boeing B767-300 with CF6-80C2 engines; and
- Bombardier CRJ900 with CF34-8C5 engines.

4.1. Attempts to Utilize INM Flight NPD Data

The first approach attempted was to utilize the INM flight NPD data to generate a relationship between noise and power setting (typically net corrected thrust per engine), and then extrapolate the results to typical taxi thrust levels, while applying a combination of ANOPP predictions and measured data to adjust the INM results. The INM NPD data were adjusted from the standard 160 Kts flight speed to the recommended "standard" taxi speed of 16 kts using the duration correction of 10 log (160/16) = 10 dB. Both departure and arrival INM NPD's were created, and plots of SEL (dBA) vs. net corrected thrust (Fn/delta) developed for various distances, from 200 ft. to 25,000 ft. The INM NPDs were developed for the aircraft listed above for which ANOPP calculations had been performed. ANOPP was used to determine the individual noise contributions from the airframe and engine components. ANOPP results were added to the plots, as well as measured taxi noise data. Examples of these comparisons are shown in Figures 4-1, 4-2 for the B737-800 (200 ft and 1000 ft) and Figures 4 3, 4-4 for the B747-400 (200 ft and 1000 ft), respectively. The INM NPD data for approach and departure is depicted as red squares and green triangles, respectively. The empirical data (from Madrid or Wyle measurements) is indicated at the assumed thrust by a yellow triangle. The two techniques for subtracting airframe noise from the INM NPDs are indicated by cyan squares (Logarithmic subtraction) or orange squares (dB difference). Polynomial fits with extrapolations are also indicated in the graphics in Figures 4-1 through 4-4 and in Appendix E[1].

[1] ANOPP computations (engine only, under the taxi condition) are plotted in combination with the other data presented in Figures 4-1 and 4-2 and may be found in Appendix E. ANOPP computations are indicated by blue diamonds.

One additional point to note is that the INM data includes all aircraft noise sources, and so it was deemed necessary to attempt to extract airframe noise from the data using information obtained from the ANOPP predictions. The ANOPP data were computed both with and without airframe noise included, and the results were anti-logarithmically subtracted to estimate the airframe noise itself. The resulting airframe noise levels were then used to extract airframe noise from the INM projections. Two methods were used, logarithmic subtraction and differencing, i.e., taking the difference in decibels obtained from the ANOPP information and subtracting from the INM information. All these variants are shown to some extent on the example plots of Figures 4-1 through 4-4. It should be noted that plots like these were generated for all the ANOPP aircraft listed above, and for distances of 200 ft., 400 ft., 630 ft., 1000 ft. and 10,000 ft., and may be found in Appendix E.

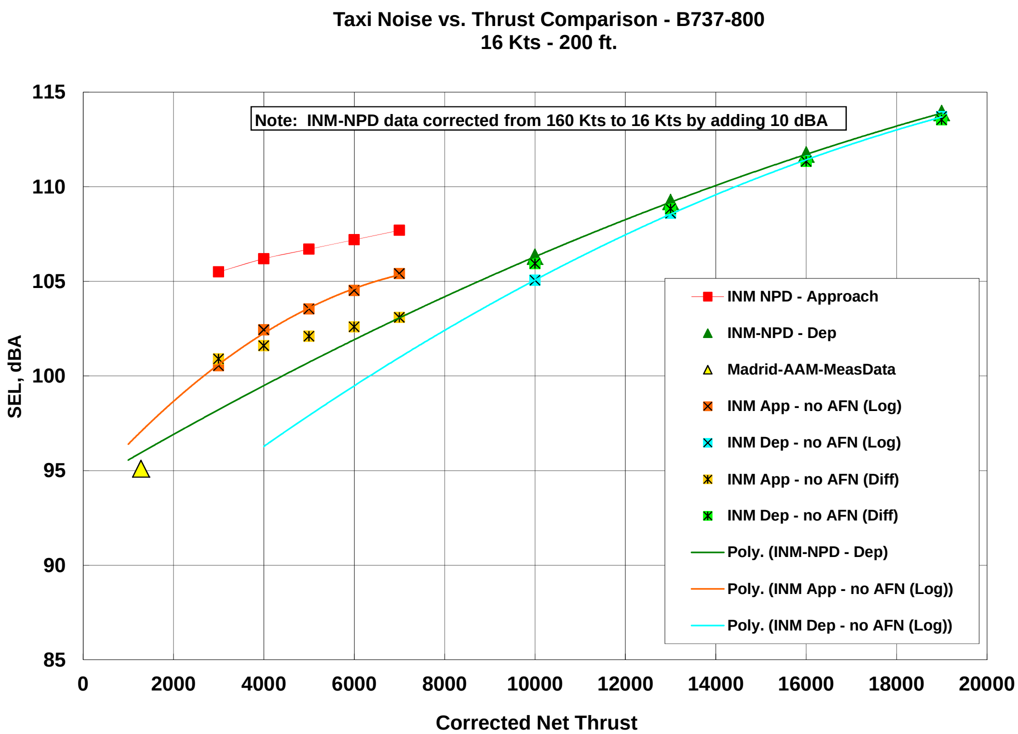

FIGURE 4-1 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 200 ft. distance.

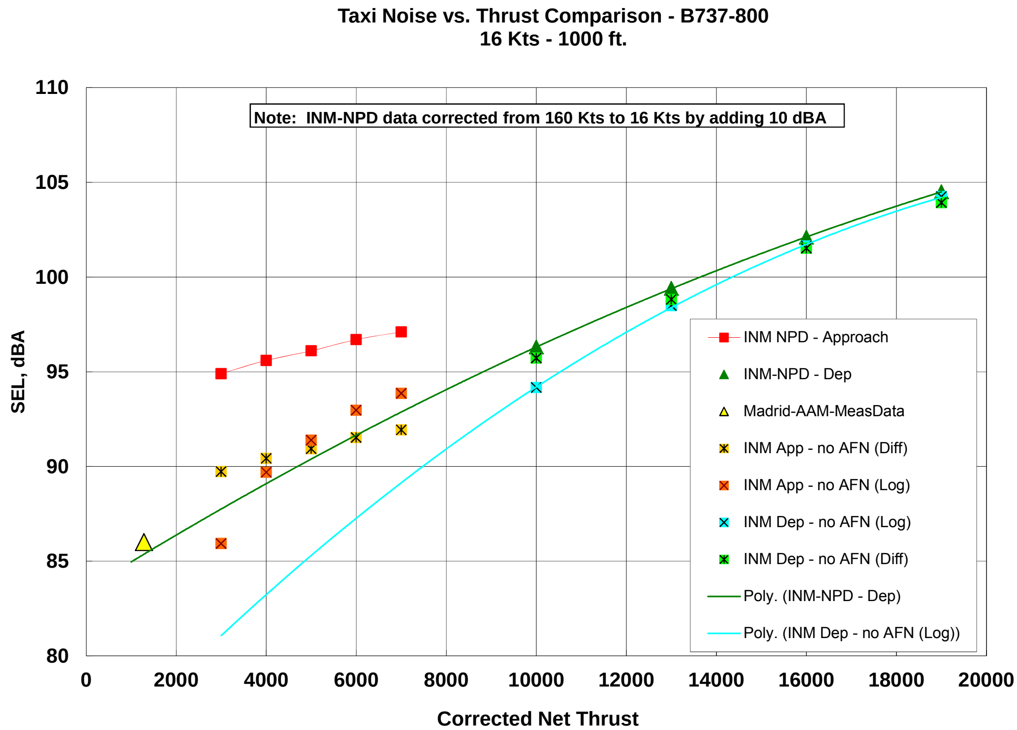

FIGURE 4-2 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 1000 ft. distance.

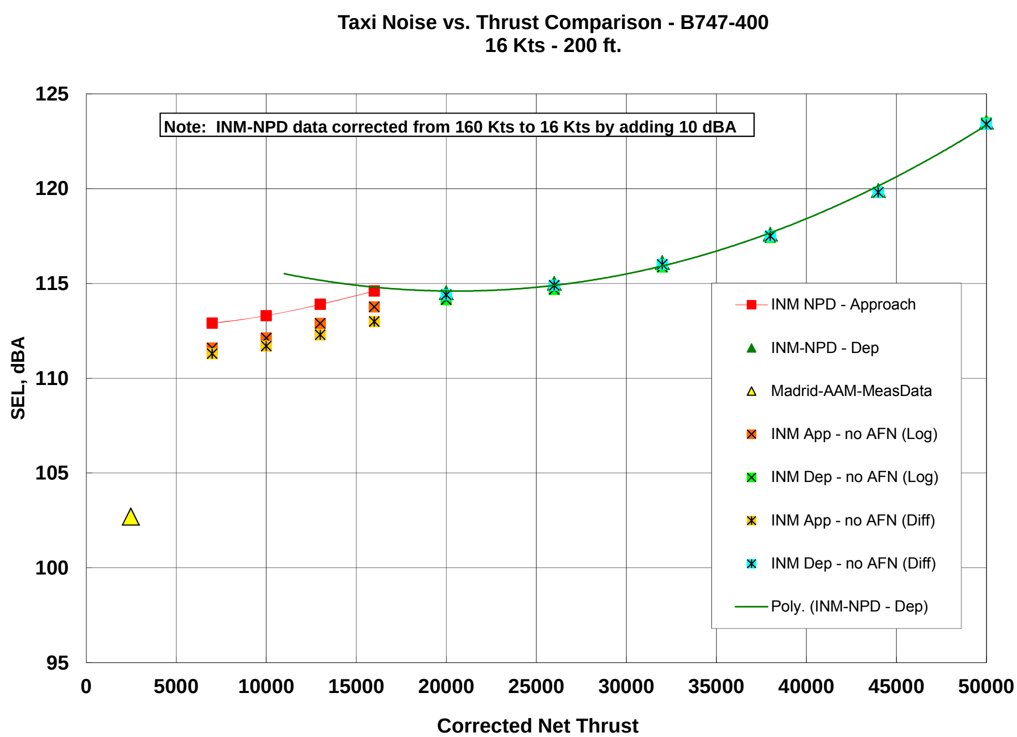

FIGURE 4-3 Taxi noise vs. thrust comparison, B747-400 for 16 knots at 200 ft. distance.

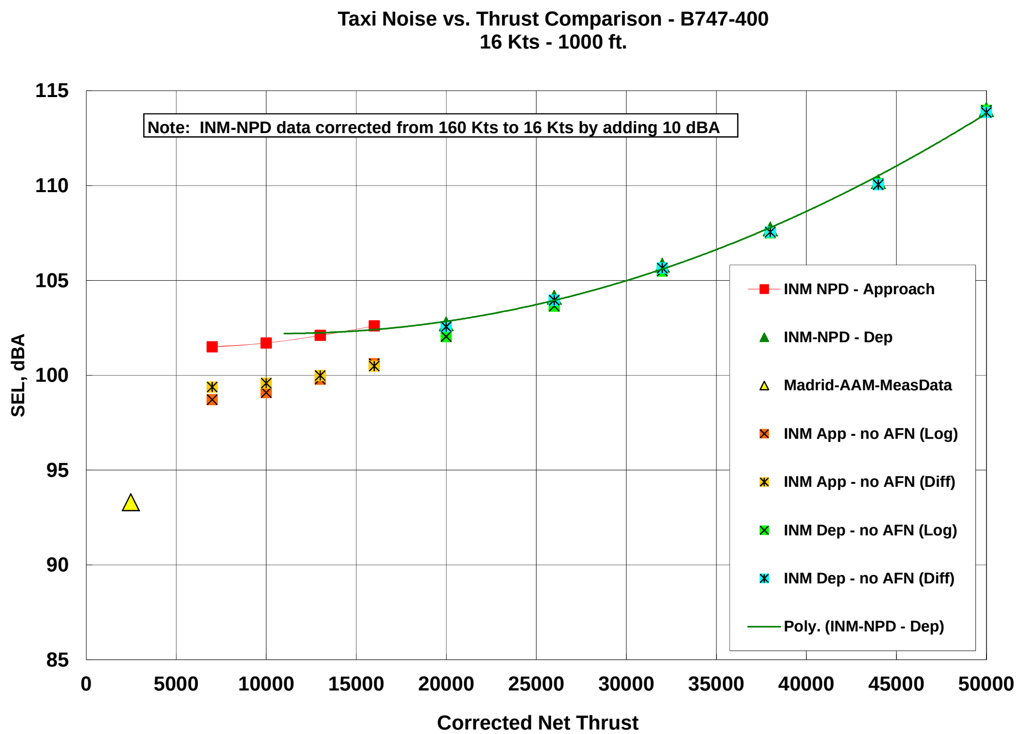

FIGURE 4-4 Taxi noise vs. thrust comparison, B747-400 for 16 knots at 1000 ft. distance.

It was concluded, having studied the results of all of these comparisons, that extrapolation of INM results, whether from the departure data or arrival data, and whether airframe noise was extracted by either method or not, does not in general provide a reliable method for estimating taxi noise, when compared to the measured data points. In addition, the trend or curve shapes obtained from the INM results do not agree with the ANOPP curve shapes of Taxi noise (SEL) vs. Taxi thrust. Based on the outcomes of the analysis presented in Figures 4-1 through 4-4 and Appendix E, it was decided that extrapolation of INM NPD data would not result in a satisfactory prediction model, and so an alternate technique which relies exclusively on Empirical data and ANOPP trends was developed.

Three approaches were identified for investigation, as discussed in the Introduction:

Method I. Empirical Taxi Noise Data and ANOPP data;
Method II. Empirical Taxi Noise Data Only; and
Method III. No Empirical Taxi Noise Data.

The logic behind selecting these three approaches was that method I utilizes all the available information, whereas Method II utilizes empirical data for the nominal taxi condition, and assumes that insufficient information is available to generate thrust-noise sensitivity data using ANOPP. Method III corresponds to the case where one has neither ANOPP nor measured data. Attempts were made to utilize existing INM flight NPD data in conjunction with the Empirical and ANOPP taxi data but were unsuccessful. Section 5 of this report documents which Method (I, II or III) is to be used for each aircraft type in the INM / AEDT database.

4.2. Correlation of ANOPP Data and Empirical Data

The ANOPP generated taxi noise data for the five aircraft listed in the previous section were correlated vs. thrust at each distance to see if the resulting curves could be collapsed or normalized into a "universal" trend line of taxi noise vs. thrust. Such a correlation would be needed for those aircraft in the INM database for which there is no empirical taxi data. Further, measured data for several aircraft were plotted on the ANOPP trend curves to see whether adjustments or calibrations might be needed to match existing taxi noise data. In order to compare with the ANOPP data, taxi thrust for the measured data points was needed, and not all the acoustic taxi data available had associated with it nominal taxi thrusts.

Therefore an attempt was first made to develop a taxi thrust correlation from existing information. A set of ICAO Best Practices Data Base (BPDB) tables (ICAO, 2008) was queried and a table of aircraft maximum takeoff weight (MTOW) and takeoff thrust was generated. By multiplying the engine takeoff thrust listed in the BPDB by the number of engines on the aircraft, and assuming that the taxi thrust was nominally about 5% of takeoff thrust , a correlation of taxi thrust vs. MTOW was obtained, as shown in Figure 4-5. An assumed value of 5% thrust is consistent with recent ICAO guidance (ICAO, 2006) for taxi power settings in cases where the taxi operating state is not known by other means.

Also shown are taxi thrusts estimated for the ANOPP case aircraft. With the exception of the CRJ900 case, the ANOPP thrust cases tend to straddle the correlation line curve fit, suggesting that this curve may be used, with a reasonable amount of uncertainty, to estimate taxi thrust for any of the aircraft for which taxi thrust is not known but noise measurements are available. This correlation was used to estimate taxi thrusts for the taxi noise data used in the correlation model that follows.

For the purposes of developing a Taxi Noise NPD dataset aircraft were grouped into "small" and "large" categories with small aircraft defined as those with a maximum certificated TOGW less than 300,000 lbs. and large aircraft with a MTOGW at or above 300,000 lbs. This division corresponds to the division between the INM/AEDT Large and Heavy Weight Class (S = Small, L = Large, H = Heavy). For the purposes of using the Taxi Noise regressions, AEDT Aircraft in Weight Class Heavy are considered Taxi Large and Weight Class Small and Large are considered Taxi Small. The Aircraft fleet dataset from INM / AEDT is illustrated graphically with the Taxi Noise division in Figure 4-6. Alternate means of categorizing the aircraft were explored – such as by max rated takeoff thrust, bypass ratio and single/twin aisle – but they did not let the ANOPP and measured data collapse as nicely.

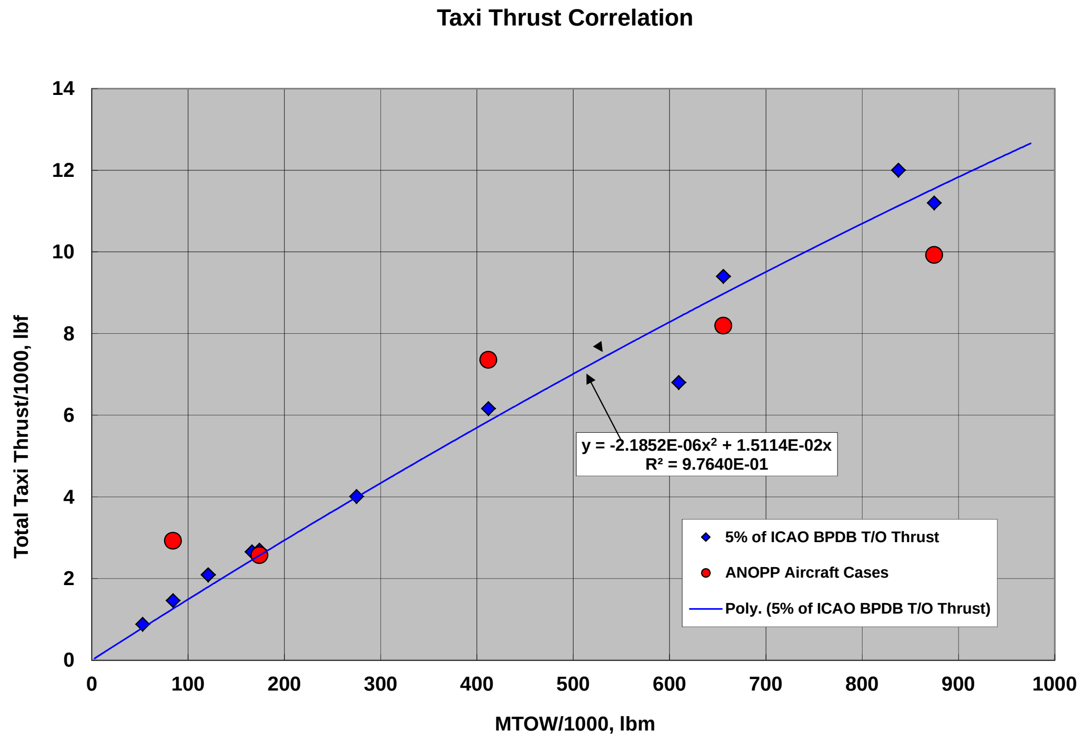

FIGURE 4-5 Taxi thrust and weight correlation.

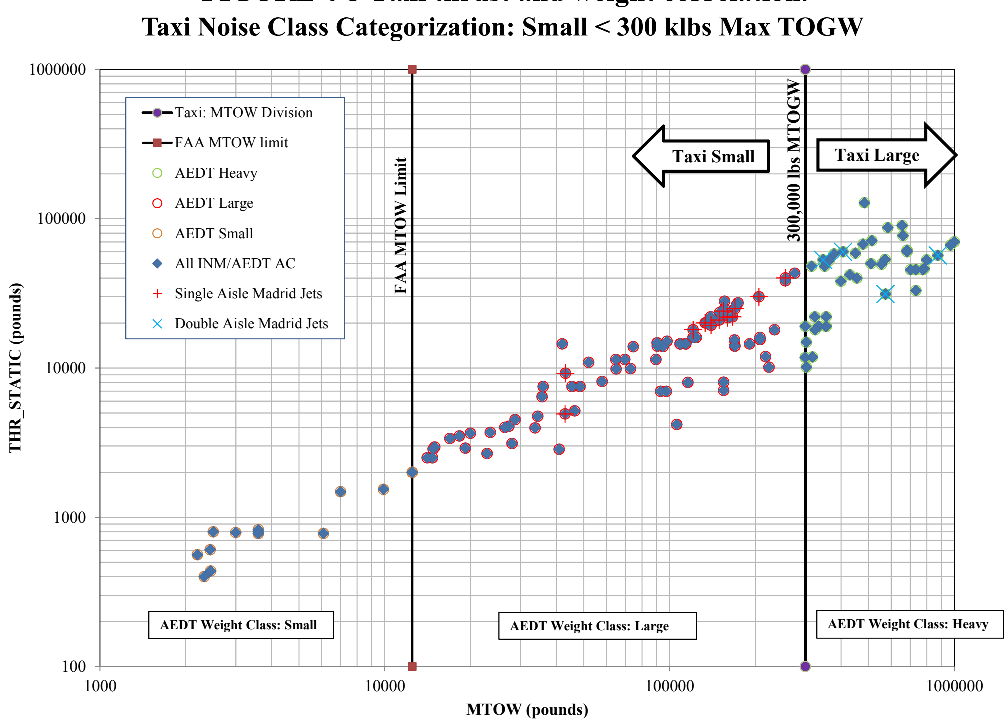

FIGURE 4-6 Taxi thrust and weight correlation.

The ANOPP taxi noise vs. thrust trend curves, for all five aircraft, were plotted at several distances. Note that the ANOPP taxi noise estimates were for engine-only, no airframe noise, and with inflow distortion (ground vortex ingestion) turned on. Figures 4-7 through 4-9 show examples of these comparisons for 400 ft. 1000 ft., and 4000 ft. Plots for the additional NPD distances and other metrics may be found in Appendix C.

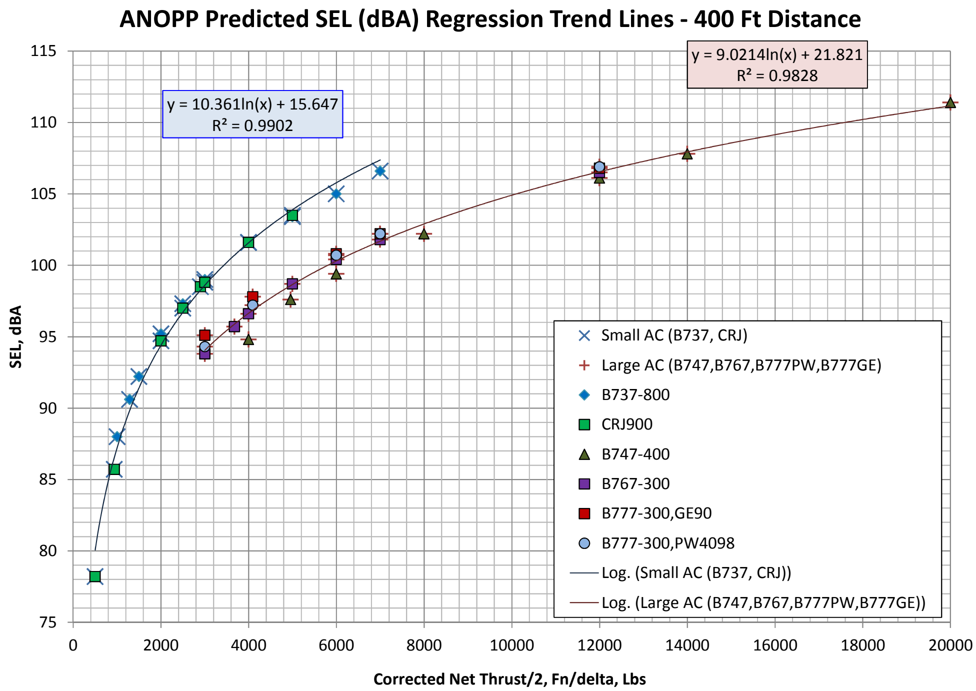

FIGURE 4-7 ANOPP predicted Taxi noise SEL trend lines – 400 ft. distance.

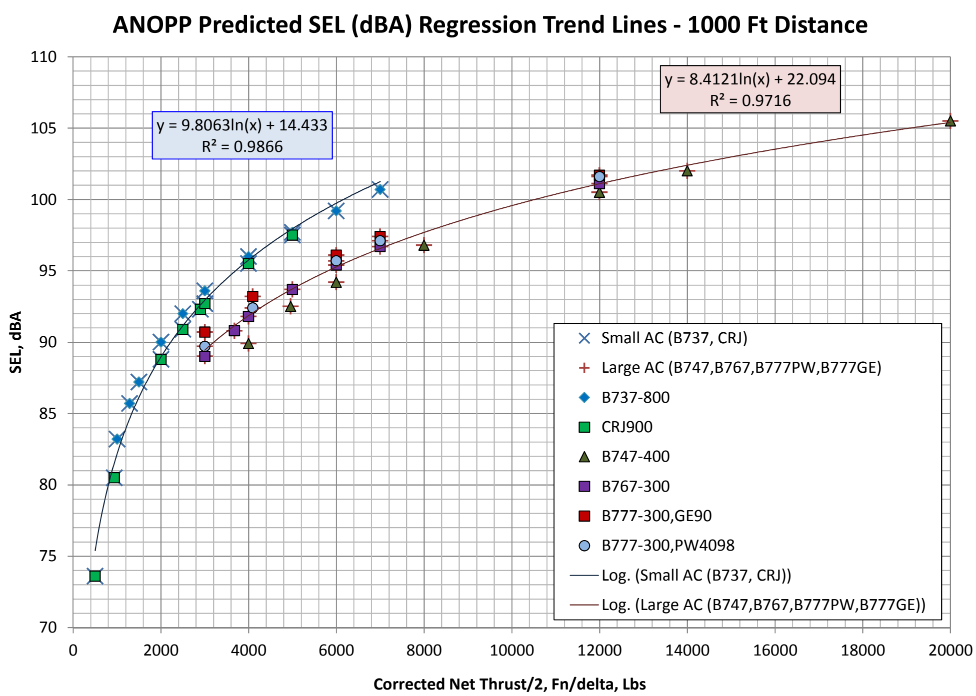

Figure 4-8. ANOPP predicted Taxi noise SEL trend lines – 1000 ft. distance.

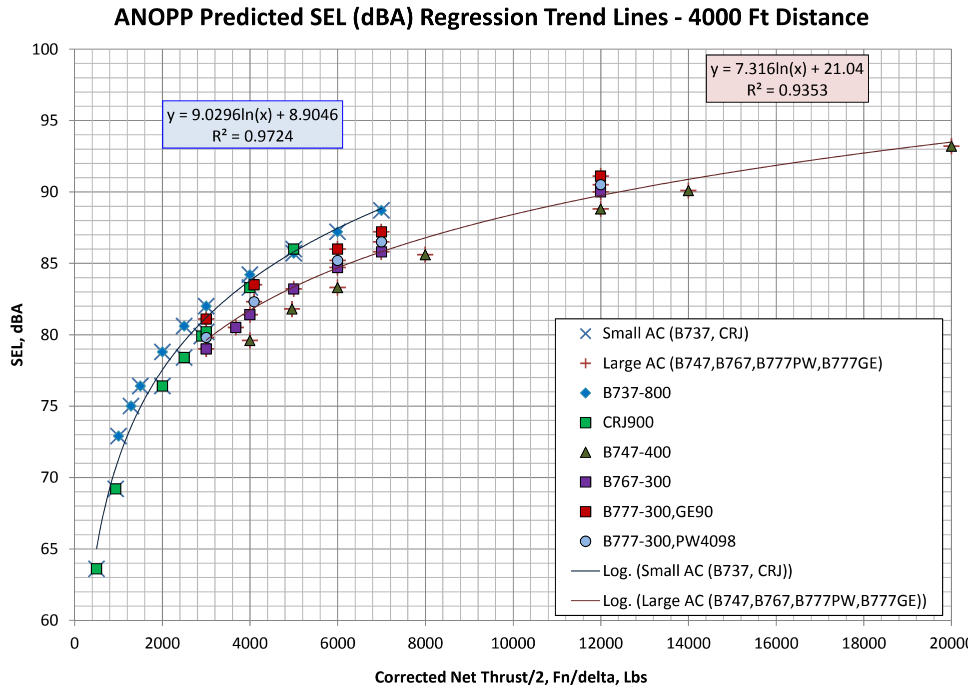

FIGURE 4-9 ANOPP predicted Taxi noise SEL trend lines – 4000 ft. distance.

The first observation made is that the small aircraft (B737-800 and CRJ900) fall on top of each other, while the larger aircraft (B767, B747 and B777) group together forming more-or-less a common curve, with very little scatter. The large aircraft grouping is about 4 to 5 dB lower than that for the two small aircraft. As distance increases, these two curve sets tend to come closer together, and the spread or variation within the groupings tends to increase, but there is still a reasonably close agreement.

The second observation is that the measured data seem to agree very well with the curve shapes and even absolute levels, and the small aircraft data tends to cluster around the ANOPP small aircraft grouping, while the large aircraft data tends to cluster around the large aircraft ANOPP grouping.

From the above results, it is concluded that a reasonable prediction model for taxi noise can be obtained using the above discussed curve shapes defined by the ANOPP data. Two sets of curves were utilized, one for small aircraft and one for large aircraft. Further, reasonable estimates of taxi thrust can be obtained using the correlation described above which assumes 5% of takeoff thrust correlated against aircraft MTOW.

Curve fits for each metric (SEL, EPNL, PNLTmax, LmaxA) have been generated for each individual ANOPP aircraft type for each of the standard INM NPD distances. Logarithmic (natural) regressions have also been generated for the single aisle and twin aisle aircraft types. These regressions are of the form in Equation 4-1.

$$L_{taxi} = m^* \ln(Fn/delta) + b \qquad \text{Eq. 4-1}$$

where L_{taxi} is the resultant Taxi noise level for the noise metric and distance for the corresponding m and b as provided in Table 4-1 or Appendix A4 at a Corrected Net Taxi Thrust/2 (Fn/delta/2, in lbs). The Fn/delta is specified as half of the taxi thrust. For 2 engine aircraft this represents single engine thrust, and for a 4 engine aircraft this is thrust from 2 engines. Coefficients for Equation 4-1 are provided in Tables 4-1 for single and twin aisle aircraft and in Appendix C, Table C.4 for individual aircraft types for which ANOPP models were available.

Table 4-1. Taxi Noise Regressions Coefficients for Turbofan Aircraft

Taxi Aircraft Size	Metric Dist (Ft)	L max (dBA)		SEL (dBA)		EPNL (dB)		PNLMX (dB)	
		m	**b**	**m**	**b**	**m**	**b**	**m**	**b**
Small	200	10.3200	7.9640	10.7198	16.2886	12.3369	6.2596	11.9024	8.5163
Small	400	10.0152	4.2812	10.3613	15.6472	12.0901	4.2351	11.7303	3.3375
Small	630	9.7806	1.8226	10.0867	15.2065	11.8601	3.0685	11.5176	0.3356
Small	1000	9.5152	-0.8341	9.8063	14.4328	11.5525	2.1026	11.2950	-3.0609
Small	2000	9.1453	-5.7928	9.3922	12.4806	10.9702	0.6455	10.6570	-6.7214
Small	4000	8.7779	-12.0089	9.0296	8.9046	10.5707	-2.8424	9.8925	-9.0451
Small	6300	8.5778	-17.2758	8.8286	5.4338	10.7297	-8.9944	9.8592	-16.4073
Small	10000	8.4241	-23.8710	8.7901	-0.2324	11.4021	-19.6520	10.5515	-27.2874
Small	16000	8.4740	-33.1212	9.0338	-9.0055	12.9697	-40.0949	12.0674	-50.1154
Small	25000	8.8536	-45.2275	9.7704	-21.8142	15.4121	-71.7522	14.5871	-83.8764
Large	200	8.6658	15.2803	9.4283	21.4469	11.0498	9.1065	10.7826	8.5383
Large	400	8.3909	12.0880	9.0214	21.8208	10.6717	8.4541	10.3440	6.1362
Large	630	8.1262	10.4477	8.7461	21.8783	10.3093	8.7098	9.9457	5.1270
Large	1000	7.7369	9.4940	8.4121	22.0943	9.8061	9.9059	9.3669	5.2708
Large	2000	7.3104	5.9932	7.9140	21.6949	8.9051	12.6168	8.4123	5.8678
Large	4000	6.9264	0.9634	7.3160	21.0404	7.8294	16.6097	7.3173	8.7751
Large	6300	6.6231	-2.7306	6.9022	19.9089	7.3639	16.8470	7.0291	4.6488
Large	10000	6.2946	-7.2202	6.4337	18.2300	7.2036	13.7611	6.9945	0.5930
Large	16000	5.9846	-13.1308	6.0489	14.6151	7.4439	4.4268	7.2952	-11.6531
Large	25000	5.8408	-21.1360	6.0714	6.8268	8.4492	-15.0634	7.9305	-28.9701

4.3. Methods for Taxi NPD Database Creation

As described above, aircraft in the INM database fall into one of three categories. Taxi noise NPDs may be generated for each category using the following procedures.

Method I. Empirical Taxi Noise Data and ANOPP data

Step 1. Process the Empirical Acoustic Taxi data (as described in Section 3.1 and Appendix A) and determine the taxi NPD noise metrics (SEL, EPNL, Lmax) as a function of distance for the reference atmospheric conditions for the measured "nominal" thrust condition.

Step 2. Assign a "nominal" taxi thrust (Fn/delta) to the acoustic data based on either (in priority order):

- Known engine operating state at the time of the acoustic data acquisition;
- Generalized nominal taxi thrust based on historical FDR data; or
- Assumed taxi thrust.

Step 3. Evaluate the NPD levels at other Power settings using ANOPP predictions (Appendix C4) to create a noise sphere and AAM to propagate the source to the required distances.

Method II. Empirical Taxi Noise Data Only

Step 1. Process the Empirical Acoustic Taxi data (as described in Section 3.1 and Appendix A) and determine the taxi NPD noise metrics (SEL, EPNL, Lmax) as a function of distance for the reference atmospheric conditions for the measured "nominal" thrust condition.

Step 2. Assign a "nominal" taxi thrust (Fn/delta) to the acoustic data based on either (in priority order):

- Known engine operating state at the time of the acoustic data acquisition; or
- Generalized nominal taxi thrust based on historical FDR data; or
- Assumed taxi thrust.

Step 3. Evaluate the NPD levels at other Power settings above and below the "nominal" taxi thrust using the generalized thrust-noise relationship provided in Figures 4-6 through 4-8 and Appendix C4.

Method III. No Empirical Taxi Noise or ANOPP Data

Step 1. Assign a "nominal" taxi thrust (Fn/delta) to the acoustic data based on:

- Generalized nominal taxi thrust based on historical FDR data;
- Assumed taxi thrust based on certification max rated thrust; or
- Assumed taxi thrust based on certification maximum takeoff gross weight.

Step 2. Evaluate the NPD levels at other Power settings above and below the "nominal" taxi thrust using the generalized thrust-noise relationship provided in Figures 4-6 through 4-8 and Appendix C4.

4.4. Uncertainty of the NPD Creation Process

The correlations of *Method III* have with them a spread or scatter, from which can be extracted uncertainties, in terms of standard deviations of noise predictions. The best empirical data was used in the creation of the final INM/AEDT NPD Dataset using *Method I* (Step 1) or *Method II* (Step 1), but for the purposes of assessing the uncertainty, it will be compared directly with *Method III* predictions, which do not use empirical data in the determination of Taxi Noise.

The aircraft TOGW was selected from the INM/AEDT Database for the aircraft represented in the noise measurements. In the case of the Madrid data where several variants were grouped together (i.e. 737-300, -400, -500) the weights were averaged. The assumed taxi thrust was computed based on the TOGW-Taxi Thrust relationship described in Figure 4-5. For aircraft with a MTOGW below 300,000 lbs the Taxi-Small noise coefficients (Table 4-1) were used to generate the SEL, Lmax, EPNL, and PNLTmax for the standard NPD distances.

Taxi Noise *Method III* predictions were compared with the empirical taxi data. A full itemization of the empirical taxi data is contained in Appendix C.5. The mean and standard deviation of the predicted minus measured differences were computed for each distance and each metric. The median of the mean difference and the Average of the Standard Deviations were calculated for all distances combined for a given metric, and are provided in Table 4-2. The Standard Deviation for all distances and all aircraft within a category (Small and Large) and the 90%, 95% and 99% Confidence Levels were then computed (Table 4-3). Slight changes in the assumed thrust will drive large changes in the noise predictions due to the steep slope of the noise – thrust curve at low power settings.

Figures 4-10 through 4-13 illustrate the comparison with empirical data for the 1000 Ft distance for the metrics SEL, Lmax, EPNL and PNLTmax respectively. The final INM/AEDT dataset for the specific aircraft[2] included in this uncertainty assessment has by virtue of the methodology, 0. Median of the Means and 0. Average Standard Deviation, as outlined in *Method I* and *Method II*.

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[2] Specific aircraft include those itemized in Appendix C.5, for which empirical acoustic taxi noise data exists and comparisons with *Method III* could be performed.

TABLE 4-2 Taxi Noise Uncertainty: *Method III* Compared with Empirical Data

Metric	Taxi-Small		Taxi-Large	
	Median of the Means	Average of the St.Devs	Median of the Means	Average of the St.Devs
SEL	-3.1	3.8	1.7	2.5
Lmax	-0.9	3.8	1.7	2.0
EPNL	-5.8	4.8	-1.8	2.7
PNLTm	-2.8	4.8	-1.8	2.5

* Note: The final INM/AEDT dataset did not use *Method III* for these aircraft.

TABLE 4-3 Taxi Noise Confidence Levels: *Method III* Compared with Empirical Data

	Taxi-Small	Taxi-Large
Count	140	40
St.Dev	4.4	3.1
90% Confid	0.6	0.8
95% Confid	0.7	0.9
99% Confid	1.0	1.2

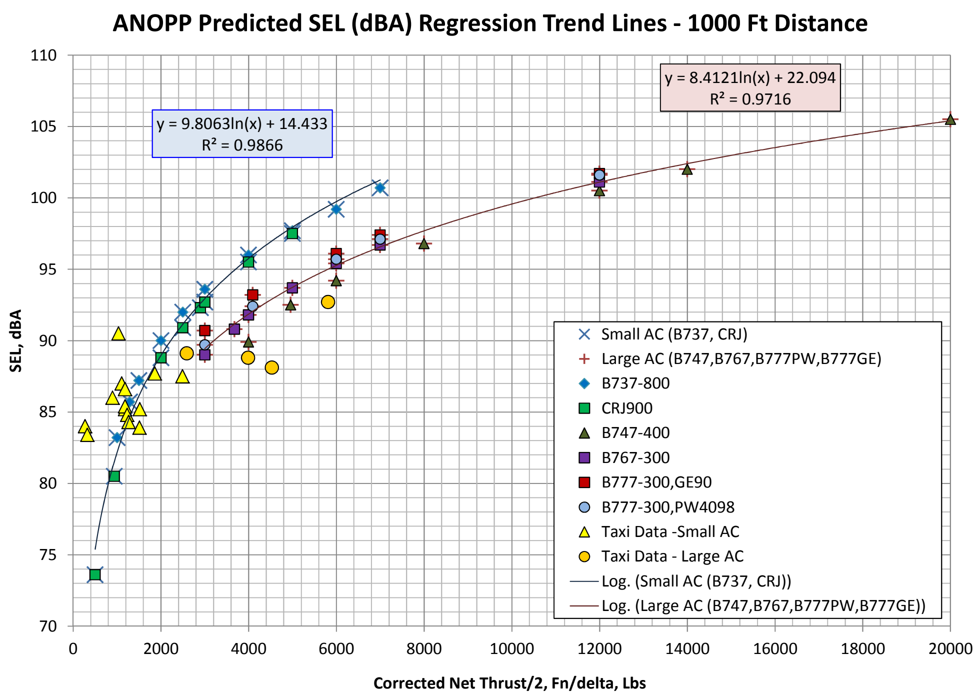

FIGURE 4-10 Comparison of Method III with empirical data, 1000 Ft – SEL (dBA).

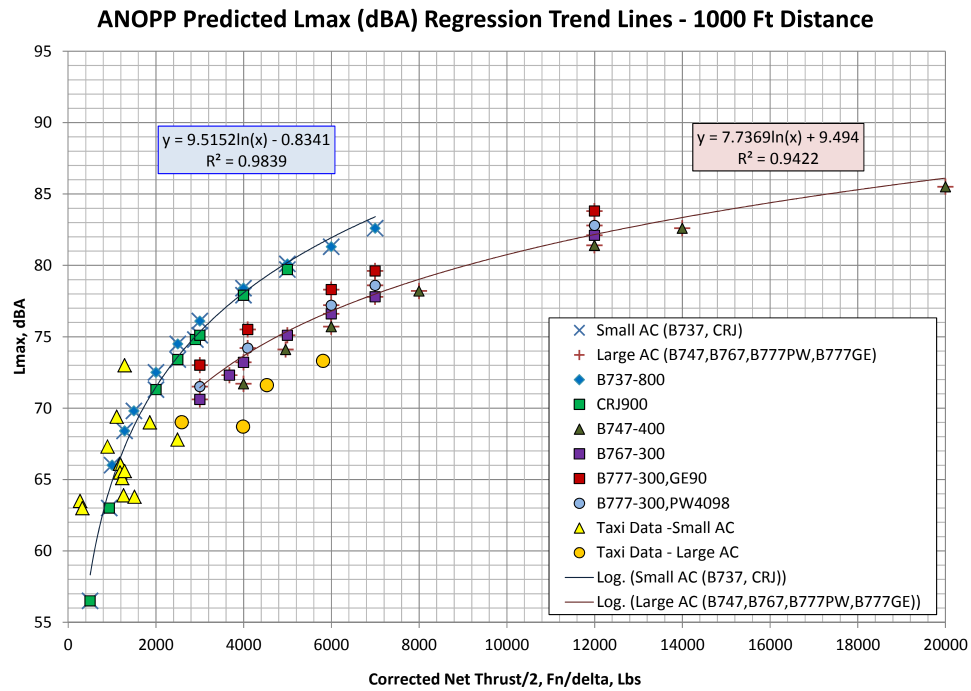

FIGURE 4-11 Comparison of Method III with empirical data, 1000 Ft – Lmax (dBA).

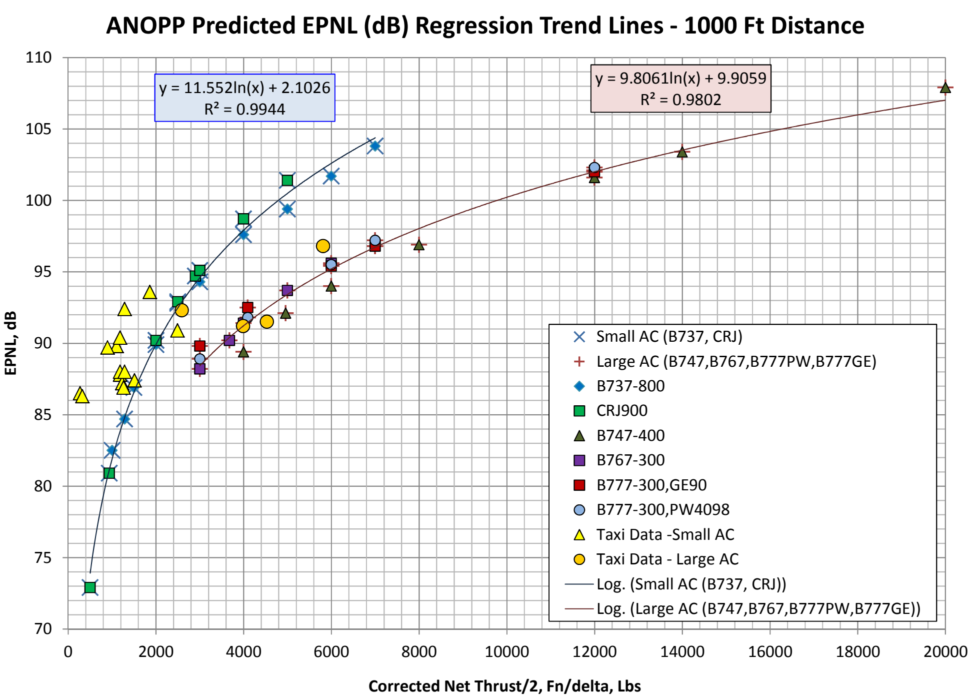

FIGURE 4-12 Comparison of Method III with empirical data, 1000 Ft – EPNL (dB).

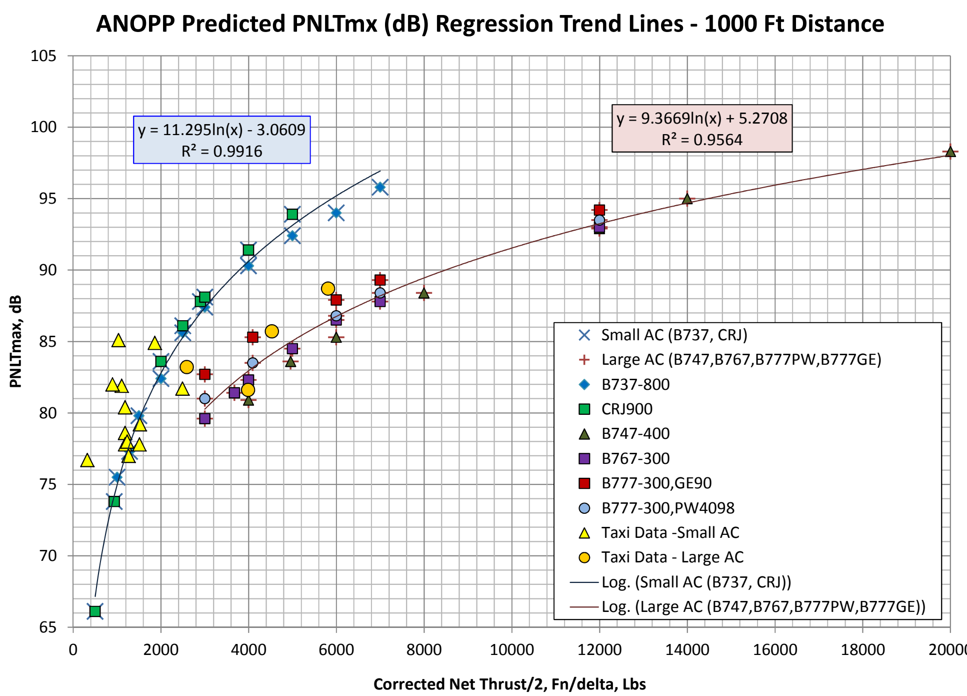

FIGURE 4-13 Comparison of Method III with empirical data, 1000 Ft – PNLTmax (dB).

CHAPTER 5. INM/AEDT COMMERCIAL TURBOFAN (JET) FLEET

For each commercial aircraft in the INM database a decision must be made as to which method I, II or III will be used for the development of the taxi NPD. Table 5-1 lists which NPD Method is to be applied. In some cases, especially for common engine types, aircraft are grouped together.

TABLE 5-1 (part 1 of 2) Chosen Taxi NPD Development Method for INM/AEDT Aircraft

ACFT_ID	ACFT_DESCR	ENG	BODY	Madrid Data	Measured Data	ANOPP Data	NPD Method
707	Boeing 707-120/JT3C	4	N				III
707120	Boeing 707-120B/JT3D-3	4	N				
707320	Boeing 707-320B/JT3D-7	4	N				
707QN	Boeing 707-320B/JT3D-7QN	4	N				
717200	Boeing 717-200/BR 715	2	N	X	X		II
737300	Boeing 737-300/CFM56-3B-1	2	N	X	X		I
7373B2	Boeing 737-300/CFM56-3B-2	2	N				
737400	Boeing 737-400/CFM56-3C-1	2	N				
737500	Boeing 737-500/CFM56-3C-1	2	N				
737700	Boeing 737-700/CFM56-7B24	2	N	X	X		I
737800	Boeing 737-800/CFM56-7B26	2	N		X	X	
737N17	B737-200/JT8D-17 Nordam Hushkit	2	N				III
737N9	B737/JT8D-9 Nordam Hushkit	2	N				
757300	Boeing 757-300/RB211-535E4B	2	N				II
757PW	Boeing 757-200/PW2037	2	N	X	X		II
757RR	Boeing 757-200/RB211-535E4	2	N				II
A310-304	Airbus A310-304/CF6-80C2A2	2	N	X			III
A319-131	Airbus A319-131/V2522-A5	2	N	X	X		II
A320-232	Airbus A320-232/V2527-A5	2	N	X	X		II
A320-211	Airbus A320-211/CFM56-5A1	2	N				
A321-232	Airbus A321-232/IAE V2530-A5	2	N	X			III
DC93LW	DC9-30/JT8D-9 Hushkit	2	N				III
DC95HW	DC9-50/JT8D17 Hushkit	2	N				III
EMB145	Embraer 145 ER/Allison AE3007	2	N		X		II
EMB14L	Embraer 145 LR / Allison AE3007A1	2	N				
F10062	F100/TAY 620-15	2	N				III
F10065	F100/TAY 650-15	2	N				
MD81	MD-81/JT8D-217	2	N	X			II
MD82	MD-82/JT8D-217A	2	N	X			II
MD83	MD-83/JT8D-219	2	N	X	X		II
MD9025	MD-90/V2525-D5	2	N				III
MD9028	MD-90/V2528-D5	2	N				

TABLE 5-1 (part 2 of 2) Chosen Taxi NPD Development Method for INM/AEDT Aircraft

ACFT_ID	ACFT_DESCR	ENG	BODY	Madrid Data	Measured Data	ANOPP Data	NPD Method
767CF6	Boeing 767-200/CF6-80A	2	W	X	X		III
767JT9	Boeing 767-200/JT9D-7R4D	2	W				III
767300	Boeing 767-300/PW4060	2	W			X	I
767400	Boeing 767-400ER/CF6-80C2B(F)	2	W				III
777200	Boeing 777-200ER/GE90-90B	2	W		X	X	I
777300	Boeing 777-300/TRENT892	2	W				III
	Boeing 777/PW	2	W		X	X	I
A300-622R	Airbus A300-622R/PW4158	2	W				III
A300B4-203	Airbus A300B4-200/CF6-50C2	2	W				III
A330-301	Airbus A330-301/CF6-80 E1A2	2	W				
A330-343	Airbus A330-343/RR TRENT 772B	2	W				III
74710Q	Boeing 747-100/JT9D-7QN	4	W				III
747200	Boeing 747-200/JT9D-7	4	W				
74720A	Boeing 747-200/JT9D-7A	4	W				
74720B	Boeing 747-200/JT9D-7Q	4	W				
747400	Boeing 747-400/PW4056	4	W	X	X	X	I
747SP	Boeing 747SP/JT9D-7	4	W				III
A340-211	Airbus A340-211/CFM56-5C2	4	W	X			III
727EM1	FEDX 727-100/JT8D-7	3	N				III
727EM2	FEDX 727-200/JT8D-15	3	N				
727QF	UPS 727100 22C 25C	3	N				III
BAE146	BAE146-200/ALF502R-5	4	N				III
BAE300	BAE146-300/ALF502R-5	4	N				
DC870	DC8-70/CFM56-2C-5	4	N				III
DC1010	DC10-10/CF6-6D	3	W				III
DC1030	DC10-30/CF6-50C2	3	W				
DC1040	DC10-40/JT9D-20	3	W				III
L1011	L1011/RB211-22B	3	W				III
L10115	L1011-500/RB211-224B	3	W				
MD11GE	MD-11/CF6-80C2D1F	3	W				III
MD11PW	MD-11/PW 4460	3	W				III

CHAPTER 6. PROPELLER AIRCRAFT TAXI NPD CURVE GENERATION USING EMPIRICAL DATA

A process has been developed for the creation of Propeller Aircraft Taxi NPDs from empirical data. All of the propeller aircraft in the INM data base are either identified as prop or turboprop based on the field 'ENG_TYPE' in the aircraft.dbf file. There are 28 aircraft with prop or turboprop designations for which NPD and spectral class data were developed. These will be referred to in this report as props.

The process developed for the commercial jet aircraft fleet was leveraged and applied to the Propeller NPD development procedure to the greatest extent possible. The prop NPD approach utilizes a single thrust-noise sensitivity relationship for all propeller aircraft, developed from a composite of the available empirical data in lieu of having suitable ANOPP prop predictions from first principles. This prop NPD technique is a hybrid of the jet methods described in Chapter 4.

6.1. Propeller Taxi NPD Procedure

Step 1. Process the Empirical Acoustic Taxi Data and determine the taxi NPD noise metrics (SEL, EPNL, Lmax, PNLTmax) as a function of distance for the reference atmospheric conditions for the measured taxi condition.

Step 2. Assign a "nominal" taxi thrust (Fn/delta) to the acoustic data based on an assumed taxi thrust derived from the aircraft maximum certificated takeoff gross weight.

Step 3. Develop a thrust-noise sensitivity from the empirical data as a function of metric and distance.

Step 4. For a given prop aircraft determine the baseline (anchor point) taxi noise based on either of the following (provided in priority order):

- Empirical data utilized in Step 1;
- Approximated taxi thrust level based on the aircraft takeoff gross weight.

Step 5. Evaluate NPD levels at other power settings based on the relationship between taxi noise and thrust derived from empirical data across all prop data (Step 3).

In step 3, the empirical thrust-noise relationship serves as a surrogate for the ANOPP sensitivity used in Method I for the Turbofan (Jet) aircraft (Chapter 4). We were unable to obtain suitable prop ANOPP datasets which matched certificated noise values from which we could develop analytical thrust noise sensitivities. This procedure is described in further detail in the Empirical Thrust-Noise Relationship section.

6.2. Prop Spectral Class Assignment

Spectral classes were derived from the empirical data wherever possible based on the spectrum at the point of maximum A-weighted noise level for a taxi operation and normalized to 70dB at 1000 Hz. This is consistent with the procedures outlined in Chapter 2, Section 2.3.

6.3. Empirical Datasets

Table 6-1 itemizes the seven aircraft for which empirical taxi noise data is available. Three prop aircraft (ATR-72-500, Fokker-50, and DHC-8Q3) were included in the Madrid report (Lopez et al., 2004) which was also utilized for development of the Commercial Jet NPD dataset. Procedures (Section 3.1) to convert sound power to spectral noise source data were also applied to the props. Additional empirical data for military propeller aircraft with equivalent commercial variants was found in the NoiseFile database from NoiseMap. NoiseFile data includes (for many aircraft) static idle acoustic data for a variety of metrics, plus directivity and spectral data.

TABLE 6-1 Empirical Datasets for Prop Aircraft used for Prop Thrust-Noise Sensitivity

Aircraft Type	Data Source	Notes
ATR-72-500	Madrid	Not in the INM/AEDT database. Used to expand measured database in finding noise vs. thrust curve fits
Fokker-50	Madrid	Not in the INM/AEDT database. Used to expand measured database in finding noise vs. thrust curve fits
DHC-8Q3	Madrid	DHC-8Q300 measured in Madrid
L188	NoiseFile	L188C/ALL 501-D13 NoiseFile Surrogate P-3A
C130	NoiseFile	C-130H/T56-A-15. NoiseFile C-130H
C130E	NoiseFile	C-130E/T56-A-7. NoiseFile: C-130E
1900D	NoiseFile	Beech 1900D/PT6A67. NoiseFile 1900D

6.4. Taxi Thrust – Weight Relationship

A graph of the maximum gross takeoff weight (ICAO/CAEP8, 2008) versus the static thrust and the relationship between these parameters, as was used in the generation of the NPD database for the fixed wing jet fleet, is shown in Figure 6-1 and provided in Equation 6-1. The prop aircraft data is overlaid on the fixed wing fleet to show the suitability of utilizing the same Taxi Thrust – MTOGW relationship.

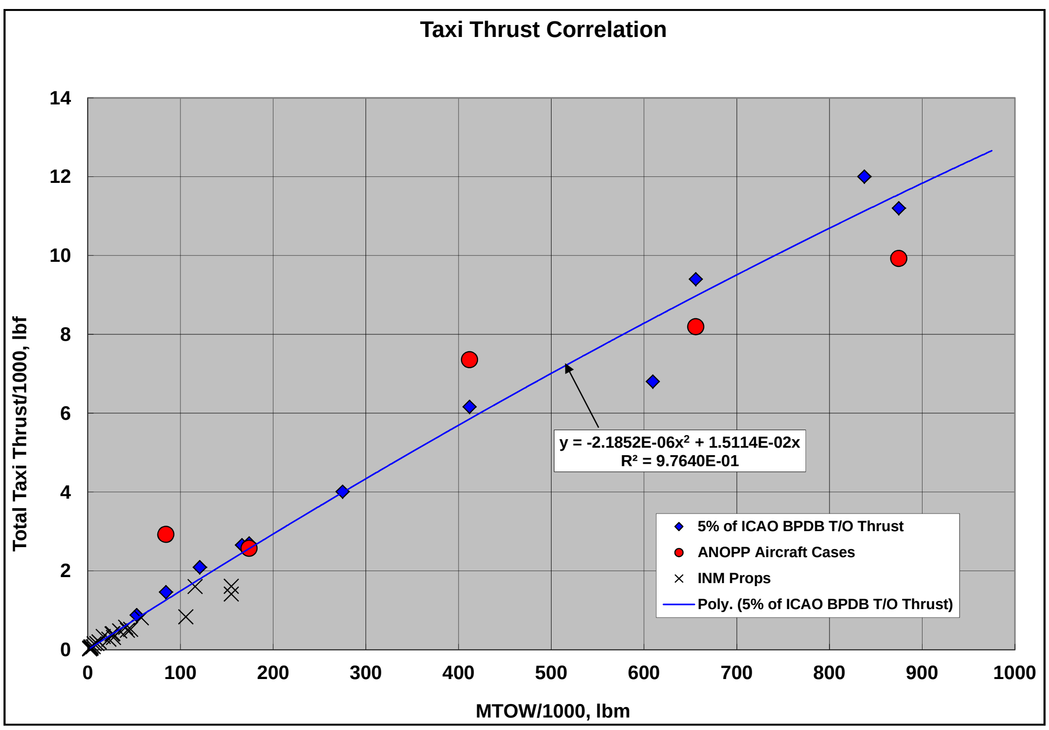

FIGURE 6-1 Max takeoff weight vs. Taxi thrust/1000 (lb) for INM Commercial Jet and Prop aircraft. Trend line was developed based on INM Commercial Jets as reported in Chapter 4.

$$T = -2.1852E - 06 * Wt^2 + 1.5114E - 02 * Wt \qquad \text{Eq. 6-1}$$

Where Wt is the aircraft takeoff gross weight/1000 in lbs. and T is Total Taxi Thrust/1000 in lbs.

6.5. NPD Curve Development Using AAM

An input file for the Advanced Acoustic Model (Page, et al., 2009a) was created which simulated the aircraft taxiing by at 16 knots on a long track placing the noise source representing the airplanes at the height of their engines. Point of interest locations were placed 4 feet above ground at slant distances equal to those of INM's NPD curves. The ground was modeled as flat earth with a flow resistivity of 150 Pa s/m. The atmosphere was modeled with a temperature of 77oF, 70% relative humidity, and one atmosphere of pressure.

The output of AAM for each modeled source contains the integrated metrics and a spectral time history at each of the point of interest locations for the entire pass-by that was modeled. The integrated metrics at each of the point of interest locations for a given aircraft are used to create the NPD curves. The NPD curves for the three metrics: A-weighted Lmax, A-weighted SEL, and EPNL, are plotted in Figures 6-2 through 6-4, respectively for the Madrid prop aircraft.

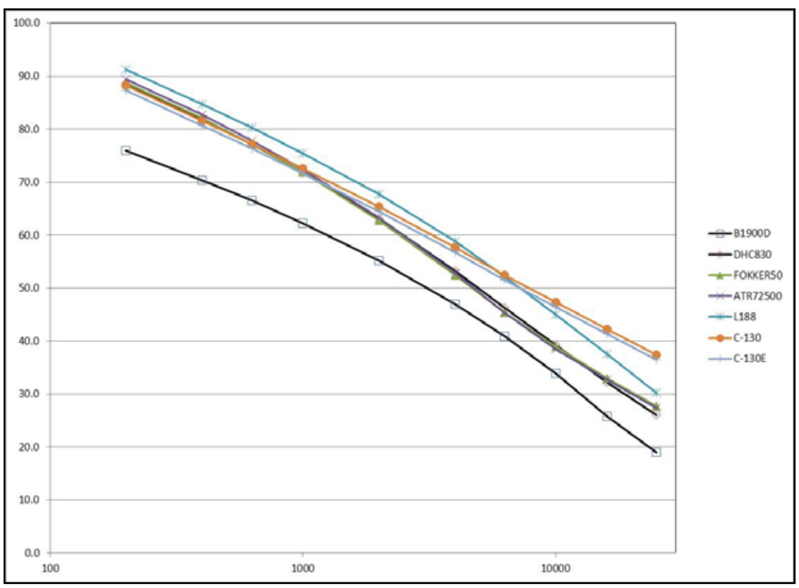

FIGURE 6-2 A-weighted maximum level versus distance for taxiing aircraft.

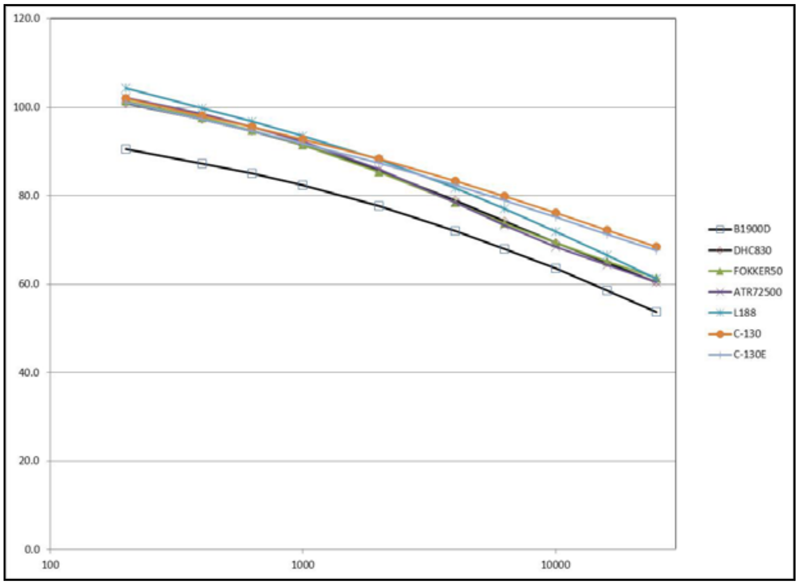

FIGURE 6-3 A-weighted SEL versus distance for taxiing aircraft.

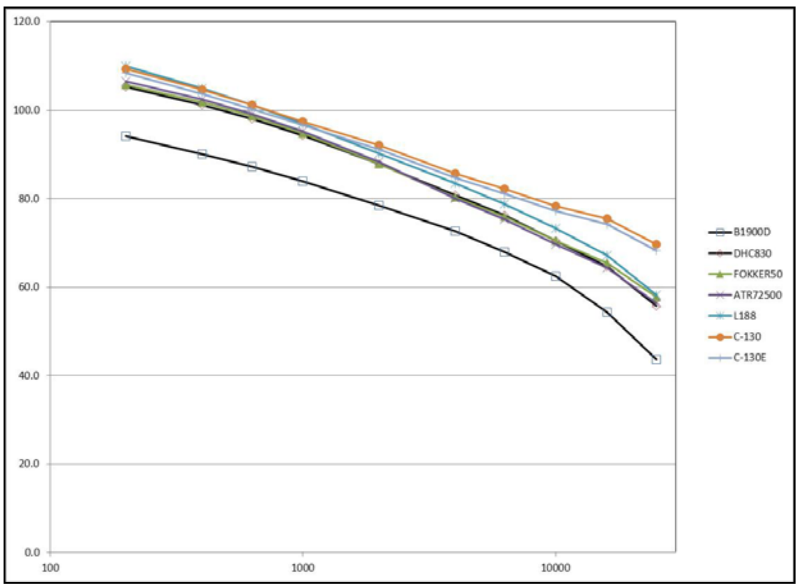

FIGURE 6-4 EPNL versus distance for taxiing aircraft.

6.6. Empirical Thrust-Noise Relationship

Linear fits of the various noise metrics versus thrust parameter ln(Thrust/2) were developed for the seven aircraft with empirical taxi noise data as Step 3. The linear fits are plotted for different distances and overlaid with the empirical data in Figure 6-5 through Figure 6-10. In a few instances, the integrated metrics (EPNL and SEL) go slightly negative, but only at the very largest distance (25,000Ft) and for very low thrust levels. The limit of applicability of the correlation is approximately 100lb total thrust, or a thrust parameter (ln(thrust/2)) of ~4. Note that the linear fits of the data improve as the distance L increases (Figure 6-13). However, at the very largest distances, the goodness-of-fit deteriorates somewhat, which is to be expected, considering the probable inaccuracies of the extrapolation methodology for very large distances. The standard deviation (sigma) and the goodness-of-fit (R^2) of the linear fits vs. distance L are shown in Figure 6-14. These figures show that above 10,000 ft, the fits do deteriorate somewhat but are still better than the very close-in fits. There is more non-linearity in the noise vs. thrust behavior at close-in distances, and with larger propagation distances the air attenuation reduces the influence of higher frequencies and the metrics behave more linearly.

For each metric and thrust correlation parameter the slope and y-intercept were determined. These are displayed in Figures 6-11 and 6-12. These provide the thrust-noise sensitivity employed in the prop NPD development.

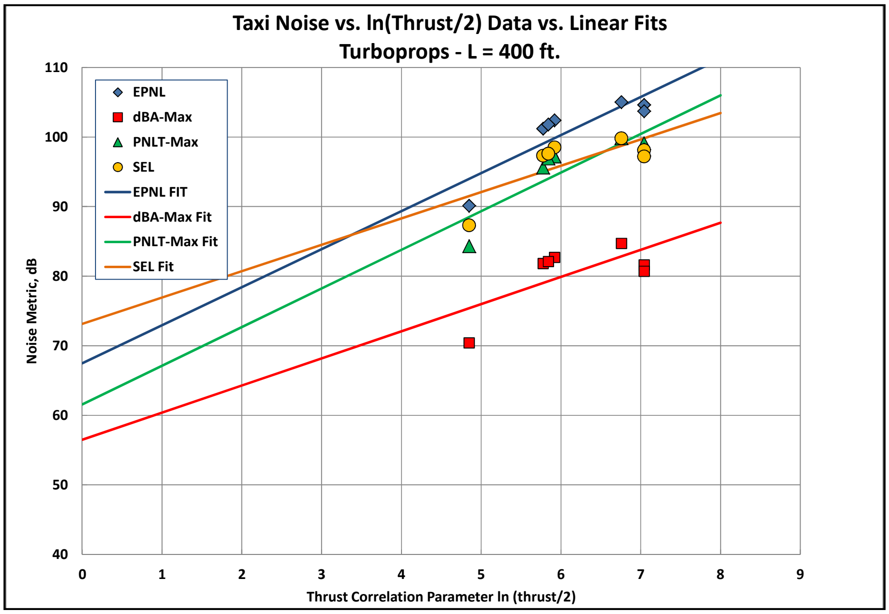

FIGURE 6-5 Taxi noise metric vs. thrust parameter for 400 ft. distance, all props.

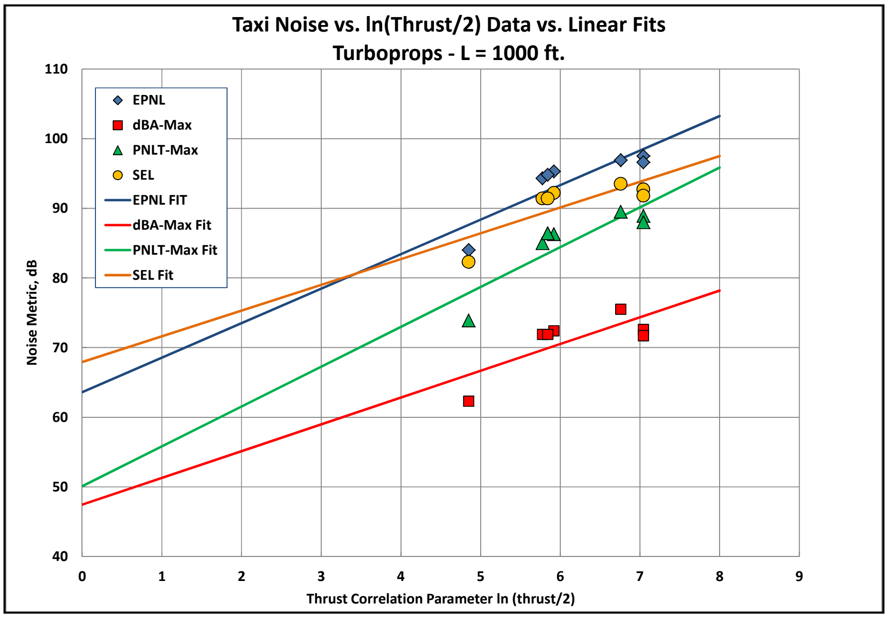

FIGURE 6-6 Taxi noise metrics vs. thrust parameter for 1000 ft. distance, all props.

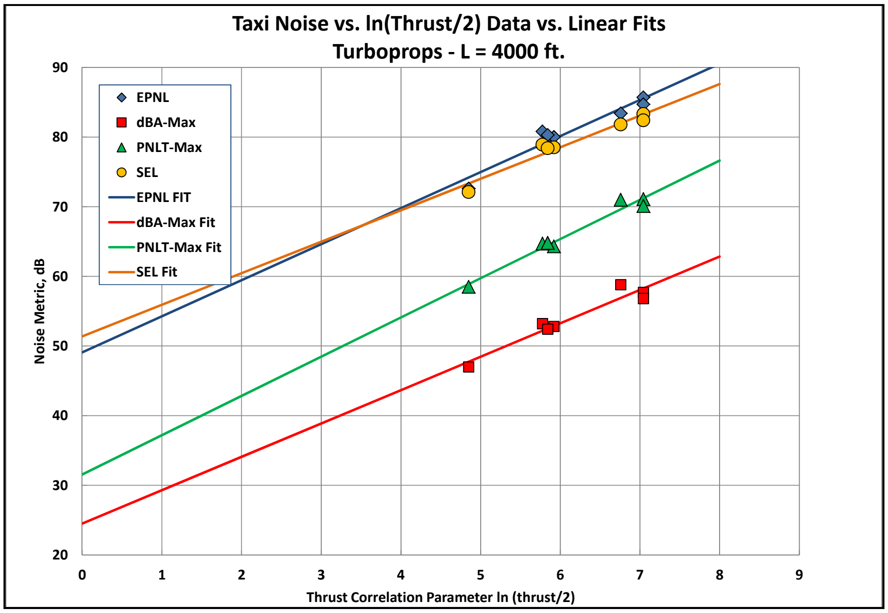

FIGURE 6-7 Taxi noise metrics vs. thrust parameter for 4000 ft. distance, all props.

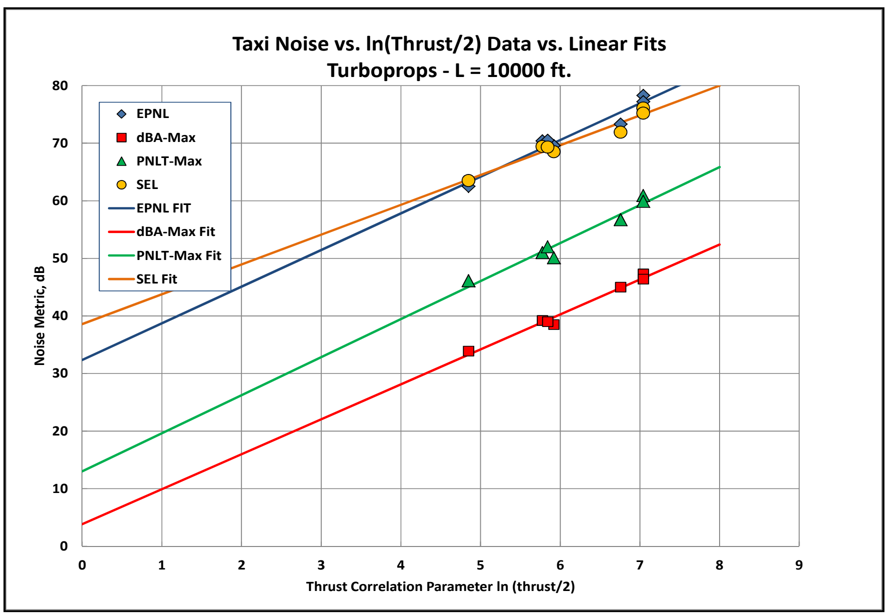

FIGURE 6-8 Taxi noise metrics vs. thrust parameter for 10,000 ft. distance, all props.

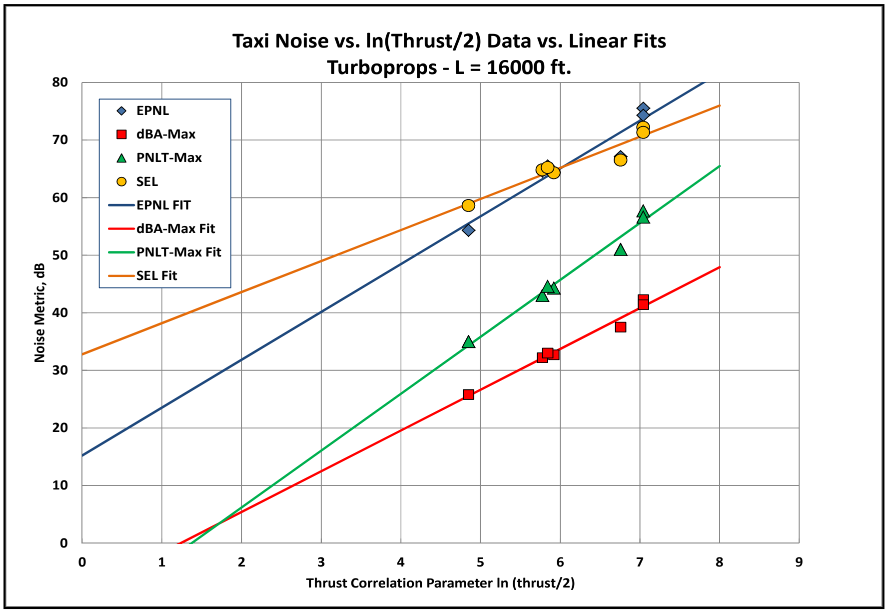

FIGURE 6-9 Taxi noise metrics vs. thrust parameter for 16,000 ft. distance, all props.

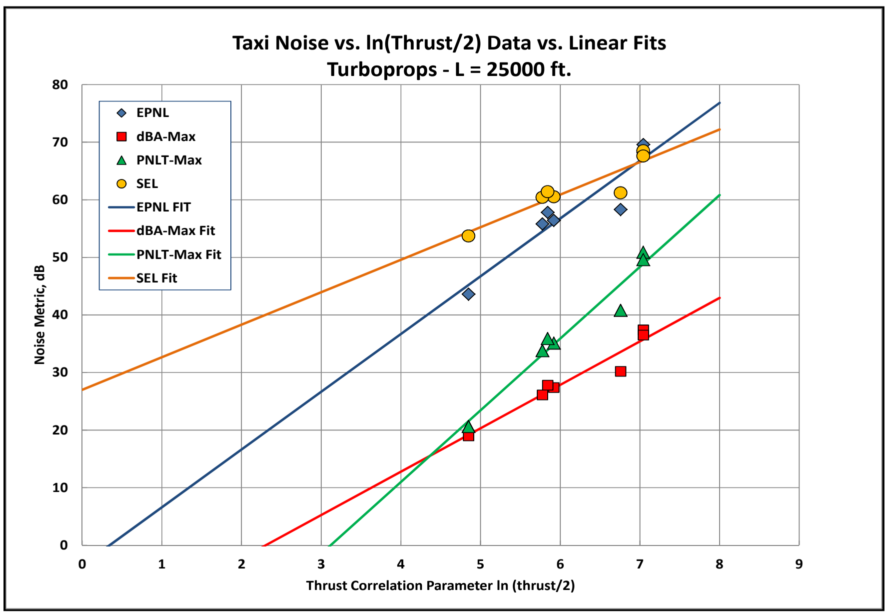

FIGURE 6-10 Taxi noise metrics vs. thrust parameter for 25,000 ft. distance, all props.

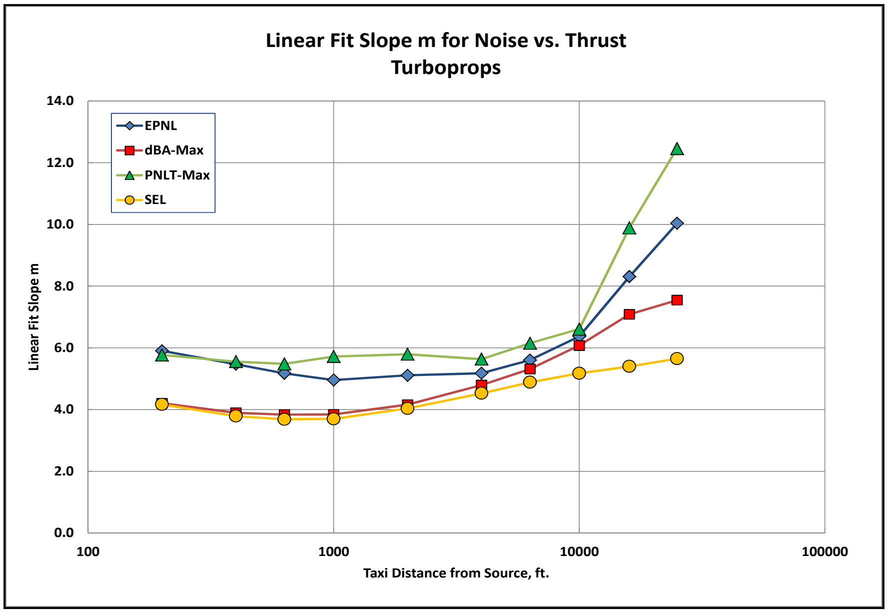

FIGURE 6-11 Metric and thrust correlation parameter slopes, all props.

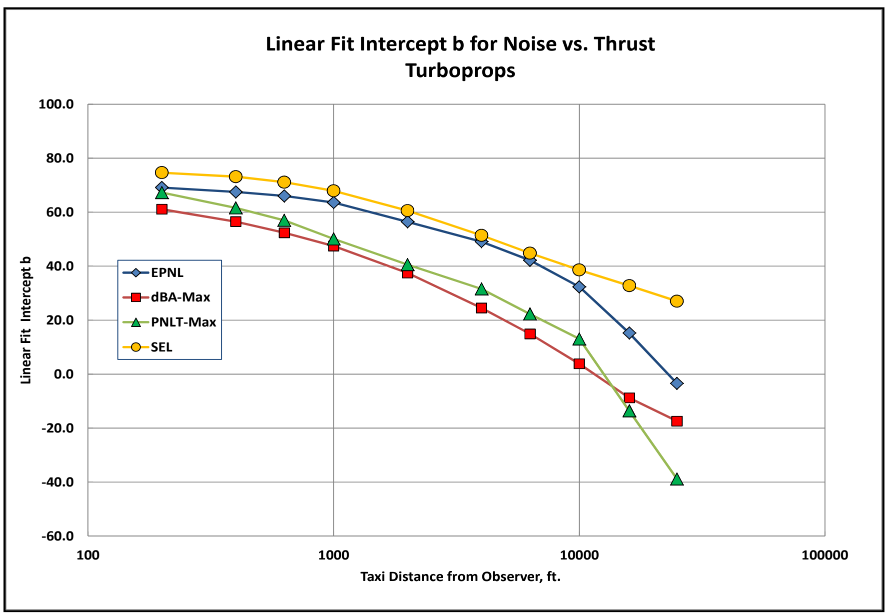

FIGURE 6-12 Metric and thrust correlation parameter y-intercepts, all props.

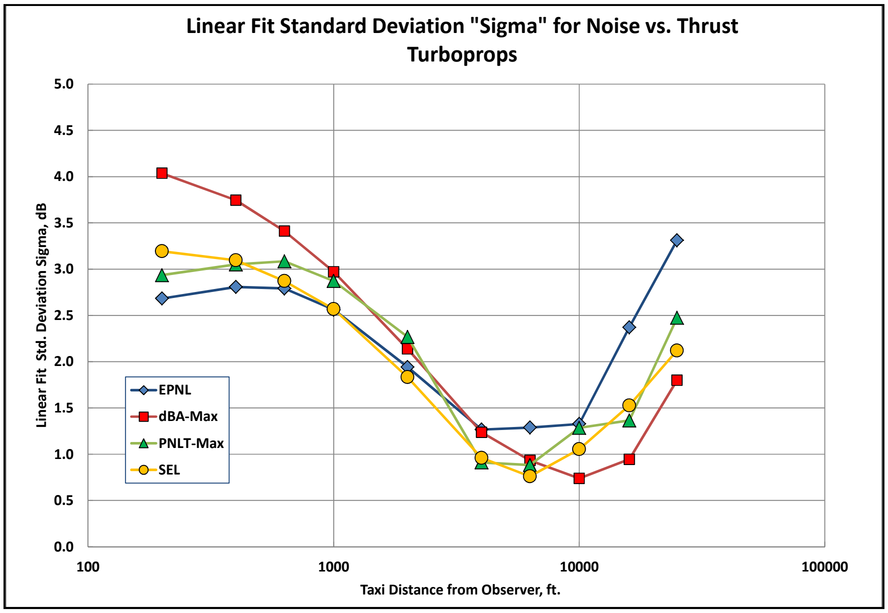

FIGURE 6-13 Linear fit standard deviation sigma for props.

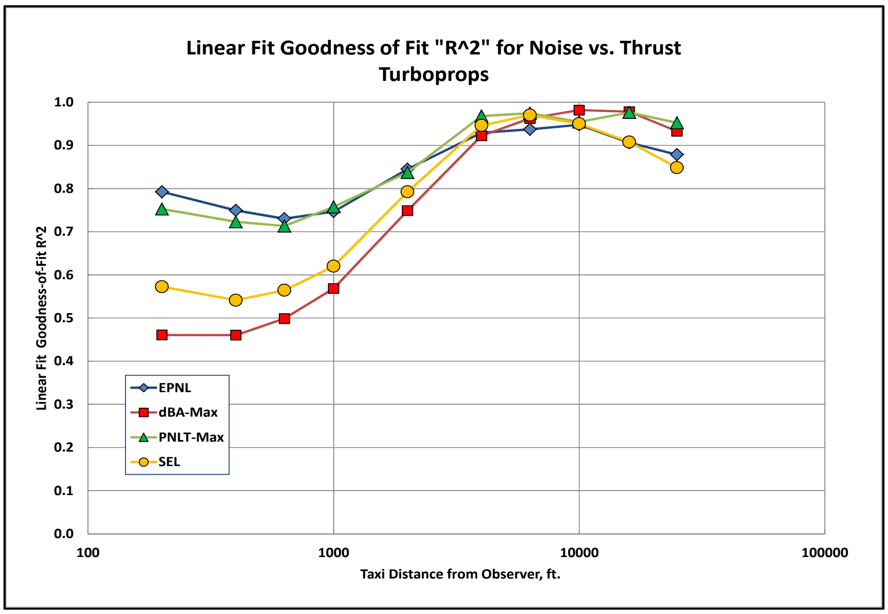

FIGURE 6-14 Linear fit goodness of fit "R^2" for noise vs. thrust for turboprops.

6.7. Spectral Class Data

The point of interest 1000' from the taxi track was used to capture the spectrum at the time of the maximum A-weighted sound level. This spectrum represents the free-field emissions to the point of interest. The ground effect has been removed and only the atmospheric absorption and spherical spreading are accounted for in the propagation. The slant range at the time of maximum A-weighted sound level was not necessarily 1000' due to the directivity of the aircraft, but by using the slant range, the spectrum was adjusted to 1000' by subtracting the extra spreading and air absorption past 1000'. All three spectra were then normalized to 70 dB. The three spectra for the Madrid aircraft are plotted in Figure 6-15.

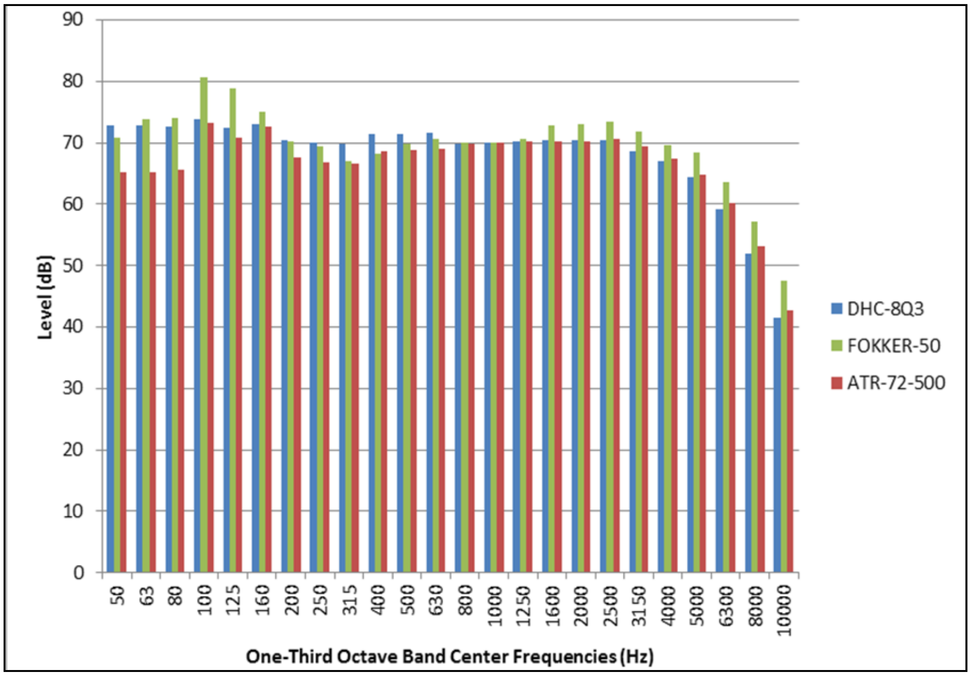

FIGURE 6-15 Spectra of taxiing aircraft at time of A-weighted maximum level 1000' away corrected to 70 dB at 1 kHz.

As can be seen from the previous figures, the NPD curves of these three aircraft are very similar while their spectra are not. Based upon visual comparison, these three spectra should be used as three separate taxi spectral classes. The significant differences in the spectral shapes are in the region below 160 Hz. This could possibly be attributed to propeller Blade Passing frequencies being different. It might be possible to create a common spectrum with adjustments for blade passing frequency differences in the future, however this was not explored.

In INM, the ATR-72-500 aircraft uses the HS478A substitution for flight operations. The flight departure and arrival spectral classes are plotted with the ATR-72-500 spectrum in Figure 6-16.

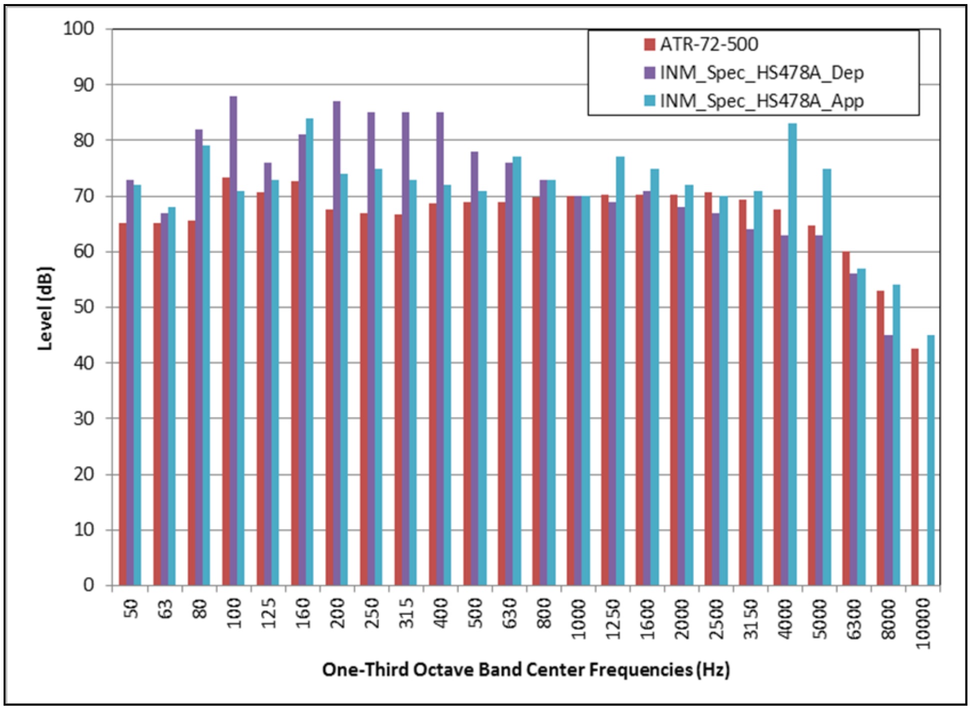

FIGURE 6-16 Taxi spectrum of ATR-72-500 plotted with the INM spectral classes used for it.

6.8. INM Propeller Database and Substitution Assignments

The full INM propeller database contains 28 aircraft. For each aircraft type a judgment was made based on the aircraft size, configuration, thrust class, engine types and where appropriate substitutions were made from the existing empirical data. For other props the general taxi thrust-weight curve was made to assign a taxi thrust, and the taxi noise metric vs. thrust parameters (both slope and y-intercept) were used to create the NPD. This in essence has the effect of assigning a single "generic" taxi NPD curve to those prop aircraft for which no empirical data is available. While the NPD values are the same, the spectral classes followed a substitution process described above so the data entries should not necessarily be combined within INM / AEDT. Table 6-2 describes the specific aircraft processes applied in the development of the INM NPDs and spectral class data.

TABLE 6-2 INM Prop Aircraft and NPD / Spectral Class Development Notes *(PropNPDs_rev6c.xlsm)*.

INM ACFT_ID	NOISEFILE DESCRIPTOR	ACFT_DESCR	Source
		ATR72500	Madrid
		FOKKER50	Madrid
DHC830	Use Madrid DHC8Q30	DASH 8-300/PW123	Madrid
DHC8	Use Madrid DHC8Q30	DASH 8-100/PW121	Madrid Substitute
1900D	Same	BEECH 1900D / PT6A67	Noisefile
C130	C-130H	C-130H/T56-A-15	Noisefile
C130E	Same	C-130E/T56-A-7	Noisefile
DC6	C-118	DC6/R2800-CB17	Noisefile
L188	P-3A	L188C/ALL 501-D13	Noisefile
BEC58P	U-4B	BARON 58P/TS10-520-L	Noisefile Substitute
CNA172	U-4B-3dB	CESSNA 172R / LYCOMING IO-360-L2A	Noisefile Substitute
CNA206	U-4B-3dB	CESSNA 206H / LYCOMING IO-540-AC	Noisefile Substitute
CNA20T	U-4B-3dB	CESSNA T206H / LYCOMING TIO-540-AJ1A	Noisefile Substitute
CNA441	U-4B	CONQUEST II/TPE331-8	Noisefile Substitute
COMSEP	U-4B-3dB	1985 1-ENG COMP	Noisefile Substitute
CVR580	T-29 (CV240)	CV580/ALL 501-D15	Noisefile Substitute
DC3	T-29 (CV240)	DC3/R1820-86	Noisefile Substitute
DHC6	Use Beech 1900	DASH 6/PT6A-27	Noisefile Substitute
DHC6QP	Use Beech 1900	DASH 6/PT6A-27 RAISBECK QUIET PROP MOD	Noisefile Substitute
DHC7	Use Beech 1900	DASH 7/PT6A-50	Noisefile Substitute
EMB120	Use Madrid ATR-72-500	EMBRAER 120 ER/ PRATT & WHITNEY PW118	Noisefile Substitute
GASEPF	U-4B-3dB	1985 1-ENG FP PROP	Noisefile Substitute
GASEPV	U-4B-3dB	1985 1-ENG VP PROP	Noisefile Substitute
HS748A	T-29 (CV240)	HS748/DART MK532-2	Noisefile Substitute
M7235C	U-4B-3dB	MAULE M-7-235C / IO540W	Noisefile Substitute
PA28	U-4B-3dB	PIPER WARRIOR PA-28-161 / O-320-D3G	Noisefile Substitute
PA30	U-4B-3dB	PIPER TWIN COMANCHE PA-30 / IO-320-B1A	Noisefile Substitute
PA31	U-4B	PIPER NAVAJO CHIEFTAIN PA-31-350 / TIO-5	Noisefile Substitute
SD330	Use Beech 1900	SD330/PT6A-45AR	Noisefile Substitute
SF340	Use Beech 1900	SF340B/CT7-9B	Noisefile Substitute

6.9. INM Propeller NPD Summary

Noise Power Distance curves were developed for each of the 28 unique INM propeller aircraft using procedures defined in this Chapter. Each of these aircraft was assigned a spectral class that represents the character of their noise emissions during taxi operations. A composite database with INM/AEDT Aircraft Info, NPD and spectral class data for both the propeller fleet and the Turbofan (Jet) fleet is provided in Appendix F.

CHAPTER 7. COMPOSITE DIRECTIVITY PATTERNS FOR TAXIING AIRCRAFT

This Chapter describes the process which was applied in order to create a single directivity pattern for taxiing turbojet aircraft and a single directivity pattern for taxiing turboprop aircraft. The established INM/AEDT US fleet mix (Boeker, 2007) was used to determine the weighting of the directivities for different aircraft types. The directivities used were those created as part of the development process of INM/AEDT in generating NPD curves and spectral data for taxiing aircraft as described in Chapter 4. Data fits were conducted using an energy basis in order to preserve the sound power aspect of the noise emissions. It was found for both the jets and props that using an energy average instead of arithmetic average resulted in better agreement with individual aircraft directivities. In addition to those Taxi data sources described in Chapter 3, propeller aircraft directivity data from the US Air Force Noisefile database (Mohlman, 1998) was utilized. Subsequent sections in this memorandum describe the fleet mix, the directivity equations and display the graphical representations of the directivity patterns.

7.1. Turbofan (Jet) Aircraft

For consistency with INM/AEDT, the US fleet mix used for the jet directivity development is the same used for the proposed directivity behind start of takeoff roll (Boeker, 2007). That data set contained the operation of aircraft in the US for 2005. Table 7-1 lists the fleet mix as documented in briefs to the SAE A-21 Noise and Emissions Standards Committee. Using only the jet aircraft with measured directivity data behind start of takeoff roll, a normalized fleet mix was calculated and is presented in Table 7-2.

A noise characterization was found for each of the jet aircraft listed in Table 7-2 except for the A330. Because the A310 has similar engines and comparable size it was used as an A330 substitute for this taxi directivity analysis. These noise characterizations came from the noise spheres used to define the noise power distance curves and spectral classes for these aircraft.

TABLE 7-1 Table from Boeker (2010) - Modeling Directivity Behind the Start of Takeoff Roll

Aircraft	Number of ops	% of Measured Fleet	% of Total Fleet
A319	1423985	9%	5%
A320	2372032	14%	9%
A330	322430	2%	1%
A340	190224	1%	1%
B717	333272	2%	1%
B737	7088418	43%	27%
B747	595303	4%	2%
B757	1162127	7%	4%
B767	823779	5%	3%
B777	453399	3%	2%
DC9	339756	2%	1%
CL600	135937	8%	5%
Props	6040263		23%
Not Measured	3834201		15%

TABLE 7-2 Fleet Mix Used as Weightings for Taxi Directivity

Plane	Fleet Mix (%)	Normalized Weighting (%)
A319	5%	8%
A320	9%	15%
A330	1%	2%
A340	1%	2%
B717	1%	2%
B737	27%	44%
B747	2%	3%
B757	4%	7%
B767	3%	5%
B777	2%	3%
DC9	1%	2%
CL600	5%	8%
Sum:	61%	100%

The directivity patterns were found by taking the one-third octave band spectral levels at the 90 degree azimuthal angle of the noise sphere (as measured from the nose). The spectrum at each angle includes 1000’ of atmospheric absorption for meteorological conditions of 77°F, 70% relative humidity, and 1 atmosphere of pressure incorporated). An A-weighted level was calculated for each angle using the corrected spectra. An example directivity pattern is shown in Figure 1 where it can be seen that the levels are at their lowest to the rear and side of the aircraft. The highest taxiing noise levels towards the front of the aircraft agree with ANOPP predictions and field observations. There is no data directly in front or behind the aircraft (Figure 7-1) because this data is empirical and it is not feasible to place a microphone on the taxi way to capture emissions directly in front or behind a moving aircraft.

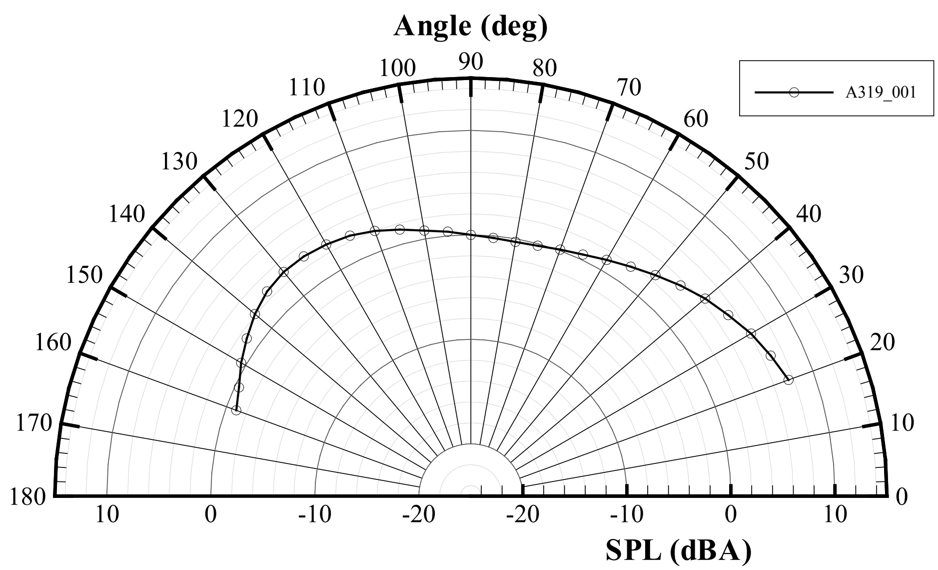

FIGURE 7-1 Taxi directivity of A319 normalized to 90 degrees.

Two methods were considered for weighting the measured directivities of the jets in the US fleet: energy averaging and arithmetic averaging. Figure 7-2 shows the averages from both methods. Both techniques provide similar results except for the area directly in front of the aircraft. The energy average method was selected because a) the directivity patterns of the ANOPP generated spheres are computed from first principles which have their roots in sound power computations, b) the NOISEFILE empirical directivity data process involves “wanding” a microphone vertically to better capture the sound power over a range of emission angles, and c) the Madrid empirical technique captured sound power and is reflective of energy distribution around the source.

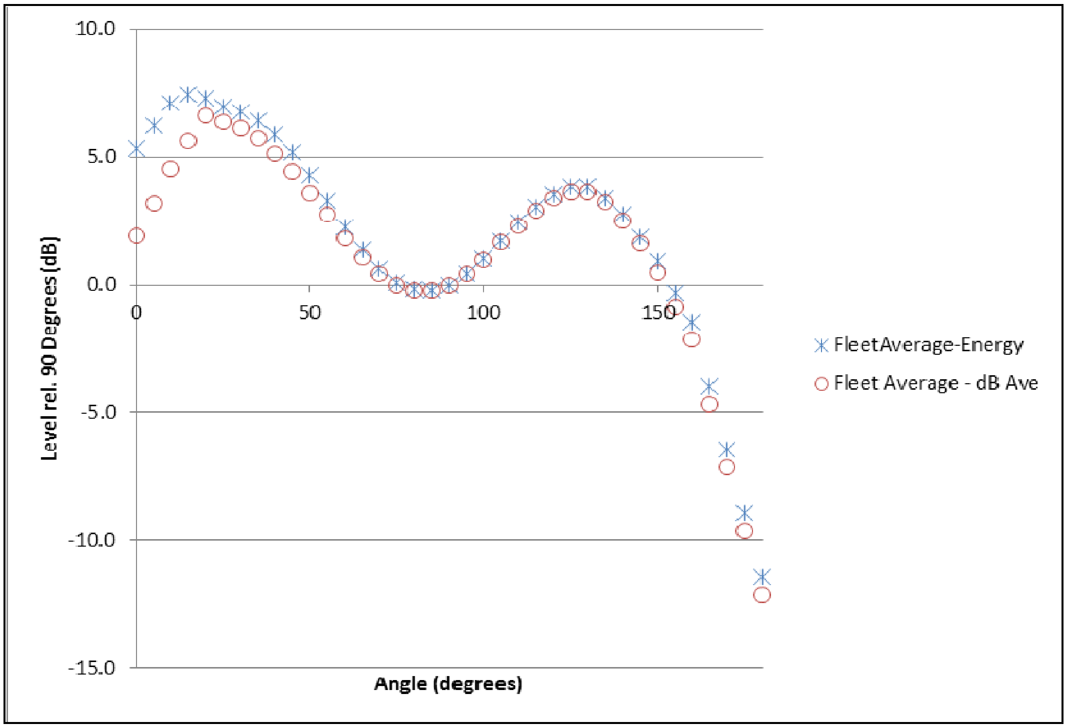

FIGURE 7-2 Comparison of arithmetic averaging of fleet-weighted levels (dB Ave) and energy averaging of fleet-weight levels (Energy).

The procedure for fitting the taxi directivity data from aircraft in the US fleet mix using weightings from Table 7-2 was as follows:

- Normalize A-weighted levels of all aircraft on the US fleet list relative to the 90^o level.
- Calculate the energy equivalent A-weighted levels and multiply by the weighting factor.
- Take 10 Log_{10} of the average of the weighted energies at each angle.
- Estimate the levels from 165 to 180 degrees by decreasing the level by 2.5 dB every 5 degrees. This drop-off rate is based on ANOPP and empirical taxi directivity data.
- Use the weighted averages of the two aircraft (B777 and DC-9) with measured data from 20^o to 0^o.
- Fit the levels from 0^o to 90^o and 90^o to 180^o separately, using fourth order polynomials.

Figure 7-3 shows the plotted directivities as well as the two fits to the data.

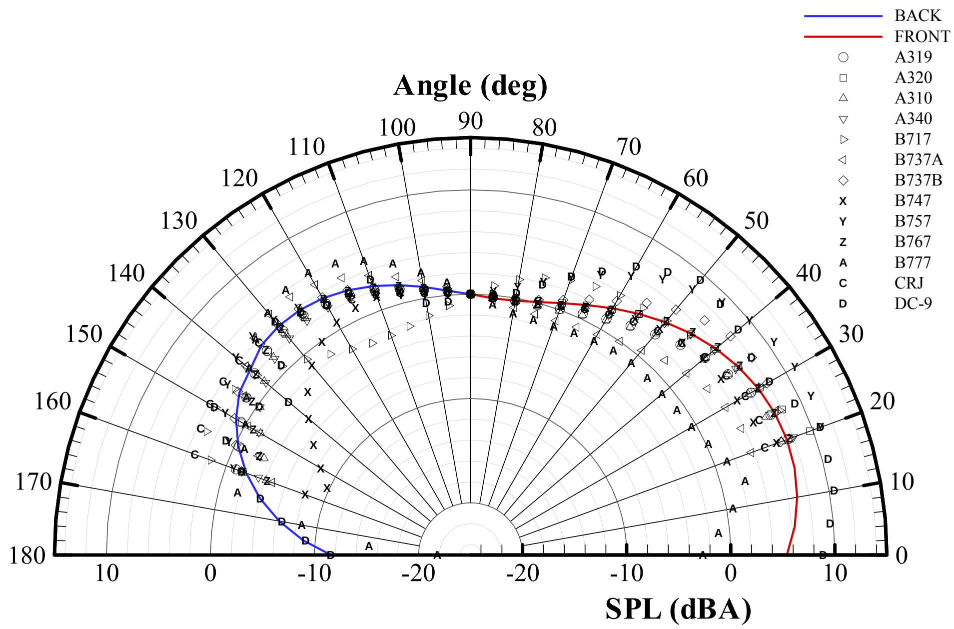

FIGURE 7-3 Directivities of US Fleet jets with curve fits of their weighted average.

The directivity adjustment for taxiing jet aircraft, DIRTXJ (in decibels), is computed as a function of azimuth angle and provided as Equations 7-1 (forward directivity) and 7-2 (aft directivity).

For Jet aircraft, the forward directivity as a function of θ between 0° and 90° is:

$$DIR_{TXJ} = 5.4325 + (0.19853 \cdot \theta) - (0.0051454 \cdot \theta^2) - (0.0000017203 \cdot \theta^3) + (0.00000029960 \cdot \theta^4) \quad \text{Eq. 7-1}$$

For Jet aircraft, the aft directivity as a function of θ between 90° and 180° is:

$$DIR_{TXJ} = 120.73 - (4.2362 \cdot \theta) + (0.051706 \cdot \theta^2) - (0.00025536 \cdot \theta^3) + (0.00000042316 \cdot \theta^4) \quad \text{Eq. 7-2}$$

The coefficients of determination and standard error of the estimate for the curve fit between 0° and 90° are 0.997 and 0.15 dBA, respectively. The coefficients of determination and standard error of the estimate for the curve fit between 90° and 180° are 0.998 and 0.21 dBA, respectively. It is important to note that the curve fit and associated statistics refer to how the fit matches the average of the weighted directivities, and not how well the curve fit matches the data from which the average directivity was derived. The resulting directivity pattern represents the U.S. fleet mix average for taxiing jet aircraft.

7.2. Turboprop Aircraft

To find a directivity pattern for taxiing turboprops, the same data set used for finding the US fleet mix above was analyzed for propeller aircraft. Of the aircraft for which there are measured directivity patterns, it was found that four aircraft accounted for 57% of the fleet mix. Table 7-3 contains a list of those aircraft. The procedure for finding a curve fit to the directivities was similar to that used for the turbofans above; however, the directivity patterns for three of the four empirical prop aircraft come from the Madrid data set. As was shown in Figure 7-1, the Madrid data set does not have information in the front or rear of the aircraft; thus, there is only data for angles from 20 to 160 degrees. NOISEFILE data was obtained from static measurements and includes acoustic directivity measurement data directly behind and in front of the aircraft.

Table 7-3 Fleet Mix Used as Weightings for Taxiing Turboprops

Aircraft	Number of ops	% of Total Fleet	Normalized Weighting (%)
ATR 72	946650	16%	29%
Beech 1900	697613	16%	22%
DHC 8	1354843	22%	42%
Fokker 50	237242	4%	7%

A fifth order polynomial was fitted to the weighted directivity patterns for the aircraft in Table 7-3 from 20 degrees to 160 degrees. The polynomial was then extended forward to 0 degrees and aft to 180 degrees. This extended fit was compared with the empirical NOISEFILE data in these regions. Figure 7-4 contains a polar plot of the resulting curve fit based upon a weighted average of the four US fleet mix aircraft, the Madrid propeller aircraft directivity, and all of the propeller aircraft from NOISEFILE (Military aircraft in NOISEFILE do not appear in the US fleet mix used to generate the final INM/AEDT propeller directivity equations, however they were examined in order to evaluate general propeller directivity shapes). The fifth order polynomial was chosen because it agreed best with the directivity patterns of the propeller aircraft in NOISEFILE.

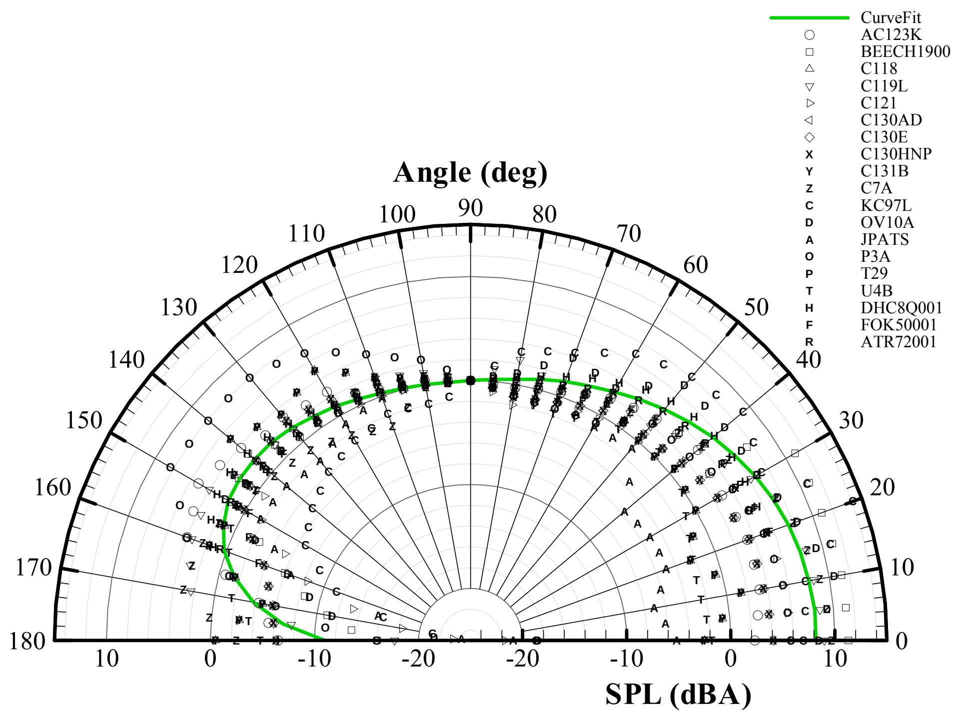

FIGURE 7-4 Directivities of NOISEFILE Turboprops compared with the curve fit of the US fleet-weighted average.

A single directivity adjustment for taxiing propeller aircraft, DIRTXP (in decibels), was developed as a function of azimuth angle from 0° to 180° (nose to tail) and is provided in Equation 7-3.

$$DIR_{TXP} = 8.20209 + (0.0042452 \cdot \theta) - (0.00187281 \cdot \theta^2) - (0.000013441 \cdot \theta^3) + (0.000000387154 \cdot \theta^4) - (0.00000000152068 \cdot \theta^5) \quad \text{Eq. 7-3}$$

The coefficient of determination and standard error of the estimate are 0.99 and 0.25 dBA, respectively. It is important to note that the curve fit and associated statistics refer to how the fit matches the average of the weighted directivities, and not how well the curve fit matches the data from which the average directivity was derived. The resulting directivity pattern represents the U.S. fleet-mix average for taxiing propeller aircraft.

7.3. Directivity Uncertainty Assessment

A comparison of the Jet Directivity function with the empirical directivity patterns is provided in Figure 7-3. An uncertainty assessment was performed by comparing the analytical directivity (dBA) with the empiricial directivity for each aircraft type. The mean and standard deviation of the predicted – measured directivity was computed for each angle from 20 to 160 degrees. Table 7-4 itemizes the results of this analysis for the available jet aircraft from which the directivity assessment was derived. Table 7-5 is the average of the Mean, Median and Standard Deviations towards the front (20-90°) Overall (20 to 160°) and aft (90-160°) for all Turbofan (Jet) aircraft types for which directivity data (or surrogate data) was available (Table 7-2). The empirical directivity pattern took into account the US fleet mix distribution, however for the uncertainty assessment no weighting factors were applied. These directivity patterns are applied to all metric computations, SEL, Lmax, EPNL and PNLTmax per established INM/AEDT methodology for application of aircraft directivity behind the start of takeoff roll.

An uncertainty assessment was not performed for the turboprop aircraft due to the very limited amount of commercial directivity data and the extensive use of military surrogates as described in Section 7.2.

TABLE 7-4 Taxi Jet Aircraft Directivity Uncertainty

Angle	Analytical Fit	Average Pred-Meas	Median Pred - Meas	Stdev Pred-Meas
20	7.4	0.1	7.6	2.7
25	7.3	0.6	6.8	2.7
30	7.0	0.8	6.3	2.7
35	6.5	0.8	5.8	2.6
40	5.8	0.6	5.1	2.6
45	5.0	0.4	4.5	2.6
50	4.2	0.1	3.7	2.7
55	3.2	0.1	2.8	2.4
60	2.3	0.0	2.0	2.2
65	1.5	-0.1	1.2	1.9
70	0.7	-0.2	0.5	1.6

TABLE 7-4 Taxi Jet Aircraft Directivity Uncertainty (Continued)

Angle	Analytical Fit	Average Pred-Meas	Median Pred-Meas	St.Dev Pred-Meas
75	0.1	-0.2	0.0	1.2
80	-0.2	-0.2	-0.2	0.8
85	-0.3	-0.2	-0.2	0.4
90	0.0	0.0	0.0	0.0
95	0.5	0.2	0.4	0.6
100	1.1	0.5	0.8	1.0
105	1.8	0.6	1.3	1.4
110	2.5	0.6	1.9	1.7
115	3.0	0.8	2.4	1.9
120	3.4	0.8	2.7	2.0
125	3.7	0.9	3.1	2.0
130	3.7	0.9	3.2	2.0
135	3.5	1.3	2.6	2.1
140	3.0	1.6	2.0	2.6
145	2.2	1.4	1.3	2.7
150	1.1	0.9	0.4	3.3
155	-0.3	0.8	-0.8	3.4
160	-2.0	0.0	-1.7	2.9

TABLE 7-5 Angle Averaged Taxi Jet Aircraft Directivity Uncertainty

Uncertainty Average over 20-90 deg		
Mean	**Median**	**St.Dev**
0.2	3.0	1.9

Uncertainty Average over 20-160 deg		
Mean	**Median**	**St.Dev**
0.5	2.2	2.0

Uncertainty Average over 90-160 deg		
Mean	**Median**	**St.Dev**
0.7	1.3	2.0

CHAPTER 8. SUMMARY

This report documents a) the taxi noise research conducted in search of a methodology for developing NPD data for INM/AEDT for taxi noise modeling and 2) development of the Noise-Power-Distance Databases for Turbofan (Jet) and Turboprop Aircraft, and, 3) Taxi operating condition acoustic directivity functions for a prescribed Turbofan (Jet) and a prescribed Turboprop fleet.

Chapter 2 itemizes INM/AEDT integration assumptions and the spectral class development procedure. Methods for taking empirical taxi noise data and developing NPDs for Jet Aircraft is described in Chapter 3. In Chapter 4 we identify three methods for creating NPD curves which depend on the source taxi noise data availability:

Method I. Empirical Taxi Noise Data and ANOPP data;
Method II. Empirical Taxi Noise Data Only; and
Method III. No Empirical Taxi Noise Data.

An itemization of the recommended NPD method for each of the aircraft in the INM/AEDT database is provided in Chapter 5. The Turboprop NPD procedure and application is documented in Chapter 6. Finally, fleet based taxi directivity patterns based on empirical data are documented in Chapter 7.

Detailed supporting information about handling Taxi measurement data, ANOPP analysis, Ground vortex ingestion and comparisons of empirical taxi noise with ANOPP and INM flight NPD data is provided in the Appendices.

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APPENDICES

APPENDIX A. MADRID DATA PROCESSING TECHNIQUE

The data presented in Lopez et al. (2004) gives the sound power output and directivity indices of several aircraft types measured while taxiing at the Madrid-Bajaras airport in Spain. The authors calculated sound power by utilizing two different methods. One of the methods employed, method B in the report, used the standard ISO 9613 (1993, 1996) to depropagate the measured sound levels to calculate the sound power level of the taxiing aircraft. This methodology is a good approximation of the acoustic repropagation technique (Page et al., 2009a) and accounted for air absorption. The sound power levels resulting from method B were chosen for creating noise spheres representing taxiing aircraft.

In order to create noise spheres from the sound power levels and directivity indices for a given aircraft, the sound power levels had to be converted to sound pressure levels using the relationship (ISO 9613, 1993) given in Equation A1.

$$\prod = \frac{1}{2\rho c} 4\pi r^2 P_s^2(r) \qquad \text{Eq. A1}$$

P_s is the amplitude pressure of an equivalent simple sound source with a power level $\prod$. The distance from the center of the simple sound source is r. The characteristic acoustic impedance is ρc. The directivity factors, D are related to the directivity indices, DI by equation A2.

$$DI = 10\log_{10} D \qquad \text{Eq. A2}$$

The power levels in the Madrid report (Lopez et al., 2004) are presented for octave bands, and the directivity indices are given for one-third octave bands. Noise spheres containing levels for one-third octave bands are to be created in this work; therefore, the power levels for one-third octave band power levels are assumed to be equal and have power adding up to the octave band level.

The directivity is given only for a range of angles from the nose of the aircraft between 20 and 160 degrees. If the directivity factors given for an aircraft do not average to unity over the range of angles, then they are adjusted uniformly so that they do average to unity. The directivity is then applied to the one-third octave band sound pressure levels. This gives one-third octave band spectra over the range of angles.

These spectra are representative of the aircraft at a distance of 1 m from the aircraft center. The spectra must be corrected for use in noise spheres. This is accomplished by adding the amount in decibels representing spherical spreading to a radius of 1000 ft (304.8 m). Levels proportional to atmospheric absorption over that distance are also added to the spectrum. The spectra are then mapped onto meridians on the noise sphere. The same spectrum is used for the length of the meridian. The sphere files are restricted to angles between 20 and 160 degrees.

A.1. Comparison of Measured Taxi Noise Data

In order to validate the sphere creation process of the Madrid data, comparisons of longitudinal directivity and spectra at 30 and 120 degrees is presented in Figures A-1 to A-14 for the B737, A319, MD-80 Series, CRJ, B767, and B747.

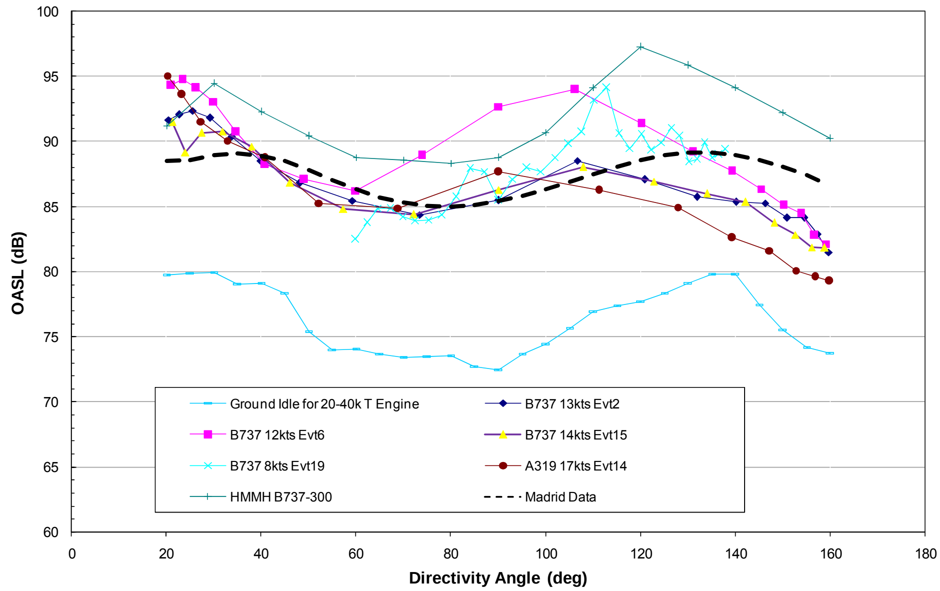

FIGURE A-1 Comparison of B737 measurement noise directivity data.

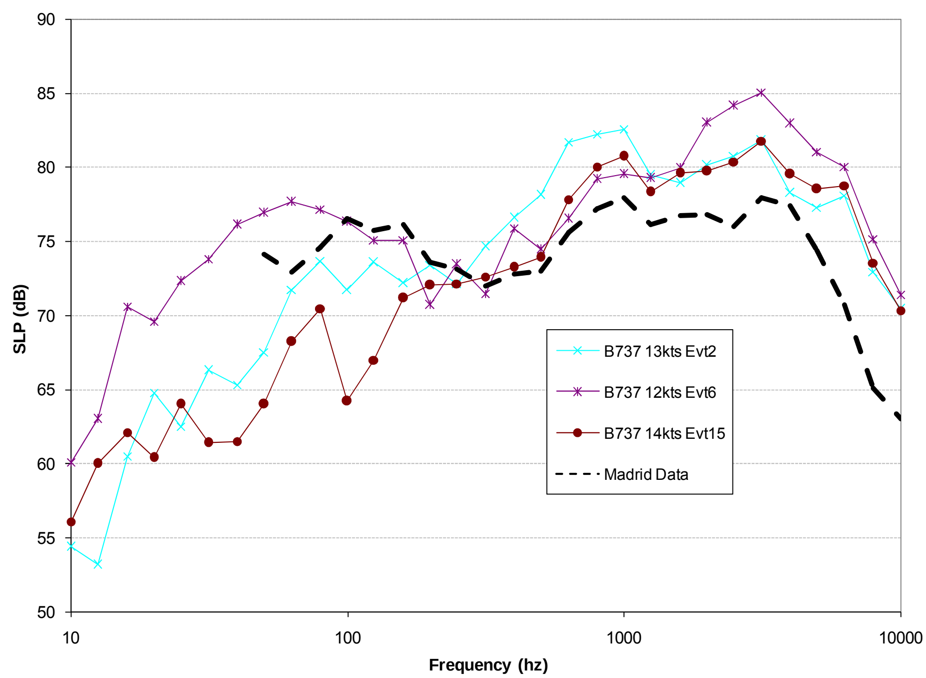

FIGURE A-2 Comparison of B737 measurement noise spectra at 30 degrees.

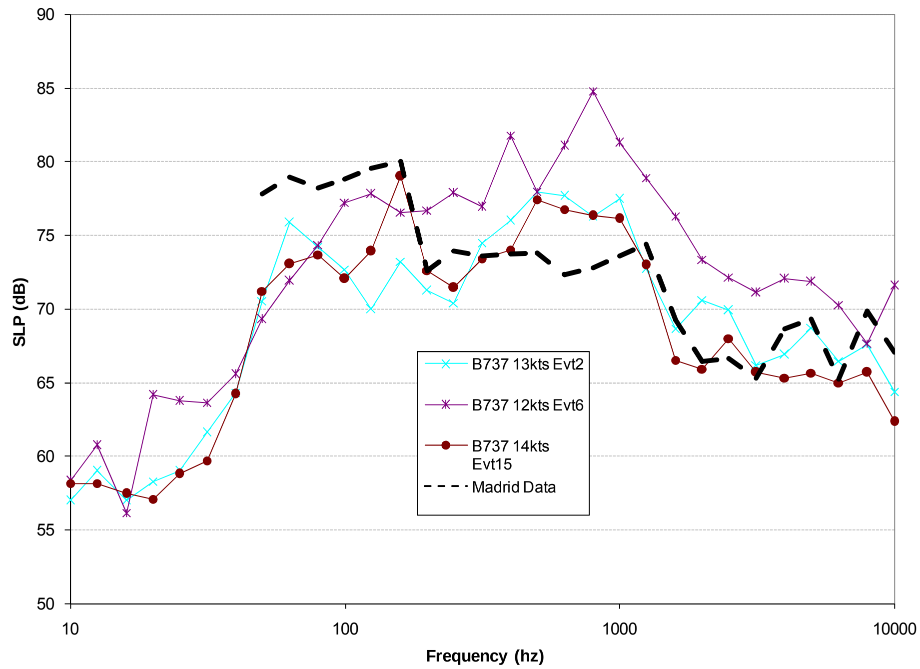

FIGURE A-3 Comparison of B737 measurement noise spectra at 120 degrees.

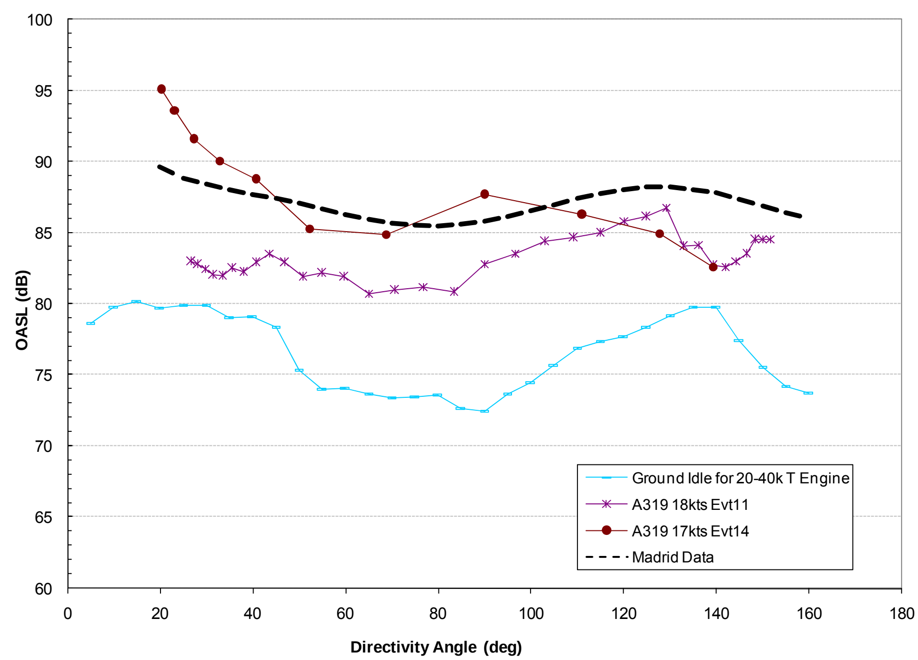

FIGURE A-4 Comparison of A319 measurement noise directivity data.

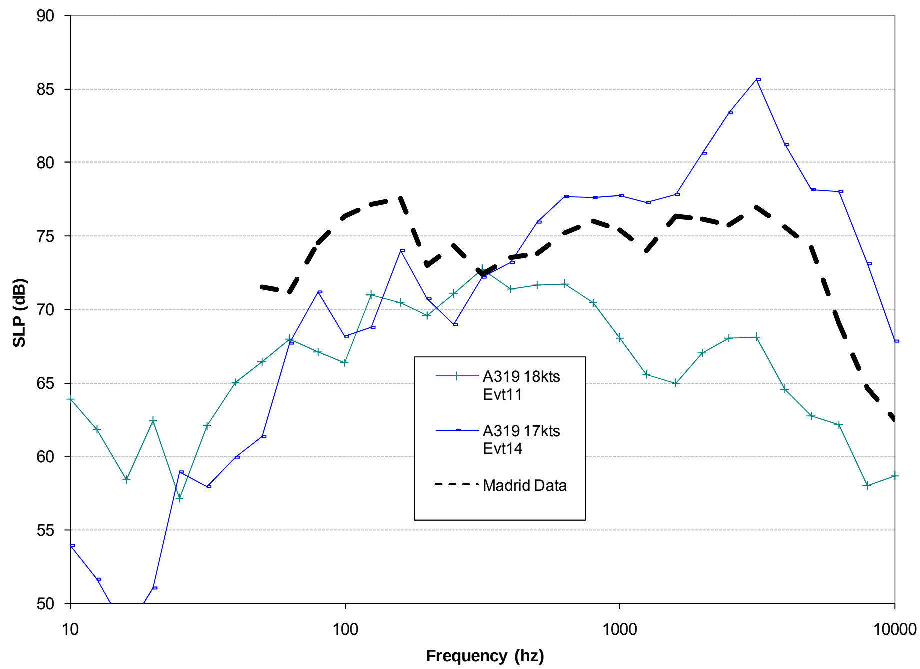

FIGURE A-5 Comparison of A319 measurement noise spectra at 30 degrees.

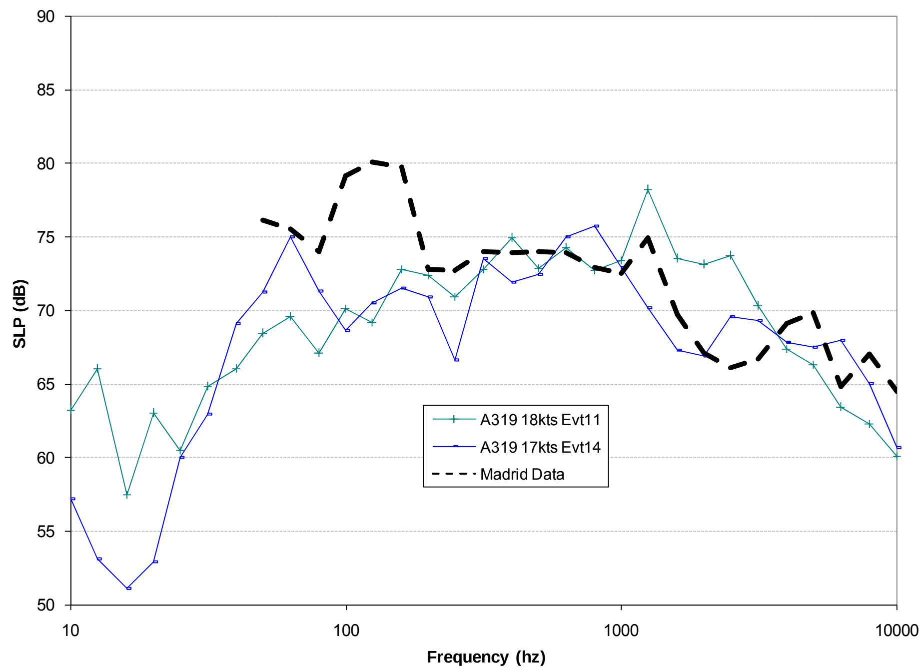

FIGURE A-6 Comparison of A319 measurement noise spectra at 120 degrees.

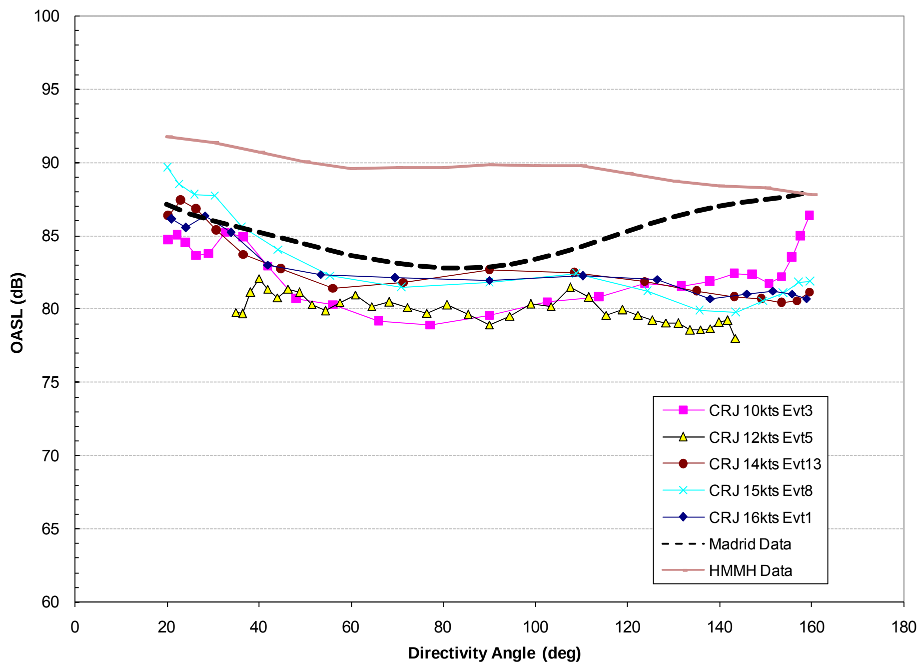

FIGURE A-7 Comparison of CRJ measurement noise directivity data.

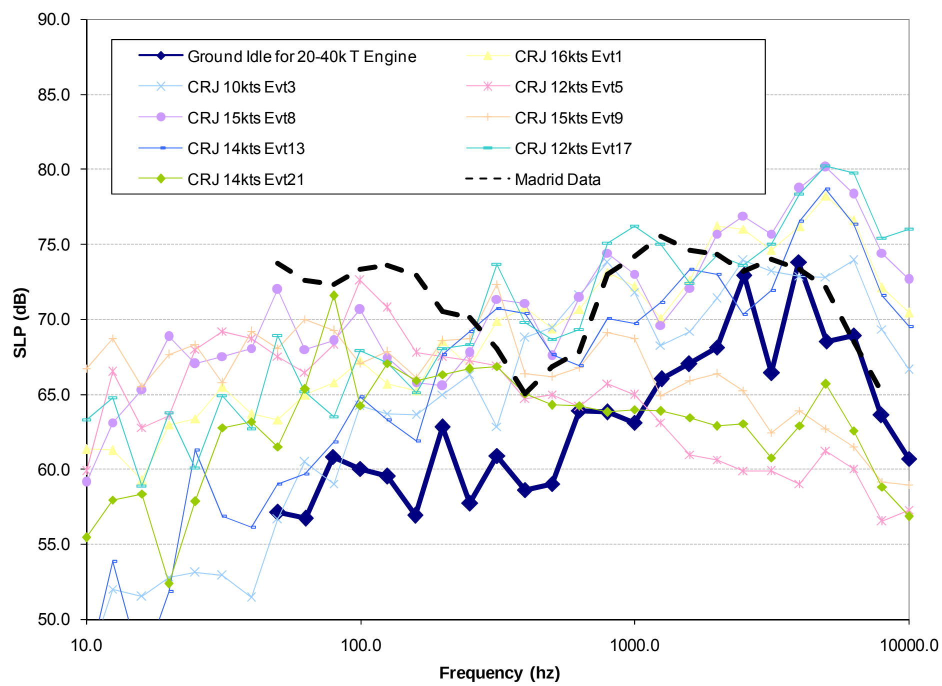

FIGURE A-8 Comparison of CRJ measurement noise spectra at 30 degrees.

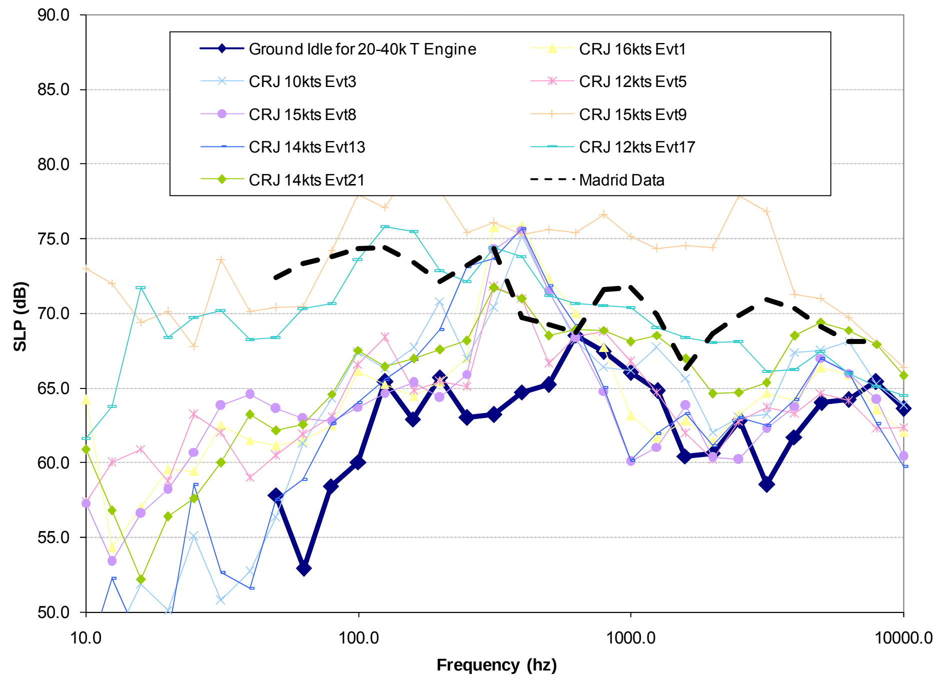

FIGURE A-9 Comparison of CRJ measurement noise spectra at 120 degrees.

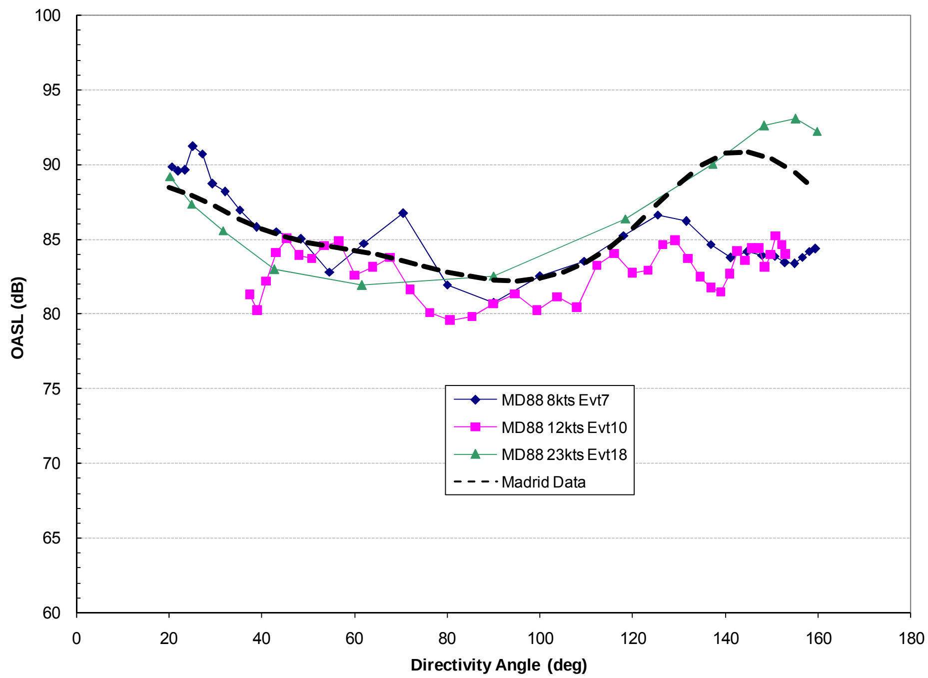

FIGURE A-10 Comparison of MD-88 measurement noise directivity data.

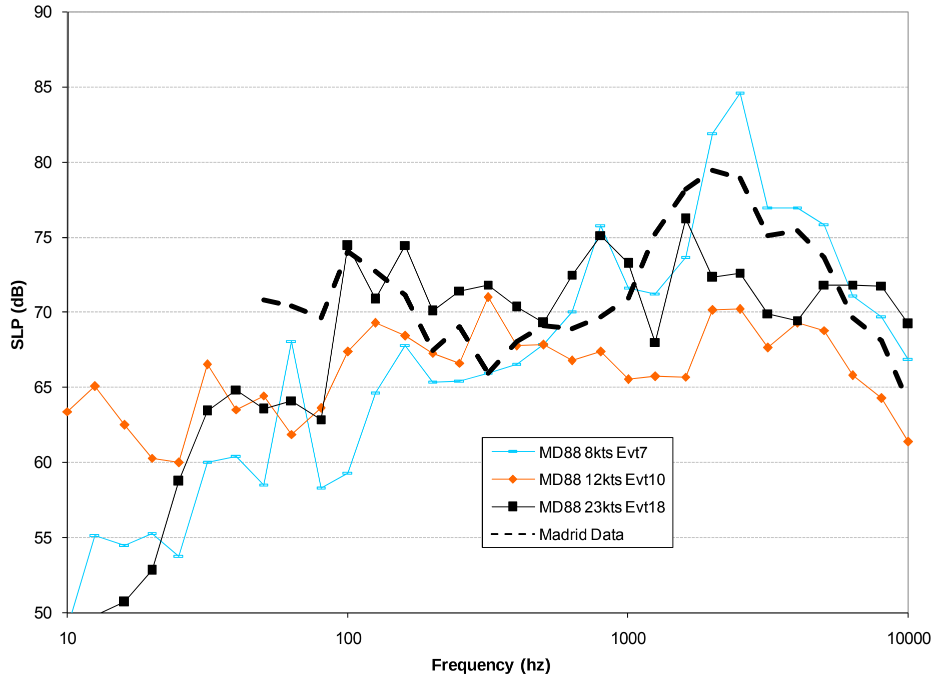

FIGURE A-11 Comparison of MD-88 measurement noise spectra at 30 degrees.

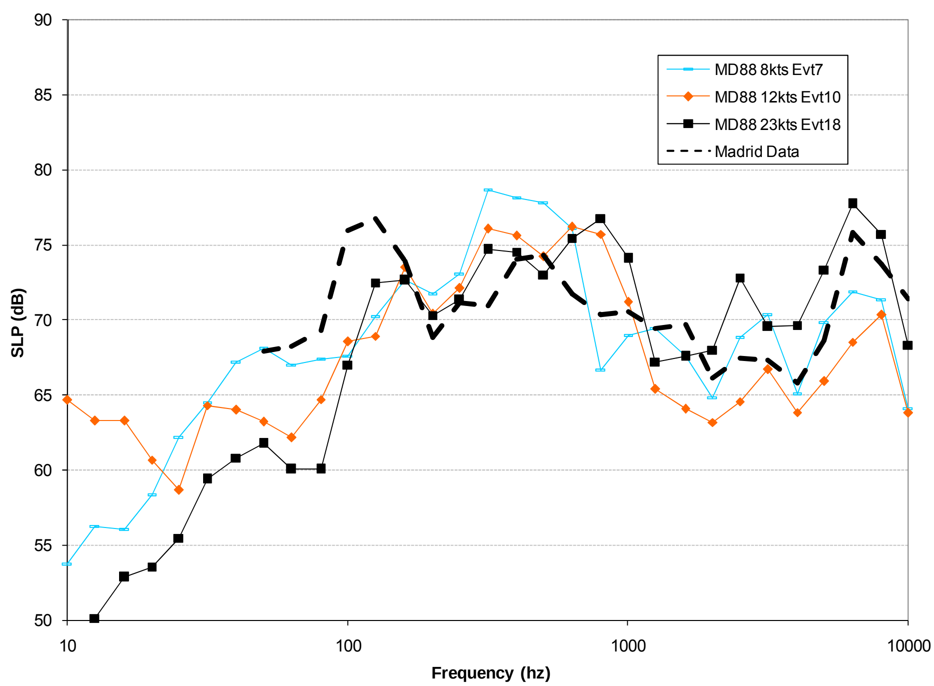

FIGURE A-12 Comparison of MD-88 measurement noise spectra at 120 degrees.

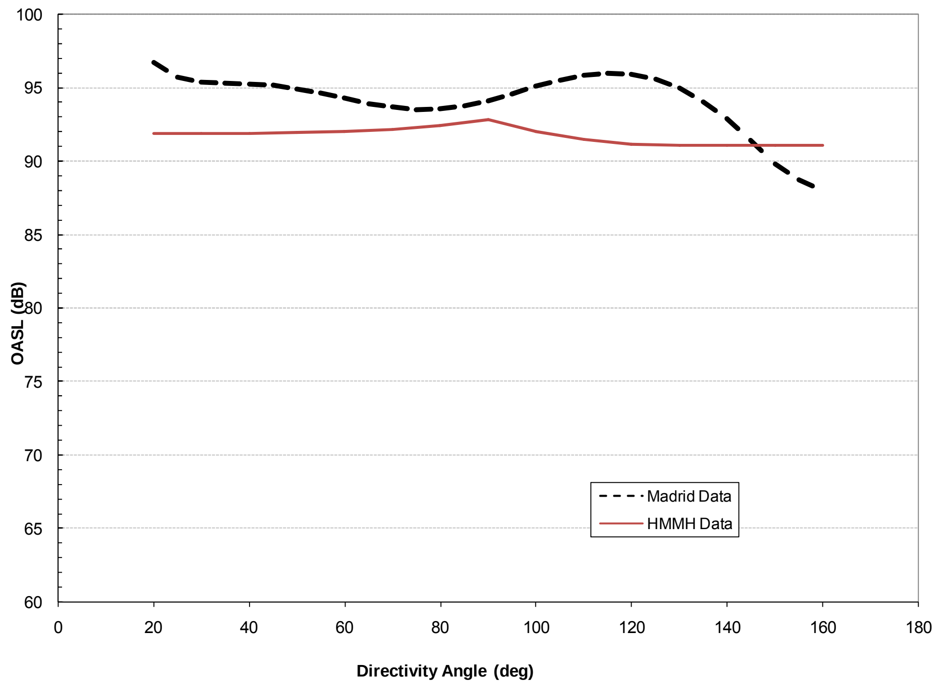

FIGURE A-13 Comparison of B747 measurement noise directivity data.

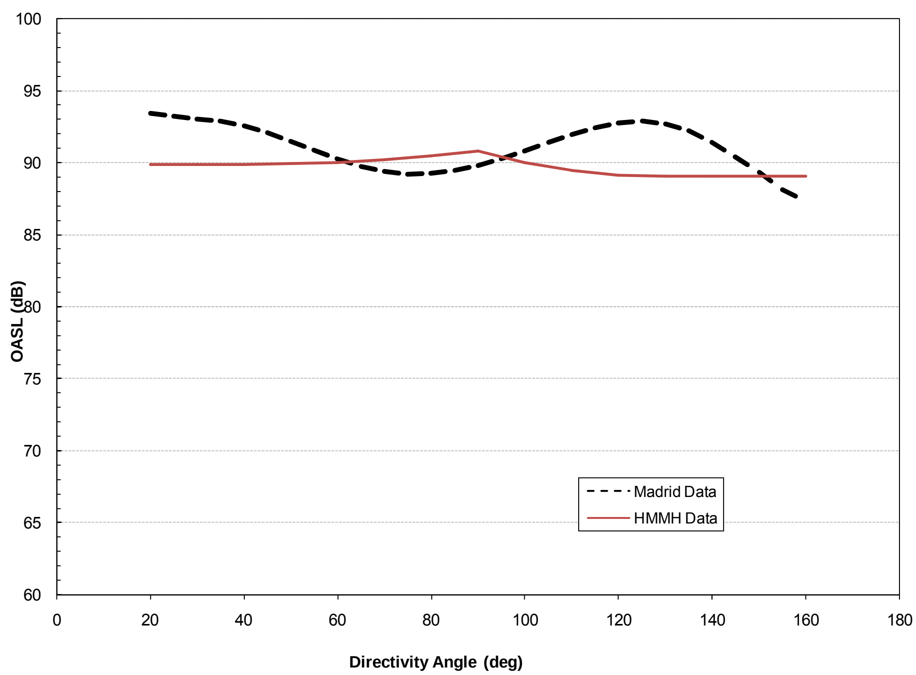

FIGURE A-14 Comparison of B767 measurement noise directivity data

Spheres with longitudinal and spectral directivity were created using the process described above. These spheres were then used in AAM to simulate taxi operations and compute SEL levels based on the individual aircraft measurement taxi speeds, environmental conditions and distances from the microphones. This process allows us to directly compare measurement SEL data with "predicted" SEL data based on Madrid empirical taxi noise spheres. Because a small number of spheres have been created from the Madrid data, substitution for the missing aircraft was made as follows: the B737B sphere was used for all B737 measured aircraft; the CRJ was used for all regional jets; and the MD-88 was used as a surrogate for the B717-200.

Table A-1 itemizes the comparison of the measured SEL levels (Ave. Meas. SEL column) with those predicted SEL data based on the noise spheres created from the Madrid dataset (Madrid SEL column). The difference in SEL has been averaged for each vehicle category and listed in the Average SEL Difference column. Overall the SEL comparisons are within 3dB, while individual events might vary more. Given the number of variables in the measurement taxi operations, we feel this is an excellent indication of the suitability of using the Madrid dataset for continued taxi noise NPD dataset development.

TABLE A-1 Comparison of SEL Levels

AC Type	Speed (knots)	Distance From Source (m)	Ave. Meas. SEL	Madrid SEL	Average SEL Difference (Pred-Meas)
A319	18	78	91	94	-1
A319	17	22	104	99	
B737-300	12	22	107	101	-3
B737-300	8	78	97	103	
B737-700	14	22	102	101	
B737-800	2	22	104	101	
B737-800	13	22	104	95	
CRJ	16	22	98	99	2
CRJ	12	78	88	93	
CRJ	15	78	96	92	
CRJ 200	10	22	99	101	
CRJ 200	15	22	99	100	
CRJ 200	14	22	98	100	
CRJ 200	12	78	92	93	
CRJ 200	14	78	89	93	
E135	9	22	101	102	
E145	6	78	88	94	
B717-200	18	78	100	94	-2
MD88	8	22	104	105	
MD88	12	78	91	95	
MD88	23	22	105	100	

APPENDIX B. WYLE 2010 B777 IAD TAXI NOISE MEASUREMENTS AND DATA PROCESSING

In order to characterize the noise emissions of Boeing 777 aircraft while taxiing, acoustic and video measurements made on taxiway E at Dulles International Airport (IAD) in July 2010 were utilized. Three cameras were collocated with pairs of microphones opposite the terminal as shown in Figure B-1. The sensors are at the red balloons labeled W, C, and E for West, Center, and East, respectively. A schematic of the sensors relative to the taxiway center line can be seen in Figure B-2. A picture of the equipment at the center location is shown in Figure B-3. The two microphones are 1.5 m and 4.0 m above the ground. The video camera is near the base of the tripod mounted on the pelican case.

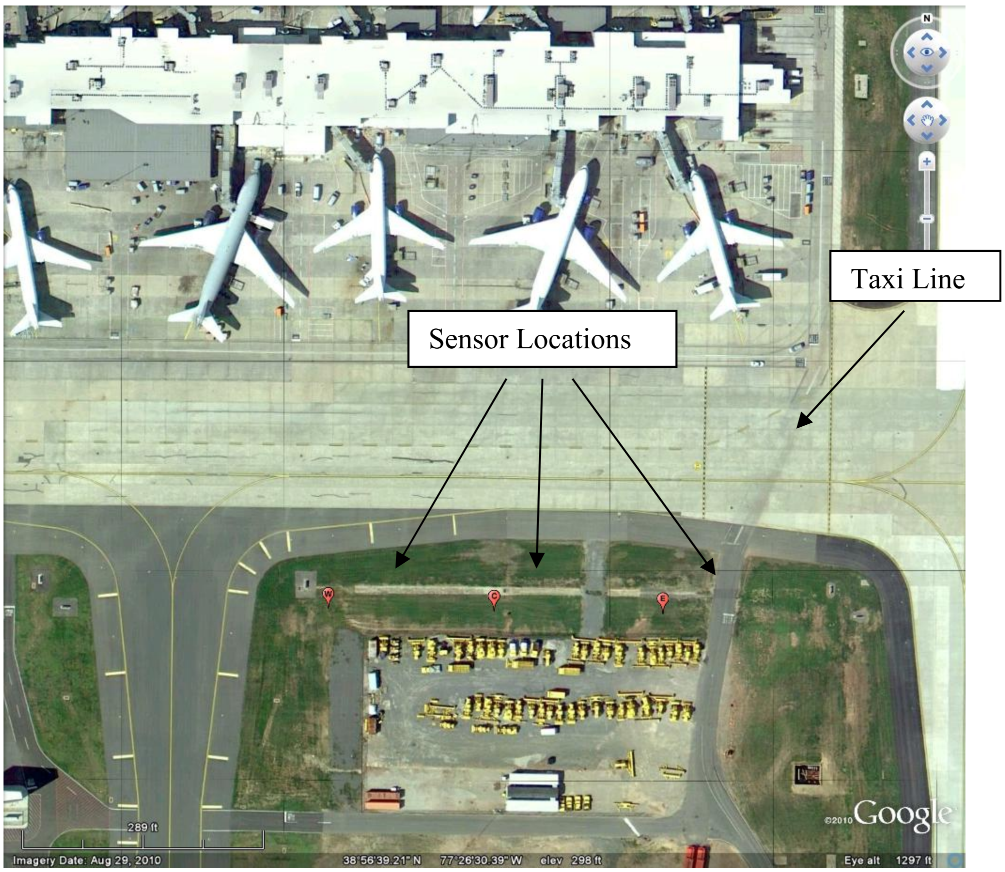

FIGURE B-1 Location of sensors at Dulles International Airport.

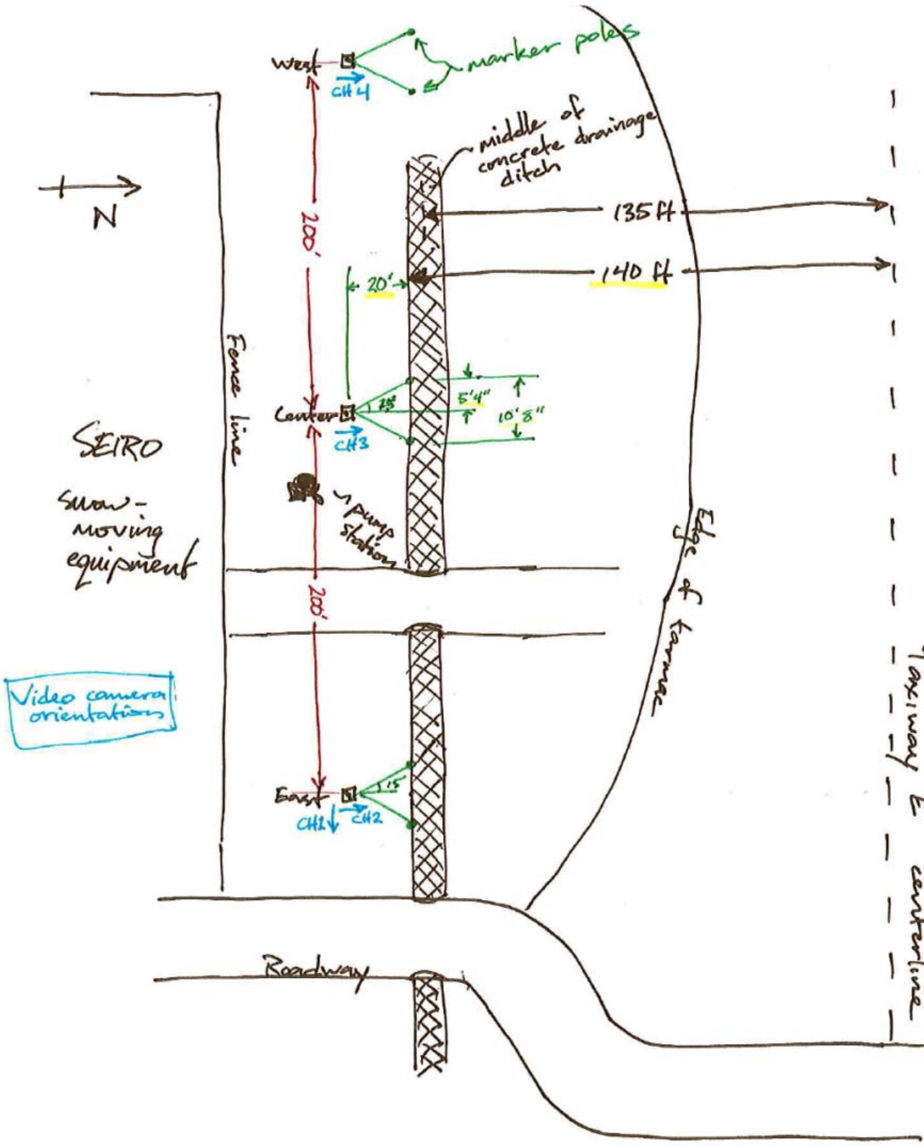

FIGURE B-2 Schematic of sensors relative to taxiway centerline.

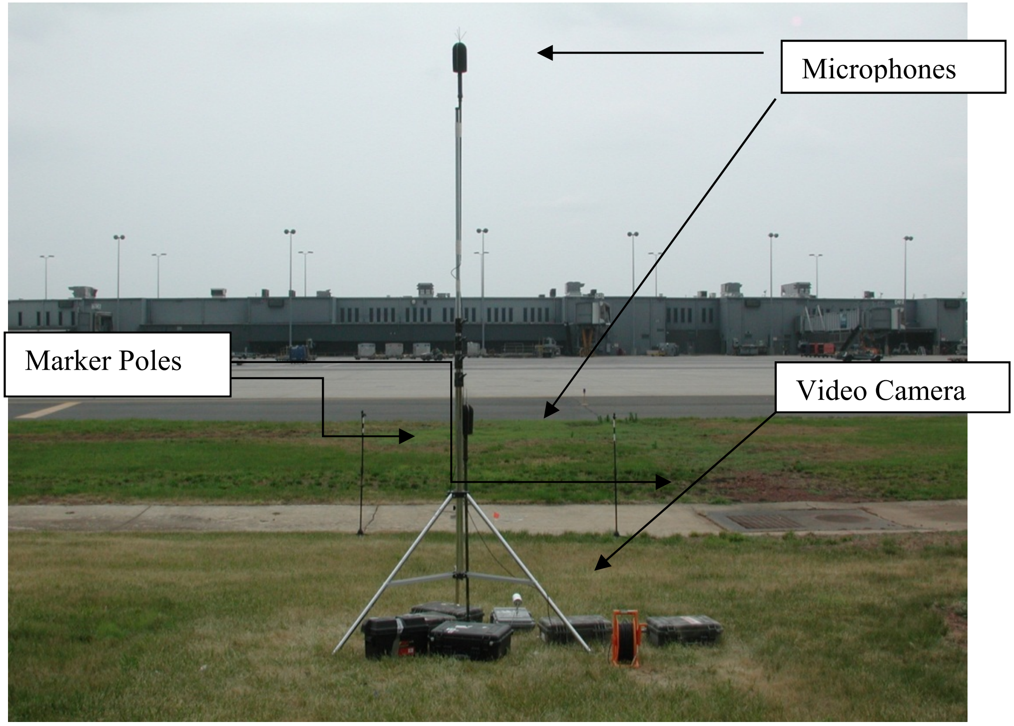

FIGURE B-3. Photo of equipment deployed at center location.

The microphone signals were run into Larson Davis Model 831 sound level meters set to record one-third octave band time histories at a 1-second time resolution. The AC output of the meters were run into Edirol R-09HR solid state recorders set to continuously record 24-bit wave files at a sampling rate of 44100 samples per second. The spectral analyses of the Edirol recordings are the basis of the noise characterization of the Boeing 777.

The video camera recorded both visible light and infra-red into a 4-channel DVR. All video cameras were hooked up to one DVR. The audio signal from a center-channel microphone was also run into the DVR audio input. The marker poles in Figure B-3 were used to determine the location and speed of the taxiing aircraft upon playback of the video. An example still shot of a Boeing 777 recorded is shown in Figure B-4. By using the operations data provided by the airport along with the time the data was taken, the airframe-engine combination could be found from records of the US aircraft fleet. The Boeing 777 pictured in Figure B-4 had PW4077 engines made by Pratt & Whitney. All the Boeing 777s studied in this memo had either PW4077 or PW4090 model engines.

In order to determine Noise emissions of the engines, one-third octave band time histories were calculated from the recordings. A time resolution of 0.25 seconds was used. The speed of the aircraft was determined from the video using the time displayed and the marker poles. The spectral time histories were synchronized to the position of the aircraft by the time displayed in the video. The time resolution of the aircraft's position was increased by using the frame count of the video along with the displayed time.

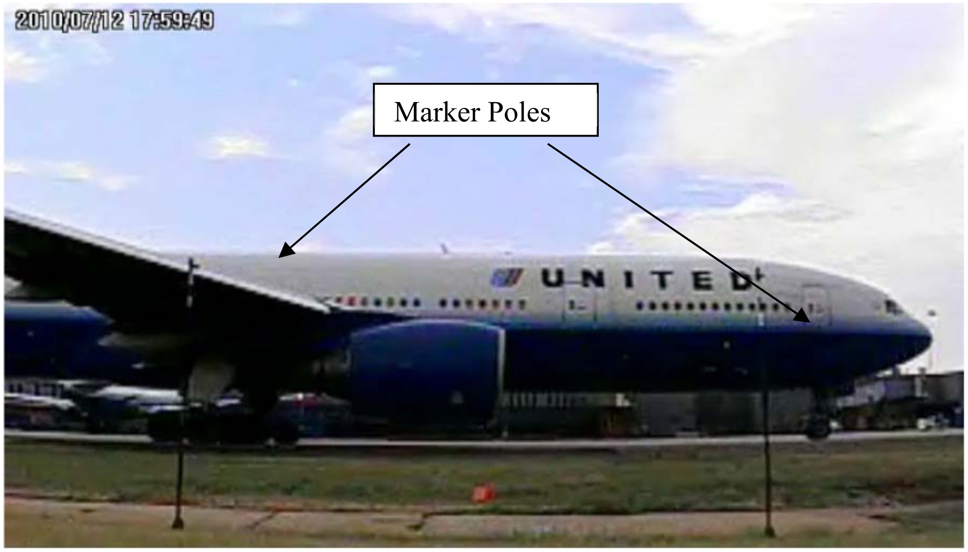

FIGURE B-4 Example video of aircraft taxiing in front of center camera.

By using the meteorological data and the taxi speeds, the spectral time histories were used to determine the free-field emissions from each of the 777s pass-bys using the Acoustic Repropagation Technique (Hobbs et al., 2010a). Figure B-5 shows the 1 kHz one-third octave band depropagated levels to a distance of 1000 feet for all the pass bys measured.

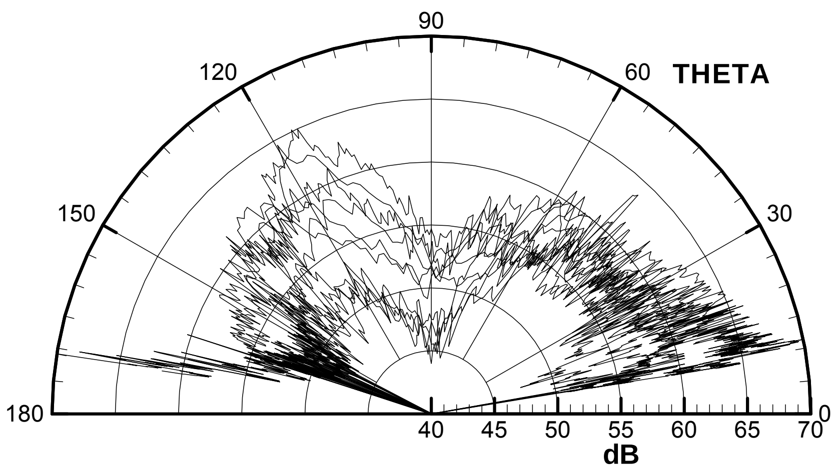

FIGURE B-5 Depropagated data from all microphones for 1 kHz one-third octave band.

Each line in Figure B-5 represents the depropagated levels from a single microphone. Reasons for the variation in levels include: variations in thrust; number of engines running; shielding of the far engine if it is the only one running. Because of proximity of each engine to the microphones, the difference in measured levels from spherical spreading would be approximately 4 dB.

The depropagated levels were averaged together as a function of the angle from the nose of the aircraft (Theta). An 11 term Fourier Transform was used to fit the data using the method outlined by Abuelma'atti. Figure B-6 shows the average and fitted curve for the band displayed in Figure B-5.

The data was fit from an angle of 15 degrees off the nose to 165 degrees. Data outside this range either does not exist because the aircraft was never in line with the microphones or was below the signal to noise ratio cutoff because the aircraft was too far away.

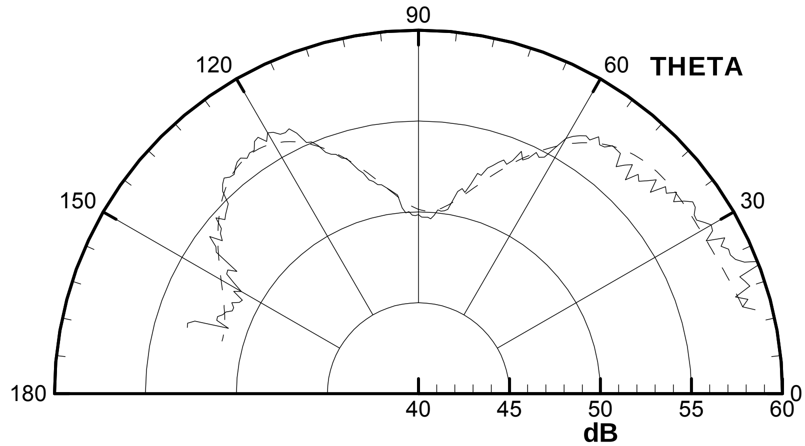

FIGURE B-6 Directivity of the average repropagated 1 kHz one-third octave band levels (Solid Line) compared to Fourier curve fit (Dashed Line)

The resulting depropagated levels were reduced to a format used in the Advanced Acoustic Model. This model was used to predict sound levels from taxi pass bys as a function of distance from the aircraft. The same was done with the Boeing 777 noise characterizations made by ANOPP for just the engine components as noise sources. The A-weighted sound exposure levels for a modeled taxi pass by at 16 knots for a set of distances are compared in Figure B-7. As can be seen in Figure B-7, the source characterization of the Boeing 777 made from the Dulles Taxi measurements is compare well with both the Pratt & Whitney engine and General Electric engine ANOPP sources.

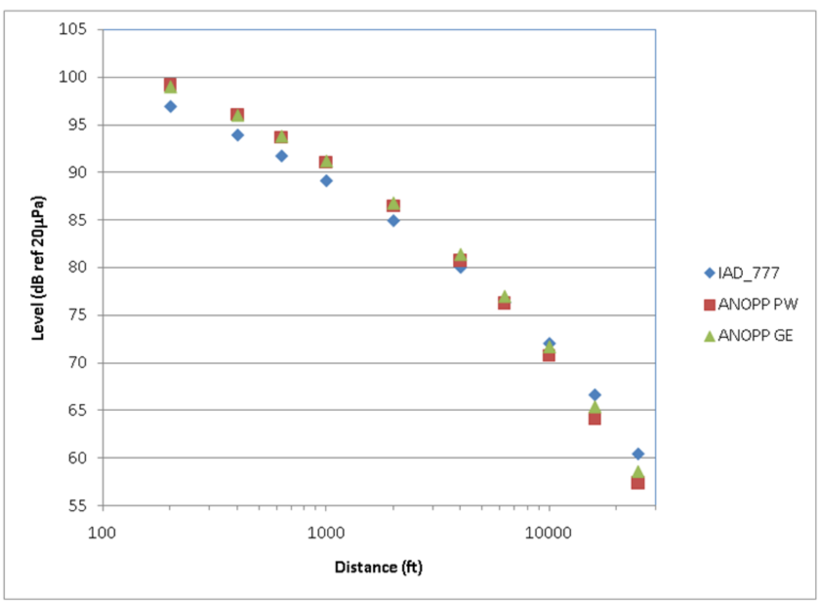

FIGURE B-7 Sound exposure level versus distance modeled in the Advance Acoustic Model for source characterization of the Boeing 777 measured at IAD (diamond), ANOPP engine- components-only (no suppression) of the Pratt & Whitney engine (square) and the General Electric engine (triangle).

In conclusion, the taxi measurements result in a source characterization that closely matches the ones made in the ANOPP estimations made by Georgia Tech. The individual pass-by measurements indicate a significant variation of noise emissions from the taxiing aircraft. Sources of the variation would be better understood if it was known what the actual engine thrust was during the measurement as well as which engines were running.

APPENDIX C. ANOPP SENSITIVITY, TRADE AND TAXI OPERATION STUDIES

C.1. Comparison of ANOPP Taxi Predictions with Measured Data

Figures C-1 through C-5 contain comparisons of ANOPP predicted Taxi SEL with empirical taxi acoustic measurement data at the assumed taxi thrust. The taxi thrust was computed based on the Thrust-Weight correlation found in Figure 4-5. Additional information about the processes employed in the generation of these plots may be found in Chapter 4 of this report.

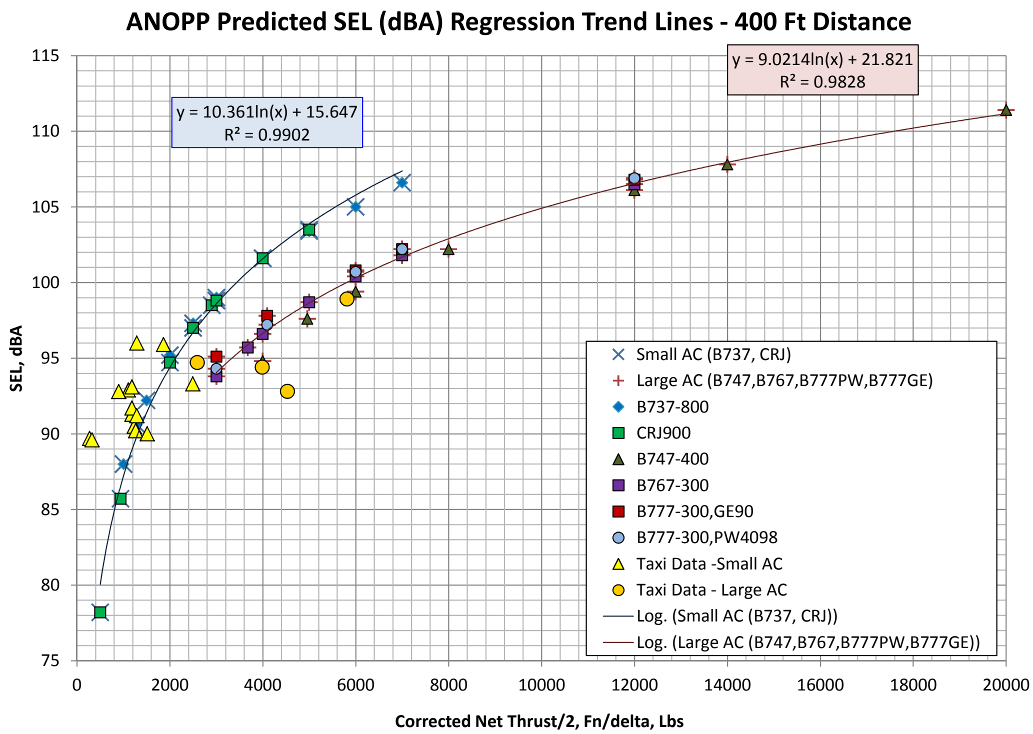

FIGURE C-1 ANOPP predicted Taxi noise SEL trend lines – 400 ft. distance.

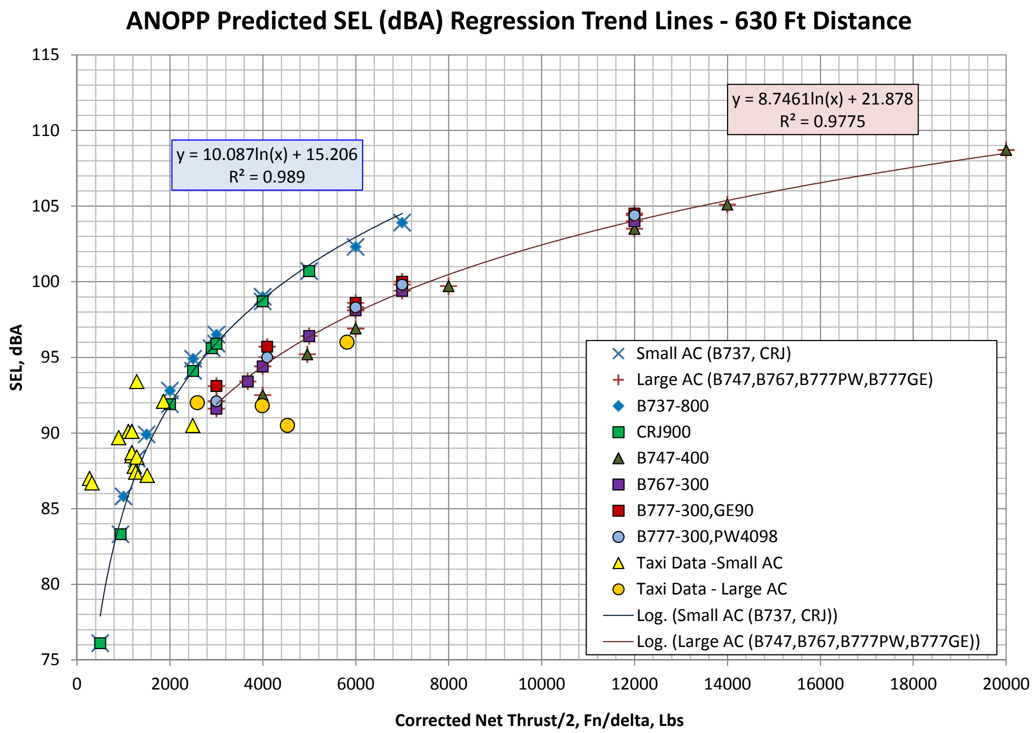

FIGURE C-2 ANOPP predicted Taxi noise SEL trend lines – 630 ft. distance.

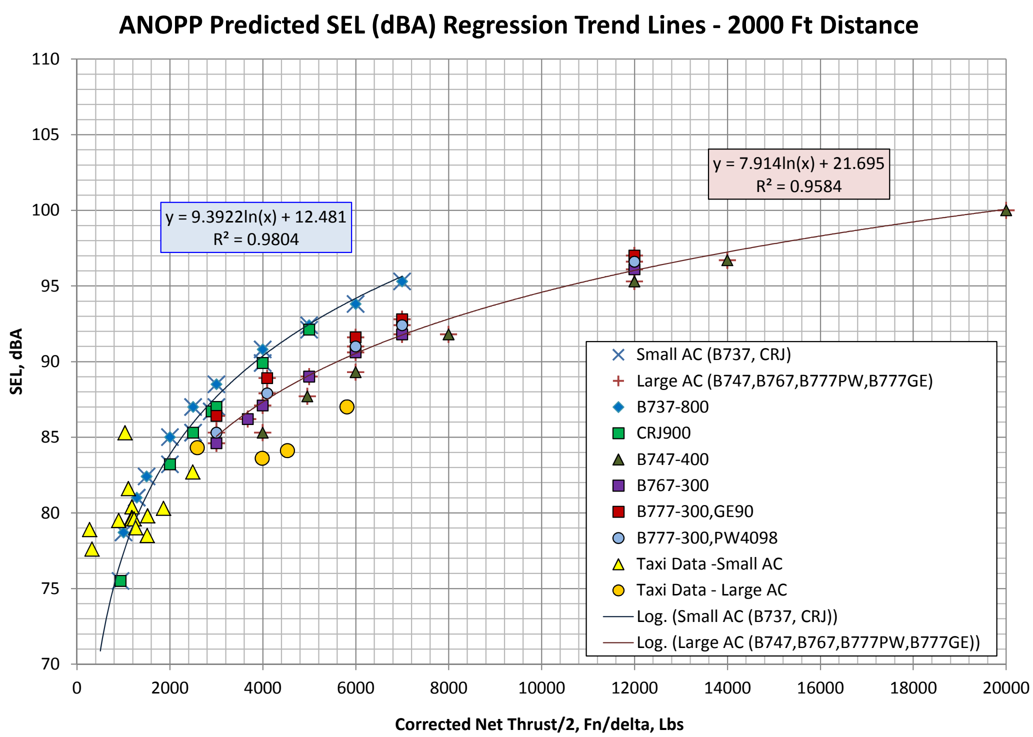

FIGURE C-3 ANOPP predicted Taxi noise SEL trend lines – 2000 ft. distance.

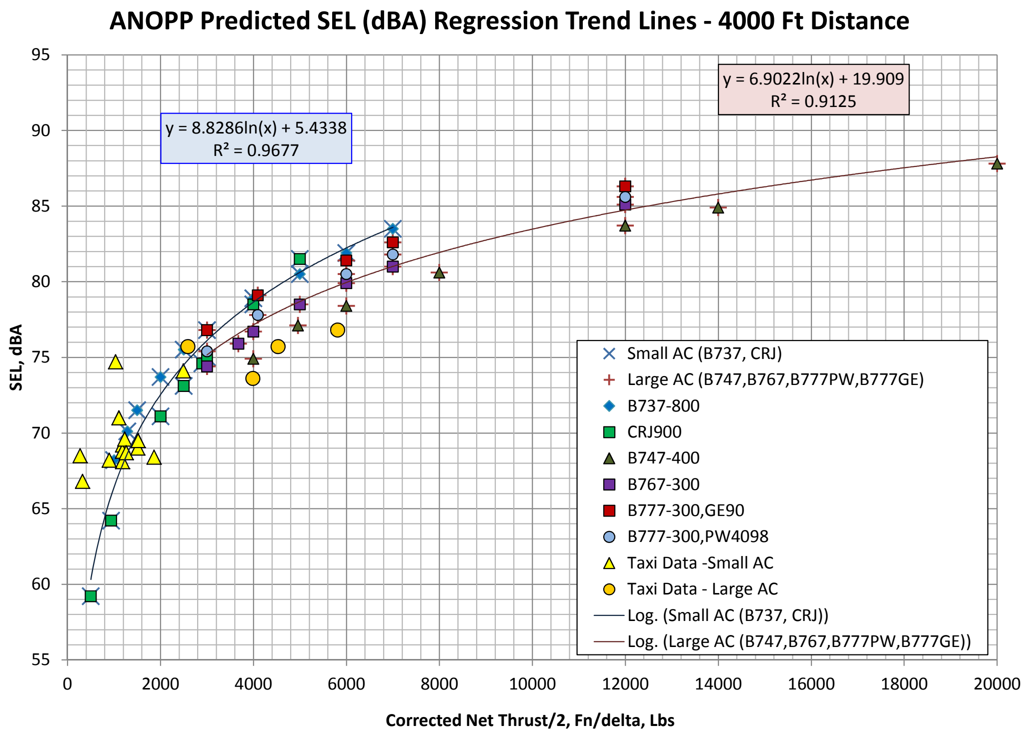

FIGURE C-4 ANOPP predicted Taxi noise SEL trend lines – 6300 ft. distance.

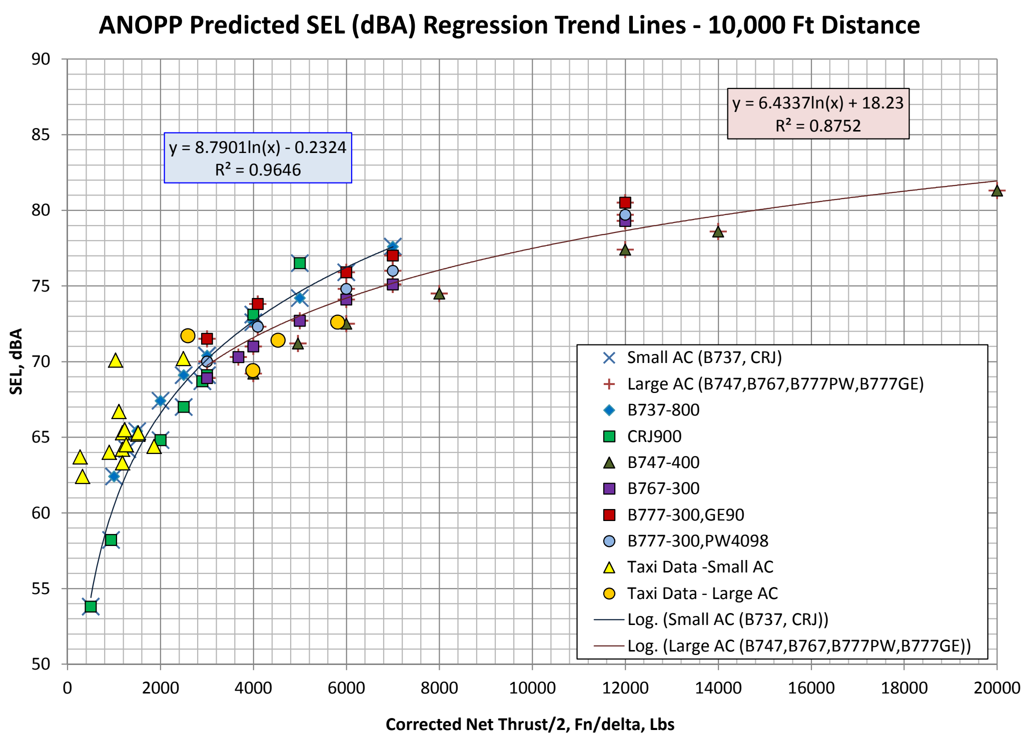

FIGURE C-5 ANOPP predicted Taxi noise SEL trend lines – 10000 ft. distance.

C.2. EDS ANOPP Flight Datasets and Generalized Suppression Tables

The ANOPP predictions carried out by Georgia Tech in support of AEDT efforts employed adjustments to the in-flight predicted component noise spectra such that when the component noise signatures were summed and integrated, the resulting certification EPNL values matched the certification values (Barros et al., 2008), (Kirby & Mavris, 2008). The EDS team predictions only had component EPNL breakdowns for the GE90-powered B777, provided by GE (Gliebe, 2003), so they could only "calibrate" the ANOPP predictions for one aircraft.

In this approach, the calibrations, which amounted to a constant correction (no variation with frequency or directivity angle) for each component spectrum (jet mixing noise, fan inlet noise, fan exit noise and core noise), were established such that the resulting predicted components gave the same relative contributions as was provided by the GE component breakdown EPNL values. In addition, the total EPNL values matched the certification EPNL. Georgia Tech used these calibration adjustments, called "suppression factors," for other aircraft in carrying out predictions for the B737 and the B767, B747 and CRJ900. A table of "suppression factors" was generated for each component, at each certification point condition – Sideline, Flyover with cutback, and Approach. In the Georgia Tech work, these suppression tables were assumed to be valid for all aircraft.

The approach taken herein was to not use these "suppression tables" for several reasons. First of all, they only apply to the GE90-powered B777, which has a much higher bypass ratio than the other aircraft considered. Secondly, they have questionable relevance to taxi noise, since they were derived from a matching of certification flight noise data. These suppression tables represent a calibration or adjustment for effects that the ANOPP model cannot account for. This includes the interactive effects of the engine noise sources with the airframe itself, and is a function of aircraft speed, attitude, and flap/slat configuration. In addition, weather, ground effects and atmospheric variations that affect the certification test results are not accounted for in the ANOPP model.

Since in the taxi condition, the aircraft in on the ground, and the aircraft speed is very low (usually less than 20 kts), airframe noise is not a significant contributor. In addition, the engine thrust levels are very low, typically near idle, but seldom more than 8 or 9% of takeoff value. Hence the relative noise source contributions are totally different than is the case at the takeoff and approach conditions typical of certification conditions. It was therefore concluded that the Georgia Tech suppression adjustments should not be applied to the predicted ANOPP component spectra. Whether there should be adjustments to reflect un-modeled taxi noise effects is still to be determined, but this cannot be assessed without having additional diagnostic data. As will be seen in subsequent results, the ANOPP taxi noise estimates agree fairly well with measured data for several aircraft types, suggesting that these adjustments are unnecessary.

C.3. Suppression Data Input for ANOPP Flight Noise Computation

The ANOPP input files for the B737-800 provided by Georgia Tech were reviewed, and the following was observed:

1. One suppression value was used for each component, i.e., there was no spectral or directivity variation in the suppressions applied to each component.

2. The suppressions were changed from approach power to takeoff power.

3. The suppressions for cutback and takeoff (sideline) are the same, although the ANOPP input descriptions suggest they can be different.

4. ANOPP itself specifies that which set of suppressions to be used are a function of power setting. For power setting (defined as Fn/Fn-max) from 0 to 0.4, the approach suppression values are

used. For power settings between 0.4 and 0.99, the cutback suppression values are used. For power settings greater than 0.99, the maximum takeoff suppression values are used.

5. Ga. Tech. used the same suppression values for all aircraft models for which predictions were made. They derived these suppression values by calibrating the B777/GE90 component breakdowns using a chart presented at the Berkley Airport Noise Symposium (Gliebe, 2003). The suppression values so-derived are tabulated in Table C-1.

TABLE C-1 Component Suppression Values for ANOPP Input

Component	Takeoff and Cutback	Approach
Fan Inlet	0.392	1.86
Fan Exhaust	0.45	0.62
Jet	0.536	3.00
Core	0.746	1.017
Airframe	0.99	0.99

6. Note that these suppressions are applied to mean-square pressure values, not to decibel levels, i.e., a suppression value of 0.3163 yields a reduction in decibel level of 5 dB.

7. Since the suppression values vary with power setting, but don't vary with angle or frequency (at least in the calibrations provided), they effectively represent just a single decibel correction to the sound pressure levels computed for each component. However, because they vary from source component to source component, and the source component levels themselves vary such that the controlling sources change with both power setting, flight speed and distance, the net impact of including suppressions will also vary with flight speed, power setting and distance.

8. Note that for high power settings (greater than 0.4), all the suppression values are less than unity, implying a noise reduction. However, the amount of impact on, say, SEL or EPNL, will vary with power setting and distance, because the dominant source contribution will change with these parameters. Conversely, for low power settings (less than 0.4), most of the suppression values are greater than unity, but core noise and airframe noise suppressions are less than unity, so depending on which source is dominant, the overall noise levels (e.g., SEL or EPNL) can increase by varying amounts, or actually decrease if core noise dominates.

C.4. ANOPP Individual Aircraft Taxi Noise Regression Coefficients

Distance (feet)	Metric Aircraft	L max (dBA) m	b	SEL (dBA) m	b	EPNL (dB) m	b	PNLMX (dB) m	b
200	737-800	9.2914	16.1254	9.8200	23.4500	11.6072	11.7796	11.2298	13.3177
400	737-800	8.9739	12.7090	9.4365	23.1763	11.4157	9.3562	11.0882	7.9888
630	737-800	8.7298	10.4714	9.1617	22.8724	11.1919	8.1475	10.8510	5.2371
1000	737-800	8.4965	7.6989	8.8622	22.3636	10.8649	7.3371	10.6076	2.0645
2000	737-800	8.0892	3.2432	8.4184	20.8371	10.0917	7.4688	9.8999	-0.9424
4000	737-800	7.7451	-2.9920	7.9704	18.0445	9.3266	7.1367	8.8546	-0.4364
6300	737-800	7.5376	-8.1587	7.7071	15.0390	9.3668	2.1179	8.5555	-5.6582
10000	737-800	7.3495	-14.5197	7.6284	9.5216	9.7525	-6.1859	9.2028	-15.9936
16000	737-800	7.4238	-24.2177	7.9386	-0.1539	10.7845	-22.3268	9.9466	-32.5023
25000	737-800	7.9741	-38.0750	8.9624	-15.7702	13.7341	-58.4104	12.8818	-69.8818
200	747-400	9.3863	7.8486	10.4985	11.1718	12.1094	-0.8748	12.2412	-5.4103
400	747-400	9.2088	3.7540	10.1006	11.3718	11.9145	-3.2969	11.9562	-9.1311
630	747-400	8.9063	2.4336	9.8557	11.0584	11.6769	-4.2474	11.4345	-9.0976
1000	747-400	8.4116	2.3526	9.4744	11.6229	11.2928	-4.2723	10.8651	-9.1029
2000	747-400	7.9072	-0.5405	8.9509	11.3164	10.4125	-2.0361	9.8217	-8.0476
4000	747-400	7.5454	-5.8820	8.2671	11.2605	9.1672	3.1026	8.0452	0.7533
6300	747-400	7.2479	-9.7183	7.8355	10.1651	8.6173	3.8635	7.8600	-4.4568
10000	747-400	7.0255	-15.2781	7.3603	8.3641	8.5824	-0.6213	8.0282	-10.4637
16000	747-400	6.8110	-22.1943	7.0008	4.3174	9.0455	-12.3111	8.6592	-26.0307
25000	747-400	6.8684	-32.2137	7.3036	-6.2079	10.5088	-36.5077	9.6974	-47.4947
200	B767-300	8.9720	12.1886	9.6030	19.9686	11.1387	8.6258	11.0892	5.5356
400	B767-300	8.7423	8.6281	9.1851	20.3774	10.8668	6.9696	10.6690	2.9929
630	B767-300	8.4806	6.9993	8.9720	19.8886	10.4653	7.4806	10.4176	0.7324
1000	B767-300	8.2995	4.2789	8.7534	19.0758	10.0247	8.1128	9.7522	1.4615
2000	B767-300	8.0838	-1.0017	8.3520	17.7868	9.3293	8.9418	9.0367	0.0205
4000	B767-300	7.8110	-6.9782	7.9726	15.2082	8.6251	9.7041	8.4627	-1.4331
6300	B767-300	7.6512	-11.9236	7.7429	12.4478	8.4680	7.2214	8.3645	-7.1489
10000	B767-300	7.4668	-17.6867	7.5154	8.6687	8.6135	1.4461	8.5061	-12.7767
16000	B767-300	7.3484	-25.2718	7.5699	1.2732	9.3322	-12.1404	9.2780	-29.1754
25000	B767-300	7.6521	-37.0882	8.1062	-10.8504	11.6056	-42.8317	10.9200	-55.3719
200	B777-300GE90	8.5521	17.7907	8.6799	28.4045	9.9617	18.4321	9.7496	19.0077
400	B777-300GE90	8.2486	14.8772	8.4024	27.8263	9.4028	19.5888	8.9033	19.9516
630	B777-300GE90	8.0370	12.7483	8.1908	27.4975	9.1375	19.1650	8.5523	18.4885
1000	B777-300GE90	7.7635	10.8549	7.9173	27.3041	8.7102	19.9224	8.1910	16.9953
2000	B777-300GE90	7.3981	6.8769	7.5919	25.6401	8.0851	20.7319	7.6359	14.5389
4000	B777-300GE90	7.0328	1.7989	7.1606	23.8128	7.5657	20.4070	7.3941	10.0921
6300	B777-300GE90	6.7952	-2.3652	6.7952	22.4348	7.2881	19.3288	7.1165	6.0140
10000	B777-300GE90	6.3460	-5.6583	6.4038	20.3214	7.1003	16.8748	6.8090	4.5157
16000	B777-300GE90	5.9847	-10.9515	5.9847	17.2485	7.1321	9.9192	6.7667	-4.2588
25000	B777-300GE90	5.6015	-16.6952	5.5974	13.2200	7.1920	-0.4790	6.8291	-15.9987

Distance (feet)	Metric Aircraft	L max (dBA) m	b	SEL (dBA) m	b	EPNL (dB) m	b	PNLMX (dB) m	b
200	B777-300PW4098	9.0769	12.1292	9.4504	21.5768	11.1851	8.1844	10.3928	11.9617
400	B777-300PW4098	8.6578	10.1562	9.1069	21.4493	10.7497	8.0723	9.8899	10.1737
630	B777-300PW4098	8.4821	7.7566	8.8653	21.2003	10.2509	9.5691	9.6864	7.6144
1000	B777-300PW4098	8.1386	6.4291	8.5999	20.8765	9.7139	11.0762	9.0475	8.3430
2000	B777-300PW4098	7.8073	2.1560	8.1686	19.9492	8.9035	13.0900	8.4365	6.0312
4000	B777-300PW4098	7.5079	-3.5727	7.7195	18.0561	8.0867	14.9585	7.8751	4.5296
6300	B777-300PW4098	7.1725	-6.9306	7.3541	16.5781	7.7791	13.9602	7.5594	0.6617
10000	B777-300PW4098	6.8471	-11.3946	6.9709	14.2344	7.6694	10.5098	7.4700	-2.8646
16000	B777-300PW4098	6.5199	-17.0830	6.5558	10.9463	7.9013	1.3627	7.7060	-14.4270
25000	B777-300PW4098	6.2108	-23.6078	6.4005	4.6706	8.7303	-16.2514	8.0937	-29.1623
200	CRJ900	11.3208	0.2761	11.5817	9.6406	13.2151	-0.1457	12.8911	1.5988
400	CRJ900	10.9248	-2.9157	11.1416	9.4114	12.8901	-1.6191	12.6314	-3.0250
630	CRJ900	10.6086	-4.9312	10.7831	9.4447	12.6493	-2.7120	12.4083	-6.0163
1000	CRJ900	10.2254	-6.8582	10.4509	8.9266	12.3595	-3.8170	12.1695	-9.3620
2000	CRJ900	9.7632	-11.3683	9.9469	7.4247	11.9172	-6.4420	11.5363	-13.1870
4000	CRJ900	9.2695	-16.8247	9.6014	3.5834	11.7141	-11.7614	10.6694	-15.4847
6300	CRJ900	9.0515	-22.0043	9.4792	-0.4559	11.8696	-18.1273	10.8750	-24.7220
10000	CRJ900	8.9553	-28.9925	9.5856	-7.0208	12.7715	-30.6481	11.4941	-35.2761
16000	CRJ900	9.1400	-38.9577	9.9983	-16.6192	14.8277	-54.9100	13.6408	-63.1937
25000	CRJ900	9.6007	-51.1865	10.7852	-29.1468	17.0271	-84.1934	15.9572	-94.9860

C.5. Empirically Derived Taxi Noise Values and Assumed Thrust

Table C-1. Empirically Derived SEL Taxi Noise Summary

Madrid and IAD SEL Taxi Summary

Aircraft	200	400	630	1000	2000	4000	6300	10000	16000	25000	MTOW	Tot Fn/delta/2	Data Source
	Distance (Feet)												
CRJ900	93.4	89.7	87.0	84.0	78.9	72.9	68.5	63.7	58.9	54.9	36000	271	Wyle
CRJ-100,200	93.5	89.6	86.7	83.4	77.6	71.1	66.8	62.4	58.0	53.7	43100	324	Madrid
MD82	96.6	92.9	90.1	87.0	81.6	75.4	71.0	66.7	62.4	58.4	149500	1106	Madrid
MD83	97.1	93.1	90.1	86.6	80.4	73.5	69.2	65.3	61.5	57.7	160000	1182	Madrid
MD87	95.2	91.3	88.5	85.2	79.7	73.3	68.8	64.2	59.7	55.4	160000	1182	Madrid
MD88	95.7	91.7	88.7	85.4	79.6	72.9	68.1	63.3	58.6	54.2	160000	1182	Madrid
B717	96.8	92.8	89.7	86.0	79.5	72.6	68.2	64.0	59.7	55.3	121000	899	Madrid
A310-300	97.1	93.3	90.5	87.5	82.7	77.6	74.1	70.2	65.8	60.8	346100	2491	Madrid
A319	94.1	90.5	87.8	84.8	79.6	73.7	69.6	65.5	61.4	57.4	166400	1229	Madrid
A320	93.8	90.2	87.4	84.3	79.0	72.9	68.7	64.5	60.3	56.3	170900	1261	Madrid
A321	93.9	90.0	87.2	83.9	78.5	72.8	69.0	65.2	61.4	57.7	206100	1513	Madrid
B737-300,400,500	99.5	96.0	93.4	90.5	85.3	79.2	74.7	70.1	65.6	61.3	139500	1034	Madrid
B737-700,800	94.9	91.2	88.4	85.2	79.8	73.7	69.5	65.3	61.1	57.2	207100	1520	Madrid
B757-200	100.8	95.9	92.1	87.7	80.3	72.8	68.4	64.4	60.6	57.0	255000	1859	Madrid
B767-200,300	98.4	94.7	92.0	89.1	84.3	79.3	75.7	71.7	67.1	62.3	361250	2594	Madrid
A340-300	97.9	94.4	91.8	88.8	83.6	77.7	73.6	69.4	65.1	61.1	573200	3989	Madrid
B777-300 - GE90	96.1	92.8	90.5	88.1	84.1	79.3	75.7	71.4	66.1	59.6	660000	4533	Wyle@IAD
B747-400	102.7	98.9	96.0	92.7	87.0	80.9	76.8	72.6	68.0	63.4	875000	5814	Madrid

Table C-2. Empirically Derived LmaxA Taxi Noise Summary

Madrid and IAD LmaxA Taxi Summary

	Distance (Feet)												
Aircraft	200	400	630	1000	2000	4000	6300	10000	16000	25000	MTOW	Tot Fn/delta	Data Sourc
CRJ900	79.2	72.7	68.3	63.5	55.8	47.5	41.4	34.8	27.7	21.0	36000	271	Wyle
CRJ-100,200	79.5	72.6	68.0	63.0	54.9	46.0	39.8	33.5	27.0	20.7	43100	324	Madrid
MD82	85.4	78.9	74.4	69.4	61.2	51.8	45.2	38.5	32.0	26.0	149500	1106	Madrid
MD83	83.1	76.3	71.5	66.1	57.3	48.2	42.2	36.2	30.2	24.4	160000	1182	Madrid
MD87	82.7	75.7	71.0	66.1	58.2	49.1	42.6	35.7	28.7	22.4	160000	1182	Madrid
MD88	83.0	75.6	70.6	65.5	57.4	48.3	41.5	34.4	27.2	20.7	160000	1182	Madrid
B717	84.6	77.8	72.9	67.3	57.6	46.7	39.6	33.1	26.9	20.8	121000	899	Madrid
A310-300	83.7	76.9	72.4	67.8	60.9	53.6	48.4	42.7	36.4	29.6	346100	2491	Madrid
A319	80.2	74.1	69.8	65.1	57.5	48.9	42.9	36.8	30.7	25.0	166400	1229	Madrid
A320	80.3	73.7	68.9	63.9	56.2	47.5	41.4	35.2	29.0	23.2	170900	1261	Madrid
A321	81.1	74.2	69.2	63.8	55.8	47.5	41.9	36.1	30.3	24.8	206100	1513	Madrid
B737-300,400,500	88.4	82.2	77.8	73.0	65.0	55.8	49.1	42.1	35.3	29.0	139500	1034	Madrid
B737-700,800	83.0	76.1	71.1	65.6	57.2	48.6	42.6	36.5	30.4	24.6	207100	1520	Madrid
B757-200	88.5	80.9	75.3	69.0	58.4	47.0	40.9	34.8	29.0	23.6	255000	1859	Madrid
B767-200,300	86.0	79.2	74.4	69.0	62.5	55.2	49.9	44.1	37.5	30.7	361250	2594	Madrid
A340-300	85.1	78.6	73.9	68.7	61.5	53.5	47.6	41.3	34.8	28.5	573200	3989	Madrid
B777-300 - GE90	85.0	79.4	75.6	71.6	65.1	57.7	52.2	46.0	38.8	30.5	660000	4533	Wyle@IAD
B747-400	90.7	83.8	78.8	73.3	66.1	58.1	52.5	46.4	39.8	33.0	875000	5814	Madrid

Table C-3. Empirically Derived EPNL Taxi Noise Summary

Madrid and IAD EPNL Taxi Summary

	Distance (Feet)												
Aircraft	200	400	630	1000	2000	4000	6300	10000	16000	25000	MTOW	Tot Fn/delta	Data Source
CRJ900	97.9	93.6	90.3	86.5	80.3	74.0	69.3	64.0	61.0	63.2	36000	271	Wyle
CRJ-100,200	98.1	93.8	90.4	86.3	79.2	71.5	66.8	60.7	54.3	43.4	43100	324	Madrid
MD82	100.9	96.8	93.6	89.8	83.2	76.2	72.1	66.4	61.6	53.0	149500	1106	Madrid
MD83	101.7	97.5	94.3	90.4	83.3	75.5	70.6	65.4	59.9	51.6	160000	1182	Madrid
MD87	99.9	95.3	91.8	87.8	81.2	73.8	69.2	63.2	56.6	47.3	160000	1182	Madrid
MD88	100.2	95.7	92.1	88.0	81.3	73.6	68.5	62.2	54.6	45.1	160000	1182	Madrid
B717	101.5	97.2	93.8	89.7	82.3	74.0	68.9	63.3	56.6	46.6	121000	899	Madrid
A310-300	102.8	98.3	94.8	90.9	85.2	79.2	75.4	70.8	66.8	58.9	346100	2491	Madrid
A319	99.1	94.6	91.1	87.2	81.1	74.4	70.0	64.7	60.3	51.8	166400	1229	Madrid
A320	98.6	94.2	90.8	86.9	80.5	73.8	69.0	63.2	58.1	49.2	170900	1261	Madrid
A321	99.5	95.0	91.4	87.4	80.5	74.0	69.9	64.7	60.3	52.2	206100	1513	Madrid
B737-300,400,500	103.6	99.4	96.1	92.4	86.1	79.7	75.9	70.9	66.2	58.1	139500	1034	Madrid
B737-700,800	99.5	95.2	91.8	88.0	81.4	74.5	70.1	64.6	59.6	50.9	207100	1520	Madrid
B757-200	106.4	101.8	98.1	93.6	85.0	74.8	69.6	63.8	58.7	50.3	255000	1859	Madrid
B767-200,300	103.4	99.0	95.9	92.3	86.3	80.6	77.1	72.6	68.7	60.6	361250	2594	Madrid
A340-300	102.2	98.0	94.7	91.2	85.1	78.8	75.0	70.2	66.2	58.5	573200	3989	Madrid
B777-300 - GE90	100.4	96.7	94.2	91.5	87.0	81.3	77.4	72.6	68.7	60.6	660000	4533	Wyle@IAD
B747-400	107.5	103.6	100.5	96.8	90.2	82.8	78.8	74.0	70.4	62.7	875000	5814	Madrid

Table C-4. Empirically Derived PNLTm Taxi Noise Summary

Madrid and IAD PNLTmax Taxi Summary

Aircraft	Distance (Feet) 200	400	630	1000	2000	4000	6300	10000	16000	25000	MTOW	Tot Fn/delta	Data Source
CRJ900	79.2	72.7	68.3	63.5	55.8	47.5	41.4	34.8	27.7	21.0	36000	271	Wyle
CRJ-100,200	94.6	87.4	82.4	76.7	66.8	57.0	51.8	42.9	36.3	22.6	43100	324	Madrid
MD82	99.3	92.5	87.5	81.9	72.9	62.6	57.7	48.5	42.5	32.5	149500	1106	Madrid
MD83	98.6	91.2	86.0	80.4	71.1	60.7	54.3	49.2	40.0	29.6	160000	1182	Madrid
MD87	98.7	90.7	84.6	78.6	69.5	59.7	54.0	46.8	37.2	26.2	160000	1182	Madrid
MD88	98.6	90.5	84.4	77.8	68.5	59.4	52.8	46.0	34.6	23.5	160000	1182	Madrid
B717	99.7	92.9	87.9	82.0	71.6	58.6	51.7	44.3	35.1	23.9	121000	899	Madrid
A310-300	100.7	93.2	87.5	81.7	73.9	65.3	60.8	53.8	48.8	39.5	346100	2491	Madrid
A319	95.6	88.6	83.5	78.0	69.2	59.7	55.1	47.1	41.5	31.6	166400	1229	Madrid
A320	95.6	88.5	82.7	77.0	68.2	58.4	52.7	44.4	38.6	28.1	170900	1261	Madrid
A321	96.7	89.1	83.9	77.8	68.1	58.9	54.3	46.5	41.1	31.5	206100	1513	Madrid
B737-300,400,500	102.4	95.5	90.5	85.1	76.2	65.9	61.3	53.0	46.8	37.6	139500	1034	Madrid
B737-700,800	97.6	90.8	85.6	79.2	69.1	59.6	54.6	46.5	40.8	30.5	207100	1520	Madrid
B757-200	103.9	96.6	91.1	84.9	73.8	59.4	53.1	44.7	38.8	28.8	255000	1859	Madrid
B767-200,300	101.6	94.0	89.0	83.2	74.6	66.4	62.4	55.3	50.3	40.6	361250	2594	Madrid
A340-300	99.6	92.4	87.1	81.6	73.8	65.0	60.2	52.4	47.1	37.8	573200	3989	Madrid
B777-300 - GE90	99.8	93.9	90.0	85.7	78.5	70.1	65.0	57.6	52.6	42.5	660000	4533	Wyle@IAD
B747-400	105.4	98.7	94.0	88.7	79.7	70.7	65.9	58.5	53.6	44.1	875000	5814	Madrid

APPENDIX D. GROUND VORTEX INGESTION

D.1. Narrow Band Analysis of Taxiing Aircraft Noise Data to Identify Ground Vortex Ingestion

In order to determine the sensitivity of noise emissions versus the operating state of an aircraft that is taxiing the measurements made on taxiway E at IAD in July 2010 were utilized. A description of the measurement setup is provided in Appendix B. In order to determine what the operating state of the engine was for the aircraft that taxied by the microphones, a narrow-band analysis was performed on the recorded signal during a taxi operation. Figure D 1 shows a comparison of the power spectral density for an A319 event compared to the ambient.

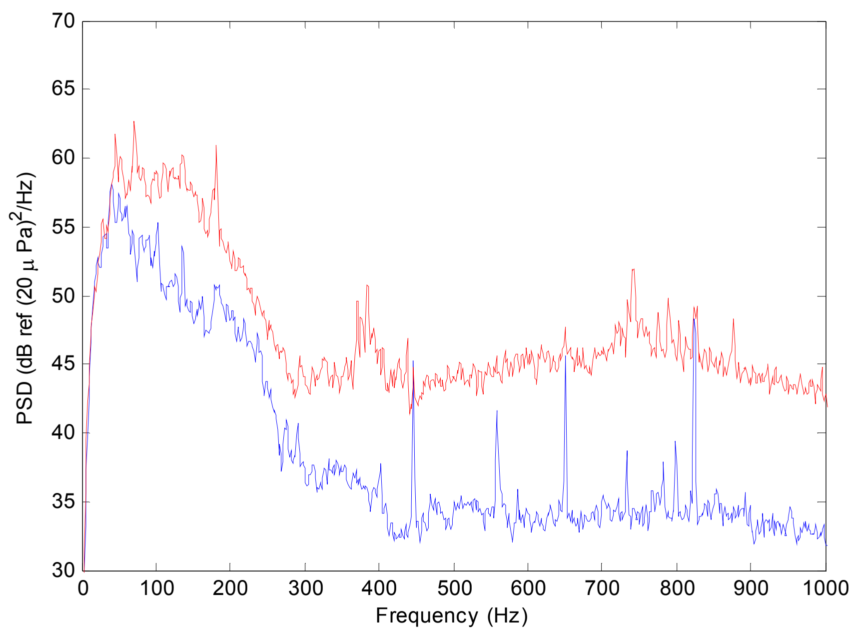

FIGURE D-1 Power spectral density of A319 Passby (red) and ambient (blue).

Information was found for the V2522-A5 engine as part of a Type Certificate Sheet E40NE indicating that the maximum permissible engine operating speeds for the low pressure rotor (N1) is 5650 rpm. The previous ACRP Taxi study conducted by Wyle indicated that the A319s in that study had an average of 19.42 % N1 while taxiing. This, combined with the fact that the engine's main fan has 22 blades leads one to believe that the fan noise should be around 402 Hz. As can be seen in Figure D-1, there is a noticeable peak around that frequency; however, it is broad. By considering the evolution of the spectral density with time using the spectrogram in Figure D-2, and knowing the time the engine's cowling crosses the middle of the video image (the closest point of approach – CPA - to the sensors) one can discern the Doppler shift of this peak along with what is assumed to be the non-Doppler shifted frequency of emission for the main fan at the zero of the horizontal axis. The frequency as the engine crosses the center of the video is approximately 410 Hz.

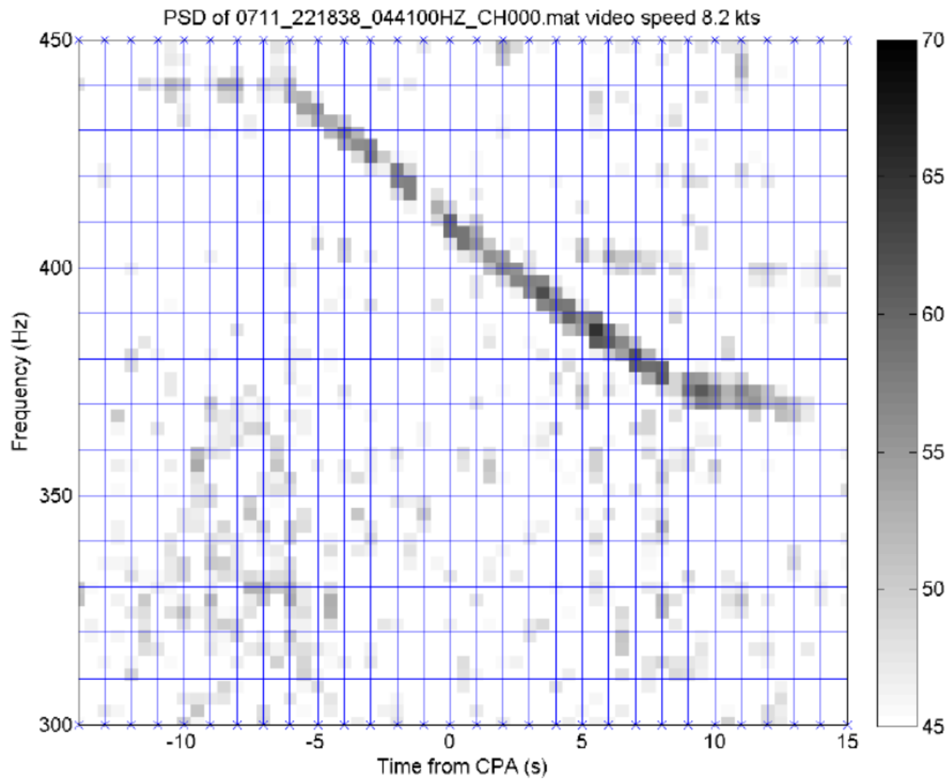

FIGURE D-2 Spectrogram of an A319 taxiing by the center sensor.

The speeds of ten A319s that passed by the center sensor location were calculated using the recorded video along with the geometry presented in Appendix B. The measured taxi speeds are presented in Table D-1 along with the frequency emitted from the main fan at the CPA gleaned using the process described above. The additional columns in Table D-1 come from using the noise source characterization of the A319 pass bys in the Advanced Acoustic Model (AAM) as discussed below. (Note: One additional A319 data point was discarded due to an anomalously high RPM and low speed.)

TABLE D-1 Measured Taxi Speeds of A319 Pass Bys

Taxi Speed (knots)	Main Fan Freq. at CPA (Hz)	Average Band 26 (dB)	Lmax (dBA)	SEL (dB)	SEL (dBC)	SEL (dBA)
16.9	367	45.9	79	95	95	91
10.5	370	45.3	78	94	94	89
15.3	377	50.0	81	96	95	92
13.4	372	50.7	84	97	96	94
14.4	367	51.2	81	97	96	93
17.8	375	50.9	81	96	96	93
19.0	397	51.3	83	98	98	94
18.2	372	54.9	83	98	98	95
17.6	367	49.8	84	98	97	94
27.3	362	48.4	82	97	97	94

By using the meteorological data and the taxi speeds, the A319s can be characterized as free-field noise sources using the Acoustic Repropagation Technique (ART). The resulting characterizations can then be used in AAM to simulate taxi pass bys at the same speed and atmospheric conditions. Figure D-3 shows the one-third octave band centered on 400 Hz produced by ART. This represents the sound recorded by the 1.5m high microphone at the center sensor position with atmospheric absorption negated and propagation effects removed except for spherical spreading to 1000 feet radius. Because it is not known which of the two engines may be operating during the taxi pass by, the source is assumed to be at 5.5 feet above the ground. Also shown in Figure D-3 is the average level for the 20 to 160 degree span.

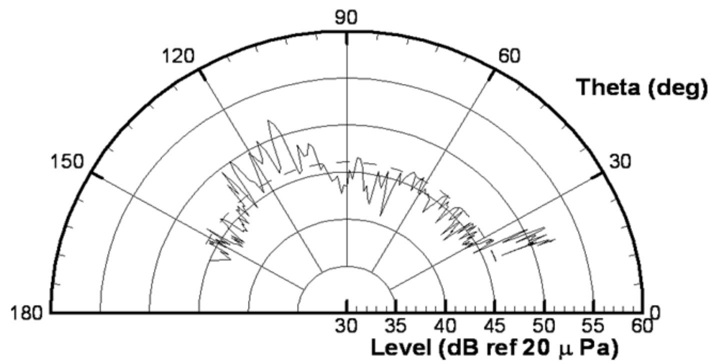

FIGURE D-3 Band 26 (400 Hz one-third octave band) directivity pattern for A319 pass by 20 to 160 degree angle measured from the noise. Dashed = average level.

Band 26 was chosen because the majority of the fan noise seen in the power spectral density was at frequencies within the limits of that one-third octave band. The sound exposure level (SEL) for the pass by event as simulated in AAM using standard atmospheric conditions and an 18 knot taxi speed 160' from a 5' (1.5m) receiver can be seen in Table D-1. Figure D-4 shows a graph of the metrics versus the main-fan frequency. As the graph shows, there is a positive trend (albeit small) with the main fan's rotation rate. Examining the trend for Average Band 26 and SELA the slopes are more distinct than the other metrics (.0918 and .0615 vs. ~.04).

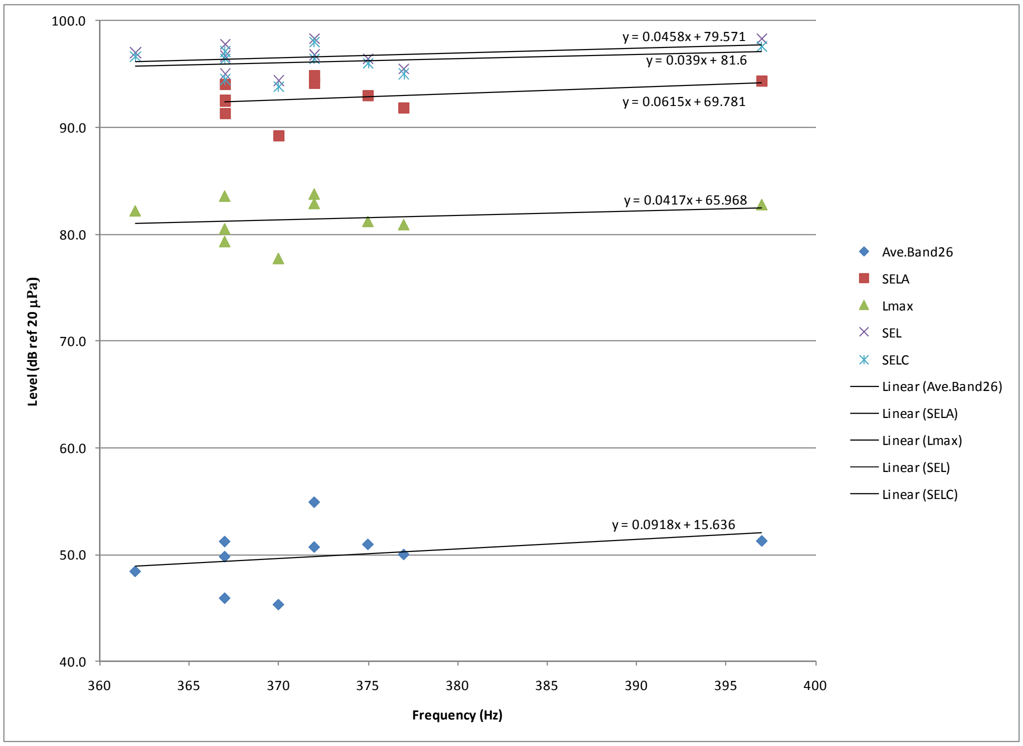

FIGURE D-4 Variation of metrics from simulated pass-bys with main fan frequency.

A positive trend can be observed between the measured speed of the aircraft and the metrics from the simulation. Because the simulation includes all the noise produced by the aircraft, it is more inclusive and does not rely upon any particular noise source on the aircraft. As can be seen in Figure D-5 there is a noticeable trend between the integrated metrics and the speed at which the A319 was traveling when it was characterized. A linear trend line is shown for the A-weighted SEL calculated from the simulated pass bys. Also of note is that the averaged levels for Band 26 (400 Hz one-third octave band) show a similar trend line to that of the A-weighted SEL.

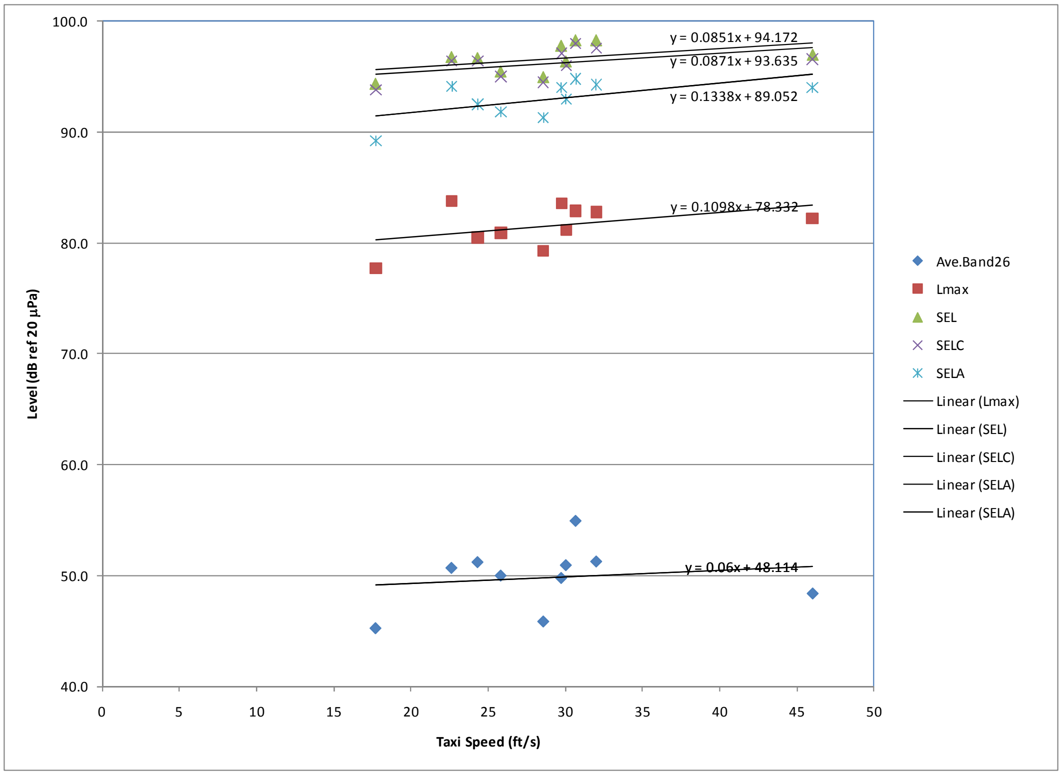

FIGURE D-5 Variation of metrics from simulated pass bys with measured taxi speed.

In conclusion, the evidence does support the variation of noise levels with the fan RPM and with the speed of the taxiing aircraft. There is agreement with the %N1 found in a previous study for the A319 and the consistent appearances of something near the equivalent frequency in the power spectral density.

D.2. Interpretation of Taxi Condition Inflow Distortion Effects

Narrowband spectra from ground taxi tests were examined in an attempt to identify fan tones and frequencies. Most of these PSD spectra show a strong fan blade passing frequency (BPF), occurring at the frequency corresponding to about 20% of takeoff fan speed. During a taxi pass-by, it is not known whether one or both engines were running, or if one engine was at idle, and whether the pilot had changed throttle during the taxi pass-by, so it is difficult to determine precisely the BPF frequency from the measurements.

However, the majority of the data examined suggests a strong BPF tone present. If, in fact, the fan on the engine being measured follows accepted design practice for acoustics, then the BPF tone should be totally cut-off or non-propagating at these low taxi fan speeds. When operating at design conditions, without any inflow distortion, these fan tones should not propagate in the forward direction. Since the BPF is present in the data, it suggests that inflow distortion of some kind is present, and most likely is caused by ground vortex ingestion.

Further, it is also likely that, at very low fan speeds, say ~20% of takeoff speed, that even the second harmonic of fan tone rotor stator interaction noise is cut off or non-propagating. Again considering the difficulty of pin-pointing BPF exactly from the measured PSD spectra, there seems to be evidence of strong 2BPF in some of the pass-bys measured, especially when the aircraft is approaching the microphone or at the point of closest approach. As the aircraft approaches the microphone, the forward propagating direction is the only place one is likely to measure strong fan tones, and these are likely caused by distortion.

These observations suggest that inflow distortion, probably due to ground vortex ingestion, is most always present during taxi maneuvers. Therefore, when attempting to model taxi noise using the ANOPP methodology, it is suggested that the inflow distortion module be turned on in the Fan Noise component.

D.3. ANOPP Inflow Distortion Model

The Inflow distortion models in ANOPP (Version L28V3, October 2010) do not have a factor which reflects the magnitude or azimuthal extent of the inflow distortion, being only a function of the fan geometric and operating parameters. The Heidmann method and the Small Fan method both compute inflow distortion tones as a separate source, and this source is added to the inlet tones produced by rotor-stator interaction. The Large fan method computes inlet tones assuming that inflow distortion is present, and then applies a "clean-up" effect to these tones which varies with tone BPF harmonic number, directivity angle, and whether the aircraft conditions represent a takeoff condition or an approach condition.

It is difficult to know what the inflow distortion characteristics (e.g., magnitude, azimuthal extent) are for a given aircraft and engine combination without carrying out extensive diagnostic measurements, either in scale model simulations or in a wind tunnel. Even then, actual weather conditions and airport geological and contour environment can have drastic effects on distortions ingested by the engines during a takeoff or landing maneuver.

For the aircraft taxi condition, where defining this effect may be most important, it seems possible that an important mechanism is ground vortex ingestion. The ANOPP inflow distortion models do not really address ground vortex ingestion per se, but use a generalized model which may include inflow atmospheric turbulence ingestion, inlet asymmetry static pressure distortions, fan duct pylon and strut back pressure distortions, as well as ground vortex ingestion.

The Large Fan method for inflow distortions is primarily an Atmospheric Turbulence Ingestion model, as it is derived from engine static measurements with and without an inflow control device (Turbulence Control Screen).

It is therefore suggested that an experimental program could be developed to address ground vortex ingestion. This could be carried out on an outdoor test stand, and utilize both "Ground Vortex Destroyers" and a Turbulence Control Screen, separately and together, to identify the vortex ingestion impact, and the results of this test could be used to develop an additional source model for the Fan Method of ANOPP.

APPENDIX E TAXI NOISE VERSUS THRUST COMPARISON PLOTS

A comparison of Taxi Noise as a function of thrust with Empirical, ANOPP and INM data is provided in Figures E-1 through E-25 for the 5 ANOPP aircraft types (B737, B777 GE&PW, B747, B767 and CRJ900) and for distances of 200ft, 400ft, 630ft, 1000ft and 10000ft. Further explanation of the analysis performed to create the data in these plots and an interpretation of the data itself, may be found in Chapter 4 of this report.

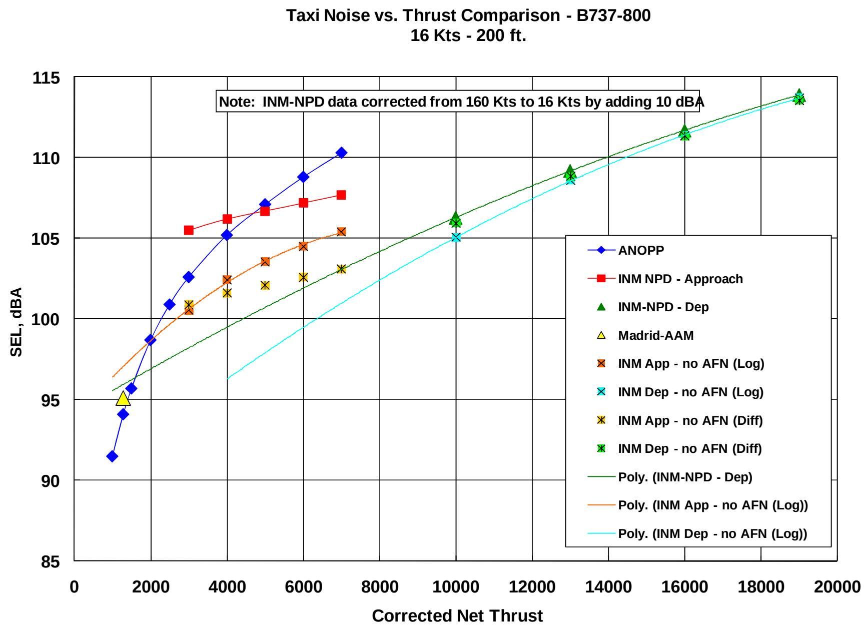

FIGURE E-1 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 200 ft distance

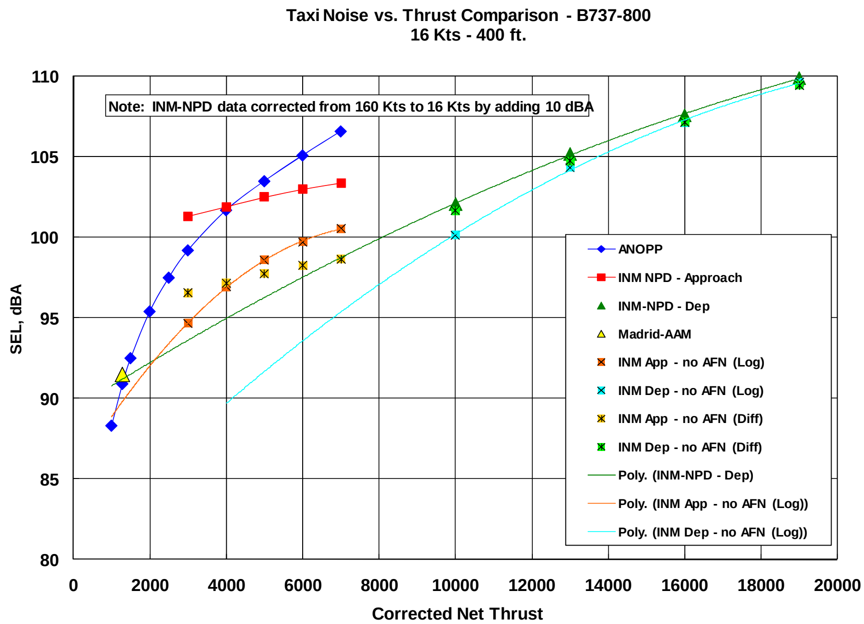

FIGURE E-2 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 400 ft. distance.

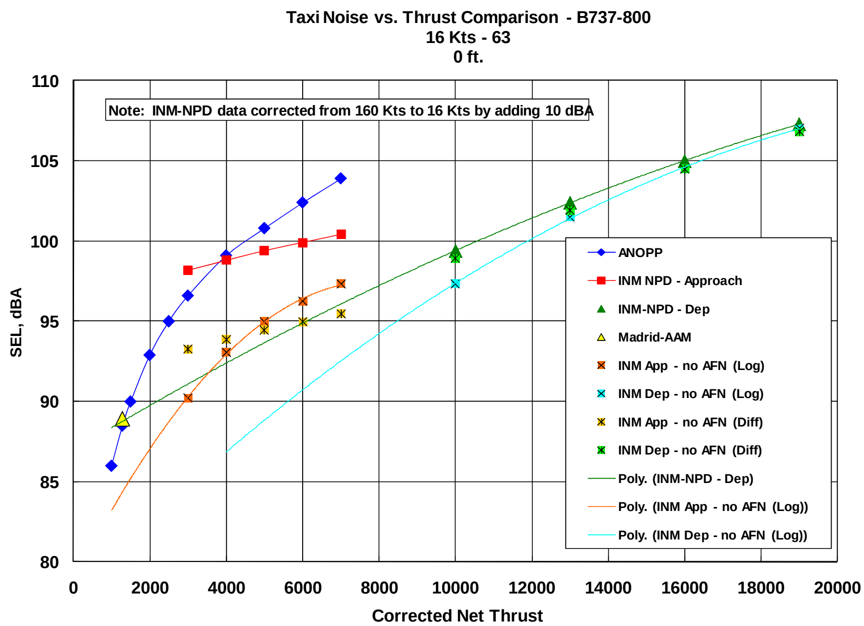

FIGURE E-3 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 630 ft. distance.

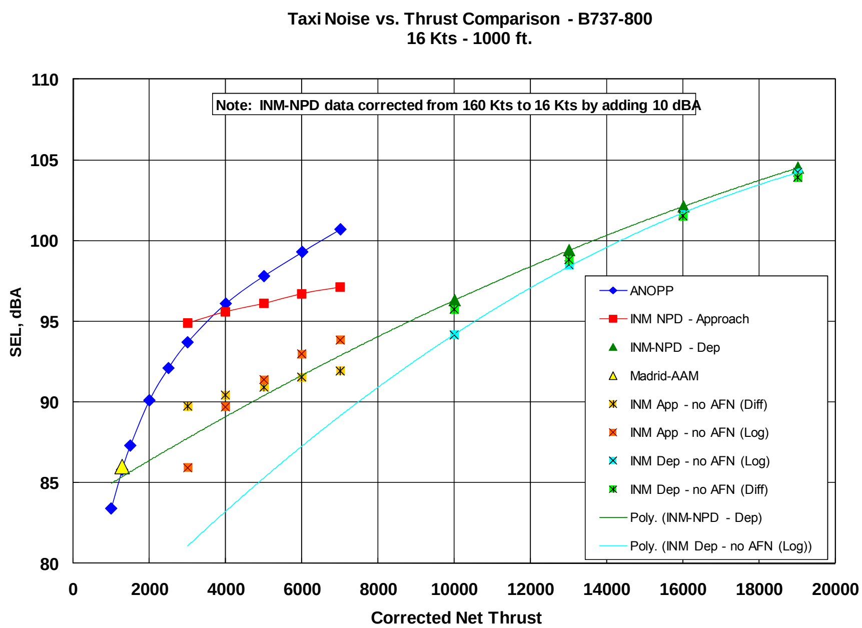

FIGURE E-4 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 1000 ft distance.

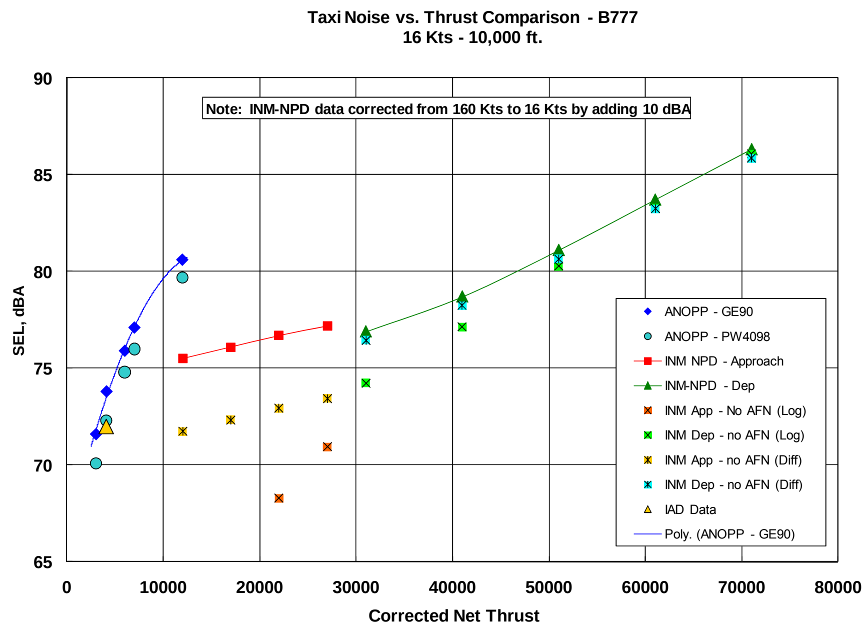

FIGURE E-5 Taxi noise vs. thrust comparison, B737-800 for 16 knots at 10000 ft. distance.

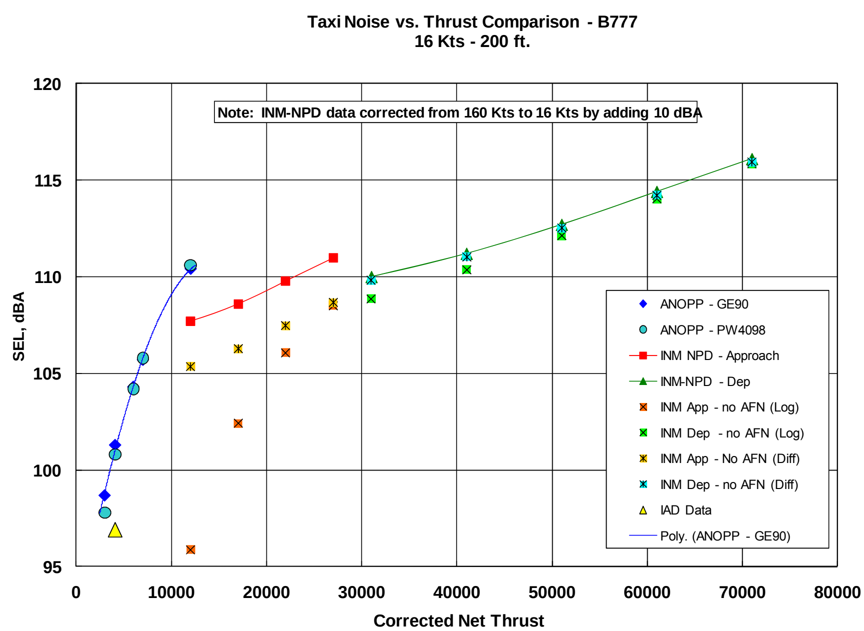

FIGURE E-6. Taxi noise vs. thrust comparison, B777-200 for 16 knots at 200 ft. distance.

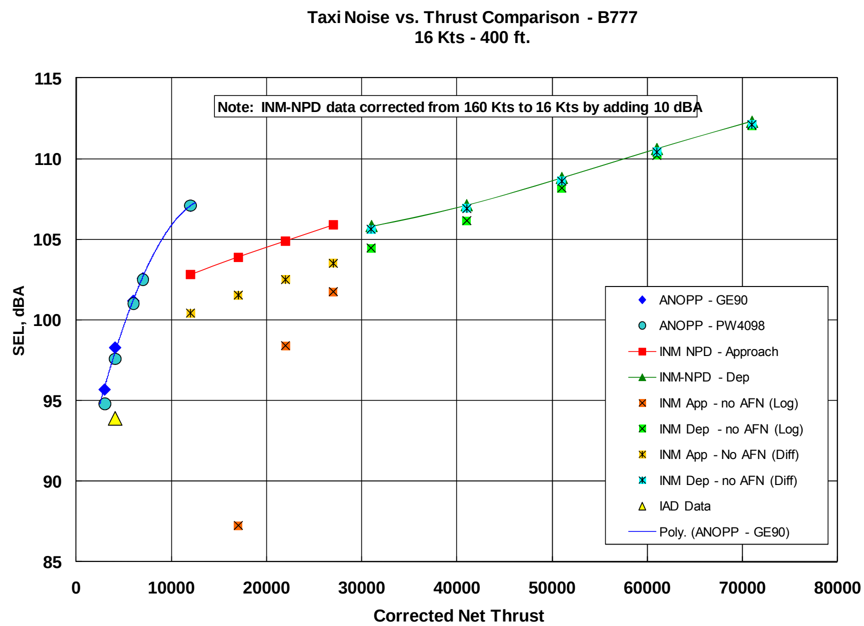

FIGURE E-7. Taxi Noise vs. Thrust Comparison, B777-200 for 16 knots at 400 Ft distance

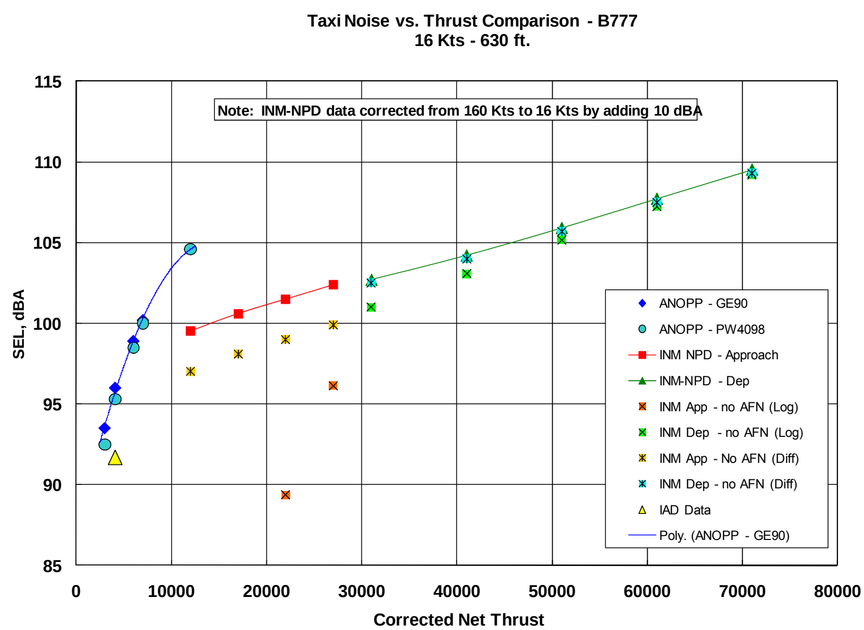

FIGURE E-8. Taxi noise vs. thrust comparison, B777-200 for 16 knots at 630 ft. distance.

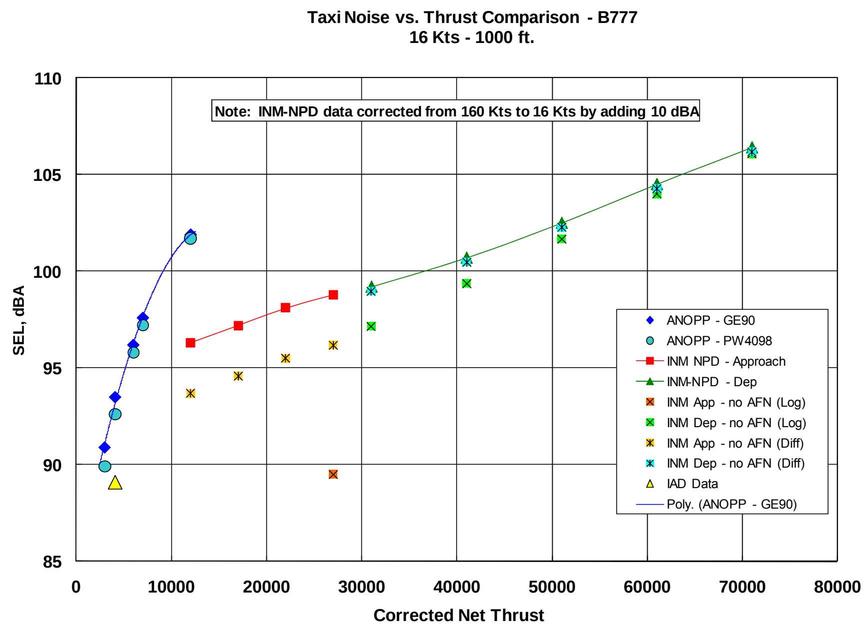

FIGURE E-9 Taxi noise vs. thrust comparison, B777-200 for 16 knots at 1000 ft distance.

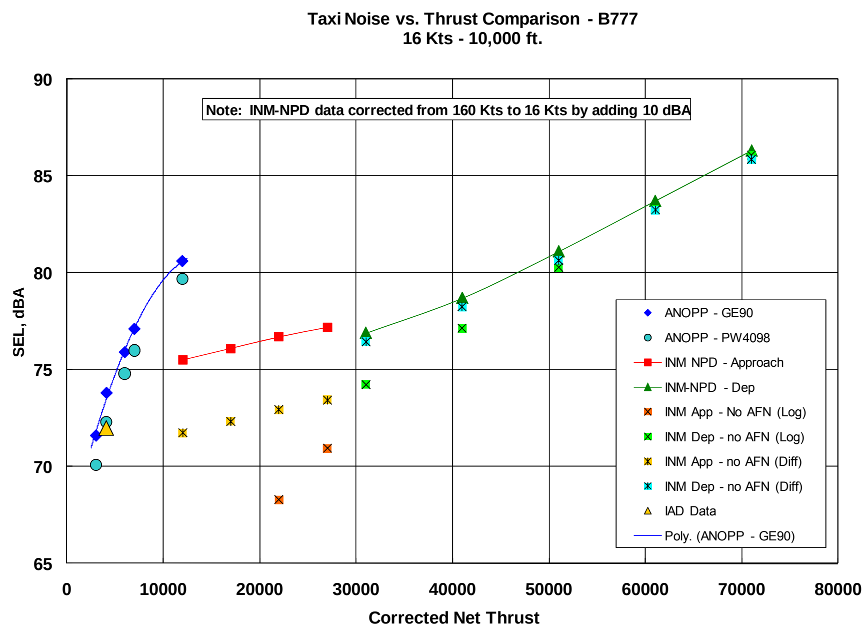

FIGURE E-10 Taxi noise vs. thrust comparison, B777-200 GE90 for 16 knots at 10000 ft. distance.

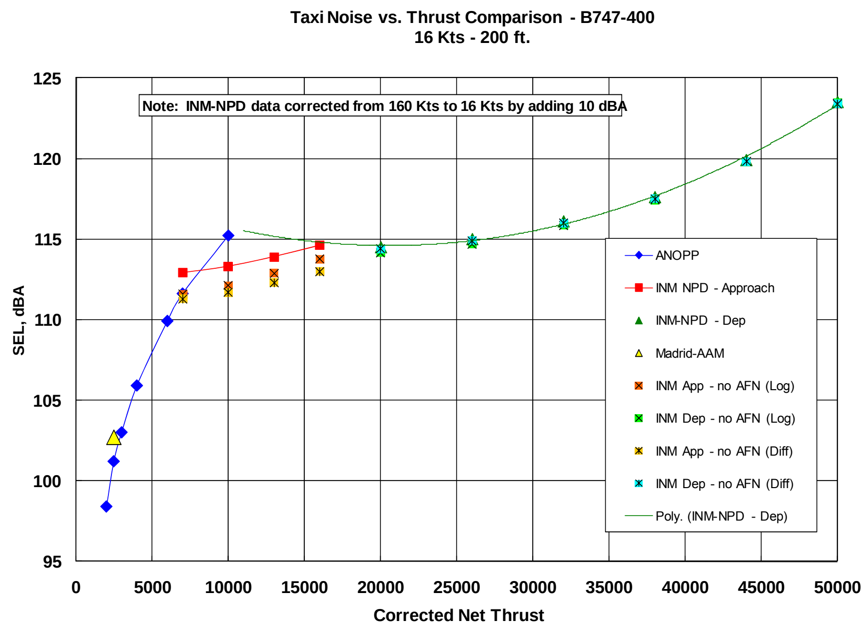

FIGURE E-11. Taxi noise vs. thrust comparison, B747-400 PW4096 for 16 knots at 200 ft. distance.

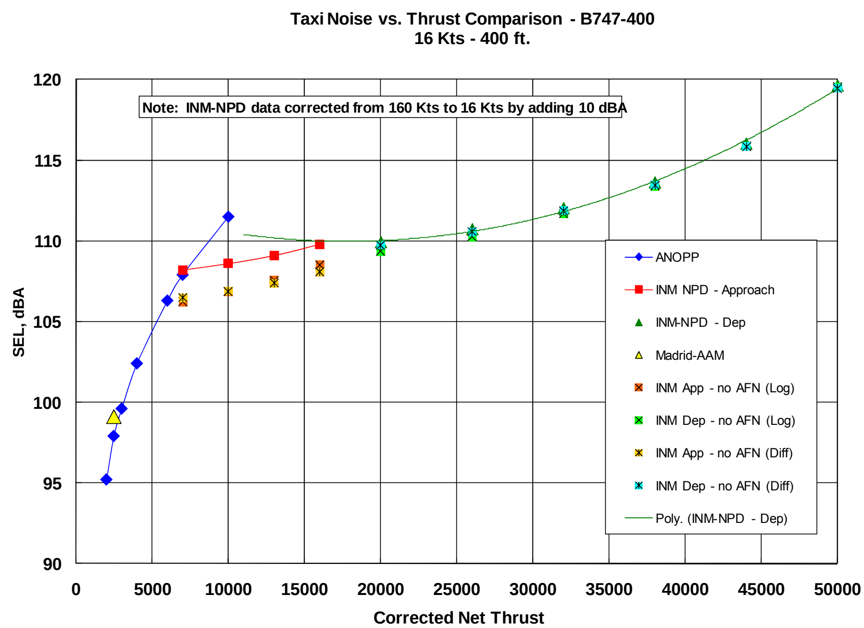

FIGURE E-12. Taxi noise vs. thrust comparison, B747-400 PW4096 for 16 knots at 400 ft. distance.

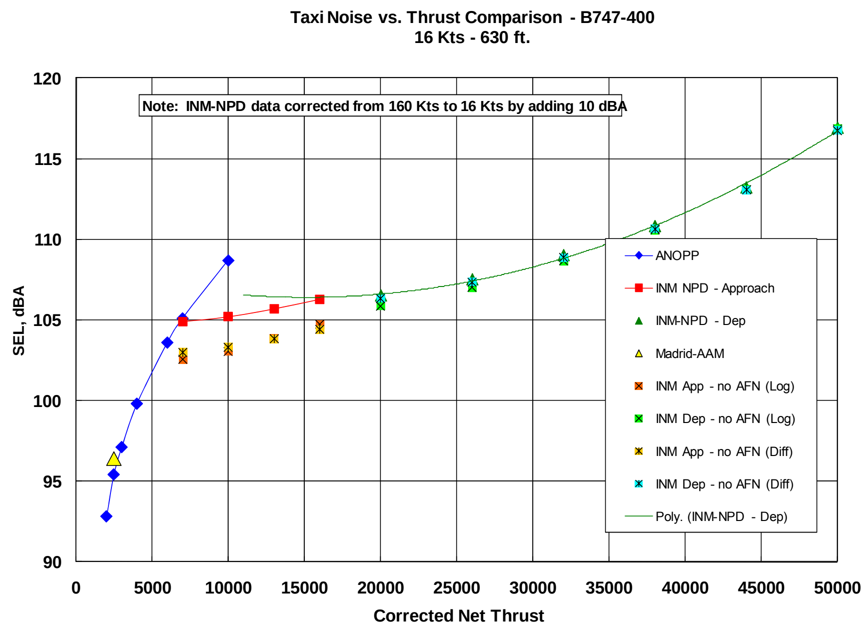

FIGURE E-13 Taxi noise vs. thrust comparison, B747-400 PW4096 for 16 knots at 630 ft. distance.

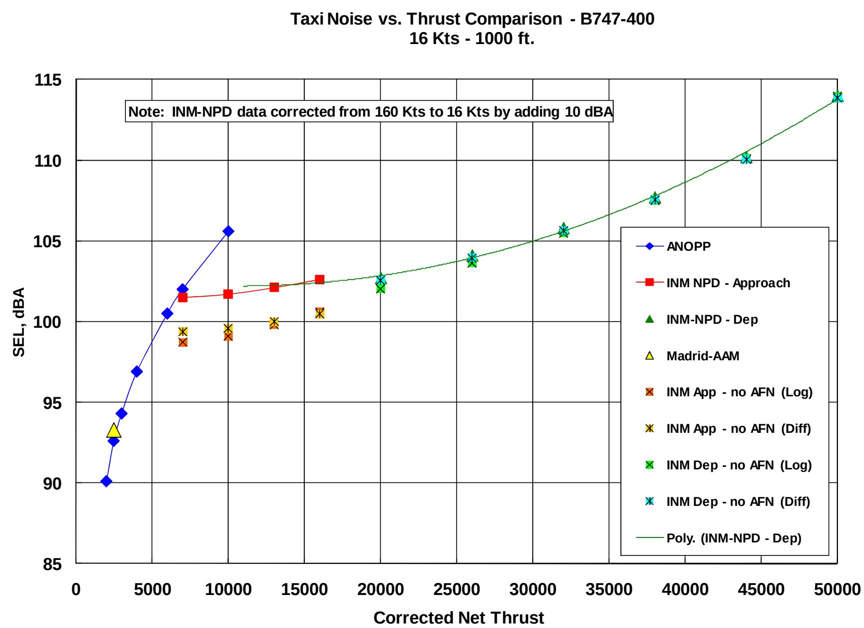

FIGURE E-14 Taxi noise vs. thrust comparison, B747-400 PW4096 for 16 knots at 1000 ft. distance.

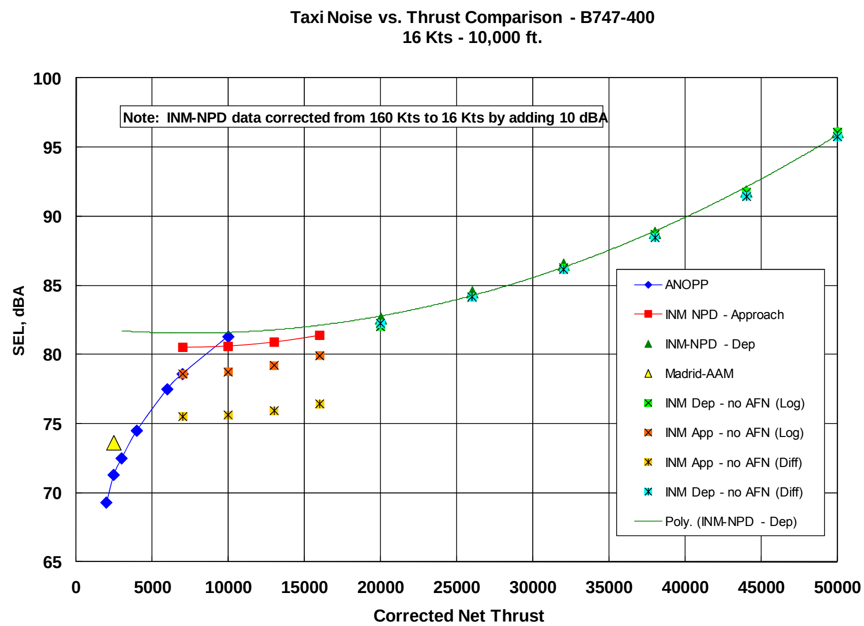

FIGURE E-15 Taxi noise vs. thrust comparison, B747-400 PW4096 for 16 knots at 10000 ft. distance.

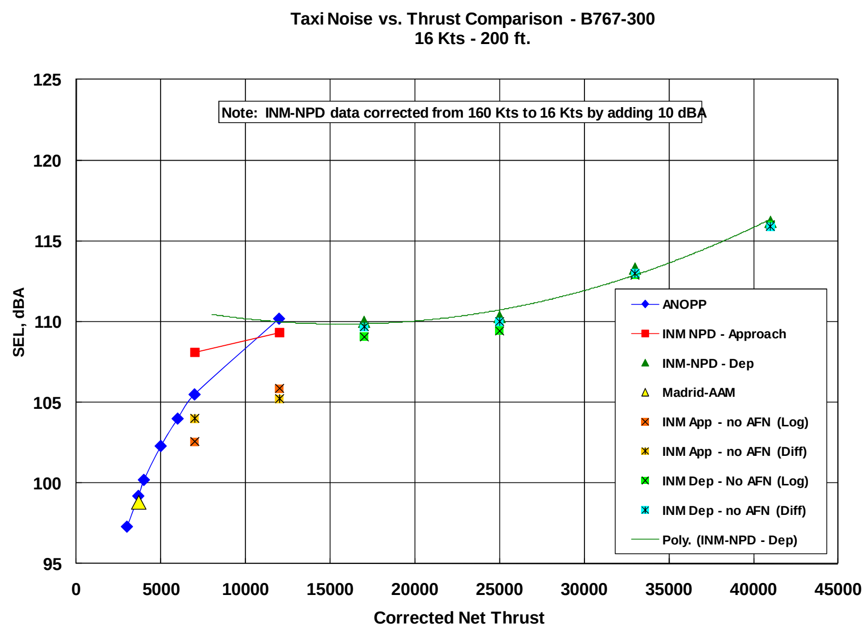

FIGURE E-16 Taxi noise vs. thrust comparison, B767-300ER for 16 knots at 200 ft distance.

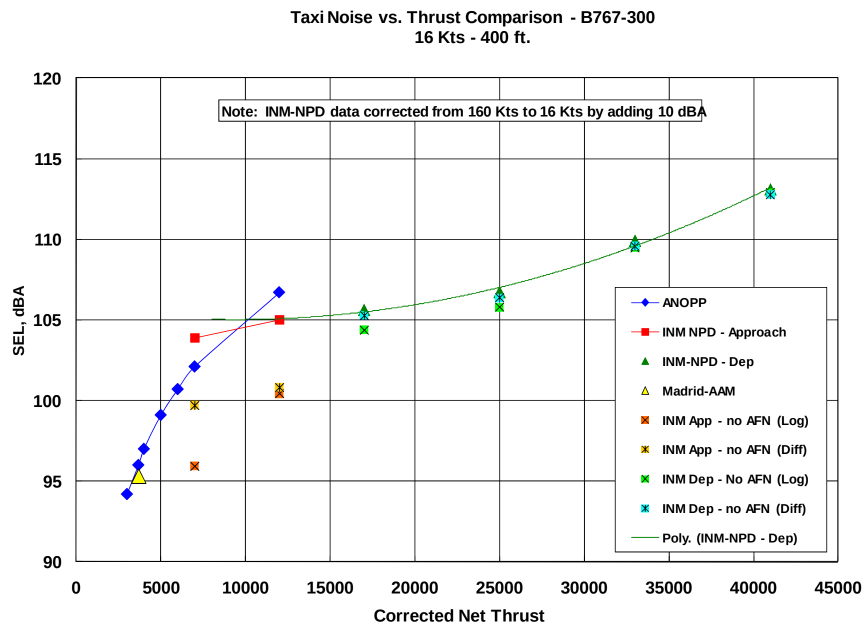

FIGURE E-17 Taxi noise vs. thrust comparison, B767-300ER for 16 knots at 400 ft distance.

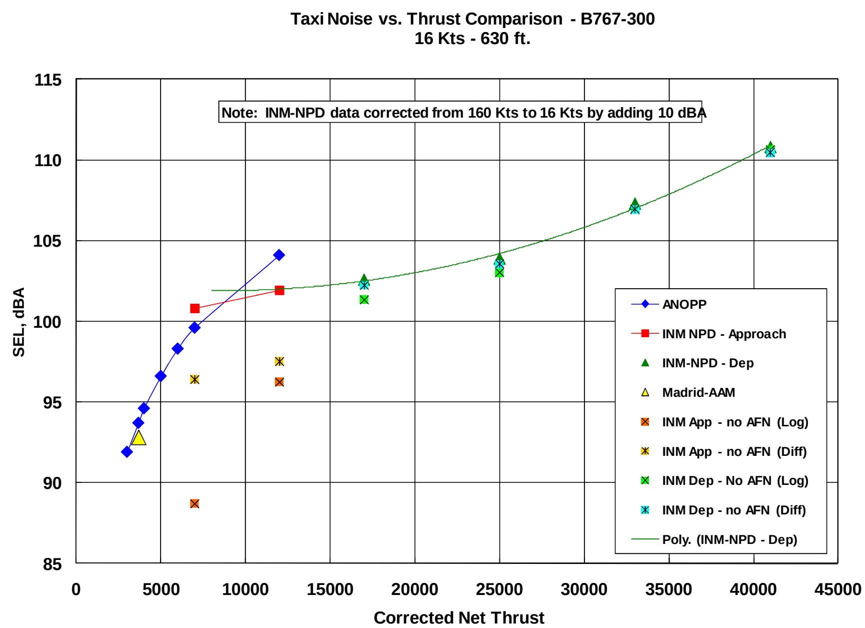

FIGURE E-18. Taxi noise vs. thrust comparison, B767-300ER for 16 knots at 630 ft. distance.

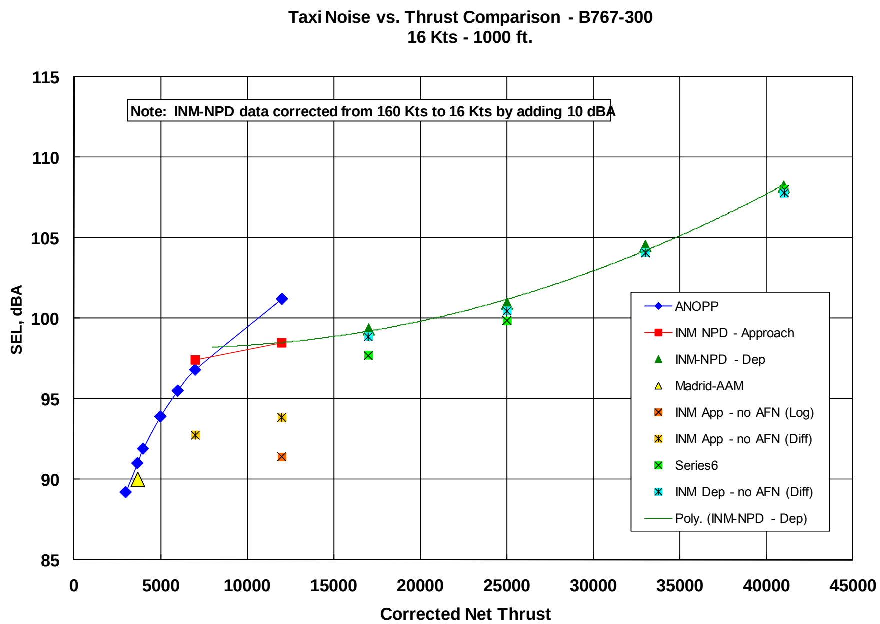

FIGURE E-19. Taxi noise vs. thrust comparison, B767-300ER for 16 knots at 1000 ft. distance.

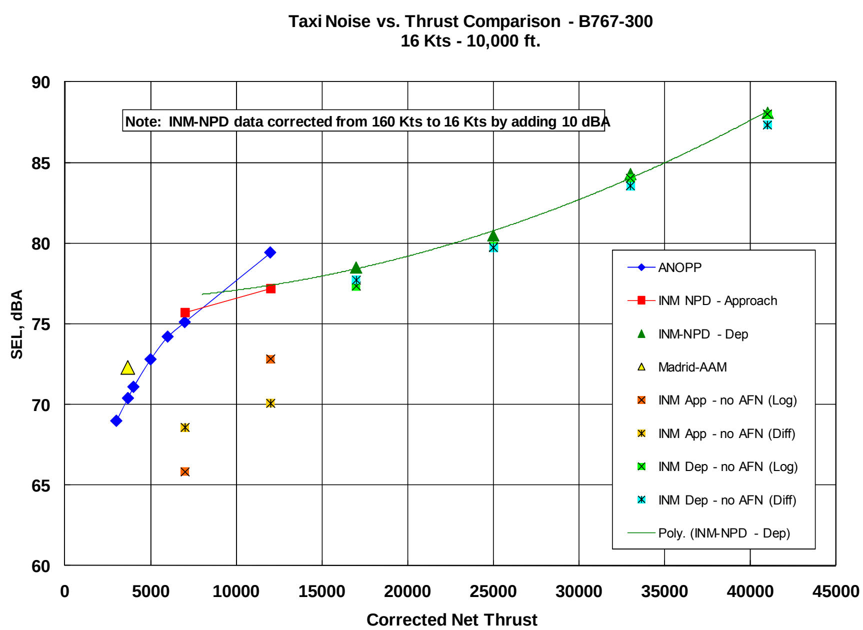

FIGURE E-20. Taxi noise vs. thrust comparison, B767-300ER for 16 knots at 10000 ft. distance.

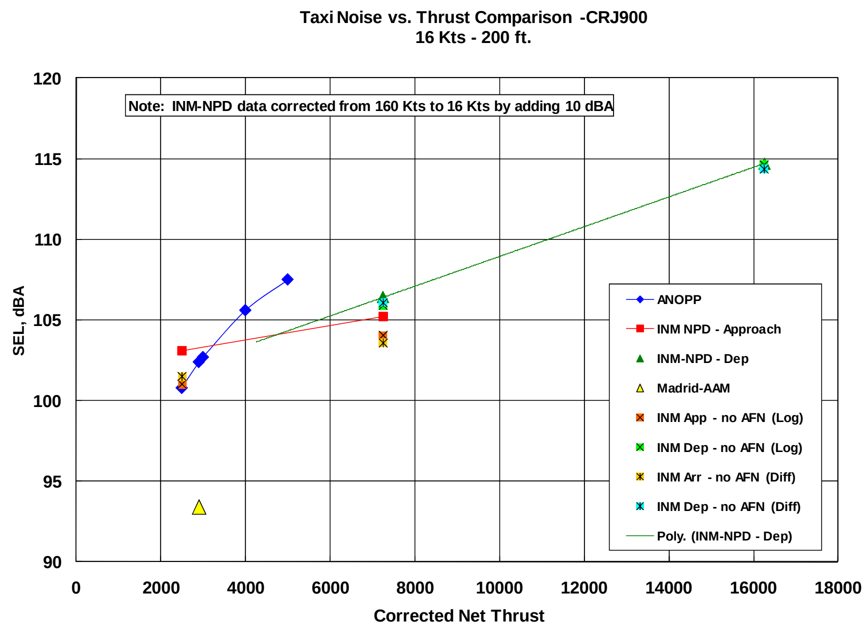

FIGURE E-21 Taxi noise vs. thrust comparison, CRJ-900 CF34-8 for 16 knots at 200 ft. distance.

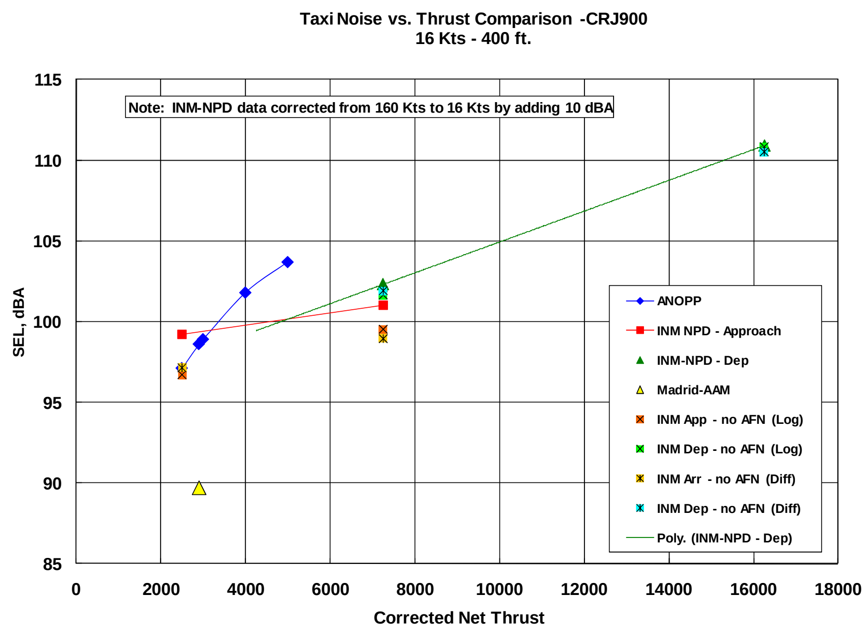

FIGURE E-22 Taxi noise vs. thrust comparison, CRJ-900 CF34-8 for 16 knots at 400 ft. distance

FIGURE E-23 Taxi noise vs. thrust comparison, CRJ-900 CF34-8 for 16 knots at 630 ft. distance.

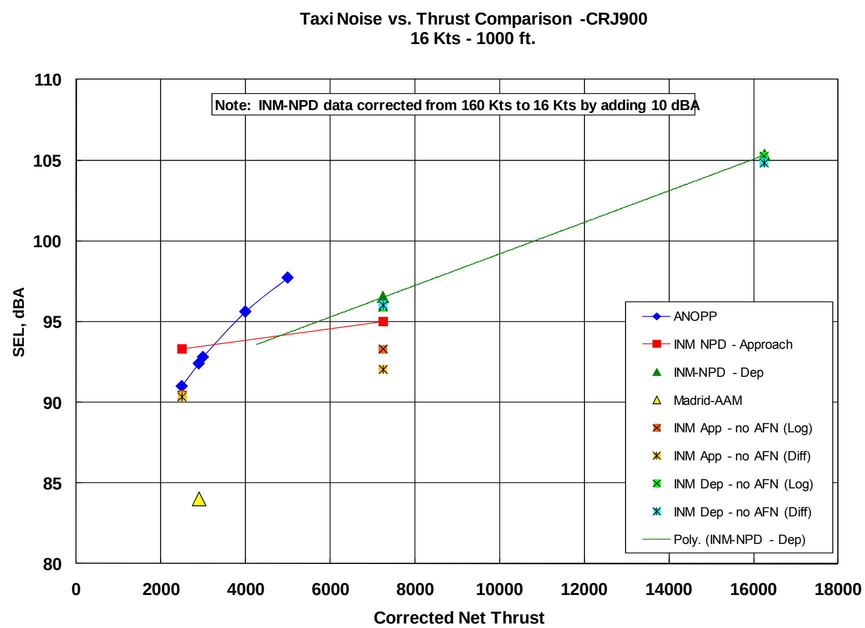

FIGURE E-24 Taxi noise vs. thrust comparison, CRJ-900 CF34-8 for 16 knots at 1000 ft. distance.

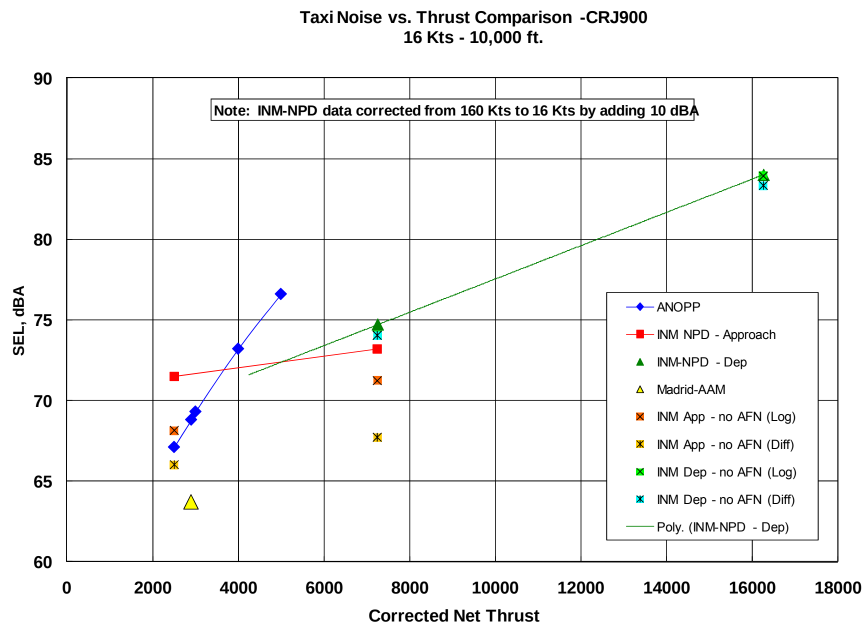

FIGURE E-25 Taxi noise vs. thrust comparison, CRJ-900 CF34-8 for 16 knots at 10000 ft. distance.

APPENDIX F. TAXI NOISE INM/AEDT DATASET

ACFT_ID	ACFT_DESCR	SIZE_CODE	MX_GW_TKO	TAXI_NOISE_ID	SPECT_TAX
1900D	BEECH 1900D / PT6A67	L	16950	TAX700	429
BEC58P	BARON 58P/TS10-520-L	S	6100	TAX960	430
C130	C-130H/T56-A-15	L	155000	TAX781	431
C130E	C-130E/T56-A-7	L	155000	TAX783	431
CNA172	CESSNA 172R / LYCOMING IO-360-L2A	S	2450	TAX961	430
CNA206	CESSNA 206H / LYCOMING IO-540-AC	S	3600	TAX962	430
CNA20T	CESSNA T206H / LYCOMING TIO-540-AJ1A	S	3600	TAX963	430
CNA441	CONQUEST II/TPE331-8	S	9900	TAX964	430
COMSEP	1985 1-ENG COMP	S	2440	TAX965	430
CVR580	CV580/ALL 501-D15	L	58000	TAX966	433
DC3	DC3/R1820-86	L	28000	TAX967	433
DC6	DC6/R2800-CB17	L	106000	TAX820	433
DHC6	DASH 6/PT6A-27	S	12500	TAX968	429
DHC6QP	DASH 6/PT6A-27 RAISBECK QUIET PROP MOD	S	12500	TAX969	429
DHC7	DASH 7/PT6A-50	L	41000	TAX970	429
DHC8	DASH 8-100/PW121	L	34500	TAX018	435
DHC830	DASH 8-300/PW123	L	43000	TAX018	435
EMB120	EMBRAER 120 ER/ PRATT & WHITNEY PW118	L	26433	TAX971	436
GASEPF	1985 1-ENG FP PROP	S	2200	TAX972	430
GASEPV	1985 1-ENG VP PROP	S	3000	TAX973	430
HS748A	HS748/DART MK532-2	L	46500	TAX974	433
L188	L188C/ALL 501-D13	L	116000	TAX900	437
M7235C	MAULE M-7-235C / IO540W	S	2500	TAX975	430
PA28	PIPER WARRIOR PA-28-161 / O-320-D3G	S	2325	TAX976	430
PA30	PIPER TWIN COMANCHE PA-30 / IO-320-B1A	S	3600	TAX977	430
PA31	PIPER NAVAJO CHIEFTAIN PA-31-350 / TIO-5	S	7000	TAX978	430
SD330	SD330/PT6A-45AR	L	22900	TAX979	429
SF340	SF340B/CT7-9B	L	27300	TAX980	429
707	BOEING 707-120/JT3C	H	302400	TAX701	422
707120	BOEING 707-120B/JT3D-3	H	302400	TAX702	422
707320	BOEING 707-320B/JT3D-7	H	334000	TAX703	422
707QN	BOEING 707-320B/JT3D-7QN	H	334000	TAX704	422
720	BOEING 720/JT3C	L	223500	TAX706	422
720B	BOEING 720B/JT3D-3	L	234000	TAX707	422
727100	BOEING 727-100/JT8D-7	L	169500	TAX708	421
727200	BOEING 727-200/JT8D-7	L	217600	TAX709	421
727D15	BOEING 727-200/JT8D-15	L	208000	TAX710	421
727D17	BOEING 727-200/JT8D-17	L	208000	TAX711	421
727EM1	FEDX 727-100/JT8D-7	L	169500	TAX712	421
727EM2	FEDX 727-200/JT8D-15	L	208000	TAX713	421
727Q15	BOEING 727-200/JT8D-15QN	L	208000	TAX714	421
727Q7	BOEING 727-100/JT8D-7QN	L	169500	TAX715	421
727Q9	BOEING 727-200/JT8D-9	L	191000	TAX716	421
727QF	UPS 727100 22C 25C	L	169000	TAX717	421
737	BOEING 737/JT8D-9	L	109000	TAX718	421
737D17	BOEING 737-200/JT8D-17	L	124000	TAX725	421
737N17	B737-200/JT8D-17 NORDAM B737 LGW HUSHKIT	L	124000	TAX726	421
737N9	B737/JT8D-9 NORDAM B737 LGW HUSHKIT	L	109000	TAX727	421
737QN	BOEING 737/JT8D-9QN	L	109000	TAX728	421
A300-622R	AIRBUS A300-622R/PW4158	H	378500	TAX747	409
A300B4-2(	AIRBUS A300B4-200/CF6-50C2	H	364000	TAX748	409
A330-301	AIRBUS A330-301/CF6-80 E1A2	H	478400	TAX754	409
A330-343	AIRBUS A330-343/RR TRENT 772B	H	513700	TAX755	409

ACFT_ID	ACFT_DESCR	SIZE_CODE	MX_GW_TKO	TAXI_NOISE_ID	SPECT_TAX
BAC111	BAC111/SPEY MK511-14	L	89600	TAX771	421
BAE146	BAE146-200/ALF502R-5	L	93000	TAX772	412
BAE300	BAE146-300/ALF502R-5	L	97500	TAX773	412
CIT3	CIT 3/TFE731-3-100S	L	20000	TAX802	424
CNA500	CIT 2/JT15D-4	L	14700	TAX809	423
CNA55B	CESSNA 550 CITATION BRAVO / PW530A	L	14800	TAX810	423
CNA750	CITATION X / ROLLS ROYCE ALLISON AE3007C	L	35700	TAX811	423
COMJET	1985 BUSINESS JET	L	19200	TAX812	423
CONCRD	CONCORDE/OLY593	H	400000	TAX814	427
DC1010	DC10-10/CF6-6D	H	455000	TAX816	409
DC1030	DC10-30/CF6-50C2	H	572000	TAX817	409
DC1040	DC10-40/JT9D-20	H	555000	TAX818	409
DC820	DC-8-20/JT4A	H	317600	TAX821	425
DC850	DC8-50/JT3D-3B	H	325000	TAX822	422
DC860	DC8-60/JT3D-7	H	355000	TAX823	422
DC870	DC8-70/CFM56-2C-5	H	355000	TAX824	406
DC8QN	DC8-60/JT8D-7QN	H	355000	TAX825	421
DC910	DC9-10/JT8D-7	L	90700	TAX826	421
DC930	DC9-30/JT8D-9	L	114000	TAX827	421
DC93LW	DC9-30/JT8D-9 W/ ABS LIGHTWEIGHT HUSHKIT	L	114000	TAX828	421
DC950	DC9-50/JT8D-17	L	121000	TAX829	421
DC95HW	DC9-50/JT8D17 W/ ABS HEAVYWEIGHT HUSHKIT	L	121000	TAX830	421
DC9Q7	DC9-10/JT8D-7QN	L	90700	TAX831	421
DC9Q9	DC9-30/JT8D-9QN	L	114000	TAX832	421
EMB145	EMBRAER 145 ER/ALLISON AE3007	L	45420	TAX844	412
EMB14L	EMBRAER 145 LR / ALLISON AE3007A1	L	48500	TAX845	412
F10062	F100/TAY 620-15	L	95000	TAX846	412
F10065	F100/TAY 650-15	L	98000	TAX847	412
F28MK2	F28-2000/RB183MK555	L	65000	TAX869	421
F28MK4	F28-4000/RB183MK555	L	73000	TAX870	421
FAL20	FALCON 20/CF700-2D-2	L	28700	TAX876	423
GII	GULFSTREAM GII/SPEY 511-8	L	64800	TAX880	412
GIIB	GULFSTREAM GIIB/GIII - SPEY 511-8	L	69700	TAX881	412
GIV	GULFSTREAM GIV-SP/TAY 611-8	L	74600	TAX882	412
GV	GULFSTREAM GV/BR 710	L	90500	TAX883	412
IA1125	ASTRA 1125/TFE731-3A	L	23500	TAX889	424
L1011	L1011/RB211-22B	H	430000	TAX898	428
L10115	L1011-500/RB211-224B	H	510000	TAX899	428
LEAR25	LEAR 25/CJ610-8	L	15000	TAX901	424
LEAR35	LEAR 36/TFE731-2	L	18300	TAX902	424
MD11GE	MD-11/CF6-80C2D1F	H	682400	TAX905	409
MD11PW	MD-11/PW 4460	H	682400	TAX906	409
MD9025	MD-90/V2525-D5	L	156000	TAX910	402
MD9028	MD-90/V2528-D5	L	156000	TAX911	402
MU3001	MU300-10/JT15D-5	L	14100	TAX912	423
SABR80	NA SABRELINER 80	L	33720	TAX923	426
7878	BOEING 787-8/Trent1000	H	484000	TAX953	409
7478	BOEING 747-8/GEnx-2B67	H	970000	TAX954	409
A350-900	AIRBUS A350-900/RR TRENT XWB	H	584200	TAX955	409
A380-841	Airbus A380-841/Trent 970	H	999999	TAX956	409

ACFT_ID	ACFT_DESCR	SIZE_CODE	MX_GW_TKO	TAXI_NOISE_ID	SPECT_TAX
717200	BOEING 717-200/BR 715	L	121000	TAX006	406
737300	BOEING 737-300/CFM56-3B-1	L	135000	TAX007	407
7373B2	BOEING 737-300/CFM56-3B-2	L	139500	TAX007	407
737400	BOEING 737-400/CFM56-3C-1	L	150000	TAX007	407
737500	BOEING 737-500/CFM56-3C-1	L	133500	TAX007	407
737700	BOEING 737-700/CFM56-7B24	L	154500	TAX008	408
737800	BOEING 737-800/CFM56-7B26	L	174200	TAX008	408
747100	BOEING 747-100/JT9DBD	H	733000	TAX009	409
74710Q	BOEING 747-100/JT9D-7QN	H	733000	TAX009	409
747200	BOEING 747-200/JT9D-7	H	775000	TAX009	409
74720A	BOEING 747-200/JT9D-7A	H	785000	TAX009	409
74720B	BOEING 747-200/JT9D-7Q	H	800000	TAX009	409
747400	BOEING 747-400/PW4056	H	875000	TAX009	409
747SP	BOEING 747SP/JT9D-7	H	702000	TAX009	409
757300	BOEING 757-300/RB211-535E4B	L	275000	TAX010	410
757PW	BOEING 757-200/PW2037	L	255000	TAX010	410
757RR	BOEING 757-200/RB211-535E4	L	255000	TAX010	410
767300	BOEING 767-300/PW4060	H	407000	TAX011	411
767400	BOEING 767-400ER/CF6-80C2B(F)	H	450000	TAX011	411
767CF6	BOEING 767-200/CF6-80A	H	315500	TAX011	411
767JT9	BOEING 767-200/JT9D-7R4D	H	351000	TAX011	411
777200	BOEING 777-200ER/GE90-90B	H	656000	TAX020	420
777300	BOEING 777-300/TRENT892	H	660000	TAX020	420
A310-304	AIRBUS A310-304/CF6-80C2A2	H	346100	TAX001	401
A319-131	AIRBUS A319-131/V2522-A5	L	166400	TAX002	402
A320-211	AIRBUS A320-211/CFM56-5A1	L	169800	TAX003	403
A320-232	AIRBUS A320-232/V2527-A5	L	172000	TAX003	403
A321-232	AIRBUS A321-232/IAE V2530-A5	L	206100	TAX004	404
A340-211	AIRBUS A340-211/CFM 56-5C2	H	573200	TAX005	405
CL600	CL600/ALF502L	L	36000	TAX012	412
CL601	CL601/CF34-3A	L	43100	TAX012	412
MD81	MD-81/JT8D-217	L	140000	TAX013	413
MD82	MD-82/JT8D-217A	L	149500	TAX013	413
MD83	MD-83/JT8D-219	L	160000	TAX014	414

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX001	E	T	1242.5	95.1	90.9	87.7	84.1	79.0	73.8	70.3	65.8	61.6	53.0
TAX001	E	T	2485.0	102.8	98.3	94.8	90.9	85.2	79.2	75.4	70.8	66.8	58.9
TAX001	E	T	4970.0	110.5	105.7	101.9	97.7	85.2	84.6	80.5	75.8	72.0	64.8
TAX001	E	T	9940.0	118.1	113.1	109.1	104.5	97.5	90.1	85.6	80.8	77.1	70.6
TAX001	M	T	1242.5	77.7	71.1	66.8	62.4	55.8	48.8	43.8	38.3	32.3	25.6
TAX001	M	T	2485.0	83.7	76.9	72.4	67.8	60.9	53.6	48.4	42.7	36.4	29.6
TAX001	M	T	4970.0	89.7	82.7	78.0	73.2	66.0	58.4	53.0	47.1	40.5	33.6
TAX001	M	T	9940.0	95.7	88.5	83.7	78.5	71.0	63.2	57.6	51.4	44.7	37.7
TAX001	P	T	1242.5	93.2	86.0	80.6	75.2	68.1	60.2	55.9	49.0	43.7	34.0
TAX001	P	T	2485.0	100.7	93.2	87.5	81.7	73.9	65.3	60.8	53.8	48.8	39.5
TAX001	P	T	4970.0	108.2	100.4	94.4	88.2	79.7	70.4	65.7	58.6	53.9	45.0
TAX001	P	T	9940.0	115.6	107.5	101.3	94.7	85.6	75.4	70.5	63.5	58.9	50.5
TAX001	S	T	1242.5	90.6	87.0	84.4	81.7	77.2	72.5	69.3	65.7	61.6	56.6
TAX001	S	T	2485.0	97.1	93.3	90.5	87.5	82.7	77.6	74.1	70.2	65.8	60.8
TAX001	S	T	4970.0	103.6	99.6	96.6	93.3	88.2	82.7	78.9	74.7	70.0	65.0
TAX001	S	T	9940.0	110.2	105.8	102.6	99.2	93.7	87.7	83.7	79.1	74.2	69.2
TAX002	E	T	1050.0	90.5	86.2	82.9	79.2	73.5	67.1	62.6	56.8	51.3	41.1
TAX002	E	T	2100.0	99.1	94.6	91.1	87.2	81.1	74.4	70.0	64.7	60.3	51.8
TAX002	E	T	4200.0	107.7	103.0	99.3	95.2	88.7	81.7	77.4	72.6	69.3	62.5
TAX002	E	T	8400.0	116.2	111.4	107.5	103.2	96.3	89.1	84.9	80.5	78.3	73.2
TAX002	M	T	1050.0	73.0	67.2	63.0	58.5	51.2	42.8	37.0	31.0	24.8	18.9
TAX002	M	T	2100.0	80.2	74.1	69.8	65.1	57.5	48.9	42.9	36.8	30.7	25.0
TAX002	M	T	4200.0	87.4	81.0	76.6	71.7	63.8	55.0	48.8	42.6	36.6	31.1
TAX002	M	T	8400.0	94.5	88.0	83.4	78.3	70.2	61.1	54.8	48.5	42.4	37.3
TAX002	P	T	1050.0	87.3	80.5	75.5	70.2	61.8	52.8	48.3	39.8	33.1	21.5
TAX002	P	T	2100.0	95.6	88.6	83.5	78.0	69.2	59.7	55.1	47.1	41.5	31.6
TAX002	P	T	4200.0	103.9	96.7	91.5	85.8	76.6	66.6	61.9	54.4	49.9	41.7
TAX002	P	T	8400.0	112.1	104.9	99.5	93.7	84.0	73.4	68.8	61.7	58.2	51.8
TAX002	S	T	1050.0	86.7	83.3	80.8	78.0	73.1	67.4	63.5	59.4	55.1	50.6
TAX002	S	T	2100.0	94.1	90.5	87.8	84.8	79.6	73.7	69.6	65.5	61.4	57.4
TAX002	S	T	4200.0	101.5	97.7	94.8	91.6	86.1	80.0	75.7	71.6	67.7	64.2
TAX002	S	T	8400.0	109.0	104.9	101.8	98.4	92.6	86.2	81.8	77.7	73.9	70.9
TAX003	E	T	1089.0	90.0	85.8	82.6	78.9	72.9	66.5	61.6	55.3	49.1	38.5
TAX003	E	T	2178.0	98.6	94.2	90.8	86.9	80.5	73.8	69.0	63.2	58.1	49.2
TAX003	E	T	4356.0	107.2	102.6	99.0	94.9	88.1	81.1	76.4	71.1	67.1	59.9
TAX003	E	T	8712.0	115.7	111.0	107.2	102.9	95.7	88.5	83.9	79.0	76.1	70.6
TAX003	M	T	1089.0	73.1	66.8	62.1	57.3	49.9	41.4	35.5	29.4	23.1	17.1
TAX003	M	T	2178.0	80.3	73.7	68.9	63.9	56.2	47.5	41.4	35.2	29.0	23.2
TAX003	M	T	4356.0	87.5	80.6	75.7	70.5	62.5	53.6	47.3	41.0	34.9	29.3
TAX003	M	T	8712.0	94.6	87.6	82.5	77.1	68.9	59.7	53.3	46.9	40.7	35.5
TAX003	P	T	1089.0	87.3	80.4	74.7	69.2	60.8	51.5	45.9	37.1	30.2	18.0
TAX003	P	T	2178.0	95.6	88.5	82.7	77.0	68.2	58.4	52.7	44.4	38.6	28.1
TAX003	P	T	4356.0	103.9	96.6	90.7	84.8	75.6	65.3	59.5	51.7	47.0	38.2
TAX003	P	T	8712.0	112.1	104.8	98.7	92.7	83.0	72.1	66.4	59.0	55.3	48.3
TAX003	S	T	1089.0	86.4	83.0	80.4	77.5	72.5	66.6	62.6	58.4	54.0	49.5
TAX003	S	T	2178.0	93.8	90.2	87.4	84.3	79.0	72.9	68.7	64.5	60.3	56.3
TAX003	S	T	4356.0	101.2	97.4	94.4	91.1	85.5	79.2	74.8	70.6	66.6	63.1
TAX003	S	T	8712.0	108.7	104.6	101.4	97.9	92.0	85.4	80.9	76.7	72.8	69.8
TAX004	E	T	1088.5	90.9	86.6	83.2	79.4	72.9	66.7	62.5	56.8	51.3	41.5
TAX004	E	T	2177.0	99.5	95.0	91.4	87.4	80.5	74.0	69.9	64.7	60.3	52.2
TAX004	E	T	4354.0	108.1	103.4	99.6	95.4	88.1	81.3	77.3	72.6	69.3	62.9
TAX004	E	T	8708.0	116.6	111.8	107.8	103.4	95.7	88.7	84.8	80.5	78.3	73.6
TAX004	M	T	1088.5	73.9	67.3	62.4	57.2	49.5	41.4	36.0	30.3	24.4	18.7
TAX004	M	T	2177.0	81.1	74.2	69.2	63.8	55.8	47.5	41.9	36.1	30.3	24.8
TAX004	M	T	4354.0	88.3	81.1	76.0	70.4	62.1	53.6	47.8	41.9	36.2	30.9
TAX004	M	T	8708.0	95.4	88.1	82.8	77.0	68.5	59.7	53.8	47.8	42.0	37.1
TAX004	P	T	1088.5	88.4	81.0	75.9	70.0	60.7	52.0	47.5	39.2	32.7	21.4
TAX004	P	T	2177.0	96.7	89.1	83.9	77.8	68.1	58.9	54.3	46.5	41.1	31.5
TAX004	P	T	4354.0	105.0	97.2	91.9	85.6	75.5	65.8	61.1	53.8	49.5	41.6
TAX004	P	T	8708.0	113.2	105.4	99.9	93.5	82.9	72.6	68.0	61.1	57.8	51.7
TAX004	S	T	1088.5	86.5	82.8	80.2	77.1	72.0	66.5	62.9	59.1	55.1	50.9
TAX004	S	T	2117.0	93.9	90.0	87.2	83.9	78.5	72.8	69.0	65.2	61.4	57.7
TAX004	S	T	4354.0	101.3	97.2	94.2	90.7	85.0	79.1	75.1	71.3	67.7	64.5
TAX004	S	T	8708.0	108.8	104.4	101.2	97.5	91.5	85.3	81.2	77.4	73.9	71.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX005	E	T	780.0	94.5	90.6	87.6	84.4	78.9	73.4	69.9	65.2	61.0	52.6
TAX005	E	T	1560.0	102.2	98.0	94.7	91.2	85.1	78.8	75.0	70.2	66.2	58.5
TAX005	E	T	3120.0	109.9	105.4	101.8	98.0	91.3	84.2	80.1	75.2	71.4	64.4
TAX005	E	T	6240.0	117.5	112.8	109.0	104.8	97.4	89.7	85.2	80.2	76.5	70.2
TAX005	M	T	780.0	79.1	72.8	68.3	63.3	56.4	48.7	43.0	36.9	30.7	24.5
TAX005	M	T	1560.0	85.1	78.6	73.9	68.7	61.5	53.5	47.6	41.3	34.8	28.5
TAX005	M	T	3120.0	91.1	84.4	79.5	74.1	66.6	58.3	52.2	45.7	38.9	32.5
TAX005	M	T	6240.0	97.1	90.2	85.2	79.4	71.6	63.1	56.8	50.0	43.1	36.6
TAX005	P	T	780.0	92.1	85.2	80.2	75.1	68.0	59.9	55.3	47.6	42.0	32.3
TAX005	P	T	1560.0	99.6	92.4	87.1	81.6	73.8	65.0	60.2	52.4	47.1	37.8
TAX005	P	T	3120.0	107.1	99.6	94.0	88.1	79.6	70.1	65.1	57.2	52.2	43.3
TAX005	P	T	6240.0	114.5	106.7	100.9	94.6	85.5	75.1	69.9	62.1	57.2	48.8
TAX005	S	T	780.0	91.4	88.1	85.7	83.0	78.1	72.6	68.8	64.9	60.9	56.9
TAX005	S	T	1560.0	97.9	94.4	91.8	88.8	83.6	77.7	73.6	69.4	65.1	61.1
TAX005	S	T	3120.0	104.4	100.7	97.9	94.6	89.1	82.8	78.4	73.9	69.3	65.3
TAX005	S	T	6240.0	111.0	106.9	103.9	100.5	94.6	87.8	83.2	78.3	73.5	69.5
TAX006	E	T	449.0	92.9	88.8	85.6	81.7	74.7	66.7	61.5	55.4	47.6	35.9
TAX006	E	T	898.0	101.5	97.2	93.8	89.7	82.3	74.0	68.9	63.3	56.6	46.6
TAX006	E	T	1796.0	110.1	105.6	102.0	97.7	89.9	81.3	76.3	71.2	65.6	57.3
TAX006	E	T	3592.0	118.6	114.0	110.2	105.7	97.5	88.7	83.8	79.1	74.6	68.0
TAX006	M	T	449.0	77.4	70.9	66.1	60.7	51.3	40.6	33.7	27.3	21.0	14.7
TAX006	M	T	898.0	84.6	77.8	72.9	67.3	57.6	46.7	39.6	33.1	26.9	20.8
TAX006	M	T	1796.0	91.8	84.7	79.7	73.9	63.9	52.8	45.5	38.9	32.8	26.9
TAX006	M	T	3592.0	98.9	91.7	86.5	80.5	70.3	58.9	51.5	44.8	38.6	33.1
TAX006	P	T	449.0	91.4	84.8	79.9	74.2	64.2	51.7	44.9	37.0	26.7	13.8
TAX006	P	T	898.0	99.7	92.9	87.9	82.0	71.6	58.6	51.7	44.3	35.1	23.9
TAX006	P	T	1796.0	108.0	101.0	95.9	89.8	79.0	65.5	58.5	51.6	43.5	34.0
TAX006	P	T	3592.0	116.2	109.2	103.9	97.7	86.4	72.3	65.4	58.9	51.8	44.1
TAX006	S	T	449.0	89.4	85.6	82.7	79.2	73.0	66.3	62.1	57.9	53.4	48.5
TAX006	S	T	898.0	96.8	92.8	89.7	86.0	79.5	72.6	68.2	64.0	59.7	55.3
TAX006	S	T	1796.0	104.2	100.0	96.7	92.8	86.0	78.9	74.3	70.1	66.0	62.1
TAX006	S	T	3592.0	111.7	107.2	103.7	99.6	92.5	85.1	80.4	76.2	72.2	68.8
TAX007	E	T	562.0	95.6	91.5	88.3	84.9	79.1	73.2	69.4	64.1	58.7	48.6
TAX007	E	T	1124.0	103.6	99.4	96.1	92.4	86.1	79.7	75.9	70.9	66.2	58.1
TAX007	E	T	2248.0	111.6	107.3	103.9	99.9	93.1	86.2	82.4	77.7	73.7	67.6
TAX007	E	T	4496.0	119.7	115.2	111.6	107.5	100.1	92.6	88.9	84.4	81.2	77.1
TAX007	M	T	562.0	82.0	76.0	71.7	67.1	59.4	50.4	43.9	37.0	30.2	23.5
TAX007	M	T	1124.0	88.4	82.2	77.8	73.0	65.0	55.8	49.1	42.1	35.3	29.0
TAX007	M	T	2248.0	94.8	88.4	83.9	78.9	70.6	61.2	54.3	47.2	40.4	34.5
TAX007	M	T	4496.0	101.3	94.6	89.9	84.8	76.2	66.5	59.5	52.3	45.6	40.1
TAX007	P	T	562.0	94.6	87.8	83.0	77.7	69.3	59.8	55.4	46.6	39.9	28.7
TAX007	P	T	1124.0	102.4	95.5	90.5	85.1	76.2	65.9	61.3	53.0	46.8	37.6
TAX007	P	T	2248.0	110.2	103.2	98.0	92.5	83.1	72.0	67.2	59.4	53.7	46.5
TAX007	P	T	4496.0	118.0	110.9	105.5	99.8	89.9	78.2	73.2	65.8	60.6	55.5
TAX007	S	T	562.0	92.7	89.5	87.0	84.4	79.5	73.7	69.4	64.8	60.1	55.1
TAX007	S	T	1124.0	99.5	96.0	93.4	90.5	85.3	79.2	74.7	70.1	65.6	61.3
TAX007	S	T	2248.0	106.3	102.5	99.8	96.6	91.1	84.7	80.0	75.4	71.1	67.5
TAX007	S	T	4496.0	113.1	109.1	106.1	102.8	97.0	90.2	85.4	80.7	76.6	73.7
TAX008	E	T	636.0	91.5	87.3	84.0	80.5	74.4	68.0	63.6	57.8	52.1	41.4
TAX008	E	T	1272.0	99.5	95.2	91.8	88.0	81.4	74.5	70.1	64.6	59.6	50.9
TAX008	E	T	2544.0	107.5	103.1	99.6	95.5	88.4	81.0	76.6	71.4	67.1	60.4
TAX008	E	T	5088.0	115.6	111.0	107.3	103.1	95.4	87.4	83.1	78.1	74.6	69.9
TAX008	M	T	636.0	76.6	69.9	65.0	59.7	51.6	43.2	37.4	31.4	25.3	19.1
TAX008	M	T	1272.0	83.0	76.1	71.1	65.6	57.2	48.6	42.6	36.5	30.4	24.6
TAX008	M	T	2544.0	89.4	82.3	77.2	71.5	62.8	54.0	47.8	41.6	35.5	30.1
TAX008	M	T	5088.0	95.9	88.5	83.2	77.4	68.4	59.3	53.0	46.7	40.7	35.7
TAX008	P	T	636.0	89.8	83.1	78.1	71.8	62.2	53.5	48.7	40.1	33.9	21.6
TAX008	P	T	1272.0	97.6	90.8	85.6	79.2	69.1	59.6	54.6	46.5	40.8	30.5
TAX008	P	T	2544.0	105.4	98.5	93.1	86.6	76.0	65.7	60.5	52.9	47.7	39.4
TAX008	P	T	5088.0	113.2	106.2	100.6	93.9	82.8	71.9	66.5	59.3	54.6	48.4
TAX008	S	T	636.0	88.1	84.7	82.0	79.1	74.0	68.2	64.2	60.0	55.6	51.0
TAX008	S	T	1272.0	94.9	91.2	88.4	85.2	79.8	73.7	69.5	65.3	61.1	57.2
TAX008	S	T	2544.0	101.7	97.7	94.8	91.3	85.6	79.2	74.8	70.6	66.6	63.4
TAX008	S	T	5088.0	108.5	104.3	101.1	97.5	91.5	84.7	80.2	75.9	72.1	69.6

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX009	E	T	1320.5	99.1	95.3	92.4	89.0	83.0	76.4	72.8	68.1	64.1	55.4
TAX009	E	T	2641.0	107.5	103.6	100.5	96.8	90.2	82.8	78.8	74.0	70.4	62.7
TAX009	E	T	5282.0	115.9	111.9	108.6	104.6	97.4	89.2	84.8	79.9	76.7	70.0
TAX009	E	T	10564.0	124.3	120.1	116.7	112.5	104.6	95.5	90.7	85.9	82.9	77.3
TAX009	M	T	1320.5	84.2	77.4	72.6	67.5	60.6	52.9	47.5	41.5	35.1	28.2
TAX009	M	T	2641.0	90.7	83.8	78.8	73.3	66.1	58.1	52.5	46.4	39.8	33.0
TAX009	M	T	5282.0	97.2	90.2	85.0	79.1	71.6	63.3	57.5	51.3	44.5	37.8
TAX009	M	T	10564.0	103.7	96.6	91.1	85.0	77.1	68.6	62.5	56.1	49.2	42.5
TAX009	P	T	1320.5	96.9	90.4	86.1	81.2	72.9	65.1	60.5	52.9	47.6	37.4
TAX009	P	T	2641.0	105.4	98.7	94.0	88.7	79.7	70.7	65.9	58.5	53.6	44.1
TAX009	P	T	5282.0	113.9	107.0	101.9	96.2	86.5	76.3	71.3	64.1	59.6	50.8
TAX009	P	T	10564.0	122.4	115.3	109.9	103.8	93.3	81.9	76.8	69.6	65.6	57.5
TAX009	S	T	1320.5	95.4	91.9	89.2	86.1	80.8	75.2	71.4	67.5	63.1	58.3
TAX009	S	T	2641.0	102.7	98.9	96.0	92.7	87.0	80.9	76.8	72.6	68.0	63.4
TAX009	S	T	5282.0	110.0	105.9	102.8	99.3	93.2	86.6	82.2	77.7	72.9	68.5
TAX009	S	T	10564.0	117.3	112.9	109.7	105.8	99.4	92.4	87.7	82.8	77.7	73.5
TAX010	E	T	693.0	97.8	93.4	89.9	85.6	77.4	67.5	62.2	55.9	49.7	39.6
TAX010	E	T	1386.0	106.4	101.8	98.1	93.6	85.0	74.8	69.6	63.8	58.7	50.3
TAX010	E	T	2772.0	115.0	110.2	106.3	101.6	92.6	82.1	77.0	71.7	67.7	61.0
TAX010	E	T	5544.0	123.5	118.6	114.5	109.6	100.2	89.5	84.5	79.6	76.7	71.7
TAX010	M	T	693.0	81.3	74.0	68.5	62.4	52.1	40.9	35.0	29.0	23.1	17.5
TAX010	M	T	1386.0	88.5	80.9	75.3	69.0	58.4	47.0	40.9	34.8	29.0	23.6
TAX010	M	T	2772.0	95.7	87.8	82.1	75.6	64.7	53.1	46.8	40.6	34.9	29.7
TAX010	M	T	5544.0	102.8	94.8	88.9	82.2	71.1	59.2	52.8	46.5	40.7	35.9
TAX010	P	T	693.0	95.6	88.5	83.1	77.1	66.4	52.5	46.3	37.4	30.4	18.7
TAX010	P	T	1386.0	103.9	96.6	91.1	84.9	73.8	59.4	53.1	44.7	38.8	28.8
TAX010	P	T	2772.0	112.2	104.7	99.1	92.7	81.2	66.3	59.9	52.0	47.2	38.9
TAX010	P	T	5544.0	120.4	112.9	107.1	100.6	88.6	73.1	66.8	59.3	55.5	49.0
TAX010	S	T	693.0	93.4	88.7	85.1	80.9	73.8	66.5	62.3	58.3	54.3	50.2
TAX010	S	T	1386.0	100.8	95.9	92.1	87.7	80.3	72.8	68.4	64.4	60.6	57.0
TAX010	S	T	2772.0	108.2	103.1	99.1	94.5	86.8	79.1	74.5	70.5	66.9	63.8
TAX010	S	T	5544.0	115.7	110.3	106.1	101.3	93.3	85.3	80.6	76.6	73.1	70.5
TAX011	E	T	1768.0	95.7	91.6	88.8	85.5	80.1	75.2	72.0	67.6	63.5	54.7
TAX011	E	T	3536.0	103.4	99.0	95.9	92.3	86.3	80.6	77.1	72.6	68.7	60.6
TAX011	E	T	7072.0	111.1	106.4	103.0	99.1	92.5	86.0	82.2	77.6	73.9	66.5
TAX011	E	T	14144.0	118.7	113.8	110.2	105.9	98.6	91.5	87.3	82.6	79.0	72.3
TAX011	M	T	1768.0	80.0	73.4	68.8	63.6	57.4	50.4	45.3	39.7	33.4	26.7
TAX011	M	T	3536.0	86.0	79.2	74.4	69.0	62.5	55.2	49.9	44.1	37.5	30.7
TAX011	M	T	7072.0	92.0	85.0	80.0	74.4	67.6	60.0	54.5	48.5	41.6	34.7
TAX011	M	T	14144.0	98.0	90.8	85.7	79.7	72.6	64.8	59.1	52.8	45.8	38.8
TAX011	P	T	1768.0	94.1	86.8	82.1	76.7	68.8	61.3	57.5	50.5	45.2	35.1
TAX011	P	T	3536.0	101.6	94.0	89.0	83.2	74.6	66.4	62.4	55.3	50.3	40.6
TAX011	P	T	7072.0	109.1	101.2	95.9	89.7	80.4	71.5	67.3	60.1	55.4	46.1
TAX011	P	T	14144.0	116.5	108.3	102.8	96.2	86.3	76.5	72.1	65.0	60.4	51.6
TAX011	S	T	1768.0	91.9	88.4	85.9	83.3	78.8	74.2	70.9	67.2	62.9	58.1
TAX011	S	T	3536.0	98.4	94.7	92.0	89.1	84.3	79.3	75.7	71.7	67.1	62.3
TAX011	S	T	7072.0	104.9	101.0	98.1	94.9	89.8	84.4	80.5	76.2	71.3	66.5
TAX011	S	T	14144.0	111.5	107.2	104.1	100.8	95.3	89.4	85.3	80.6	75.5	70.7
TAX012	E	T	298.0	88.9	84.9	81.6	77.7	70.9	63.4	58.6	51.8	44.0	31.6
TAX012	E	T	596.0	98.1	93.8	90.4	86.3	79.2	71.5	66.8	60.7	54.3	43.4
TAX012	E	T	1192.0	107.3	102.7	99.2	94.9	87.5	79.6	75.0	69.6	64.6	55.2
TAX012	E	T	2384.0	116.4	111.7	107.9	103.4	95.7	87.7	83.3	78.4	74.9	67.0
TAX012	M	T	298.0	71.7	65.0	60.6	55.9	48.1	39.6	33.5	27.3	20.7	14.0
TAX012	M	T	596.0	79.5	72.6	68.0	63.0	54.9	46.0	39.8	33.5	27.0	20.7
TAX012	M	T	1192.0	87.3	80.2	75.4	70.1	61.7	52.4	46.1	39.7	33.3	27.4
TAX012	M	T	2384.0	95.2	87.7	82.7	77.2	68.4	58.9	52.3	45.9	39.7	34.0
TAX012	P	T	298.0	85.7	78.6	73.8	68.3	58.8	49.6	44.3	34.9	26.8	11.5
TAX012	P	T	596.0	94.6	87.4	82.4	76.7	66.8	57.0	51.8	42.9	36.3	22.6
TAX012	P	T	1192.0	103.5	96.2	91.0	85.1	74.8	64.4	59.3	50.9	45.8	33.7
TAX012	P	T	2384.0	112.5	104.9	99.6	93.6	82.8	71.8	66.9	58.8	55.2	44.7
TAX012	S	T	298.0	85.5	81.9	79.2	76.2	70.7	64.4	60.2	55.8	51.1	46.2
TAX012	S	T	596.0	93.5	89.6	86.7	83.4	77.6	71.1	66.8	62.4	58.0	53.7
TAX012	S	T	1192.0	101.5	97.3	94.2	90.6	84.5	77.8	73.4	69.0	64.9	61.2
TAX012	S	T	2384.0	109.6	105.0	101.6	97.9	91.4	84.4	79.9	75.7	71.9	68.7

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX013	E	T	552.5	92.3	88.4	85.4	81.8	75.6	68.9	64.7	58.5	52.6	42.3
TAX013	E	T	1105.0	100.9	96.8	93.6	89.8	83.2	76.2	72.1	66.4	61.6	53.0
TAX013	E	T	2210.0	109.5	105.2	101.8	97.8	90.8	83.5	79.5	74.3	70.6	63.7
TAX013	E	T	4420.0	118.0	113.6	110.0	105.8	98.4	90.9	87.0	82.2	79.6	74.4
TAX013	M	T	552.5	78.2	72.0	67.6	62.8	54.9	45.7	39.3	32.7	26.1	19.9
TAX013	M	T	1105.0	85.4	78.9	74.4	69.4	61.2	51.8	45.2	38.5	32.0	26.0
TAX013	M	T	2210.0	92.6	85.8	81.2	76.0	67.5	57.9	51.1	44.3	37.9	32.1
TAX013	M	T	4420.0	99.7	92.8	88.0	82.6	73.9	64.0	57.1	50.2	43.7	38.3
TAX013	P	T	552.5	91.0	84.4	79.5	74.1	65.5	55.7	50.9	41.2	34.1	22.4
TAX013	P	T	1105.0	99.3	92.5	87.5	81.9	72.9	62.6	57.7	48.5	42.5	32.5
TAX013	P	T	2210.0	107.6	100.6	95.5	89.7	80.3	69.5	64.5	55.8	50.9	42.6
TAX013	P	T	4420.0	115.8	108.8	103.5	97.6	87.7	76.3	71.4	63.1	59.2	52.7
TAX013	S	T	552.5	89.2	85.7	83.1	80.2	75.1	69.1	64.9	60.6	56.1	51.6
TAX013	S	T	1105.0	96.6	92.9	90.1	87.0	81.6	75.4	71.0	66.7	62.4	58.4
TAX013	S	T	2210.0	104.0	100.1	97.1	93.8	88.1	81.7	77.1	72.8	68.7	65.2
TAX013	S	T	4420.0	111.5	107.3	104.1	100.6	94.6	87.9	83.2	78.9	74.9	71.9
TAX014	E	T	590.5	93.1	89.1	86.1	82.4	75.7	68.2	63.2	57.5	50.9	40.9
TAX014	E	T	1181.0	101.7	97.5	94.3	90.4	83.3	75.5	70.6	65.4	59.9	51.6
TAX014	E	T	2362.0	110.3	105.9	102.5	98.4	90.9	82.8	78.0	73.3	68.9	62.3
TAX014	E	T	4724.0	118.8	114.3	110.7	106.4	98.5	90.2	85.5	81.2	77.9	73.0
TAX014	M	T	590.5	75.9	69.4	64.7	59.5	51.0	42.1	36.3	30.4	24.3	18.3
TAX014	M	T	1181.0	83.1	76.3	71.5	66.1	57.3	48.2	42.2	36.2	30.2	24.4
TAX014	M	T	2362.0	90.3	83.2	78.3	72.7	63.6	54.3	48.1	42.0	36.1	30.5
TAX014	M	T	4724.0	97.4	90.2	85.1	79.3	70.0	60.4	54.1	47.9	41.9	36.7
TAX014	P	T	590.5	90.3	83.1	78.0	72.6	63.7	53.8	47.5	41.9	31.6	19.5
TAX014	P	T	1181.0	98.6	91.2	86.0	80.4	71.1	60.7	54.3	49.2	40.0	29.6
TAX014	P	T	2362.0	106.9	99.3	94.0	88.2	78.5	67.6	61.1	56.5	48.4	39.7
TAX014	P	T	4724.0	115.1	107.5	102.0	96.1	85.9	74.4	68.0	63.8	56.7	49.8
TAX014	S	T	590.5	89.7	85.9	83.1	79.8	73.9	67.2	63.1	59.2	55.2	50.9
TAX014	S	T	1181.0	97.1	93.1	90.1	86.6	80.4	73.5	69.2	65.3	61.5	57.7
TAX014	S	T	2362.0	104.5	100.3	97.1	93.4	86.9	79.8	75.3	71.4	67.8	64.5
TAX014	S	T	4724.0	112.0	107.5	104.1	100.2	93.4	86.0	81.4	77.5	74.0	71.2
TAX017	E	T	186.0	102.4	98.6	95.6	91.9	84.8	76.4	71.4	65.2	58.6	49.4
TAX017	E	T	372.0	106.5	102.4	99.2	95.3	88.3	80.0	75.3	69.6	64.4	56.4
TAX017	E	T	744.0	110.6	106.2	102.8	98.7	91.8	83.6	79.2	74.0	70.2	63.4
TAX017	E	T	1488.0	114.7	110.0	106.4	102.2	95.4	87.2	83.1	78.4	75.9	70.3
TAX017	M	T	186.0	86.5	80.0	75.1	69.7	60.4	49.5	41.7	34.3	27.8	22.2
TAX017	M	T	372.0	89.4	82.7	77.8	72.4	63.3	52.8	45.4	38.5	32.7	27.4
TAX017	M	T	744.0	92.3	85.4	80.5	75.1	66.2	56.1	49.1	42.7	37.6	32.6
TAX017	M	T	1488.0	95.2	88.1	83.1	77.7	69.1	59.4	52.8	46.9	42.5	37.9
TAX017	P	T	186.0	100.1	93.3	88.2	82.3	72.3	60.4	54.0	45.5	37.4	26.5
TAX017	P	T	372.0	104.1	97.2	92.0	86.3	76.3	64.3	58.3	50.1	44.3	35.1
TAX017	P	T	744.0	108.1	101.1	95.8	90.3	80.3	68.2	62.6	54.7	51.2	43.7
TAX017	P	T	1488.0	112.1	104.9	99.6	94.2	84.3	72.1	66.8	59.3	58.0	52.4
TAX017	S	T	186.0	99.3	95.9	93.0	89.6	83.2	75.4	69.9	64.9	60.6	56.6
TAX017	S	T	372.0	102.2	98.5	95.6	92.2	86.0	78.5	73.3	68.5	64.3	60.5
TAX017	S	T	744.0	105.1	101.1	98.2	94.8	88.8	81.6	76.7	72.1	68.0	64.4
TAX017	S	T	1488.0	108.0	103.8	100.7	97.3	91.6	84.8	80.1	75.7	71.8	68.3
TAX018	E	T	161.5	101.1	97.4	94.5	90.9	84.4	77.2	72.4	66.0	58.8	48.8
TAX018	E	T	323.0	105.2	101.2	98.1	94.3	87.9	80.8	76.3	70.4	64.6	55.8
TAX018	E	T	646.0	109.3	105.0	101.7	97.7	91.4	84.4	80.2	74.8	70.4	62.8
TAX018	E	T	1292.0	113.4	108.8	105.3	101.2	95.0	88.0	84.1	79.2	76.1	69.7
TAX018	M	T	161.5	85.5	79.1	74.4	69.2	60.3	49.9	42.6	35.0	27.3	20.9
TAX018	M	T	323.0	88.4	81.8	77.1	71.9	63.2	53.2	46.3	39.2	32.2	26.1
TAX018	M	T	646.0	91.3	84.5	79.8	74.6	66.1	56.5	50.0	43.4	37.1	31.3
TAX018	M	T	1292.0	94.2	87.2	82.4	77.2	69.0	59.8	53.7	47.6	42.0	36.6
TAX018	P	T	161.5	98.5	91.7	87.0	81.0	71.5	60.8	54.9	46.4	36.1	25.2
TAX018	P	T	323.0	102.5	95.6	90.8	85.0	75.5	64.7	59.2	51.0	43.0	33.8
TAX018	P	T	646.0	106.5	99.5	94.6	89.0	79.5	68.6	63.5	55.6	49.9	42.4
TAX018	P	T	1292.0	110.5	103.3	98.4	92.9	83.5	72.5	67.7	60.2	56.7	51.1
TAX018	S	T	161.5	97.9	94.7	92.0	88.8	82.9	75.8	70.8	65.8	61.1	56.5
TAX018	S	T	323.0	100.8	97.3	94.6	91.4	85.7	78.9	74.2	69.4	64.8	60.4
TAX018	S	T	646.0	103.7	99.9	97.2	94.0	88.5	82.0	77.6	73.0	68.5	64.3
TAX018	S	T	1292.0	106.6	102.6	99.7	96.5	91.3	85.2	81.0	76.6	72.3	68.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX019	E	T	172.5	101.7	98.0	95.1	91.4	84.4	76.7	72.0	66.1	59.7	50.8
TAX019	E	T	345.0	105.8	101.8	98.7	94.8	87.9	80.3	75.9	70.5	65.5	57.8
TAX019	E	T	690.0	109.9	105.6	102.3	98.2	91.4	83.9	79.8	74.9	71.3	64.8
TAX019	E	T	1380.0	114.0	109.4	105.9	101.7	95.0	87.5	83.7	79.3	77.0	71.7
TAX019	M	T	172.5	85.9	79.4	74.5	69.2	59.9	49.1	41.7	34.8	28.1	22.6
TAX019	M	T	345.0	88.8	82.1	77.2	71.9	62.8	52.4	45.4	39.0	33.0	27.8
TAX019	M	T	690.0	91.7	84.8	79.9	74.6	65.7	55.7	49.1	43.2	37.9	33.0
TAX019	M	T	1380.0	94.6	87.5	82.5	77.2	68.6	59.0	52.8	47.4	42.8	38.3
TAX019	P	T	172.5	99.7	93.0	88.2	82.4	72.7	60.9	54.0	47.4	37.7	27.3
TAX019	P	T	345.0	103.7	96.9	92.0	86.4	76.7	64.8	58.3	52.0	44.6	35.9
TAX019	P	T	690.0	107.7	100.8	95.8	90.4	80.7	68.7	62.6	56.6	51.5	44.5
TAX019	P	T	1380.0	111.7	104.6	99.6	94.3	84.7	72.6	66.8	61.2	58.3	53.2
TAX019	S	T	172.5	98.4	95.0	92.1	88.8	82.6	75.3	70.3	65.7	61.5	57.5
TAX019	S	T	345.0	101.3	97.6	94.7	91.4	85.4	78.4	73.7	69.3	65.2	61.4
TAX019	S	T	690.0	104.2	100.2	97.3	94.0	88.2	81.5	77.1	72.9	68.9	65.3
TAX019	S	T	1380.0	107.1	102.9	99.8	96.5	91.0	84.7	80.5	76.5	72.7	69.2
TAX020	E	T	2385.0	93.5	90.1	87.9	85.5	81.4	76.1	72.3	67.7	63.8	55.6
TAX020	E	T	4770.0	100.4	96.6	94.2	91.5	87.0	81.3	77.4	72.6	68.7	60.6
TAX020	E	T	9540.0	107.3	103.1	100.5	97.5	92.6	86.5	82.5	77.5	73.6	65.6
TAX020	E	T	19080.0	114.2	109.6	106.9	103.6	98.2	91.8	87.5	82.4	78.6	70.6
TAX020	M	T	2385.0	79.1	73.7	70.0	66.2	60.0	52.8	47.5	41.6	34.7	26.6
TAX020	M	T	4770.0	85.0	79.4	75.6	71.6	65.1	57.7	52.2	46.0	38.8	30.5
TAX020	M	T	9540.0	90.9	85.1	81.2	77.0	70.2	62.6	56.9	50.4	42.9	34.4
TAX020	M	T	19080.0	96.9	90.8	86.7	82.4	75.4	67.4	61.6	54.8	47.1	38.3
TAX020	P	T	2385.0	93.0	87.7	84.1	80.0	73.2	65.0	60.1	52.9	47.9	37.8
TAX020	P	T	4770.0	99.8	93.9	90.0	85.7	78.5	70.1	65.0	57.6	52.6	42.5
TAX020	P	T	9540.0	106.6	100.1	95.9	91.4	83.8	75.2	69.9	62.3	57.3	47.2
TAX020	P	T	19080.0	113.3	106.2	101.9	97.1	89.1	80.4	74.9	67.0	62.0	52.0
TAX020	S	T	2385.0	90.1	87.0	84.8	82.6	78.8	74.3	71.0	67.0	62.0	55.7
TAX020	S	T	4770.0	96.1	92.8	90.5	88.1	84.1	79.3	75.7	71.4	66.1	59.6
TAX020	S	T	9540.0	102.1	98.6	96.2	93.6	89.4	84.3	80.4	75.8	70.2	63.5
TAX020	S	T	19080.0	108.1	104.4	101.9	99.1	94.6	89.2	85.1	80.3	74.4	67.4
TAX700	E	T	63.9	90.0	86.3	83.6	80.6	75.0	69.0	64.1	58.1	48.5	36.6
TAX700	E	T	127.8	94.1	90.1	87.2	84.0	78.5	72.6	68.0	62.5	54.3	43.6
TAX700	E	T	255.6	98.2	93.9	90.8	87.4	82.0	76.2	71.9	66.9	60.1	50.6
TAX700	E	T	511.1	102.3	97.7	94.4	90.9	85.6	79.8	75.8	71.3	65.8	57.5
TAX700	M	T	63.9	73.1	67.7	63.8	59.6	52.3	43.7	37.2	29.7	20.9	13.8
TAX700	M	T	127.8	76.0	70.4	66.5	62.3	55.2	47.0	40.9	33.9	25.8	19.0
TAX700	M	T	255.6	78.9	73.1	69.2	65.0	58.1	50.3	44.6	38.1	30.7	24.2
TAX700	M	T	511.1	81.8	75.8	71.8	67.6	61.0	53.6	48.3	42.3	35.6	29.5
TAX700	P	T	63.9	87.2	80.4	75.5	69.9	61.7	54.6	47.1	41.5	28.1	12.0
TAX700	P	T	127.8	91.2	84.3	79.3	73.9	65.7	58.5	51.4	46.1	35.0	20.6
TAX700	P	T	255.6	95.2	88.2	83.1	77.9	69.7	62.4	55.7	50.7	41.9	29.2
TAX700	P	T	511.1	99.2	92.0	86.9	81.8	73.7	66.3	59.9	55.3	48.7	37.9
TAX700	S	T	63.9	87.7	84.7	82.4	79.7	74.8	69.0	64.6	59.9	54.9	49.8
TAX700	S	T	127.8	90.6	87.3	85.0	82.3	77.6	72.1	68.0	63.5	58.6	53.7
TAX700	S	T	255.6	93.5	89.9	87.6	84.9	80.4	75.2	71.4	67.1	62.3	57.6
TAX700	S	T	511.1	96.4	92.6	90.1	87.4	83.2	78.4	74.8	70.7	66.1	61.5
TAX701	E	T	546.3	86.4	83.1	80.8	78.5	74.9	71.4	68.4	64.2	56.5	44.1
TAX701	E	T	1092.7	94.1	90.5	88.0	85.3	81.1	76.8	73.5	69.2	61.7	49.9
TAX701	E	T	2185.3	101.7	97.9	95.1	92.1	87.3	82.2	78.6	74.1	66.8	55.8
TAX701	E	T	4370.6	109.4	105.3	102.3	98.9	93.4	87.7	83.7	79.1	72.0	61.6
TAX701	M	T	546.3	75.9	70.8	67.3	63.6	57.1	49.4	43.6	36.8	28.7	19.7
TAX701	M	T	1092.7	81.9	76.6	72.9	69.0	62.2	54.2	48.2	41.2	32.9	23.8
TAX701	M	T	2185.3	87.9	82.4	78.6	74.3	67.3	59.0	52.8	45.5	37.0	27.8
TAX701	M	T	4370.6	93.9	88.2	84.2	79.7	72.3	63.8	57.4	49.9	41.2	31.9
TAX701	P	T	546.3	84.0	78.5	74.7	70.8	64.7	60.0	53.8	49.5	39.4	26.5
TAX701	P	T	1092.7	91.5	85.7	81.6	77.3	70.6	65.0	58.7	54.4	44.4	32.0
TAX701	P	T	2185.3	98.9	92.8	88.5	83.8	76.4	70.1	63.6	59.2	49.5	37.5
TAX701	P	T	4370.6	106.4	100.0	95.4	90.3	82.2	75.2	68.4	64.1	54.6	43.0
TAX701	S	T	546.3	87.4	84.9	83.1	80.9	77.1	72.2	68.2	63.2	56.9	49.3
TAX701	S	T	1092.7	93.9	91.2	89.1	86.8	82.5	77.3	73.0	67.7	61.1	53.5
TAX701	S	T	2185.3	100.5	97.4	95.2	92.6	88.0	82.4	77.8	72.2	65.3	57.7
TAX701	S	T	4370.6	107.0	103.7	101.3	98.4	93.5	87.4	82.6	76.6	69.5	61.9

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX702	E	T	546.3	86.4	83.1	80.8	78.5	74.9	71.4	68.4	64.2	56.5	44.1
TAX702	E	T	1092.7	94.1	90.5	88.0	85.3	81.1	76.8	73.5	69.2	61.7	49.9
TAX702	E	T	2185.3	101.7	97.9	95.1	92.1	87.3	82.2	78.6	74.1	66.8	55.8
TAX702	E	T	4370.6	109.4	105.3	102.3	98.9	93.4	87.7	83.7	79.1	72.0	61.6
TAX702	M	T	546.3	75.9	70.8	67.3	63.6	57.1	49.4	43.6	36.8	28.7	19.7
TAX702	M	T	1092.7	81.9	76.6	72.9	69.0	62.2	54.2	48.2	41.2	32.9	23.8
TAX702	M	T	2185.3	87.9	82.4	78.6	74.3	67.3	59.0	52.8	45.5	37.0	27.8
TAX702	M	T	4370.6	93.9	88.2	84.2	79.7	72.3	63.8	57.4	49.9	41.2	31.9
TAX702	P	T	546.3	84.0	78.5	74.7	70.8	64.7	60.0	53.8	49.5	39.4	26.5
TAX702	P	T	1092.7	91.5	85.7	81.6	77.3	70.6	65.0	58.7	54.4	44.4	32.0
TAX702	P	T	2185.3	98.9	92.8	88.5	83.8	76.4	70.1	63.6	59.2	49.5	37.5
TAX702	P	T	4370.6	106.4	100.0	95.4	90.3	82.2	75.2	68.4	64.1	54.6	43.0
TAX702	S	T	546.3	87.4	84.9	83.1	80.9	77.1	72.2	68.2	63.2	56.9	49.3
TAX702	S	T	1092.7	93.9	91.2	89.1	86.8	82.5	77.3	73.0	67.7	61.1	53.5
TAX702	S	T	2185.3	100.5	97.4	95.2	92.6	88.0	82.4	77.8	72.2	65.3	57.7
TAX702	S	T	4370.6	107.0	103.7	101.3	98.4	93.5	87.4	82.6	76.6	69.5	61.9
TAX703	E	T	600.5	87.5	84.1	81.8	79.4	75.8	72.1	69.1	64.8	57.2	44.8
TAX703	E	T	1201.1	95.1	91.5	89.0	86.2	81.9	77.6	74.2	69.8	62.4	50.7
TAX703	E	T	2402.2	102.8	98.9	96.1	93.0	88.1	83.0	79.3	74.8	67.5	56.6
TAX703	E	T	4804.3	110.4	106.3	103.3	99.8	94.3	88.4	84.4	79.8	72.7	62.4
TAX703	M	T	600.5	76.7	71.6	68.1	64.4	57.8	50.1	44.2	37.4	29.3	20.3
TAX703	M	T	1201.1	82.7	77.4	73.7	69.7	62.9	54.9	48.8	41.8	33.5	24.3
TAX703	M	T	2402.2	88.7	83.2	79.3	75.1	68.0	59.7	53.4	46.1	37.6	28.4
TAX703	M	T	4804.3	94.7	89.0	85.0	80.4	73.0	64.5	58.0	50.5	41.8	32.4
TAX703	P	T	600.5	85.0	79.5	75.7	71.7	65.5	60.7	54.5	50.2	40.1	27.3
TAX703	P	T	1201.1	92.5	86.7	82.5	78.2	71.3	65.7	59.4	55.0	45.1	32.8
TAX703	P	T	2402.2	99.9	93.8	89.4	84.7	77.2	70.8	64.2	59.9	50.2	38.3
TAX703	P	T	4804.3	107.4	101.0	96.3	91.2	83.0	75.9	69.1	64.7	55.2	43.8
TAX703	S	T	600.5	88.3	85.8	83.9	81.7	77.8	72.9	68.9	63.9	57.5	49.9
TAX703	S	T	1201.1	94.8	92.0	90.0	87.6	83.3	78.0	73.6	68.3	61.7	54.1
TAX703	S	T	2402.2	101.4	98.3	96.0	93.4	88.8	83.1	78.4	72.8	65.9	58.3
TAX703	S	T	4804.3	107.9	104.6	102.1	99.2	94.3	88.1	83.2	77.2	70.1	62.5
TAX704	E	T	600.5	87.5	84.1	81.8	79.4	75.8	72.1	69.1	64.8	57.2	44.8
TAX704	E	T	1201.1	95.1	91.5	89.0	86.2	81.9	77.6	74.2	69.8	62.4	50.7
TAX704	E	T	2402.2	102.8	98.9	96.1	93.0	88.1	83.0	79.3	74.8	67.5	56.6
TAX704	E	T	4804.3	110.4	106.3	103.3	99.8	94.3	88.4	84.4	79.8	72.7	62.4
TAX704	M	T	600.5	76.7	71.6	68.1	64.4	57.8	50.1	44.2	37.4	29.3	20.3
TAX704	M	T	1201.1	82.7	77.4	73.7	69.7	62.9	54.9	48.8	41.8	33.5	24.3
TAX704	M	T	2402.2	88.7	83.2	79.3	75.1	68.0	59.7	53.4	46.1	37.6	28.4
TAX704	M	T	4804.3	94.7	89.0	85.0	80.4	73.0	64.5	58.0	50.5	41.8	32.4
TAX704	P	T	600.5	85.0	79.5	75.7	71.7	65.5	60.7	54.5	50.2	40.1	27.3
TAX704	P	T	1201.1	92.5	86.7	82.5	78.2	71.3	65.7	59.4	55.0	45.1	32.8
TAX704	P	T	2402.2	99.9	93.8	89.4	84.7	77.2	70.8	64.2	59.9	50.2	38.3
TAX704	P	T	4804.3	107.4	101.0	96.3	91.2	83.0	75.9	69.1	64.7	55.2	43.8
TAX704	S	T	600.5	88.3	85.8	83.9	81.7	77.8	72.9	68.9	63.9	57.5	49.9
TAX704	S	T	1201.1	94.8	92.0	90.0	87.6	83.3	78.0	73.6	68.3	61.7	54.1
TAX704	S	T	2402.2	101.4	98.3	96.0	93.4	88.8	83.1	78.4	72.8	65.9	58.3
TAX704	S	T	4804.3	107.9	104.6	102.1	99.2	94.3	88.1	83.2	77.2	70.1	62.5
TAX706	E	T	408.6	89.0	85.3	82.6	79.6	74.2	68.0	63.0	56.8	46.9	31.6
TAX706	E	T	817.2	97.5	93.7	90.8	87.6	81.8	75.4	70.4	64.7	55.9	42.3
TAX706	E	T	1634.4	106.1	102.1	99.0	95.6	89.4	82.7	77.8	72.6	64.9	53.0
TAX706	E	T	3268.8	114.6	110.5	107.3	103.6	97.0	90.0	85.3	80.5	73.8	63.6
TAX706	M	T	408.6	77.2	71.4	67.4	63.0	55.5	46.9	40.2	32.6	23.7	14.1
TAX706	M	T	817.2	84.3	78.4	74.2	69.6	61.9	52.9	46.2	38.5	29.6	20.3
TAX706	M	T	1634.4	91.5	85.3	81.0	76.2	68.2	59.0	52.1	44.3	35.5	26.4
TAX706	M	T	3268.8	98.6	92.3	87.7	82.8	74.6	65.1	58.1	50.1	41.3	32.6
TAX706	P	T	408.6	88.3	82.0	77.6	72.7	64.7	57.3	49.7	43.5	30.8	13.9
TAX706	P	T	817.2	96.6	90.1	85.6	80.5	72.1	64.1	56.5	50.8	39.2	24.1
TAX706	P	T	1634.4	104.8	98.3	93.5	88.3	79.5	71.0	63.4	58.1	47.5	34.2
TAX706	P	T	3268.8	113.1	106.4	101.5	96.2	86.9	77.9	70.2	65.4	55.9	44.3
TAX706	S	T	408.6	88.2	85.1	82.8	80.2	75.5	69.5	64.6	58.7	51.6	43.7
TAX706	S	T	817.2	95.6	92.3	89.8	87.0	82.0	75.7	70.8	64.8	57.8	50.5
TAX706	S	T	1634.4	103.0	99.5	96.8	93.8	88.5	82.0	76.9	70.9	64.1	57.2
TAX706	S	T	3268.8	110.5	106.7	103.8	100.6	95.0	88.2	83.0	77.0	70.4	64.0

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX707	E	T	427.1	89.5	85.8	83.1	80.1	74.7	68.5	63.4	57.3	47.5	32.3
TAX707	E	T	854.3	98.1	94.2	91.3	88.1	82.3	75.8	70.9	65.2	56.4	43.0
TAX707	E	T	1708.5	106.6	102.6	99.6	96.1	89.9	83.2	78.3	73.1	65.4	53.6
TAX707	E	T	3417.0	115.2	111.0	107.8	104.1	97.5	90.5	85.7	81.0	74.4	64.3
TAX707	M	T	427.1	77.6	71.9	67.8	63.4	55.9	47.2	40.6	33.0	24.1	14.5
TAX707	M	T	854.3	84.8	78.8	74.6	70.0	62.3	53.3	46.6	38.8	30.0	20.7
TAX707	M	T	1708.5	91.9	85.8	81.4	76.6	68.6	59.4	52.5	44.7	35.8	26.8
TAX707	M	T	3417.0	99.1	92.7	88.2	83.2	75.0	65.5	58.5	50.5	41.7	32.9
TAX707	P	T	427.1	88.9	82.5	78.1	73.2	65.2	57.7	50.1	43.9	31.3	14.6
TAX707	P	T	854.3	97.1	90.7	86.1	81.0	72.6	64.6	57.0	51.3	39.7	24.7
TAX707	P	T	1708.5	105.4	98.8	94.0	88.8	80.0	71.4	63.8	58.6	48.1	34.8
TAX707	P	T	3417.0	113.6	106.9	102.0	96.7	87.4	78.3	70.6	65.9	56.4	44.9
TAX707	S	T	427.1	88.6	85.6	83.3	80.6	75.9	69.9	65.0	59.1	52.0	44.1
TAX707	S	T	854.3	96.1	92.8	90.3	87.4	82.4	76.1	71.1	65.2	58.2	50.9
TAX707	S	T	1708.5	103.5	100.0	97.3	94.2	88.9	82.4	77.3	71.3	64.5	57.7
TAX707	S	T	3417.0	110.9	107.1	104.3	101.0	95.4	88.6	83.4	77.4	70.8	64.5
TAX708	E	T	416.5	85.7	82.1	79.4	76.5	71.3	65.2	60.1	53.7	43.4	27.5
TAX708	E	T	833.0	94.2	90.4	87.6	84.5	78.9	72.5	67.5	61.7	52.4	38.1
TAX708	E	T	1666.0	102.8	98.8	95.9	92.5	86.5	79.9	75.0	69.6	61.4	48.8
TAX708	E	T	3332.1	111.3	107.2	104.1	100.5	94.1	87.2	82.4	77.5	70.4	59.5
TAX708	M	T	416.5	74.4	68.8	64.8	60.4	53.1	44.5	37.9	30.4	21.4	11.8
TAX708	M	T	833.0	81.6	75.7	71.6	67.0	59.4	50.6	43.9	36.2	27.3	17.9
TAX708	M	T	1666.0	88.7	82.6	78.3	73.6	65.8	56.7	49.8	42.0	33.2	24.0
TAX708	M	T	3332.1	95.9	89.6	85.1	80.2	72.1	62.8	55.8	47.9	39.1	30.2
TAX708	P	T	416.5	85.1	78.8	74.5	69.6	61.9	54.6	47.1	40.6	27.6	10.0
TAX708	P	T	833.0	93.4	87.0	82.5	77.5	69.3	61.5	53.9	48.0	35.9	20.1
TAX708	P	T	1666.0	101.6	95.1	90.4	85.3	76.7	68.4	60.7	55.3	44.3	30.2
TAX708	P	T	3332.1	109.9	103.2	98.4	93.1	84.0	75.2	67.6	62.6	52.7	40.4
TAX708	S	T	416.5	85.3	82.3	80.1	77.6	72.9	67.0	62.3	56.4	49.1	41.1
TAX708	S	T	833.0	92.7	89.5	87.1	84.4	79.5	73.3	68.4	62.4	55.4	47.9
TAX708	S	T	1666.0	100.2	96.7	94.1	91.2	86.0	79.5	74.5	68.5	61.7	54.6
TAX708	S	T	3332.1	107.6	103.9	101.1	98.0	92.5	85.8	80.6	74.6	67.9	61.4
TAX709	E	T	530.9	88.7	85.0	82.3	79.3	73.9	67.8	62.7	56.5	46.5	31.2
TAX709	E	T	1061.8	97.2	93.4	90.5	87.3	81.5	75.1	70.1	64.4	55.5	41.9
TAX709	E	T	2123.6	105.8	101.8	98.7	95.3	89.1	82.4	77.6	72.3	64.5	52.6
TAX709	E	T	4247.1	114.3	110.1	107.0	103.3	96.7	89.8	85.0	80.2	73.5	63.2
TAX709	M	T	530.9	76.9	71.2	67.2	62.7	55.3	46.6	40.0	32.4	23.5	13.9
TAX709	M	T	1061.8	84.1	78.1	73.9	69.3	61.6	52.7	46.0	38.2	29.4	20.1
TAX709	M	T	2123.6	91.2	85.1	80.7	75.9	68.0	58.8	51.9	44.1	35.2	26.2
TAX709	M	T	4247.1	98.4	92.0	87.5	82.5	74.3	64.9	57.9	49.9	41.1	32.3
TAX709	P	T	530.9	88.0	81.7	77.3	72.4	64.5	57.0	49.5	43.2	30.5	13.6
TAX709	P	T	1061.8	96.3	89.8	85.3	80.2	71.9	63.9	56.3	50.5	38.9	23.7
TAX709	P	T	2123.6	104.5	98.0	93.2	88.0	79.2	70.8	63.1	57.8	47.2	33.8
TAX709	P	T	4247.1	112.8	106.1	101.2	95.9	86.6	77.6	70.0	65.1	55.6	43.9
TAX709	S	T	530.9	87.9	84.9	82.6	79.9	75.2	69.2	64.4	58.5	51.3	43.5
TAX709	S	T	1061.8	95.3	92.0	89.6	86.7	81.7	75.5	70.5	64.6	57.6	50.2
TAX709	S	T	2123.6	102.8	99.2	96.6	93.5	88.2	81.7	76.6	70.7	63.9	57.0
TAX709	S	T	4247.1	110.2	106.4	103.6	100.3	94.8	88.0	82.8	76.8	70.1	63.8
TAX710	E	T	508.2	88.1	84.5	81.8	78.8	73.4	67.3	62.2	56.0	46.0	30.5
TAX710	E	T	1016.4	96.7	92.8	90.0	86.8	81.1	74.6	69.6	63.9	55.0	41.2
TAX710	E	T	2032.8	105.2	101.2	98.2	94.8	88.7	82.0	77.1	71.8	64.0	51.9
TAX710	E	T	4065.6	113.8	109.6	106.4	102.8	96.3	89.3	84.5	79.7	72.9	62.6
TAX710	M	T	508.2	76.5	70.7	66.7	62.3	54.9	46.2	39.6	32.0	23.1	13.5
TAX710	M	T	1016.4	83.6	77.7	73.5	68.9	61.2	52.3	45.6	37.9	29.0	19.7
TAX710	M	T	2032.8	90.8	84.6	80.3	75.5	67.6	58.4	51.5	43.7	34.9	25.8
TAX710	M	T	4065.6	97.9	91.6	87.1	82.1	73.9	64.5	57.5	49.6	40.7	31.9
TAX710	P	T	508.2	87.5	81.2	76.8	71.9	64.0	56.6	49.0	42.7	30.0	12.9
TAX710	P	T	1016.4	95.8	89.3	84.8	79.7	71.4	63.5	55.9	50.0	38.3	23.0
TAX710	P	T	2032.8	104.0	97.4	92.7	87.6	78.8	70.3	62.7	57.4	46.7	33.2
TAX710	P	T	4065.6	112.3	105.6	100.7	95.4	86.2	77.2	69.5	64.7	55.1	43.3
TAX710	S	T	508.2	87.4	84.4	82.1	79.5	74.8	68.8	64.0	58.1	50.9	43.0
TAX710	S	T	1016.4	94.9	91.6	89.1	86.3	81.3	75.1	70.1	64.2	57.2	49.8
TAX710	S	T	2032.8	102.3	98.8	96.1	93.1	87.8	81.3	76.3	70.3	63.5	56.6
TAX710	S	T	4065.6	109.7	106.0	103.1	99.9	94.3	87.6	82.4	76.4	69.7	63.3

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX711	E	T	508.2	88.1	84.5	81.8	78.8	73.4	67.3	62.2	56.0	46.0	30.5
TAX711	E	T	1016.4	96.7	92.8	90.0	86.8	81.1	74.6	69.6	63.9	55.0	41.2
TAX711	E	T	2032.8	105.2	101.2	98.2	94.8	88.7	82.0	77.1	71.8	64.0	51.9
TAX711	E	T	4065.6	113.8	109.6	106.4	102.8	96.3	89.3	84.5	79.7	72.9	62.6
TAX711	M	T	508.2	76.5	70.7	66.7	62.3	54.9	46.2	39.6	32.0	23.1	13.5
TAX711	M	T	1016.4	83.6	77.7	73.5	68.9	61.2	52.3	45.6	37.9	29.0	19.7
TAX711	M	T	2032.8	90.8	84.6	80.3	75.5	67.6	58.4	51.5	43.7	34.9	25.8
TAX711	M	T	4065.6	97.9	91.6	87.1	82.1	73.9	64.5	57.5	49.6	40.7	31.9
TAX711	P	T	508.2	87.5	81.2	76.8	71.9	64.0	56.6	49.0	42.7	30.0	12.9
TAX711	P	T	1016.4	95.8	89.3	84.8	79.7	71.4	63.5	55.9	50.0	38.3	23.0
TAX711	P	T	2032.8	104.0	97.4	92.7	87.6	78.8	70.3	62.7	57.4	46.7	33.2
TAX711	P	T	4065.6	112.3	105.6	100.7	95.4	86.2	77.2	69.5	64.7	55.1	43.3
TAX711	S	T	508.2	87.4	84.4	82.1	79.5	74.8	68.8	64.0	58.1	50.9	43.0
TAX711	S	T	1016.4	94.9	91.6	89.1	86.3	81.3	75.1	70.1	64.2	57.2	49.8
TAX711	S	T	2032.8	102.3	98.8	96.1	93.1	87.8	81.3	76.3	70.3	63.5	56.6
TAX711	S	T	4065.6	109.7	106.0	103.1	99.9	94.3	87.6	82.4	76.4	69.7	63.3
TAX712	E	T	416.5	85.7	82.1	79.4	76.5	71.3	65.2	60.1	53.7	43.4	27.5
TAX712	E	T	833.0	94.2	90.4	87.6	84.5	78.9	72.5	67.5	61.7	52.4	38.1
TAX712	E	T	1666.0	102.8	98.8	95.9	92.5	86.5	79.9	75.0	69.6	61.4	48.8
TAX712	E	T	3332.1	111.3	107.2	104.1	100.5	94.1	87.2	82.4	77.5	70.4	59.5
TAX712	M	T	416.5	74.4	68.8	64.8	60.4	53.1	44.5	37.9	30.4	21.4	11.8
TAX712	M	T	833.0	81.6	75.7	71.6	67.0	59.4	50.6	43.9	36.2	27.3	17.9
TAX712	M	T	1666.0	88.7	82.6	78.3	73.6	65.8	56.7	49.8	42.0	33.2	24.0
TAX712	M	T	3332.1	95.9	89.6	85.1	80.2	72.1	62.8	55.8	47.9	39.1	30.2
TAX712	P	T	416.5	85.1	78.8	74.5	69.6	61.9	54.6	47.1	40.6	27.6	10.0
TAX712	P	T	833.0	93.4	87.0	82.5	77.5	69.3	61.5	53.9	48.0	35.9	20.1
TAX712	P	T	1666.0	101.6	95.1	90.4	85.3	76.7	68.4	60.7	55.3	44.3	30.2
TAX712	P	T	3332.1	109.9	103.2	98.4	93.1	84.0	75.2	67.6	62.6	52.7	40.4
TAX712	S	T	416.5	85.3	82.3	80.1	77.6	72.9	67.0	62.3	56.4	49.1	41.1
TAX712	S	T	833.0	92.7	89.5	87.1	84.4	79.5	73.3	68.4	62.4	55.4	47.9
TAX712	S	T	1666.0	100.2	96.7	94.1	91.2	86.0	79.5	74.5	68.5	61.7	54.6
TAX712	S	T	3332.1	107.6	103.9	101.1	98.0	92.5	85.8	80.6	74.6	67.9	61.4
TAX713	E	T	508.2	88.1	84.5	81.8	78.8	73.4	67.3	62.2	56.0	46.0	30.5
TAX713	E	T	1016.4	96.7	92.8	90.0	86.8	81.1	74.6	69.6	63.9	55.0	41.2
TAX713	E	T	2032.8	105.2	101.2	98.2	94.8	88.7	82.0	77.1	71.8	64.0	51.9
TAX713	E	T	4065.6	113.8	109.6	106.4	102.8	96.3	89.3	84.5	79.7	72.9	62.6
TAX713	M	T	508.2	76.5	70.7	66.7	62.3	54.9	46.2	39.6	32.0	23.1	13.5
TAX713	M	T	1016.4	83.6	77.7	73.5	68.9	61.2	52.3	45.6	37.9	29.0	19.7
TAX713	M	T	2032.8	90.8	84.6	80.3	75.5	67.6	58.4	51.5	43.7	34.9	25.8
TAX713	M	T	4065.6	97.9	91.6	87.1	82.1	73.9	64.5	57.5	49.6	40.7	31.9
TAX713	P	T	508.2	87.5	81.2	76.8	71.9	64.0	56.6	49.0	42.7	30.0	12.9
TAX713	P	T	1016.4	95.8	89.3	84.8	79.7	71.4	63.5	55.9	50.0	38.3	23.0
TAX713	P	T	2032.8	104.0	97.4	92.7	87.6	78.8	70.3	62.7	57.4	46.7	33.2
TAX713	P	T	4065.6	112.3	105.6	100.7	95.4	86.2	77.2	69.5	64.7	55.1	43.3
TAX713	S	T	508.2	87.4	84.4	82.1	79.5	74.8	68.8	64.0	58.1	50.9	43.0
TAX713	S	T	1016.4	94.9	91.6	89.1	86.3	81.3	75.1	70.1	64.2	57.2	49.8
TAX713	S	T	2032.8	102.3	98.8	96.1	93.1	87.8	81.3	76.3	70.3	63.5	56.6
TAX713	S	T	4065.6	109.7	106.0	103.1	99.9	94.3	87.6	82.4	76.4	69.7	63.3
TAX714	E	T	508.2	88.1	84.5	81.8	78.8	73.4	67.3	62.2	56.0	46.0	30.5
TAX714	E	T	1016.4	96.7	92.8	90.0	86.8	81.1	74.6	69.6	63.9	55.0	41.2
TAX714	E	T	2032.8	105.2	101.2	98.2	94.8	88.7	82.0	77.1	71.8	64.0	51.9
TAX714	E	T	4065.6	113.8	109.6	106.4	102.8	96.3	89.3	84.5	79.7	72.9	62.6
TAX714	M	T	508.2	76.5	70.7	66.7	62.3	54.9	46.2	39.6	32.0	23.1	13.5
TAX714	M	T	1016.4	83.6	77.7	73.5	68.9	61.2	52.3	45.6	37.9	29.0	19.7
TAX714	M	T	2032.8	90.8	84.6	80.3	75.5	67.6	58.4	51.5	43.7	34.9	25.8
TAX714	M	T	4065.6	97.9	91.6	87.1	82.1	73.9	64.5	57.5	49.6	40.7	31.9
TAX714	P	T	508.2	87.5	81.2	76.8	71.9	64.0	56.6	49.0	42.7	30.0	12.9
TAX714	P	T	1016.4	95.8	89.3	84.8	79.7	71.4	63.5	55.9	50.0	38.3	23.0
TAX714	P	T	2032.8	104.0	97.4	92.7	87.6	78.8	70.3	62.7	57.4	46.7	33.2
TAX714	P	T	4065.6	112.3	105.6	100.7	95.4	86.2	77.2	69.5	64.7	55.1	43.3
TAX714	S	T	508.2	87.4	84.4	82.1	79.5	74.8	68.8	64.0	58.1	50.9	43.0
TAX714	S	T	1016.4	94.9	91.6	89.1	86.3	81.3	75.1	70.1	64.2	57.2	49.8
TAX714	S	T	2032.8	102.3	98.8	96.1	93.1	87.8	81.3	76.3	70.3	63.5	56.6
TAX714	S	T	4065.6	109.7	106.0	103.1	99.9	94.3	87.6	82.4	76.4	69.7	63.3

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX715	E	T	416.5	85.7	82.1	79.4	76.5	71.3	65.2	60.1	53.7	43.4	27.5
TAX715	E	T	833.0	94.2	90.4	87.6	84.5	78.9	72.5	67.5	61.7	52.4	38.1
TAX715	E	T	1666.0	102.8	98.8	95.9	92.5	86.5	79.9	75.0	69.6	61.4	48.8
TAX715	E	T	3332.1	111.3	107.2	104.1	100.5	94.1	87.2	82.4	77.5	70.4	59.5
TAX715	M	T	416.5	74.4	68.8	64.8	60.4	53.1	44.5	37.9	30.4	21.4	11.8
TAX715	M	T	833.0	81.6	75.7	71.6	67.0	59.4	50.6	43.9	36.2	27.3	17.9
TAX715	M	T	1666.0	88.7	82.6	78.3	73.6	65.8	56.7	49.8	42.0	33.2	24.0
TAX715	M	T	3332.1	95.9	89.6	85.1	80.2	72.1	62.8	55.8	47.9	39.1	30.2
TAX715	P	T	416.5	85.1	78.8	74.5	69.6	61.9	54.6	47.1	40.6	27.6	10.0
TAX715	P	T	833.0	93.4	87.0	82.5	77.5	69.3	61.5	53.9	48.0	35.9	20.1
TAX715	P	T	1666.0	101.6	95.1	90.4	85.3	76.7	68.4	60.7	55.3	44.3	30.2
TAX715	P	T	3332.1	109.9	103.2	98.4	93.1	84.0	75.2	67.6	62.6	52.7	40.4
TAX715	S	T	416.5	85.3	82.3	80.1	77.6	72.9	67.0	62.3	56.4	49.1	41.1
TAX715	S	T	833.0	92.7	89.5	87.1	84.4	79.5	73.3	68.4	62.4	55.4	47.9
TAX715	S	T	1666.0	100.2	96.7	94.1	91.2	86.0	79.5	74.5	68.5	61.7	54.6
TAX715	S	T	3332.1	107.6	103.9	101.1	98.0	92.5	85.8	80.6	74.6	67.9	61.4
TAX716	E	T	467.8	87.1	83.5	80.8	77.8	72.5	66.4	61.3	55.1	44.9	29.3
TAX716	E	T	935.7	95.7	91.8	89.0	85.8	80.1	73.8	68.8	63.0	53.9	39.9
TAX716	E	T	1871.4	104.2	100.2	97.2	93.8	87.7	81.1	76.2	70.9	62.9	50.6
TAX716	E	T	3742.7	112.8	108.6	105.5	101.8	95.4	88.4	83.6	78.8	71.9	61.3
TAX716	M	T	467.8	75.6	69.9	65.9	61.5	54.1	45.5	38.9	31.3	22.4	12.8
TAX716	M	T	935.7	82.8	76.9	72.7	68.1	60.5	51.6	44.9	37.2	28.3	18.9
TAX716	M	T	1871.4	89.9	83.8	79.5	74.7	66.8	57.7	50.8	43.0	34.2	25.1
TAX716	M	T	3742.7	97.1	90.7	86.3	81.3	73.2	63.8	56.8	48.9	40.0	31.2
TAX716	P	T	467.8	86.5	80.2	75.8	71.0	63.1	55.8	48.2	41.9	29.0	11.7
TAX716	P	T	935.7	94.8	88.3	83.8	78.8	70.5	62.6	55.0	49.2	37.3	21.8
TAX716	P	T	1871.4	103.0	96.5	91.8	86.6	77.9	69.5	61.9	56.5	45.7	31.9
TAX716	P	T	3742.7	111.3	104.6	99.8	94.4	85.3	76.4	68.7	63.8	54.1	42.1
TAX716	S	T	467.8	86.5	83.6	81.3	78.7	74.0	68.1	63.3	57.4	50.2	42.2
TAX716	S	T	935.7	94.0	90.7	88.3	85.5	80.5	74.3	69.4	63.5	56.5	49.0
TAX716	S	T	1871.4	101.4	97.9	95.3	92.3	87.1	80.6	75.5	69.6	62.7	55.8
TAX716	S	T	3742.7	108.8	105.1	102.3	99.1	93.6	86.9	81.7	75.7	69.0	62.5
TAX717	E	T	415.3	85.6	82.0	79.4	76.4	71.2	65.2	60.0	53.7	43.4	27.4
TAX717	E	T	830.6	94.2	90.4	87.6	84.4	78.8	72.5	67.5	61.6	52.3	38.1
TAX717	E	T	1661.2	102.7	98.8	95.8	92.5	86.4	79.8	74.9	69.5	61.3	48.8
TAX717	E	T	3322.5	111.3	107.2	104.0	100.5	94.0	87.2	82.4	77.4	70.3	59.5
TAX717	M	T	415.3	74.4	68.7	64.8	60.4	53.1	44.5	37.9	30.3	21.4	11.7
TAX717	M	T	830.6	81.5	75.7	71.5	67.0	59.4	50.6	43.9	36.2	27.3	17.9
TAX717	M	T	1661.2	88.7	82.6	78.3	73.6	65.7	56.6	49.8	42.0	33.2	24.0
TAX717	M	T	3322.5	95.8	89.5	85.1	80.2	72.1	62.7	55.8	47.9	39.0	30.2
TAX717	P	T	415.3	85.1	78.8	74.4	69.6	61.9	54.6	47.0	40.6	27.5	10.0
TAX717	P	T	830.6	93.4	86.9	82.4	77.4	69.2	61.5	53.9	47.9	35.9	20.1
TAX717	P	T	1661.2	101.6	95.1	90.4	85.3	76.6	68.3	60.7	55.2	44.3	30.2
TAX717	P	T	3322.5	109.9	103.2	98.4	93.1	84.0	75.2	67.5	62.5	52.6	40.3
TAX717	S	T	415.3	85.3	82.3	80.1	77.5	72.9	67.0	62.2	56.3	49.1	41.1
TAX717	S	T	830.6	92.7	89.5	87.1	84.3	79.4	73.3	68.4	62.4	55.4	47.8
TAX717	S	T	1661.2	100.1	96.7	94.1	91.1	85.9	79.5	74.5	68.5	61.6	54.6
TAX717	S	T	3322.5	107.6	103.9	101.1	97.9	92.4	85.8	80.6	74.6	67.9	61.4
TAX718	E	T	405.4	80.3	76.8	74.3	71.5	66.5	60.6	55.4	48.8	37.8	20.8
TAX718	E	T	810.7	88.9	85.2	82.5	79.5	74.1	68.0	62.9	56.7	46.8	31.5
TAX718	E	T	1621.5	97.4	93.6	90.7	87.5	81.7	75.3	70.3	64.6	55.8	42.2
TAX718	E	T	3242.9	106.0	102.0	98.9	95.5	89.3	82.6	77.7	72.5	64.8	52.8
TAX718	M	T	405.4	69.9	64.4	60.6	56.3	49.1	40.7	34.2	26.7	17.8	7.9
TAX718	M	T	810.7	77.1	71.4	67.3	62.9	55.5	46.8	40.2	32.6	23.6	14.1
TAX718	M	T	1621.5	84.2	78.3	74.1	69.5	61.8	52.9	46.1	38.4	29.5	20.2
TAX718	M	T	3242.9	91.4	85.2	80.9	76.1	68.1	59.0	52.1	44.2	35.4	26.3
TAX718	P	T	405.4	80.0	73.8	69.5	64.8	57.3	50.4	42.8	36.1	22.3	3.7
TAX718	P	T	810.7	88.2	81.9	77.5	72.6	64.7	57.2	49.6	43.4	30.7	13.8
TAX718	P	T	1621.5	96.5	90.0	85.5	80.4	72.0	64.1	56.5	50.7	39.1	23.9
TAX718	P	T	3242.9	104.7	98.2	93.4	88.3	79.4	70.9	63.3	58.0	47.4	34.0
TAX718	S	T	405.4	80.7	77.9	75.8	73.3	68.9	63.1	58.4	52.6	45.2	36.9
TAX718	S	T	810.7	88.1	85.0	82.8	80.1	75.4	69.4	64.6	58.6	51.5	43.6
TAX718	S	T	1621.5	95.5	92.2	89.8	86.9	81.9	75.6	70.7	64.7	57.8	50.4
TAX718	S	T	3242.9	102.9	99.4	96.7	93.7	88.4	81.9	76.8	70.8	64.0	57.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX725	E	T	460.1	81.9	78.4	75.8	72.9	67.9	62.0	56.8	50.3	39.4	22.7
TAX725	E	T	920.3	90.5	86.7	84.0	80.9	75.5	69.3	64.2	58.2	48.4	33.4
TAX725	E	T	1840.5	99.0	95.1	92.2	89.0	83.1	76.6	71.7	66.1	57.4	44.1
TAX725	E	T	3681.1	107.6	103.5	100.5	97.0	90.7	84.0	79.1	74.0	66.4	54.8
TAX725	M	T	460.1	71.2	65.7	61.8	57.5	50.3	41.8	35.3	27.8	18.8	9.1
TAX725	M	T	920.3	78.4	72.6	68.6	64.1	56.6	47.9	41.3	33.6	24.7	15.2
TAX725	M	T	1840.5	85.5	79.6	75.4	70.7	63.0	54.0	47.2	39.5	30.6	21.3
TAX725	M	T	3681.1	92.7	86.5	82.1	77.3	69.3	60.1	53.2	45.3	36.5	27.5
TAX725	P	T	460.1	81.5	75.3	71.0	66.2	58.6	51.6	44.0	37.4	23.9	5.6
TAX725	P	T	920.3	89.7	83.4	78.9	74.0	66.0	58.5	50.9	44.7	32.2	15.7
TAX725	P	T	1840.5	98.0	91.5	86.9	81.9	73.4	65.3	57.7	52.0	40.6	25.8
TAX725	P	T	3681.1	106.2	99.7	94.9	89.7	80.8	72.2	64.5	59.4	49.0	35.9
TAX725	S	T	460.1	82.0	79.2	77.1	74.6	70.1	64.3	59.6	53.7	46.4	38.1
TAX725	S	T	920.3	89.4	86.4	84.0	81.4	76.6	70.5	65.7	59.8	52.6	44.9
TAX725	S	T	1840.5	96.9	93.5	91.0	88.2	83.1	76.8	71.8	65.9	58.9	51.6
TAX725	S	T	3681.1	104.3	100.7	98.0	95.0	89.6	83.0	77.9	71.9	65.2	58.4
TAX726	E	T	460.1	81.9	78.4	75.8	72.9	67.9	62.0	56.8	50.3	39.4	22.7
TAX726	E	T	920.3	90.5	86.7	84.0	80.9	75.5	69.3	64.2	58.2	48.4	33.4
TAX726	E	T	1840.5	99.0	95.1	92.2	89.0	83.1	76.6	71.7	66.1	57.4	44.1
TAX726	E	T	3681.1	107.6	103.5	100.5	97.0	90.7	84.0	79.1	74.0	66.4	54.8
TAX726	M	T	460.1	71.2	65.7	61.8	57.5	50.3	41.8	35.3	27.8	18.8	9.1
TAX726	M	T	920.3	78.4	72.6	68.6	64.1	56.6	47.9	41.3	33.6	24.7	15.2
TAX726	M	T	1840.5	85.5	79.6	75.4	70.7	63.0	54.0	47.2	39.5	30.6	21.3
TAX726	M	T	3681.1	92.7	86.5	82.1	77.3	69.3	60.1	53.2	45.3	36.5	27.5
TAX726	P	T	460.1	81.5	75.3	71.0	66.2	58.6	51.6	44.0	37.4	23.9	5.6
TAX726	P	T	920.3	89.7	83.4	78.9	74.0	66.0	58.5	50.9	44.7	32.2	15.7
TAX726	P	T	1840.5	98.0	91.5	86.9	81.9	73.4	65.3	57.7	52.0	40.6	25.8
TAX726	P	T	3681.1	106.2	99.7	94.9	89.7	80.8	72.2	64.5	59.4	49.0	35.9
TAX726	S	T	460.1	82.0	79.2	77.1	74.6	70.1	64.3	59.6	53.7	46.4	38.1
TAX726	S	T	920.3	89.4	86.4	84.0	81.4	76.6	70.5	65.7	59.8	52.6	44.9
TAX726	S	T	1840.5	96.9	93.5	91.0	88.2	83.1	76.8	71.8	65.9	58.9	51.6
TAX726	S	T	3681.1	104.3	100.7	98.0	95.0	89.6	83.0	77.9	71.9	65.2	58.4
TAX727	E	T	405.4	80.3	76.8	74.3	71.5	66.5	60.6	55.4	48.8	37.8	20.8
TAX727	E	T	810.7	88.9	85.2	82.5	79.5	74.1	68.0	62.9	56.7	46.8	31.5
TAX727	E	T	1621.5	97.4	93.6	90.7	87.5	81.7	75.3	70.3	64.6	55.8	42.2
TAX727	E	T	3242.9	106.0	102.0	98.9	95.5	89.3	82.6	77.7	72.5	64.8	52.8
TAX727	M	T	405.4	69.9	64.4	60.6	56.3	49.1	40.7	34.2	26.7	17.8	7.9
TAX727	M	T	810.7	77.1	71.4	67.3	62.9	55.5	46.8	40.2	32.6	23.6	14.1
TAX727	M	T	1621.5	84.2	78.3	74.1	69.5	61.8	52.9	46.1	38.4	29.5	20.2
TAX727	M	T	3242.9	91.4	85.2	80.9	76.1	68.1	59.0	52.1	44.2	35.4	26.3
TAX727	P	T	405.4	80.0	73.8	69.5	64.8	57.3	50.4	42.8	36.1	22.3	3.7
TAX727	P	T	810.7	88.2	81.9	77.5	72.6	64.7	57.2	49.6	43.4	30.7	13.8
TAX727	P	T	1621.5	96.5	90.0	85.5	80.4	72.0	64.1	56.5	50.7	39.1	23.9
TAX727	P	T	3242.9	104.7	98.2	93.4	88.3	79.4	70.9	63.3	58.0	47.4	34.0
TAX727	S	T	405.4	80.7	77.9	75.8	73.3	68.9	63.1	58.4	52.6	45.2	36.9
TAX727	S	T	810.7	88.1	85.0	82.8	80.1	75.4	69.4	64.6	58.6	51.5	43.6
TAX727	S	T	1621.5	95.5	92.2	89.8	86.9	81.9	75.6	70.7	64.7	57.8	50.4
TAX727	S	T	3242.9	102.9	99.4	96.7	93.7	88.4	81.9	76.8	70.8	64.0	57.2
TAX728	E	T	405.4	80.3	76.8	74.3	71.5	66.5	60.6	55.4	48.8	37.8	20.8
TAX728	E	T	810.7	88.9	85.2	82.5	79.5	74.1	68.0	62.9	56.7	46.8	31.5
TAX728	E	T	1621.5	97.4	93.6	90.7	87.5	81.7	75.3	70.3	64.6	55.8	42.2
TAX728	E	T	3242.9	106.0	102.0	98.9	95.5	89.3	82.6	77.7	72.5	64.8	52.8
TAX728	M	T	405.4	69.9	64.4	60.6	56.3	49.1	40.7	34.2	26.7	17.8	7.9
TAX728	M	T	810.7	77.1	71.4	67.3	62.9	55.5	46.8	40.2	32.6	23.6	14.1
TAX728	M	T	1621.5	84.2	78.3	74.1	69.5	61.8	52.9	46.1	38.4	29.5	20.2
TAX728	M	T	3242.9	91.4	85.2	80.9	76.1	68.1	59.0	52.1	44.2	35.4	26.3
TAX728	P	T	405.4	80.0	73.8	69.5	64.8	57.3	50.4	42.8	36.1	22.3	3.7
TAX728	P	T	810.7	88.2	81.9	77.5	72.6	64.7	57.2	49.6	43.4	30.7	13.8
TAX728	P	T	1621.5	96.5	90.0	85.5	80.4	72.0	64.1	56.5	50.7	39.1	23.9
TAX728	P	T	3242.9	104.7	98.2	93.4	88.3	79.4	70.9	63.3	58.0	47.4	34.0
TAX728	S	T	405.4	80.7	77.9	75.8	73.3	68.9	63.1	58.4	52.6	45.2	36.9
TAX728	S	T	810.7	88.1	85.0	82.8	80.1	75.4	69.4	64.6	58.6	51.5	43.6
TAX728	S	T	1621.5	95.5	92.2	89.8	86.9	81.9	75.6	70.7	64.7	57.8	50.4
TAX728	S	T	3242.9	102.9	99.4	96.7	93.7	88.4	81.9	76.8	70.8	64.0	57.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX747	E	T	1351.9	88.8	85.4	83.0	80.6	76.8	73.1	69.9	65.7	58.1	45.8
TAX747	E	T	2703.8	96.4	92.8	90.2	87.4	83.0	78.5	75.0	70.7	63.3	51.7
TAX747	E	T	5407.6	104.1	100.2	97.3	94.2	89.2	83.9	80.1	75.7	68.4	57.6
TAX747	E	T	10815.2	111.7	107.6	104.5	101.0	95.3	89.3	85.2	80.7	73.6	63.4
TAX747	M	T	1351.9	77.8	72.6	69.0	65.3	58.7	50.9	45.0	38.2	30.0	21.0
TAX747	M	T	2703.8	83.8	78.4	74.7	70.6	63.8	55.7	49.6	42.5	34.2	25.0
TAX747	M	T	5407.6	89.8	84.2	80.3	76.0	68.8	60.5	54.2	46.9	38.3	29.1
TAX747	M	T	10815.2	95.8	90.0	85.9	81.4	73.9	65.3	58.8	51.2	42.5	33.1
TAX747	P	T	1351.9	86.3	80.7	76.8	72.8	66.5	61.5	55.3	51.0	40.9	28.2
TAX747	P	T	2703.8	93.7	87.9	83.7	79.3	72.3	66.6	60.2	55.9	46.0	33.7
TAX747	P	T	5407.6	101.2	95.0	90.6	85.8	78.2	71.7	65.1	60.7	51.1	39.2
TAX747	P	T	10815.2	108.7	102.2	97.5	92.3	84.0	76.7	69.9	65.6	56.1	44.7
TAX747	S	T	1351.9	89.4	86.9	84.9	82.7	78.7	73.8	69.7	64.6	58.2	50.6
TAX747	S	T	2703.8	96.0	93.1	91.0	88.6	84.2	78.9	74.5	69.1	62.4	54.8
TAX747	S	T	5407.6	102.5	99.4	97.1	94.4	89.7	83.9	79.2	73.5	66.6	59.0
TAX747	S	T	10815.2	109.0	105.6	103.1	100.2	95.2	89.0	84.0	78.0	70.8	63.2
TAX748	E	T	1303.0	88.4	85.0	82.7	80.2	76.5	72.8	69.7	65.4	57.8	45.5
TAX748	E	T	2606.0	96.0	92.4	89.8	87.0	82.7	78.2	74.8	70.4	63.0	51.4
TAX748	E	T	5212.0	103.7	99.8	96.9	93.8	88.8	83.6	79.9	75.4	68.1	57.3
TAX748	E	T	10423.9	111.3	107.2	104.1	100.6	95.0	89.0	85.0	80.4	73.3	63.1
TAX748	M	T	1303.0	77.4	72.3	68.7	65.0	58.4	50.6	44.8	37.9	29.8	20.8
TAX748	M	T	2606.0	83.4	78.1	74.4	70.3	63.5	55.4	49.4	42.3	33.9	24.8
TAX748	M	T	5212.0	89.4	83.9	80.0	75.7	68.6	60.2	54.0	46.7	38.1	28.9
TAX748	M	T	10423.9	95.5	89.7	85.6	81.1	73.6	65.0	58.5	51.0	42.2	32.9
TAX748	P	T	1303.0	85.9	80.3	76.5	72.5	66.2	61.3	55.1	50.8	40.7	27.9
TAX748	P	T	2606.0	93.3	87.5	83.4	78.9	72.0	66.3	59.9	55.6	45.7	33.4
TAX748	P	T	5212.0	100.8	94.7	90.2	85.4	77.9	71.4	64.8	60.5	50.8	38.9
TAX748	P	T	10423.9	108.3	101.8	97.1	91.9	83.7	76.5	69.7	65.3	55.8	44.4
TAX748	S	T	1303.0	89.1	86.5	84.6	82.4	78.5	73.5	69.4	64.4	58.0	50.4
TAX748	S	T	2606.0	95.6	92.8	90.7	88.3	83.9	78.6	74.2	68.8	62.2	54.6
TAX748	S	T	5212.0	102.1	99.0	96.7	94.1	89.4	83.7	79.0	73.3	66.4	58.8
TAX748	S	T	10423.9	108.7	105.3	102.8	99.9	94.9	88.7	83.8	77.8	70.6	63.0
TAX754	E	T	1682.6	91.2	87.7	85.3	82.7	78.8	74.8	71.5	67.3	59.7	47.7
TAX754	E	T	3365.2	98.8	95.1	92.4	89.5	84.9	80.2	76.7	72.3	64.9	53.6
TAX754	E	T	6730.4	106.5	102.5	99.6	96.3	91.1	85.6	81.8	77.3	70.0	59.4
TAX754	E	T	13460.8	114.2	109.9	106.7	103.1	97.3	91.0	86.9	82.2	75.2	65.3
TAX754	M	T	1682.6	79.7	74.4	70.8	67.0	60.3	52.4	46.5	39.5	31.3	22.3
TAX754	M	T	3365.2	85.7	80.2	76.4	72.3	65.4	57.2	51.1	43.9	35.5	26.3
TAX754	M	T	6730.4	91.7	86.0	82.1	77.7	70.4	62.0	55.6	48.3	39.6	30.3
TAX754	M	T	13460.8	97.7	91.9	87.7	83.1	75.5	66.8	60.2	52.6	43.8	34.4
TAX754	P	T	1682.6	88.6	83.0	79.0	74.8	68.4	63.1	56.9	52.5	42.5	29.9
TAX754	P	T	3365.2	96.1	90.1	85.9	81.3	74.2	68.2	61.7	57.4	47.6	35.4
TAX754	P	T	6730.4	103.6	97.3	92.8	87.8	80.0	73.3	66.6	62.2	52.7	40.9
TAX754	P	T	13460.8	111.1	104.5	99.7	94.3	85.8	78.3	71.5	67.1	57.7	46.4
TAX754	S	T	1682.6	91.5	88.8	86.8	84.6	80.5	75.4	71.2	66.0	59.5	51.9
TAX754	S	T	3365.2	98.0	95.1	92.9	90.4	86.0	80.5	76.0	70.5	63.7	56.1
TAX754	S	T	6730.4	104.6	101.3	99.0	96.2	91.5	85.5	80.7	74.9	67.9	60.3
TAX754	S	T	13460.8	111.1	107.6	105.0	102.1	96.9	90.6	85.5	79.4	72.1	64.6
TAX755	E	T	1796.9	91.9	88.4	86.0	83.4	79.3	75.3	72.0	67.7	60.2	48.3
TAX755	E	T	3593.7	99.6	95.8	93.1	90.2	85.5	80.7	77.1	72.7	65.4	54.1
TAX755	E	T	7187.4	107.2	103.2	100.3	97.0	91.7	86.1	82.2	77.7	70.5	60.0
TAX755	E	T	14374.8	114.9	110.6	107.4	103.8	97.9	91.6	87.3	82.7	75.7	65.8
TAX755	M	T	1796.9	80.2	75.0	71.3	67.5	60.8	52.9	46.9	39.9	31.7	22.6
TAX755	M	T	3593.7	86.2	80.8	77.0	72.8	65.8	57.7	51.5	44.3	35.9	26.7
TAX755	M	T	7187.4	92.2	86.6	82.6	78.2	70.9	62.5	56.1	48.7	40.0	30.7
TAX755	M	T	14374.8	98.2	92.4	88.2	83.6	76.0	67.3	60.7	53.0	44.2	34.8
TAX755	P	T	1796.9	89.3	83.7	79.7	75.5	68.9	63.6	57.3	53.0	43.0	30.5
TAX755	P	T	3593.7	96.8	90.8	86.6	82.0	74.7	68.7	62.2	57.9	48.1	36.0
TAX755	P	T	7187.4	104.3	98.0	93.4	88.4	80.6	73.8	67.1	62.7	53.1	41.5
TAX755	P	T	14374.8	111.8	105.2	100.3	94.9	86.4	78.8	71.9	67.6	58.2	47.0
TAX755	S	T	1796.9	92.1	89.4	87.4	85.1	81.0	75.9	71.6	66.4	59.9	52.3
TAX755	S	T	3593.7	98.6	95.7	93.5	91.0	86.5	80.9	76.4	70.9	64.1	56.5
TAX755	S	T	7187.4	105.2	101.9	99.5	96.8	92.0	86.0	81.2	75.4	68.3	60.7
TAX755	S	T	14374.8	111.7	108.2	105.6	102.6	97.5	91.1	86.0	79.8	72.5	64.9

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX771	E	T	334.2	78.0	74.5	72.0	69.2	64.4	58.6	53.4	46.6	35.3	17.8
TAX771	E	T	668.3	86.5	82.9	80.2	77.2	72.0	65.9	60.8	54.5	44.3	28.5
TAX771	E	T	1336.7	95.1	91.3	88.4	85.3	79.6	73.2	68.2	62.4	53.3	39.2
TAX771	E	T	2673.3	103.6	99.6	96.7	93.3	87.2	80.6	75.7	70.3	62.3	49.9
TAX771	M	T	334.2	67.9	62.5	58.7	54.5	47.4	39.0	32.6	25.1	16.1	6.2
TAX771	M	T	668.3	75.1	69.4	65.4	61.1	53.7	45.1	38.5	30.9	22.0	12.4
TAX771	M	T	1336.7	82.2	76.4	72.2	67.7	60.0	51.2	44.5	36.8	27.9	18.5
TAX771	M	T	2673.3	89.4	83.3	79.0	74.3	66.4	57.3	50.4	42.6	33.7	24.6
TAX771	P	T	334.2	77.7	71.5	67.3	62.6	55.2	48.4	40.9	34.0	20.0	0.9
TAX771	P	T	668.3	85.9	79.6	75.3	70.4	62.6	55.3	47.7	41.3	28.4	11.0
TAX771	P	T	1336.7	94.2	87.8	83.2	78.2	70.0	62.2	54.6	48.7	36.7	21.1
TAX771	P	T	2673.3	102.4	95.9	91.2	86.1	77.4	69.0	61.4	56.0	45.1	31.2
TAX771	S	T	334.2	78.6	75.9	73.8	71.4	67.1	61.4	56.7	50.9	43.5	35.0
TAX771	S	T	668.3	86.0	83.0	80.8	78.2	73.6	67.6	62.9	56.9	49.8	41.7
TAX771	S	T	1336.7	93.4	90.2	87.8	85.0	80.1	73.9	69.0	63.0	56.0	48.5
TAX771	S	T	2673.3	100.9	97.4	94.8	91.8	86.6	80.2	75.1	69.1	62.3	55.3
TAX772	E	T	173.3	78.4	74.9	72.4	69.7	64.8	59.0	53.8	47.0	35.8	18.4
TAX772	E	T	346.7	87.0	83.3	80.7	77.7	72.4	66.3	61.2	54.9	44.7	29.1
TAX772	E	T	693.4	95.5	91.7	88.9	85.7	80.0	73.6	68.6	62.8	53.7	39.7
TAX772	E	T	1386.7	104.1	100.1	97.1	93.7	87.6	81.0	76.1	70.7	62.7	50.4
TAX772	M	T	173.3	68.3	62.9	59.0	54.8	47.7	39.3	32.9	25.4	16.4	6.6
TAX772	M	T	346.7	75.5	69.8	65.8	61.4	54.0	45.4	38.8	31.2	22.3	12.7
TAX772	M	T	693.4	82.6	76.7	72.6	68.0	60.4	51.5	44.8	37.1	28.2	18.8
TAX772	M	T	1386.7	89.8	83.7	79.4	74.6	66.7	57.6	50.7	42.9	34.1	25.0
TAX772	P	T	173.3	78.1	71.9	67.7	63.0	55.6	48.8	41.3	34.4	20.5	1.4
TAX772	P	T	346.7	86.4	80.1	75.7	70.8	63.0	55.7	48.1	41.7	28.8	11.5
TAX772	P	T	693.4	94.6	88.2	83.7	78.7	70.4	62.5	54.9	49.0	37.2	21.7
TAX772	P	T	1386.7	102.9	96.3	91.6	86.5	77.8	69.4	61.8	56.4	45.6	31.8
TAX772	S	T	173.3	79.0	76.2	74.2	71.8	67.4	61.7	57.1	51.2	43.8	35.3
TAX772	S	T	346.7	86.4	83.4	81.2	78.6	73.9	68.0	63.2	57.3	50.1	42.1
TAX772	S	T	693.4	93.8	90.6	88.2	85.4	80.4	74.2	69.3	63.4	56.4	48.9
TAX772	S	T	1386.7	101.3	97.8	95.2	92.2	86.9	80.5	75.4	69.5	62.6	55.6
TAX773	E	T	181.6	79.0	75.5	73.0	70.2	65.3	59.5	54.3	47.6	36.4	19.1
TAX773	E	T	363.2	87.5	83.9	81.2	78.2	72.9	66.8	61.7	55.5	45.4	29.8
TAX773	E	T	726.4	96.1	92.3	89.4	86.2	80.5	74.1	69.1	63.4	54.3	40.5
TAX773	E	T	1452.8	104.6	100.6	97.6	94.2	88.1	81.5	76.6	71.3	63.3	51.2
TAX773	M	T	181.6	68.8	63.3	59.5	55.3	48.1	39.7	33.3	25.8	16.8	7.0
TAX773	M	T	363.2	76.0	70.3	66.3	61.9	54.5	45.8	39.2	31.6	22.7	13.1
TAX773	M	T	726.4	83.1	77.2	73.0	68.4	60.8	51.9	45.2	37.5	28.6	19.2
TAX773	M	T	1452.8	90.3	84.1	79.8	75.0	67.1	58.0	51.1	43.3	34.5	25.4
TAX773	P	T	181.6	78.7	72.5	68.2	63.5	56.1	49.3	41.7	34.9	21.0	2.1
TAX773	P	T	363.2	86.9	80.6	76.2	71.4	63.5	56.1	48.5	42.2	29.4	12.2
TAX773	P	T	726.4	95.2	88.7	84.2	79.2	70.9	63.0	55.4	49.5	37.8	22.3
TAX773	P	T	1452.8	103.4	96.9	92.2	87.0	78.3	69.8	62.2	56.9	46.1	32.4
TAX773	S	T	181.6	79.5	76.7	74.7	72.2	67.8	62.1	57.5	51.6	44.2	35.8
TAX773	S	T	363.2	86.9	83.9	81.7	79.0	74.4	68.4	63.6	57.7	50.5	42.6
TAX773	S	T	726.4	94.3	91.1	88.7	85.8	80.9	74.7	69.7	63.8	56.8	49.3
TAX773	S	T	1452.8	101.8	98.3	95.6	92.6	87.4	80.9	75.8	69.9	63.0	56.1
TAX781	E	T	286.3	105.2	100.8	97.6	94.1	88.6	82.1	78.3	73.9	69.7	62.6
TAX781	E	T	572.5	109.3	104.6	101.2	97.5	92.1	85.7	82.2	78.3	75.5	69.6
TAX781	E	T	1145.1	113.4	108.4	104.8	100.9	95.6	89.3	86.1	82.7	81.3	76.6
TAX781	E	T	2290.2	117.5	112.2	108.4	104.4	99.2	92.9	90.0	87.1	87.0	83.5
TAX781	M	T	286.3	85.3	78.9	74.5	69.9	62.5	54.4	48.7	43.1	37.4	32.2
TAX781	M	T	572.5	88.2	81.6	77.2	72.6	65.4	57.7	52.4	47.3	42.3	37.4
TAX781	M	T	1145.1	91.1	84.3	79.9	75.3	68.3	61.0	56.1	51.5	47.2	42.6
TAX781	M	T	2290.2	94.0	87.0	82.5	77.9	71.2	64.3	59.8	55.7	52.1	47.9
TAX781	P	T	286.3	102.4	95.2	90.2	84.9	76.2	67.2	61.4	56.3	50.8	42.3
TAX781	P	T	572.5	106.4	99.1	94.0	88.9	80.2	71.1	65.7	60.9	57.7	50.9
TAX781	P	T	1145.1	110.4	103.0	97.8	92.9	84.2	75.0	70.0	65.5	64.6	59.5
TAX781	P	T	2290.2	114.4	106.8	101.6	96.8	88.2	78.9	74.2	70.1	71.4	68.2
TAX781	S	T	286.3	99.1	95.5	92.9	90.1	85.5	80.2	76.4	72.5	68.5	64.6
TAX781	S	T	572.5	102.0	98.1	95.5	92.7	88.3	83.3	79.8	76.1	72.2	68.5
TAX781	S	T	1145.1	104.9	100.7	98.1	95.3	91.1	86.4	83.2	79.7	75.9	72.4
TAX781	S	T	2290.2	107.8	103.4	100.6	97.8	93.9	89.6	86.6	83.3	79.7	76.3

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX783	E	T	286.3	104.3	99.9	96.7	93.2	87.6	81.1	77.2	72.8	68.5	61.2
TAX783	E	T	572.5	108.4	103.7	100.3	96.6	91.1	84.7	81.1	77.2	74.3	68.2
TAX783	E	T	1145.1	112.5	107.5	103.9	100.0	94.6	88.3	85.0	81.6	80.1	75.2
TAX783	E	T	2290.2	116.6	111.3	107.5	103.5	98.2	91.9	88.9	86.0	85.8	82.1
TAX783	M	T	286.3	84.4	78.0	73.6	69.0	61.6	53.5	47.8	42.2	36.5	31.3
TAX783	M	T	572.5	87.3	80.7	76.3	71.7	64.5	56.8	51.5	46.4	41.4	36.5
TAX783	M	T	1145.1	90.2	83.4	79.0	74.4	67.4	60.1	55.2	50.6	46.3	41.7
TAX783	M	T	2290.2	93.1	86.1	81.6	77.0	70.3	63.4	58.9	54.8	51.2	47.0
TAX783	P	T	286.3	101.5	94.3	89.3	84.0	75.2	66.2	60.3	55.3	49.7	41.0
TAX783	P	T	572.5	105.5	98.2	93.1	88.0	79.2	70.1	64.6	59.9	56.6	49.6
TAX783	P	T	1145.1	109.5	102.1	96.9	92.0	83.2	74.0	68.9	64.5	63.5	58.2
TAX783	P	T	2290.2	113.5	105.9	100.7	95.9	87.2	77.9	73.1	69.1	70.3	66.9
TAX783	S	T	286.3	98.2	94.6	92.0	89.2	84.6	79.3	75.5	71.6	67.6	63.7
TAX783	S	T	572.5	101.1	97.2	94.6	91.8	87.4	82.4	78.9	75.2	71.3	67.6
TAX783	S	T	1145.1	104.0	99.8	97.2	94.4	90.2	85.5	82.3	78.8	75.0	71.5
TAX783	S	T	2290.2	106.9	102.5	99.7	96.9	93.0	88.7	85.7	82.4	78.8	75.4
TAX802	E	T	75.4	59.6	56.5	54.3	52.0	48.1	42.8	37.4	29.6	16.0	-5.1
TAX802	E	T	150.7	68.1	64.9	62.6	60.0	55.7	50.2	44.8	37.5	25.0	5.5
TAX802	E	T	301.4	76.7	73.3	70.8	68.0	63.3	57.5	52.3	45.4	33.9	16.2
TAX802	E	T	602.8	85.2	81.6	79.0	76.1	70.9	64.8	59.7	53.3	42.9	26.9
TAX802	M	T	75.4	52.6	47.6	44.1	40.3	33.7	25.9	19.8	12.5	3.5	-7.0
TAX802	M	T	150.7	59.7	54.5	50.9	46.9	40.1	32.0	25.7	18.4	9.4	-0.8
TAX802	M	T	301.4	66.9	61.5	57.7	53.5	46.4	38.1	31.7	24.2	15.3	5.3
TAX802	M	T	602.8	74.0	68.4	64.4	60.1	52.8	44.2	37.6	30.1	21.1	11.4
TAX802	P	T	75.4	60.0	54.0	50.1	45.8	39.3	33.7	26.2	18.3	2.0	-20.8
TAX802	P	T	150.7	68.2	62.2	58.1	53.6	46.7	40.6	33.0	25.6	10.4	-10.7
TAX802	P	T	301.4	76.5	70.3	66.1	61.4	54.1	47.4	39.9	32.9	18.8	-0.6
TAX802	P	T	602.8	84.7	78.4	74.1	69.2	61.5	54.3	46.7	40.3	27.1	9.5
TAX802	S	T	75.4	62.6	60.4	58.8	56.8	53.1	47.9	43.6	37.8	30.0	20.4
TAX802	S	T	150.7	70.1	67.6	65.8	63.6	59.6	54.2	49.7	43.9	36.3	27.2
TAX802	S	T	301.4	77.5	74.8	72.8	70.4	66.1	60.4	55.8	49.9	42.6	34.0
TAX802	S	T	602.8	84.9	82.0	79.8	77.2	72.6	66.7	62.0	56.0	48.8	40.7
TAX809	E	T	55.4	55.8	52.8	50.7	48.5	44.7	39.6	34.1	26.1	12.0	-9.9
TAX809	E	T	110.9	64.3	61.2	58.9	56.5	52.3	46.9	41.5	34.0	21.0	0.8
TAX809	E	T	221.7	72.9	69.5	67.1	64.5	59.9	54.3	49.0	41.9	30.0	11.5
TAX809	E	T	443.4	81.4	77.9	75.3	72.5	67.5	61.6	56.4	49.8	38.9	22.2
TAX809	M	T	55.4	49.4	44.5	41.1	37.4	30.9	23.2	17.2	10.0	0.9	-9.7
TAX809	M	T	110.9	56.6	51.4	47.9	44.0	37.3	29.3	23.1	15.8	6.8	-3.5
TAX809	M	T	221.7	63.7	58.4	54.7	50.6	43.6	35.4	29.1	21.6	12.6	2.6
TAX809	M	T	443.4	70.9	65.3	61.4	57.2	49.9	41.5	35.0	27.5	18.5	8.7
TAX809	P	T	55.4	56.3	50.4	46.6	42.3	36.1	30.7	23.2	15.1	-1.7	-25.3
TAX809	P	T	110.9	64.6	58.6	54.6	50.1	43.5	37.5	30.0	22.4	6.7	-15.2
TAX809	P	T	221.7	72.8	66.7	62.5	57.9	50.8	44.4	36.8	29.7	15.1	-5.1
TAX809	P	T	443.4	81.1	74.8	70.5	65.8	58.2	51.2	43.7	37.0	23.4	5.0
TAX809	S	T	55.4	59.3	57.2	55.7	53.8	50.2	45.2	40.9	35.1	27.3	17.4
TAX809	S	T	110.9	66.8	64.4	62.7	60.6	56.7	51.4	47.0	41.2	33.5	24.2
TAX809	S	T	221.7	74.2	71.6	69.7	67.4	63.2	57.7	53.1	47.2	39.8	31.0
TAX809	S	T	443.4	81.6	78.8	76.7	74.2	69.7	63.9	59.2	53.3	46.1	37.7
TAX810	E	T	55.8	55.9	52.9	50.8	48.6	44.8	39.7	34.2	26.2	12.1	-9.8
TAX810	E	T	111.6	64.4	61.2	59.0	56.6	52.4	47.0	41.6	34.1	21.1	0.9
TAX810	E	T	223.2	73.0	69.6	67.2	64.6	60.0	54.3	49.0	42.0	30.0	11.6
TAX810	E	T	446.4	81.5	78.0	75.4	72.6	67.6	61.7	56.5	49.9	39.0	22.3
TAX810	M	T	55.8	49.5	44.6	41.2	37.4	31.0	23.3	17.2	10.0	1.0	-9.6
TAX810	M	T	111.6	56.6	51.5	47.9	44.0	37.3	29.4	23.2	15.8	6.8	-3.5
TAX810	M	T	223.2	63.8	58.4	54.7	50.6	43.7	35.5	29.1	21.7	12.7	2.7
TAX810	M	T	446.4	70.9	65.4	61.5	57.2	50.0	41.5	35.1	27.5	18.6	8.8
TAX810	P	T	55.8	56.4	50.5	46.7	42.4	36.1	30.7	23.2	15.1	-1.6	-25.2
TAX810	P	T	111.6	64.6	58.6	54.6	50.2	43.5	37.6	30.1	22.5	6.8	-15.1
TAX810	P	T	223.2	72.9	66.8	62.6	58.0	50.9	44.5	36.9	29.8	15.1	-5.0
TAX810	P	T	446.4	81.1	74.9	70.6	65.9	58.3	51.3	43.7	37.1	23.5	5.1
TAX810	S	T	55.8	59.4	57.3	55.8	53.9	50.3	45.2	40.9	35.1	27.3	17.5
TAX810	S	T	111.6	66.8	64.5	62.8	60.7	56.8	51.5	47.1	41.2	33.6	24.3
TAX810	S	T	223.2	74.3	71.7	69.8	67.5	63.3	57.7	53.2	47.3	39.8	31.0
TAX810	S	T	446.4	81.7	78.9	76.7	74.3	69.8	64.0	59.3	53.4	46.1	37.8

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX811	E	T	134.2	66.7	63.5	61.2	58.7	54.4	48.9	43.6	36.2	23.4	3.8
TAX811	E	T	268.4	75.3	71.8	69.4	66.7	62.0	56.3	51.0	44.1	32.4	14.4
TAX811	E	T	536.8	83.8	80.2	77.6	74.7	69.6	63.6	58.4	52.0	41.4	25.1
TAX811	E	T	1073.6	92.4	88.6	85.8	82.7	77.2	70.9	65.9	59.9	50.4	35.8
TAX811	M	T	134.2	58.5	53.3	49.7	45.8	39.0	31.0	24.7	17.4	8.4	-1.9
TAX811	M	T	268.4	65.7	60.3	56.5	52.4	45.4	37.1	30.7	23.2	14.3	4.3
TAX811	M	T	536.8	72.8	67.2	63.3	59.0	51.7	43.2	36.6	29.1	20.1	10.4
TAX811	M	T	1073.6	80.0	74.2	70.1	65.6	58.0	49.2	42.6	34.9	26.0	16.6
TAX811	P	T	134.2	66.8	60.8	56.8	52.3	45.5	39.4	31.9	24.4	9.0	-12.4
TAX811	P	T	268.4	75.1	68.9	64.7	60.1	52.9	46.3	38.7	31.7	17.4	-2.3
TAX811	P	T	536.8	83.3	77.1	72.7	67.9	60.3	53.1	45.6	39.0	25.7	7.8
TAX811	P	T	1073.6	91.6	85.2	80.7	75.8	67.7	60.0	52.4	46.3	34.1	17.9
TAX811	S	T	134.2	68.8	66.4	64.6	62.5	58.5	53.1	48.7	42.8	35.3	26.1
TAX811	S	T	268.4	76.2	73.6	71.6	69.3	65.0	59.4	54.8	48.9	41.5	32.8
TAX811	S	T	536.8	83.7	80.8	78.6	76.1	71.5	65.7	60.9	55.0	47.8	39.6
TAX811	S	T	1073.6	91.1	88.0	85.6	82.9	78.0	71.9	67.0	61.1	54.0	46.4
TAX812	E	T	72.3	59.1	56.0	53.8	51.6	47.6	42.4	36.9	29.2	15.4	-5.8
TAX812	E	T	144.7	67.6	64.4	62.1	59.6	55.2	49.7	44.4	37.1	24.4	4.9
TAX812	E	T	289.4	76.2	72.8	70.3	67.6	62.8	57.1	51.8	45.0	33.4	15.6
TAX812	E	T	578.8	84.7	81.1	78.5	75.6	70.4	64.4	59.3	52.9	42.4	26.3
TAX812	M	T	72.3	52.1	47.2	43.7	39.9	33.4	25.6	19.4	12.2	3.2	-7.3
TAX812	M	T	144.7	59.3	54.1	50.5	46.5	39.7	31.7	25.4	18.0	9.0	-1.2
TAX812	M	T	289.4	66.5	61.0	57.3	53.1	46.0	37.7	31.3	23.9	14.9	5.0
TAX812	M	T	578.8	73.6	68.0	64.0	59.7	52.4	43.8	37.3	29.7	20.8	11.1
TAX812	P	T	72.3	59.5	53.6	49.6	45.3	38.9	33.3	25.8	17.9	1.6	-21.4
TAX812	P	T	144.7	67.7	61.7	57.6	53.1	46.3	40.2	32.6	25.2	9.9	-11.3
TAX812	P	T	289.4	76.0	69.8	65.6	61.0	53.7	47.0	39.5	32.5	18.3	-1.2
TAX812	P	T	578.8	84.2	78.0	73.6	68.8	61.1	53.9	46.3	39.8	26.6	8.9
TAX812	S	T	72.3	62.2	60.0	58.4	56.4	52.7	47.6	43.2	37.4	29.7	20.0
TAX812	S	T	144.7	69.6	67.2	65.4	63.2	59.2	53.8	49.4	43.5	35.9	26.8
TAX812	S	T	289.4	77.0	74.4	72.4	70.0	65.7	60.1	55.5	49.6	42.2	33.6
TAX812	S	T	578.8	84.5	81.6	79.4	76.8	72.2	66.3	61.6	55.7	48.5	40.3
TAX814	E	T	712.0	89.3	85.9	83.6	81.1	77.3	73.5	70.3	66.1	58.5	46.3
TAX814	E	T	1424.0	97.0	93.3	90.7	87.9	83.5	78.9	75.4	71.1	63.6	52.1
TAX814	E	T	2848.0	104.7	100.7	97.9	94.7	89.6	84.3	80.5	76.1	68.8	58.0
TAX814	E	T	5696.0	112.3	108.1	105.0	101.5	95.8	89.7	85.6	81.0	74.0	63.9
TAX814	M	T	712.0	78.2	73.0	69.5	65.7	59.1	51.3	45.4	38.5	30.3	21.3
TAX814	M	T	1424.0	84.2	78.8	75.1	71.0	64.1	56.1	50.0	42.8	34.5	25.3
TAX814	M	T	2848.0	90.2	84.6	80.7	76.4	69.2	60.9	54.5	47.2	38.6	29.4
TAX814	M	T	5696.0	96.2	90.5	86.4	81.8	74.3	65.7	59.1	51.6	42.8	33.4
TAX814	P	T	712.0	86.8	81.2	77.3	73.3	67.0	61.9	55.7	51.4	41.3	28.6
TAX814	P	T	1424.0	94.3	88.4	84.2	79.8	72.8	67.0	60.6	56.2	46.4	34.1
TAX814	P	T	2848.0	101.8	95.6	91.1	86.3	78.6	72.1	65.4	61.1	51.4	39.6
TAX814	P	T	5696.0	109.3	102.8	98.0	92.8	84.4	77.1	70.3	65.9	56.5	45.1
TAX814	S	T	712.0	89.9	87.3	85.4	83.2	79.2	74.2	70.0	64.9	58.5	50.9
TAX814	S	T	1424.0	96.4	93.6	91.4	89.0	84.6	79.2	74.8	69.4	62.7	55.1
TAX814	S	T	2848.0	103.0	99.8	97.5	94.8	90.1	84.3	79.6	73.9	66.9	59.3
TAX814	S	T	5696.0	109.5	106.1	103.6	100.7	95.6	89.4	84.4	78.3	71.1	63.5
TAX816	E	T	1070.7	90.7	87.2	84.8	82.3	78.4	74.4	71.2	66.9	59.4	47.3
TAX816	E	T	2141.5	98.3	94.6	92.0	89.1	84.5	79.8	76.3	71.9	64.5	53.2
TAX816	E	T	4283.0	106.0	102.0	99.1	95.9	90.7	85.3	81.4	76.9	69.7	59.0
TAX816	E	T	8566.0	113.6	109.4	106.2	102.7	96.9	90.7	86.5	81.9	74.9	64.9
TAX816	M	T	1070.7	79.2	74.0	70.4	66.6	60.0	52.1	46.2	39.2	31.0	22.0
TAX816	M	T	2141.5	85.3	79.8	76.1	72.0	65.0	56.9	50.7	43.6	35.2	26.0
TAX816	M	T	4283.0	91.3	85.7	81.7	77.3	70.1	61.7	55.3	48.0	39.3	30.1
TAX816	M	T	8566.0	97.3	91.5	87.3	82.7	75.2	66.5	59.9	52.3	43.5	34.1
TAX816	P	T	1070.7	88.1	82.5	78.5	74.4	68.0	62.8	56.5	52.2	42.2	29.6
TAX816	P	T	2141.5	95.6	89.7	85.4	80.9	73.8	67.9	61.4	57.1	47.3	35.1
TAX816	P	T	4283.0	103.1	96.8	92.3	87.4	79.6	72.9	66.3	61.9	52.3	40.6
TAX816	P	T	8566.0	110.6	104.0	99.2	93.9	85.5	78.0	71.2	66.8	57.4	46.1
TAX816	S	T	1070.7	91.0	88.4	86.4	84.2	80.1	75.0	70.9	65.7	59.3	51.6
TAX816	S	T	2141.5	97.6	94.7	92.5	90.0	85.6	80.1	75.6	70.2	63.5	55.9
TAX816	S	T	4283.0	104.1	100.9	98.6	95.9	91.1	85.2	80.4	74.6	67.7	60.1
TAX816	S	T	8566.0	110.6	107.2	104.6	101.7	96.6	90.3	85.2	79.1	71.8	64.3

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX817	E	T	1321.7	93.0	89.5	87.0	84.4	80.2	76.1	72.8	68.5	60.9	49.1
TAX817	E	T	2643.4	100.7	96.9	94.1	91.2	86.4	81.5	77.9	73.4	66.1	54.9
TAX817	E	T	5286.8	108.3	104.3	101.3	97.9	92.6	86.9	83.0	78.4	71.3	60.8
TAX817	E	T	10573.7	116.0	111.7	108.4	104.7	98.7	92.3	88.1	83.4	76.4	66.7
TAX817	M	T	1321.7	81.1	75.8	72.1	68.2	61.5	53.5	47.6	40.6	32.3	23.2
TAX817	M	T	2643.4	87.1	81.6	77.8	73.6	66.6	58.4	52.1	44.9	36.5	27.3
TAX817	M	T	5286.8	93.1	87.4	83.4	79.0	71.6	63.2	56.7	49.3	40.6	31.3
TAX817	M	T	10573.7	99.1	93.2	89.0	84.3	76.7	68.0	61.3	53.7	44.7	35.4
TAX817	P	T	1321.7	90.4	84.7	80.6	76.4	69.7	64.3	58.0	53.7	43.7	31.2
TAX817	P	T	2643.4	97.9	91.8	87.5	82.9	75.6	69.4	62.9	58.5	48.8	36.7
TAX817	P	T	5286.8	105.3	99.0	94.4	89.4	81.4	74.5	67.8	63.4	53.8	42.2
TAX817	P	T	10573.7	112.8	106.2	101.3	95.9	87.2	79.5	72.6	68.2	58.9	47.7
TAX817	S	T	1321.7	93.0	90.3	88.3	86.0	81.8	76.6	72.3	67.1	60.5	52.9
TAX817	S	T	2643.4	99.6	96.6	94.3	91.8	87.3	81.7	77.1	71.5	64.7	57.1
TAX817	S	T	5286.8	106.1	102.8	100.4	97.6	92.8	86.7	81.9	76.0	68.9	61.3
TAX817	S	T	10573.7	112.6	109.1	106.5	103.5	98.2	91.8	86.7	80.5	73.1	65.5
TAX818	E	T	1285.9	92.7	89.2	86.7	84.1	80.0	75.8	72.6	68.3	60.7	48.9
TAX818	E	T	2571.7	100.4	96.6	93.8	90.9	86.2	81.3	77.7	73.2	65.9	54.7
TAX818	E	T	5143.4	108.0	104.0	101.0	97.7	92.3	86.7	82.8	78.2	71.1	60.6
TAX818	E	T	10286.9	115.7	111.4	108.1	104.5	98.5	92.1	87.9	83.2	76.2	66.4
TAX818	M	T	1285.9	80.8	75.6	71.9	68.0	61.3	53.4	47.4	40.4	32.1	23.0
TAX818	M	T	2571.7	86.8	81.4	77.6	73.4	66.4	58.2	52.0	44.8	36.3	27.1
TAX818	M	T	5143.4	92.8	87.2	83.2	78.7	71.4	63.0	56.6	49.1	40.4	31.1
TAX818	M	T	10286.9	98.9	93.0	88.8	84.1	76.5	67.8	61.1	53.5	44.6	35.2
TAX818	P	T	1285.9	90.1	84.4	80.4	76.1	69.5	64.1	57.8	53.5	43.5	31.0
TAX818	P	T	2571.7	97.6	91.6	87.3	82.6	75.3	69.2	62.7	58.4	48.6	36.5
TAX818	P	T	5143.4	105.1	98.7	94.2	89.1	81.2	74.3	67.6	63.2	53.6	42.0
TAX818	P	T	10286.9	112.5	105.9	101.0	95.6	87.0	79.3	72.4	68.0	58.7	47.5
TAX818	S	T	1285.9	92.8	90.1	88.0	85.7	81.6	76.4	72.1	66.9	60.4	52.8
TAX818	S	T	2571.7	99.3	96.3	94.1	91.6	87.0	81.5	76.9	71.4	64.6	57.0
TAX818	S	T	5143.4	105.8	102.6	100.2	97.4	92.5	86.5	81.7	75.8	68.8	61.2
TAX818	S	T	10286.9	112.4	108.8	106.2	103.2	98.0	91.6	86.5	80.3	73.0	65.4
TAX820	E	T	197.2	92.3	88.7	85.9	82.7	77.2	71.1	67.8	63.3	59.5	52.4
TAX820	E	T	394.4	96.4	92.5	89.5	86.1	80.7	74.7	71.7	67.7	65.3	59.4
TAX820	E	T	788.8	100.5	96.3	93.1	89.5	84.2	78.3	75.6	72.1	71.1	66.4
TAX820	E	T	1577.5	104.6	100.1	96.7	93.0	87.8	81.9	79.5	76.5	76.8	73.3
TAX820	M	T	197.2	74.0	68.2	64.3	60.2	53.4	46.0	40.9	35.6	30.0	24.9
TAX820	M	T	394.4	76.9	70.9	67.0	62.9	56.3	49.3	44.6	39.8	34.9	30.1
TAX820	M	T	788.8	79.8	73.6	69.7	65.6	59.2	52.6	48.3	44.0	39.8	35.3
TAX820	M	T	1577.5	82.7	76.3	72.3	68.2	62.1	55.9	52.0	48.2	44.7	40.6
TAX820	P	T	197.2	92.9	86.3	82.0	76.7	68.3	59.6	54.8	48.2	42.4	32.8
TAX820	P	T	394.4	96.9	90.2	85.8	80.7	72.3	63.5	59.1	52.8	49.3	41.4
TAX820	P	T	788.8	100.9	94.1	89.6	84.7	76.3	67.4	63.4	57.4	56.2	50.0
TAX820	P	T	1577.5	104.9	97.9	93.4	88.6	80.3	71.3	67.6	62.0	63.0	58.7
TAX820	S	T	197.2	85.5	82.7	80.6	78.3	74.2	69.7	66.6	63.5	60.5	57.4
TAX820	S	T	394.4	88.4	85.3	83.2	80.9	77.0	72.8	70.0	67.1	64.2	61.3
TAX820	S	T	788.8	91.3	87.9	85.8	83.5	79.8	75.9	73.4	70.7	67.9	65.2
TAX820	S	T	1577.5	94.2	90.6	88.3	86.0	82.6	79.1	76.8	74.3	71.7	69.1
TAX821	E	T	572.5	86.9	83.6	81.3	79.0	75.3	71.8	68.7	64.5	56.9	44.4
TAX821	E	T	1144.9	94.6	91.0	88.5	85.8	81.5	77.2	73.8	69.5	62.0	50.3
TAX821	E	T	2289.9	102.2	98.4	95.6	92.6	87.7	82.6	78.9	74.5	67.2	56.2
TAX821	E	T	4579.8	109.9	105.8	102.8	99.4	93.9	88.0	84.0	79.5	72.3	62.0
TAX821	M	T	572.5	76.3	71.2	67.7	64.0	57.5	49.7	43.9	37.1	29.0	20.0
TAX821	M	T	1144.9	82.3	77.0	73.3	69.3	62.5	54.5	48.5	41.5	33.2	24.0
TAX821	M	T	2289.9	88.3	82.8	78.9	74.7	67.6	59.3	53.1	45.8	37.3	28.1
TAX821	M	T	4579.8	94.3	88.6	84.6	80.1	72.7	64.2	57.7	50.2	41.5	32.1
TAX821	P	T	572.5	84.5	79.0	75.2	71.2	65.1	60.3	54.2	49.9	39.7	26.9
TAX821	P	T	1144.9	92.0	86.2	82.1	77.7	70.9	65.4	59.0	54.7	44.8	32.4
TAX821	P	T	2289.9	99.4	93.3	89.0	84.2	76.8	70.5	63.9	59.6	49.8	37.9
TAX821	P	T	4579.8	106.9	100.5	95.9	90.7	82.6	75.5	68.8	64.4	54.9	43.4
TAX821	S	T	572.5	87.9	85.4	83.5	81.3	77.4	72.6	68.5	63.5	57.2	49.6
TAX821	S	T	1144.9	94.4	91.6	89.5	87.2	82.9	77.6	73.3	68.0	61.4	53.8
TAX821	S	T	2289.9	100.9	97.9	95.6	93.0	88.4	82.7	78.1	72.5	65.6	58.0
TAX821	S	T	4579.8	107.5	104.1	101.7	98.8	93.9	87.8	82.9	76.9	69.8	62.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX822	E	T	585.2	87.2	83.8	81.5	79.2	75.5	71.9	68.9	64.7	57.0	44.6
TAX822	E	T	1170.3	94.8	91.2	88.7	86.0	81.7	77.4	74.0	69.6	62.2	50.5
TAX822	E	T	2340.6	102.5	98.6	95.8	92.8	87.9	82.8	79.1	74.6	67.3	56.3
TAX822	E	T	4681.2	110.2	106.0	103.0	99.6	94.0	88.2	84.2	79.6	72.5	62.2
TAX822	M	T	585.2	76.5	71.4	67.9	64.2	57.6	49.9	44.1	37.3	29.2	20.1
TAX822	M	T	1170.3	82.5	77.2	73.5	69.5	62.7	54.7	48.7	41.6	33.3	24.2
TAX822	M	T	2340.6	88.5	83.0	79.1	74.9	67.8	59.5	53.2	46.0	37.4	28.2
TAX822	M	T	4681.2	94.5	88.8	84.8	80.2	72.8	64.3	57.8	50.3	41.6	32.3
TAX822	P	T	585.2	84.7	79.2	75.4	71.4	65.3	60.5	54.3	50.0	39.9	27.1
TAX822	P	T	1170.3	92.2	86.4	82.3	77.9	71.1	65.5	59.2	54.9	44.9	32.6
TAX822	P	T	2340.6	99.7	93.6	89.2	84.4	77.0	70.6	64.1	59.7	50.0	38.1
TAX822	P	T	4681.2	107.1	100.7	96.1	90.9	82.8	75.7	68.9	64.6	55.1	43.6
TAX822	S	T	585.2	88.1	85.6	83.7	81.5	77.6	72.7	68.7	63.7	57.4	49.7
TAX822	S	T	1170.3	94.6	91.8	89.7	87.4	83.1	77.8	73.5	68.1	61.5	53.9
TAX822	S	T	2340.6	101.1	98.1	95.8	93.2	88.6	82.9	78.2	72.6	65.7	58.1
TAX822	S	T	4681.2	107.7	104.3	101.9	99.0	94.1	87.9	83.0	77.1	69.9	62.3
TAX823	E	T	636.3	88.1	84.7	82.4	80.0	76.3	72.6	69.5	65.3	57.6	45.3
TAX823	E	T	1272.5	95.8	92.1	89.6	86.8	82.4	78.0	74.6	70.3	62.8	51.2
TAX823	E	T	2545.0	103.4	99.5	96.7	93.6	88.6	83.4	79.7	75.2	68.0	57.1
TAX823	E	T	5090.1	111.1	106.9	103.8	100.4	94.8	88.9	84.8	80.2	73.1	62.9
TAX823	M	T	636.3	77.2	72.1	68.5	64.8	58.3	50.5	44.6	37.8	29.7	20.6
TAX823	M	T	1272.5	83.2	77.9	74.2	70.2	63.3	55.3	49.2	42.1	33.8	24.7
TAX823	M	T	2545.0	89.2	83.7	79.8	75.5	68.4	60.1	53.8	46.5	37.9	28.7
TAX823	M	T	5090.1	95.2	89.5	85.4	80.9	73.5	64.9	58.4	50.9	42.1	32.8
TAX823	P	T	636.3	85.6	80.1	76.2	72.2	66.0	61.1	54.9	50.6	40.5	27.7
TAX823	P	T	1272.5	93.1	87.3	83.1	78.7	71.8	66.2	59.8	55.4	45.6	33.2
TAX823	P	T	2545.0	100.6	94.4	90.0	85.2	77.7	71.2	64.6	60.3	50.6	38.7
TAX823	P	T	5090.1	108.0	101.6	96.9	91.7	83.5	76.3	69.5	65.1	55.7	44.2
TAX823	S	T	636.3	88.8	86.3	84.4	82.2	78.3	73.3	69.3	64.2	57.9	50.2
TAX823	S	T	1272.5	95.4	92.6	90.5	88.1	83.8	78.4	74.0	68.7	62.1	54.4
TAX823	S	T	2545.0	101.9	98.8	96.5	93.9	89.2	83.5	78.8	73.1	66.2	58.6
TAX823	S	T	5090.1	108.5	105.1	102.6	99.7	94.7	88.6	83.6	77.6	70.4	62.9
TAX824	E	T	636.3	88.1	84.7	82.4	80.0	76.3	72.6	69.5	65.3	57.6	45.3
TAX824	E	T	1272.5	95.8	92.1	89.6	86.8	82.4	78.0	74.6	70.3	62.8	51.2
TAX824	E	T	2545.0	103.4	99.5	96.7	93.6	88.6	83.4	79.7	75.2	68.0	57.1
TAX824	E	T	5090.1	111.1	106.9	103.8	100.4	94.8	88.9	84.8	80.2	73.1	62.9
TAX824	M	T	636.3	77.2	72.1	68.5	64.8	58.3	50.5	44.6	37.8	29.7	20.6
TAX824	M	T	1272.5	83.2	77.9	74.2	70.2	63.3	55.3	49.2	42.1	33.8	24.7
TAX824	M	T	2545.0	89.2	83.7	79.8	75.5	68.4	60.1	53.8	46.5	37.9	28.7
TAX824	M	T	5090.1	95.2	89.5	85.4	80.9	73.5	64.9	58.4	50.9	42.1	32.8
TAX824	P	T	636.3	85.6	80.1	76.2	72.2	66.0	61.1	54.9	50.6	40.5	27.7
TAX824	P	T	1272.5	93.1	87.3	83.1	78.7	71.8	66.2	59.8	55.4	45.6	33.2
TAX824	P	T	2545.0	100.6	94.4	90.0	85.2	77.7	71.2	64.6	60.3	50.6	38.7
TAX824	P	T	5090.1	108.0	101.6	96.9	91.7	83.5	76.3	69.5	65.1	55.7	44.2
TAX824	S	T	636.3	88.8	86.3	84.4	82.2	78.3	73.3	69.3	64.2	57.9	50.2
TAX824	S	T	1272.5	95.4	92.6	90.5	88.1	83.8	78.4	74.0	68.7	62.1	54.4
TAX824	S	T	2545.0	101.9	98.8	96.5	93.9	89.2	83.5	78.8	73.1	66.2	58.6
TAX824	S	T	5090.1	108.5	105.1	102.6	99.7	94.7	88.6	83.6	77.6	70.4	62.9
TAX825	E	T	636.3	88.1	84.7	82.4	80.0	76.3	72.6	69.5	65.3	57.6	45.3
TAX825	E	T	1272.5	95.8	92.1	89.6	86.8	82.4	78.0	74.6	70.3	62.8	51.2
TAX825	E	T	2545.0	103.4	99.5	96.7	93.6	88.6	83.4	79.7	75.2	68.0	57.1
TAX825	E	T	5090.1	111.1	106.9	103.8	100.4	94.8	88.9	84.8	80.2	73.1	62.9
TAX825	M	T	636.3	77.2	72.1	68.5	64.8	58.3	50.5	44.6	37.8	29.7	20.6
TAX825	M	T	1272.5	83.2	77.9	74.2	70.2	63.3	55.3	49.2	42.1	33.8	24.7
TAX825	M	T	2545.0	89.2	83.7	79.8	75.5	68.4	60.1	53.8	46.5	37.9	28.7
TAX825	M	T	5090.1	95.2	89.5	85.4	80.9	73.5	64.9	58.4	50.9	42.1	32.8
TAX825	P	T	636.3	85.6	80.1	76.2	72.2	66.0	61.1	54.9	50.6	40.5	27.7
TAX825	P	T	1272.5	93.1	87.3	83.1	78.7	71.8	66.2	59.8	55.4	45.6	33.2
TAX825	P	T	2545.0	100.6	94.4	90.0	85.2	77.7	71.2	64.6	60.3	50.6	38.7
TAX825	P	T	5090.1	108.0	101.6	96.9	91.7	83.5	76.3	69.5	65.1	55.7	44.2
TAX825	S	T	636.3	88.8	86.3	84.4	82.2	78.3	73.3	69.3	64.2	57.9	50.2
TAX825	S	T	1272.5	95.4	92.6	90.5	88.1	83.8	78.4	74.0	68.7	62.1	54.4
TAX825	S	T	2545.0	101.9	98.8	96.5	93.9	89.2	83.5	78.8	73.1	66.2	58.6
TAX825	S	T	5090.1	108.5	105.1	102.6	99.7	94.7	88.6	83.6	77.6	70.4	62.9

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX826	E	T	338.2	78.1	74.6	72.1	69.4	64.5	58.7	53.5	46.8	35.4	18.0
TAX826	E	T	676.4	86.7	83.0	80.4	77.4	72.1	66.0	60.9	54.7	44.4	28.7
TAX826	E	T	1352.9	95.2	91.4	88.6	85.4	79.7	73.4	68.4	62.6	53.4	39.4
TAX826	E	T	2705.7	103.8	99.8	96.8	93.4	87.3	80.7	75.8	70.5	62.4	50.1
TAX826	M	T	338.2	68.1	62.6	58.8	54.6	47.5	39.1	32.7	25.2	16.2	6.3
TAX826	M	T	676.4	75.2	69.5	65.6	61.2	53.8	45.2	38.6	31.0	22.1	12.5
TAX826	M	T	1352.9	82.4	76.5	72.3	67.8	60.1	51.3	44.6	36.9	28.0	18.6
TAX826	M	T	2705.7	89.5	83.4	79.1	74.4	66.5	57.4	50.5	42.7	33.8	24.7
TAX826	P	T	338.2	77.8	71.7	67.4	62.7	55.3	48.6	41.0	34.2	20.2	1.1
TAX826	P	T	676.4	86.1	79.8	75.4	70.5	62.7	55.4	47.8	41.5	28.5	11.2
TAX826	P	T	1352.9	94.3	87.9	83.4	78.4	70.1	62.3	54.7	48.8	36.9	21.3
TAX826	P	T	2705.7	102.6	96.0	91.4	86.2	77.5	69.1	61.5	56.1	45.3	31.4
TAX826	S	T	338.2	78.7	76.0	73.9	71.5	67.2	61.5	56.8	51.0	43.6	35.1
TAX826	S	T	676.4	86.1	83.2	80.9	78.3	73.7	67.7	63.0	57.1	49.9	41.9
TAX826	S	T	1352.9	93.6	90.4	87.9	85.1	80.2	74.0	69.1	63.1	56.1	48.6
TAX826	S	T	2705.7	101.0	97.5	94.9	91.9	86.7	80.3	75.2	69.2	62.4	55.4
TAX827	E	T	423.6	80.9	77.4	74.8	72.0	67.0	61.1	55.9	49.3	38.4	21.5
TAX827	E	T	847.3	89.4	85.7	83.0	80.0	74.6	68.4	63.3	57.2	47.3	32.2
TAX827	E	T	1694.6	98.0	94.1	91.3	88.0	82.2	75.8	70.8	65.1	56.3	42.8
TAX827	E	T	3389.2	106.5	102.5	99.5	96.0	89.8	83.1	78.2	73.0	65.3	53.5
TAX827	M	T	423.6	70.4	64.9	61.0	56.7	49.5	41.1	34.6	27.1	18.1	8.3
TAX827	M	T	847.3	77.5	71.8	67.8	63.3	55.9	47.2	40.6	32.9	24.0	14.5
TAX827	M	T	1694.6	84.7	78.7	74.5	69.9	62.2	53.3	46.5	38.8	29.9	20.6
TAX827	M	T	3389.2	91.8	85.7	81.3	76.5	68.5	59.3	52.4	44.6	35.8	26.7
TAX827	P	T	423.6	80.5	74.3	70.0	65.3	57.7	50.8	43.2	36.5	22.9	4.4
TAX827	P	T	847.3	88.8	82.4	78.0	73.1	65.1	57.7	50.1	43.9	31.2	14.5
TAX827	P	T	1694.6	97.0	90.6	86.0	80.9	72.5	64.5	56.9	51.2	39.6	24.6
TAX827	P	T	3389.2	105.3	98.7	94.0	88.7	79.9	71.4	63.7	58.5	48.0	34.7
TAX827	S	T	423.6	81.1	78.3	76.2	73.8	69.3	63.5	58.8	52.9	45.6	37.3
TAX827	S	T	847.3	88.6	85.5	83.2	80.5	75.8	69.8	65.0	59.0	51.9	44.1
TAX827	S	T	1694.6	96.0	92.7	90.2	87.3	82.3	76.0	71.1	65.1	58.2	50.8
TAX827	S	T	3389.2	103.4	99.9	97.2	94.1	88.8	82.3	77.2	71.2	64.4	57.6
TAX828	E	T	423.6	80.9	77.4	74.8	72.0	67.0	61.1	55.9	49.3	38.4	21.5
TAX828	E	T	847.3	89.4	85.7	83.0	80.0	74.6	68.4	63.3	57.2	47.3	32.2
TAX828	E	T	1694.6	98.0	94.1	91.3	88.0	82.2	75.8	70.8	65.1	56.3	42.8
TAX828	E	T	3389.2	106.5	102.5	99.5	96.0	89.8	83.1	78.2	73.0	65.3	53.5
TAX828	M	T	423.6	70.4	64.9	61.0	56.7	49.5	41.1	34.6	27.1	18.1	8.3
TAX828	M	T	847.3	77.5	71.8	67.8	63.3	55.9	47.2	40.6	32.9	24.0	14.5
TAX828	M	T	1694.6	84.7	78.7	74.5	69.9	62.2	53.3	46.5	38.8	29.9	20.6
TAX828	M	T	3389.2	91.8	85.7	81.3	76.5	68.5	59.3	52.4	44.6	35.8	26.7
TAX828	P	T	423.6	80.5	74.3	70.0	65.3	57.7	50.8	43.2	36.5	22.9	4.4
TAX828	P	T	847.3	88.8	82.4	78.0	73.1	65.1	57.7	50.1	43.9	31.2	14.5
TAX828	P	T	1694.6	97.0	90.6	86.0	80.9	72.5	64.5	56.9	51.2	39.6	24.6
TAX828	P	T	3389.2	105.3	98.7	94.0	88.7	79.9	71.4	63.7	58.5	48.0	34.7
TAX828	S	T	423.6	81.1	78.3	76.2	73.8	69.3	63.5	58.8	52.9	45.6	37.3
TAX828	S	T	847.3	88.6	85.5	83.2	80.5	75.8	69.8	65.0	59.0	51.9	44.1
TAX828	S	T	1694.6	96.0	92.7	90.2	87.3	82.3	76.0	71.1	65.1	58.2	50.8
TAX828	S	T	3389.2	103.4	99.9	97.2	94.1	88.8	82.3	77.2	71.2	64.4	57.6
TAX829	E	T	449.2	81.6	78.1	75.5	72.7	67.6	61.7	56.5	50.0	39.1	22.4
TAX829	E	T	898.4	90.2	86.5	83.7	80.7	75.2	69.0	64.0	57.9	48.1	33.1
TAX829	E	T	1796.8	98.7	94.8	91.9	88.7	82.9	76.4	71.4	65.8	57.1	43.7
TAX829	E	T	3593.6	107.3	103.2	100.2	96.7	90.5	83.7	78.8	73.7	66.1	54.4
TAX829	M	T	449.2	71.0	65.4	61.6	57.3	50.1	41.6	35.1	27.6	18.6	8.8
TAX829	M	T	898.4	78.1	72.4	68.3	63.9	56.4	47.7	41.1	33.4	24.5	15.0
TAX829	M	T	1796.8	85.3	79.3	75.1	70.5	62.7	53.8	47.0	39.3	30.4	21.1
TAX829	M	T	3593.6	92.5	86.3	81.9	77.1	69.1	59.9	53.0	45.1	36.3	27.3
TAX829	P	T	449.2	81.2	75.0	70.7	65.9	58.4	51.4	43.8	37.2	23.6	5.2
TAX829	P	T	898.4	89.5	83.1	78.7	73.8	65.8	58.2	50.6	44.5	32.0	15.3
TAX829	P	T	1796.8	97.7	91.2	86.6	81.6	73.1	65.1	57.5	51.8	40.3	25.4
TAX829	P	T	3593.6	106.0	99.4	94.6	89.4	80.5	71.9	64.3	59.1	48.7	35.5
TAX829	S	T	449.2	81.8	78.9	76.8	74.3	69.8	64.1	59.4	53.5	46.2	37.9
TAX829	S	T	898.4	89.2	86.1	83.8	81.1	76.4	70.3	65.5	59.5	52.4	44.6
TAX829	S	T	1796.8	96.6	93.3	90.8	87.9	82.9	76.6	71.6	65.6	58.7	51.4
TAX829	S	T	3593.6	104.1	100.5	97.8	94.7	89.4	82.8	77.7	71.7	65.0	58.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX830	E	T	449.2	81.6	78.1	75.5	72.7	67.6	61.7	56.5	50.0	39.1	22.4
TAX830	E	T	898.4	90.2	86.5	83.7	80.7	75.2	69.0	64.0	57.9	48.1	33.1
TAX830	E	T	1796.8	98.7	94.8	91.9	88.7	82.9	76.4	71.4	65.8	57.1	43.7
TAX830	E	T	3593.6	107.3	103.2	100.2	96.7	90.5	83.7	78.8	73.7	66.1	54.4
TAX830	M	T	449.2	71.0	65.4	61.6	57.3	50.1	41.6	35.1	27.6	18.6	8.8
TAX830	M	T	898.4	78.1	72.4	68.3	63.9	56.4	47.7	41.1	33.4	24.5	15.0
TAX830	M	T	1796.8	85.3	79.3	75.1	70.5	62.7	53.8	47.0	39.3	30.4	21.1
TAX830	M	T	3593.6	92.5	86.3	81.9	77.1	69.1	59.9	53.0	45.1	36.3	27.3
TAX830	P	T	449.2	81.2	75.0	70.7	65.9	58.4	51.4	43.8	37.2	23.6	5.2
TAX830	P	T	898.4	89.5	83.1	78.7	73.8	65.8	58.2	50.6	44.5	32.0	15.3
TAX830	P	T	1796.8	97.7	91.2	86.6	81.6	73.1	65.1	57.5	51.8	40.3	25.4
TAX830	P	T	3593.6	106.0	99.4	94.6	89.4	80.5	71.9	64.3	59.1	48.7	35.5
TAX830	S	T	449.2	81.8	78.9	76.8	74.3	69.8	64.1	59.4	53.5	46.2	37.9
TAX830	S	T	898.4	89.2	86.1	83.8	81.1	76.4	70.3	65.5	59.5	52.4	44.6
TAX830	S	T	1796.8	96.6	93.3	90.8	87.9	82.9	76.6	71.6	65.6	58.7	51.4
TAX830	S	T	3593.6	104.1	100.5	97.8	94.7	89.4	82.8	77.7	71.7	65.0	58.2
TAX831	E	T	338.2	78.1	74.6	72.1	69.4	64.5	58.7	53.5	46.8	35.4	18.0
TAX831	E	T	676.4	86.7	83.0	80.4	77.4	72.1	66.0	60.9	54.7	44.4	28.7
TAX831	E	T	1352.9	95.2	91.4	88.6	85.4	79.7	73.4	68.4	62.6	53.4	39.4
TAX831	E	T	2705.7	103.8	99.8	96.8	93.4	87.3	80.7	75.8	70.5	62.4	50.1
TAX831	M	T	338.2	68.1	62.6	58.8	54.6	47.5	39.1	32.7	25.2	16.2	6.3
TAX831	M	T	676.4	75.2	69.5	65.6	61.2	53.8	45.2	38.6	31.0	22.1	12.5
TAX831	M	T	1352.9	82.4	76.5	72.3	67.8	60.1	51.3	44.6	36.9	28.0	18.6
TAX831	M	T	2705.7	89.5	83.4	79.1	74.4	66.5	57.4	50.5	42.7	33.8	24.7
TAX831	P	T	338.2	77.8	71.7	67.4	62.7	55.3	48.6	41.0	34.2	20.2	1.1
TAX831	P	T	676.4	86.1	79.8	75.4	70.5	62.7	55.4	47.8	41.5	28.5	11.2
TAX831	P	T	1352.9	94.3	87.9	83.4	78.4	70.1	62.3	54.7	48.8	36.9	21.3
TAX831	P	T	2705.7	102.6	96.0	91.4	86.2	77.5	69.1	61.5	56.1	45.3	31.4
TAX831	S	T	338.2	78.7	76.0	73.9	71.5	67.2	61.5	56.8	51.0	43.6	35.1
TAX831	S	T	676.4	86.1	83.2	80.9	78.3	73.7	67.7	63.0	57.1	49.9	41.9
TAX831	S	T	1352.9	93.6	90.4	87.9	85.1	80.2	74.0	69.1	63.1	56.1	48.6
TAX831	S	T	2705.7	101.0	97.5	94.9	91.9	86.7	80.3	75.2	69.2	62.4	55.4
TAX832	E	T	423.6	80.9	77.4	74.8	72.0	67.0	61.1	55.9	49.3	38.4	21.5
TAX832	E	T	847.3	89.4	85.7	83.0	80.0	74.6	68.4	63.3	57.2	47.3	32.2
TAX832	E	T	1694.6	98.0	94.1	91.3	88.0	82.2	75.8	70.8	65.1	56.3	42.8
TAX832	E	T	3389.2	106.5	102.5	99.5	96.0	89.8	83.1	78.2	73.0	65.3	53.5
TAX832	M	T	423.6	70.4	64.9	61.0	56.7	49.5	41.1	34.6	27.1	18.1	8.3
TAX832	M	T	847.3	77.5	71.8	67.8	63.3	55.9	47.2	40.6	32.9	24.0	14.5
TAX832	M	T	1694.6	84.7	78.7	74.5	69.9	62.2	53.3	46.5	38.8	29.9	20.6
TAX832	M	T	3389.2	91.8	85.7	81.3	76.5	68.5	59.3	52.4	44.6	35.8	26.7
TAX832	P	T	423.6	80.5	74.3	70.0	65.3	57.7	50.8	43.2	36.5	22.9	4.4
TAX832	P	T	847.3	88.8	82.4	78.0	73.1	65.1	57.7	50.1	43.9	31.2	14.5
TAX832	P	T	1694.6	97.0	90.6	86.0	80.9	72.5	64.5	56.9	51.2	39.6	24.6
TAX832	P	T	3389.2	105.3	98.7	94.0	88.7	79.9	71.4	63.7	58.5	48.0	34.7
TAX832	S	T	423.6	81.1	78.3	76.2	73.8	69.3	63.5	58.8	52.9	45.6	37.3
TAX832	S	T	847.3	88.6	85.5	83.2	80.5	75.8	69.8	65.0	59.0	51.9	44.1
TAX832	S	T	1694.6	96.0	92.7	90.2	87.3	82.3	76.0	71.1	65.1	58.2	50.8
TAX832	S	T	3389.2	103.4	99.9	97.2	94.1	88.8	82.3	77.2	71.2	64.4	57.6
TAX844	E	T	170.5	69.7	66.4	64.0	61.5	57.0	51.5	46.1	38.9	26.6	7.4
TAX844	E	T	341.0	78.2	74.7	72.2	69.5	64.6	58.8	53.6	46.8	35.5	18.1
TAX844	E	T	682.0	86.8	83.1	80.5	77.5	72.2	66.1	61.0	54.7	44.5	28.8
TAX844	E	T	1363.9	95.3	91.5	88.7	85.5	79.8	73.5	68.5	62.6	53.5	39.5
TAX844	M	T	170.5	61.0	55.7	52.1	48.1	41.2	33.1	26.8	19.4	10.4	0.3
TAX844	M	T	341.0	68.1	62.7	58.9	54.7	47.5	39.2	32.7	25.3	16.3	6.4
TAX844	M	T	682.0	75.3	69.6	65.6	61.3	53.9	45.3	38.7	31.1	22.2	12.5
TAX844	M	T	1363.9	82.5	76.6	72.4	67.8	60.2	51.4	44.6	36.9	28.0	18.7
TAX844	P	T	170.5	69.7	63.6	59.5	55.0	48.0	41.8	34.3	26.9	11.9	-8.9
TAX844	P	T	341.0	77.9	71.7	67.5	62.8	55.4	48.6	41.1	34.2	20.3	1.2
TAX844	P	T	682.0	86.2	79.9	75.5	70.6	62.8	55.5	47.9	41.6	28.6	11.3
TAX844	P	T	1363.9	94.4	88.0	83.5	78.5	70.2	62.4	54.8	48.9	37.0	21.4
TAX844	S	T	170.5	71.4	68.9	67.0	64.8	60.7	55.3	50.8	44.9	37.4	28.4
TAX844	S	T	341.0	78.8	76.1	74.0	71.6	67.3	61.6	56.9	51.0	43.7	35.2
TAX844	S	T	682.0	86.2	83.3	81.0	78.4	73.8	67.8	63.0	57.1	49.9	41.9
TAX844	S	T	1363.9	93.7	90.4	88.0	85.2	80.3	74.1	69.2	63.2	56.2	48.7

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX845	E	T	182.0	70.5	67.2	64.8	62.2	57.7	52.2	46.8	39.7	27.4	8.4
TAX845	E	T	363.9	79.0	75.5	73.0	70.2	65.3	59.5	54.3	47.6	36.4	19.1
TAX845	E	T	727.9	87.6	83.9	81.2	78.2	72.9	66.8	61.7	55.5	45.4	29.8
TAX845	E	T	1455.8	96.1	92.3	89.4	86.2	80.5	74.1	69.2	63.4	54.4	40.5
TAX845	M	T	182.0	61.7	56.4	52.7	48.7	41.8	33.7	27.4	20.0	11.0	0.8
TAX845	M	T	363.9	68.8	63.3	59.5	55.3	48.1	39.8	33.3	25.8	16.9	7.0
TAX845	M	T	727.9	76.0	70.3	66.3	61.9	54.5	45.8	39.3	31.6	22.7	13.1
TAX845	M	T	1455.8	83.1	77.2	73.1	68.5	60.8	51.9	45.2	37.5	28.6	19.3
TAX845	P	T	182.0	70.5	64.4	60.3	55.7	48.7	42.4	34.9	27.6	12.7	-8.0
TAX845	P	T	363.9	78.7	72.5	68.3	63.5	56.1	49.3	41.7	34.9	21.0	2.1
TAX845	P	T	727.9	87.0	80.6	76.2	71.4	63.5	56.1	48.6	42.2	29.4	12.3
TAX845	P	T	1455.8	95.2	88.8	84.2	79.2	70.9	63.0	55.4	49.6	37.8	22.4
TAX845	S	T	182.0	72.1	69.6	67.7	65.5	61.4	55.9	51.4	45.5	38.0	29.0
TAX845	S	T	363.9	79.5	76.7	74.7	72.3	67.9	62.2	57.5	51.6	44.3	35.8
TAX845	S	T	727.9	86.9	83.9	81.7	79.1	74.4	68.4	63.6	57.7	50.5	42.6
TAX845	S	T	1455.8	94.4	91.1	88.7	85.9	80.9	74.7	69.7	63.8	56.8	49.3
TAX846	E	T	354.0	78.7	75.2	72.7	69.9	65.0	59.2	54.0	47.3	36.0	18.7
TAX846	E	T	708.1	87.2	83.6	80.9	77.9	72.6	66.5	61.4	55.2	45.0	29.4
TAX846	E	T	1416.1	95.8	92.0	89.1	85.9	80.2	73.9	68.9	63.1	54.0	40.1
TAX846	E	T	2832.2	104.3	100.3	97.3	93.9	87.8	81.2	76.3	71.0	63.0	50.8
TAX846	M	T	354.0	68.5	63.1	59.2	55.0	47.9	39.5	33.1	25.6	16.6	6.7
TAX846	M	T	708.1	75.7	70.0	66.0	61.6	54.2	45.6	39.0	31.4	22.5	12.9
TAX846	M	T	1416.1	82.8	76.9	72.8	68.2	60.6	51.7	45.0	37.3	28.4	19.0
TAX846	M	T	2832.2	90.0	83.9	79.6	74.8	66.9	57.8	50.9	43.1	34.2	25.1
TAX846	P	T	354.0	78.4	72.2	67.9	63.2	55.8	49.0	41.5	34.6	20.7	1.7
TAX846	P	T	708.1	86.6	80.3	75.9	71.1	63.2	55.9	48.3	42.0	29.1	11.9
TAX846	P	T	1416.1	94.9	88.4	83.9	78.9	70.6	62.7	55.1	49.3	37.4	22.0
TAX846	P	T	2832.2	103.1	96.6	91.9	86.7	78.0	69.6	62.0	56.6	45.8	32.1
TAX846	S	T	354.0	79.2	76.5	74.4	72.0	67.6	61.9	57.3	51.4	44.0	35.5
TAX846	S	T	708.1	86.6	83.6	81.4	78.8	74.1	68.2	63.4	57.5	50.3	42.3
TAX846	S	T	1416.1	94.1	90.8	88.4	85.6	80.6	74.4	69.5	63.5	56.5	49.1
TAX846	S	T	2832.2	101.5	98.0	95.4	92.4	87.1	80.7	75.6	69.6	62.8	55.8
TAX847	E	T	365.0	79.0	75.6	73.0	70.3	65.4	59.5	54.3	47.6	36.4	19.2
TAX847	E	T	730.1	87.6	83.9	81.3	78.3	73.0	66.9	61.7	55.5	45.4	29.9
TAX847	E	T	1460.2	96.2	92.3	89.5	86.3	80.6	74.2	69.2	63.4	54.4	40.5
TAX847	E	T	2920.4	104.7	100.7	97.7	94.3	88.2	81.5	76.6	71.3	63.4	51.2
TAX847	M	T	365.0	68.9	63.4	59.5	55.3	48.2	39.8	33.3	25.8	16.9	7.0
TAX847	M	T	730.1	76.0	70.3	66.3	61.9	54.5	45.9	39.3	31.7	22.7	13.1
TAX847	M	T	1460.2	83.2	77.3	73.1	68.5	60.8	51.9	45.2	37.5	28.6	19.3
TAX847	M	T	2920.4	90.3	84.2	79.9	75.1	67.2	58.0	51.2	43.3	34.5	25.4
TAX847	P	T	365.0	78.7	72.5	68.3	63.6	56.2	49.3	41.8	35.0	21.1	2.2
TAX847	P	T	730.1	87.0	80.7	76.3	71.4	63.5	56.2	48.6	42.3	29.4	12.3
TAX847	P	T	1460.2	95.2	88.8	84.3	79.2	70.9	63.0	55.4	49.6	37.8	22.4
TAX847	P	T	2920.4	103.5	96.9	92.2	87.1	78.3	69.9	62.3	56.9	46.2	32.5
TAX847	S	T	365.0	79.5	76.8	74.7	72.3	67.9	62.2	57.5	51.6	44.3	35.8
TAX847	S	T	730.1	87.0	84.0	81.7	79.1	74.4	68.4	63.6	57.7	50.6	42.6
TAX847	S	T	1460.2	94.4	91.1	88.7	85.9	80.9	74.7	69.8	63.8	56.8	49.4
TAX847	S	T	2920.4	101.8	98.3	95.7	92.7	87.4	81.0	75.9	69.9	63.1	56.1
TAX869	E	T	243.3	74.0	70.7	68.2	65.6	60.9	55.2	50.0	43.0	31.2	12.9
TAX869	E	T	486.6	82.6	79.0	76.5	73.6	68.5	62.6	57.4	50.9	40.2	23.6
TAX869	E	T	973.2	91.1	87.4	84.7	81.6	76.1	69.9	64.8	58.8	49.1	34.3
TAX869	E	T	1946.4	99.7	95.8	92.9	89.6	83.7	77.2	72.3	66.7	58.1	45.0
TAX869	M	T	243.3	64.7	59.3	55.6	51.4	44.5	36.2	29.9	22.4	13.4	3.4
TAX869	M	T	486.6	71.8	66.2	62.3	58.0	50.8	42.3	35.8	28.3	19.3	9.6
TAX869	M	T	973.2	79.0	73.2	69.1	64.6	57.1	48.4	41.7	34.1	25.2	15.7
TAX869	M	T	1946.4	86.1	80.1	75.9	71.2	63.5	54.5	47.7	39.9	31.1	21.8
TAX869	P	T	243.3	73.9	67.8	63.6	59.0	51.8	45.3	37.8	30.7	16.2	-3.7
TAX869	P	T	486.6	82.2	75.9	71.6	66.8	59.2	52.2	44.6	38.0	24.6	6.4
TAX869	P	T	973.2	90.4	84.0	79.6	74.7	66.6	59.0	51.4	45.3	32.9	16.5
TAX869	P	T	1946.4	98.7	92.2	87.6	82.5	74.0	65.9	58.3	52.6	41.3	26.6
TAX869	S	T	243.3	75.2	72.6	70.6	68.3	64.1	58.5	53.9	48.1	40.6	31.9
TAX869	S	T	486.6	82.6	79.8	77.6	75.1	70.6	64.8	60.1	54.2	46.9	38.6
TAX869	S	T	973.2	90.0	86.9	84.6	81.9	77.1	71.0	66.2	60.2	53.2	45.4
TAX869	S	T	1946.4	97.5	94.1	91.6	88.7	83.6	77.3	72.3	66.3	59.4	52.2

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX870	E	T	272.9	75.5	72.1	69.6	66.9	62.2	56.5	51.2	44.3	32.7	14.7
TAX870	E	T	545.8	84.0	80.4	77.8	74.9	69.8	63.8	58.6	52.2	41.6	25.4
TAX870	E	T	1091.7	92.6	88.8	86.0	82.9	77.4	71.1	66.1	60.1	50.6	36.1
TAX870	E	T	2183.4	101.1	97.2	94.3	90.9	85.0	78.4	73.5	68.0	59.6	46.7
TAX870	M	T	272.9	65.9	60.5	56.7	52.5	45.5	37.2	30.8	23.4	14.4	4.4
TAX870	M	T	545.8	73.0	67.4	63.5	59.1	51.8	43.3	36.8	29.2	20.3	10.6
TAX870	M	T	1091.7	80.2	74.3	70.2	65.7	58.2	49.4	42.7	35.1	26.2	16.7
TAX870	M	T	2183.4	87.3	81.3	77.0	72.3	64.5	55.5	48.7	40.9	32.0	22.8
TAX870	P	T	272.9	75.3	69.1	64.9	60.3	53.1	46.4	38.9	31.9	17.6	-2.1
TAX870	P	T	545.8	83.5	77.3	72.9	68.1	60.4	53.3	45.7	39.2	25.9	8.1
TAX870	P	T	1091.7	91.8	85.4	80.9	76.0	67.8	60.2	52.6	46.5	34.3	18.2
TAX870	P	T	2183.4	100.0	93.5	88.9	83.8	75.2	67.0	59.4	53.8	42.7	28.3
TAX870	S	T	272.9	76.4	73.8	71.8	69.4	65.2	59.6	55.0	49.1	41.7	33.0
TAX870	S	T	545.8	83.8	80.9	78.8	76.2	71.7	65.8	61.1	55.2	47.9	39.8
TAX870	S	T	1091.7	91.3	88.1	85.8	83.0	78.2	72.1	67.2	61.3	54.2	46.5
TAX870	S	T	2183.4	98.7	95.3	92.8	89.8	84.7	78.3	73.3	67.4	60.5	53.3
TAX876	E	T	108.0	64.0	60.8	58.6	56.2	52.0	46.7	41.2	33.7	20.6	0.4
TAX876	E	T	216.0	72.6	69.2	66.8	64.2	59.6	54.0	48.7	41.6	29.6	11.1
TAX876	E	T	432.0	81.1	77.6	75.0	72.2	67.2	61.3	56.1	49.5	38.6	21.8
TAX876	E	T	863.9	89.7	86.0	83.3	80.2	74.8	68.6	63.6	57.4	47.6	32.5
TAX876	M	T	108.0	56.3	51.2	47.6	43.7	37.0	29.1	22.9	15.6	6.6	-3.8
TAX876	M	T	216.0	63.4	58.1	54.4	50.3	43.4	35.2	28.8	21.4	12.4	2.4
TAX876	M	T	432.0	70.6	65.1	61.2	56.9	49.7	41.3	34.8	27.2	18.3	8.5
TAX876	M	T	863.9	77.7	72.0	68.0	63.5	56.0	47.3	40.7	33.1	24.2	14.6
TAX876	P	T	108.0	64.2	58.3	54.3	49.8	43.2	37.3	29.8	22.1	6.4	-15.6
TAX876	P	T	216.0	72.5	66.4	62.2	57.7	50.6	44.1	36.6	29.4	14.7	-5.5
TAX876	P	T	432.0	80.7	74.5	70.2	65.5	57.9	51.0	43.4	36.7	23.1	4.6
TAX876	P	T	863.9	89.0	82.7	78.2	73.3	65.3	57.8	50.3	44.1	31.5	14.8
TAX876	S	T	108.0	66.5	64.2	62.4	60.3	56.5	51.2	46.8	40.9	33.3	23.9
TAX876	S	T	216.0	73.9	71.3	69.4	67.1	63.0	57.4	52.9	47.0	39.6	30.7
TAX876	S	T	432.0	81.3	78.5	76.4	73.9	69.5	63.7	59.0	53.1	45.8	37.5
TAX876	S	T	863.9	88.8	85.7	83.4	80.7	76.0	70.0	65.1	59.2	52.1	44.2
TAX880	E	T	242.6	74.0	70.6	68.2	65.5	60.9	55.2	49.9	43.0	31.1	12.9
TAX880	E	T	485.1	82.6	79.0	76.4	73.5	68.5	62.5	57.4	50.9	40.1	23.6
TAX880	E	T	970.2	91.1	87.4	84.6	81.6	76.1	69.9	64.8	58.8	49.1	34.2
TAX880	E	T	1940.4	99.7	95.8	92.9	89.6	83.7	77.2	72.2	66.7	58.1	44.9
TAX880	M	T	242.6	64.6	59.3	55.5	51.4	44.4	36.2	29.8	22.4	13.4	3.4
TAX880	M	T	485.1	71.8	66.2	62.3	58.0	50.8	42.3	35.8	28.2	19.3	9.5
TAX880	M	T	970.2	78.9	73.2	69.1	64.6	57.1	48.4	41.7	34.1	25.2	15.7
TAX880	M	T	1940.4	86.1	80.1	75.9	71.2	63.4	54.4	47.7	39.9	31.0	21.8
TAX880	P	T	242.6	73.9	67.8	63.6	59.0	51.8	45.3	37.7	30.7	16.1	-3.8
TAX880	P	T	485.1	82.1	75.9	71.6	66.8	59.2	52.1	44.6	38.0	24.5	6.3
TAX880	P	T	970.2	90.4	84.0	79.5	74.6	66.6	59.0	51.4	45.3	32.9	16.4
TAX880	P	T	1940.4	98.6	92.1	87.5	82.4	74.0	65.8	58.2	52.6	41.2	26.6
TAX880	S	T	242.6	75.2	72.5	70.6	68.3	64.1	58.5	53.9	48.0	40.6	31.8
TAX880	S	T	485.1	82.6	79.7	77.6	75.1	70.6	64.7	60.0	54.1	46.9	38.6
TAX880	S	T	970.2	90.0	86.9	84.6	81.9	77.1	71.0	66.2	60.2	53.1	45.4
TAX880	S	T	1940.4	97.4	94.1	91.6	88.7	83.6	77.3	72.3	66.3	59.4	52.2
TAX881	E	T	260.7	74.9	71.5	69.1	66.4	61.7	56.0	50.7	43.8	32.1	14.0
TAX881	E	T	521.4	83.4	79.9	77.3	74.4	69.3	63.3	58.1	51.7	41.1	24.7
TAX881	E	T	1042.8	92.0	88.3	85.5	82.4	76.9	70.6	65.6	59.6	50.0	35.4
TAX881	E	T	2085.7	100.5	96.6	93.7	90.4	84.5	77.9	73.0	67.5	59.0	46.0
TAX881	M	T	260.7	65.4	60.0	56.2	52.1	45.1	36.8	30.4	23.0	14.0	4.0
TAX881	M	T	521.4	72.5	66.9	63.0	58.7	51.4	42.9	36.4	28.8	19.9	10.2
TAX881	M	T	1042.8	79.7	73.9	69.8	65.3	57.8	49.0	42.3	34.7	25.8	16.3
TAX881	M	T	2085.7	86.8	80.8	76.6	71.9	64.1	55.1	48.3	40.5	31.6	22.4
TAX881	P	T	260.7	74.7	68.6	64.4	59.8	52.6	46.0	38.4	31.4	17.0	-2.7
TAX881	P	T	521.4	83.0	76.7	72.4	67.6	60.0	52.8	45.3	38.7	25.4	7.4
TAX881	P	T	1042.8	91.2	84.9	80.4	75.4	67.3	59.7	52.1	46.0	33.7	17.5
TAX881	P	T	2085.7	99.5	93.0	88.4	83.3	74.7	66.6	58.9	53.4	42.1	27.6
TAX881	S	T	260.7	75.9	73.3	71.3	69.0	64.7	59.1	54.6	48.7	41.3	32.5
TAX881	S	T	521.4	83.4	80.5	78.3	75.8	71.2	65.4	60.7	54.8	47.5	39.3
TAX881	S	T	1042.8	90.8	87.7	85.3	82.6	77.8	71.7	66.8	60.9	53.8	46.1
TAX881	S	T	2085.7	98.2	94.8	92.3	89.4	84.3	77.9	72.9	66.9	60.0	52.9

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX882	E	T	278.8	75.7	72.3	69.8	67.2	62.4	56.7	51.4	44.5	32.9	15.0
TAX882	E	T	557.7	84.3	80.7	78.1	75.2	70.0	64.0	58.9	52.5	41.9	25.7
TAX882	E	T	1115.3	92.8	89.1	86.3	83.2	77.6	71.3	66.3	60.4	50.9	36.4
TAX882	E	T	2230.7	101.4	97.5	94.5	91.2	85.2	78.7	73.7	68.3	59.9	47.1
TAX882	M	T	278.8	66.1	60.7	56.9	52.7	45.7	37.4	31.0	23.6	14.6	4.6
TAX882	M	T	557.7	73.2	67.6	63.7	59.3	52.0	43.5	37.0	29.4	20.5	10.8
TAX882	M	T	1115.3	80.4	74.6	70.5	65.9	58.4	49.6	42.9	35.2	26.3	16.9
TAX882	M	T	2230.7	87.5	81.5	77.2	72.5	64.7	55.7	48.9	41.1	32.2	23.0
TAX882	P	T	278.8	75.5	69.4	65.2	60.5	53.3	46.7	39.1	32.1	17.8	-1.7
TAX882	P	T	557.7	83.8	77.5	73.2	68.4	60.7	53.5	45.9	39.4	26.2	8.4
TAX882	P	T	1115.3	92.0	85.6	81.2	76.2	68.1	60.4	52.8	46.8	34.6	18.5
TAX882	P	T	2230.7	100.3	93.8	89.1	84.0	75.4	67.2	59.6	54.1	42.9	28.6
TAX882	S	T	278.8	76.6	74.0	72.0	69.6	65.4	59.7	55.1	49.3	41.9	33.2
TAX882	S	T	557.7	84.1	81.2	79.0	76.4	71.9	66.0	61.3	55.4	48.1	40.0
TAX882	S	T	1115.3	91.5	88.4	86.0	83.2	78.4	72.3	67.4	61.4	54.4	46.7
TAX882	S	T	2230.7	98.9	95.5	93.0	90.0	84.9	78.5	73.5	67.5	60.6	53.5
TAX883	E	T	337.5	78.1	74.6	72.1	69.4	64.5	58.7	53.5	46.7	35.4	18.0
TAX883	E	T	675.0	86.6	83.0	80.3	77.4	72.1	66.0	60.9	54.6	44.4	28.7
TAX883	E	T	1349.9	95.2	91.4	88.6	85.4	79.7	73.3	68.3	62.5	53.4	39.3
TAX883	E	T	2699.8	103.7	99.8	96.8	93.4	87.3	80.7	75.8	70.4	62.4	50.0
TAX883	M	T	337.5	68.0	62.6	58.8	54.6	47.4	39.1	32.7	25.2	16.2	6.3
TAX883	M	T	675.0	75.2	69.5	65.5	61.2	53.8	45.2	38.6	31.0	22.1	12.5
TAX883	M	T	1349.9	82.3	76.5	72.3	67.7	60.1	51.3	44.6	36.8	28.0	18.6
TAX883	M	T	2699.8	89.5	83.4	79.1	74.3	66.5	57.3	50.5	42.7	33.8	24.7
TAX883	P	T	337.5	77.8	71.6	67.4	62.7	55.3	48.5	41.0	34.1	20.1	1.0
TAX883	P	T	675.0	86.1	79.8	75.4	70.5	62.7	55.4	47.8	41.5	28.5	11.2
TAX883	P	T	1349.9	94.3	87.9	83.4	78.4	70.1	62.3	54.7	48.8	36.9	21.3
TAX883	P	T	2699.8	102.6	96.0	91.3	86.2	77.5	69.1	61.5	56.1	45.2	31.4
TAX883	S	T	337.5	78.7	76.0	73.9	71.5	67.2	61.5	56.8	50.9	43.6	35.1
TAX883	S	T	675.0	86.1	83.1	80.9	78.3	73.7	67.7	62.9	57.0	49.8	41.8
TAX883	S	T	1349.9	93.6	90.3	87.9	85.1	80.2	74.0	69.1	63.1	56.1	48.6
TAX883	S	T	2699.8	101.0	97.5	94.9	91.9	86.7	80.2	75.2	69.2	62.4	55.4
TAX889	E	T	88.5	61.6	58.4	56.2	53.9	49.8	44.5	39.1	31.5	18.0	-2.7
TAX889	E	T	177.0	70.1	66.8	64.5	61.9	57.4	51.9	46.5	39.4	27.0	8.0
TAX889	E	T	354.0	78.7	75.2	72.7	69.9	65.0	59.2	54.0	47.3	36.0	18.7
TAX889	E	T	707.9	87.2	83.6	80.9	77.9	72.6	66.5	61.4	55.2	45.0	29.4
TAX889	M	T	88.5	54.2	49.2	45.7	41.8	35.2	27.3	21.2	13.9	4.9	-5.5
TAX889	M	T	177.0	61.4	56.1	52.4	48.4	41.5	33.4	27.1	19.7	10.7	0.6
TAX889	M	T	354.0	68.5	63.1	59.2	55.0	47.9	39.5	33.1	25.6	16.6	6.7
TAX889	M	T	707.9	75.7	70.0	66.0	61.6	54.2	45.6	39.0	31.4	22.5	12.9
TAX889	P	T	88.5	61.9	55.9	52.0	47.6	41.1	35.3	27.8	20.0	4.0	-18.5
TAX889	P	T	177.0	70.1	64.1	60.0	55.4	48.4	42.2	34.6	27.3	12.3	-8.4
TAX889	P	T	354.0	78.4	72.2	67.9	63.2	55.8	49.0	41.5	34.6	20.7	1.7
TAX889	P	T	707.9	86.6	80.3	75.9	71.1	63.2	55.9	48.3	42.0	29.1	11.8
TAX889	S	T	88.5	64.3	62.1	60.4	58.4	54.6	49.4	45.0	39.2	31.5	22.0
TAX889	S	T	177.0	71.8	69.3	67.4	65.2	61.1	55.6	51.1	45.3	37.8	28.8
TAX889	S	T	354.0	79.2	76.5	74.4	72.0	67.6	61.9	57.3	51.4	44.0	35.5
TAX889	S	T	707.9	86.6	83.6	81.4	78.8	74.1	68.2	63.4	57.5	50.3	42.3
TAX898	E	T	1015.8	90.1	86.7	84.3	81.8	77.9	74.0	70.8	66.6	59.0	46.9
TAX898	E	T	2031.7	97.7	94.1	91.4	88.6	84.1	79.4	75.9	71.5	64.1	52.7
TAX898	E	T	4063.3	105.4	101.5	98.6	95.4	90.2	84.8	81.0	76.5	69.3	58.6
TAX898	E	T	8126.6	113.1	108.9	105.7	102.2	96.4	90.3	86.1	81.5	74.5	64.4
TAX898	M	T	1015.8	78.8	73.6	70.0	66.2	59.6	51.7	45.8	38.9	30.7	21.7
TAX898	M	T	2031.7	84.8	79.4	75.6	71.6	64.6	56.5	50.4	43.3	34.9	25.7
TAX898	M	T	4063.3	90.8	85.2	81.3	76.9	69.7	61.3	55.0	47.6	39.0	29.8
TAX898	M	T	8126.6	96.8	91.0	86.9	82.3	74.8	66.1	59.6	52.0	43.2	33.8
TAX898	P	T	1015.8	87.6	81.9	78.0	73.9	67.5	62.4	56.2	51.9	41.8	29.2
TAX898	P	T	2031.7	95.0	89.1	84.9	80.4	73.4	67.5	61.0	56.7	46.9	34.6
TAX898	P	T	4063.3	102.5	96.3	91.8	86.9	79.2	72.5	65.9	61.6	51.9	40.1
TAX898	P	T	8126.6	110.0	103.5	98.7	93.4	85.0	77.6	70.8	66.4	57.0	45.6
TAX898	S	T	1015.8	90.5	87.9	86.0	83.7	79.7	74.7	70.5	65.4	58.9	51.3
TAX898	S	T	2031.7	97.1	94.2	92.0	89.6	85.2	79.7	75.3	69.8	63.1	55.5
TAX898	S	T	4063.3	103.6	100.4	98.1	95.4	90.7	84.8	80.1	74.3	67.3	59.7
TAX898	S	T	8126.6	110.2	106.7	104.2	101.2	96.2	89.9	84.8	78.8	71.5	63.9

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX899	E	T	1190.0	91.8	88.4	85.9	83.3	79.3	75.2	72.0	67.7	60.2	48.2
TAX899	E	T	2379.9	99.5	95.8	93.0	90.1	85.5	80.7	77.1	72.7	65.3	54.1
TAX899	E	T	4759.8	107.2	103.1	100.2	96.9	91.6	86.1	82.2	77.7	70.5	59.9
TAX899	E	T	9519.7	114.8	110.5	107.3	103.7	97.8	91.5	87.3	82.7	75.6	65.8
TAX899	M	T	1190.0	80.2	74.9	71.3	67.4	60.7	52.8	46.9	39.9	31.7	22.6
TAX899	M	T	2379.9	86.2	80.7	76.9	72.8	65.8	57.6	51.4	44.3	35.8	26.6
TAX899	M	T	4759.8	92.2	86.5	82.6	78.1	70.9	62.4	56.0	48.6	40.0	30.7
TAX899	M	T	9519.7	98.2	92.4	88.2	83.5	75.9	67.2	60.6	53.0	44.1	34.7
TAX899	P	T	1190.0	89.3	83.6	79.6	75.4	68.9	63.6	57.3	53.0	43.0	30.4
TAX899	P	T	2379.9	96.7	90.8	86.5	81.9	74.7	68.6	62.1	57.8	48.0	35.9
TAX899	P	T	4759.8	104.2	97.9	93.4	88.4	80.5	73.7	67.0	62.7	53.1	41.4
TAX899	P	T	9519.7	111.7	105.1	100.3	94.9	86.3	78.8	71.9	67.5	58.1	46.9
TAX899	S	T	1190.0	92.0	89.4	87.4	85.1	80.9	75.8	71.6	66.4	59.9	52.3
TAX899	S	T	2379.9	98.6	95.6	93.4	90.9	86.4	80.9	76.4	70.9	64.1	56.5
TAX899	S	T	4759.8	105.1	101.9	99.5	96.7	91.9	86.0	81.2	75.3	68.3	60.7
TAX899	S	T	9519.7	111.6	108.1	105.5	102.6	97.4	91.0	85.9	79.8	72.5	64.9
TAX900	E	T	215.5	105.8	101.2	97.6	93.5	86.7	79.8	74.8	68.9	61.3	51.3
TAX900	E	T	431.0	109.9	105.0	101.2	96.9	90.2	83.4	78.7	73.3	67.1	58.3
TAX900	E	T	862.0	114.0	108.8	104.8	100.3	93.7	87.0	82.6	77.7	72.9	65.3
TAX900	E	T	1724.0	118.1	112.6	108.4	103.8	97.3	90.6	86.5	82.1	78.6	72.2
TAX900	M	T	215.5	88.3	82.0	77.6	72.8	64.8	55.5	48.5	40.8	32.6	25.0
TAX900	M	T	431.0	91.2	84.7	80.3	75.5	67.7	58.8	52.2	45.0	37.5	30.2
TAX900	M	T	862.0	94.1	87.4	83.0	78.2	70.6	62.1	55.9	49.2	42.4	35.4
TAX900	M	T	1724.0	97.0	90.1	85.6	80.8	73.5	65.4	59.6	53.4	47.3	40.7
TAX900	P	T	215.5	102.9	95.9	90.9	85.5	76.9	67.1	60.1	52.1	44.1	32.2
TAX900	P	T	431.0	106.9	99.8	94.7	89.5	80.9	71.0	64.4	56.7	51.0	40.8
TAX900	P	T	862.0	110.9	103.7	98.5	93.5	84.9	74.9	68.7	61.3	57.9	49.4
TAX900	P	T	1724.0	114.9	107.5	102.3	97.4	88.9	78.8	72.9	65.9	64.7	58.1
TAX900	S	T	215.5	101.5	97.2	94.2	90.9	85.3	78.7	73.7	68.3	62.8	57.3
TAX900	S	T	431.0	104.4	99.8	96.8	93.5	88.1	81.8	77.1	71.9	66.5	61.2
TAX900	S	T	862.0	107.3	102.4	99.4	96.1	90.9	84.9	80.5	75.5	70.2	65.1
TAX900	S	T	1724.0	110.2	105.1	101.9	98.6	93.7	88.1	83.9	79.1	74.0	69.0
TAX901	E	T	56.6	56.0	53.0	50.9	48.7	44.9	39.8	34.3	26.4	12.2	-9.6
TAX901	E	T	113.1	64.6	61.4	59.1	56.7	52.5	47.1	41.7	34.3	21.2	1.1
TAX901	E	T	226.2	73.1	69.8	67.4	64.7	60.1	54.5	49.2	42.2	30.2	11.8
TAX901	E	T	452.4	81.7	78.2	75.6	72.7	67.7	61.8	56.6	50.1	39.2	22.5
TAX901	M	T	56.6	49.6	44.7	41.3	37.6	31.1	23.4	17.3	10.1	1.1	-9.5
TAX901	M	T	113.1	56.8	51.6	48.1	44.2	37.4	29.5	23.3	16.0	6.9	-3.4
TAX901	M	T	226.2	63.9	58.6	54.8	50.8	43.8	35.6	29.2	21.8	12.8	2.8
TAX901	M	T	452.4	71.1	65.5	61.6	57.3	50.1	41.7	35.2	27.6	18.7	8.9
TAX901	P	T	56.6	56.5	50.7	46.8	42.5	36.3	30.9	23.4	15.3	-1.4	-25.0
TAX901	P	T	113.1	64.8	58.8	54.8	50.3	43.7	37.7	30.2	22.6	6.9	-14.9
TAX901	P	T	226.2	73.0	66.9	62.8	58.2	51.1	44.6	37.0	29.9	15.3	-4.8
TAX901	P	T	452.4	81.3	75.1	70.8	66.0	58.4	51.4	43.9	37.2	23.7	5.3
TAX901	S	T	56.6	59.5	57.5	55.9	54.0	50.4	45.3	41.1	35.2	27.4	17.6
TAX901	S	T	113.1	67.0	64.6	62.9	60.8	56.9	51.6	47.2	41.3	33.7	24.4
TAX901	S	T	226.2	74.4	71.8	69.9	67.6	63.4	57.9	53.3	47.4	40.0	31.2
TAX901	S	T	452.4	81.8	79.0	76.9	74.4	69.9	64.1	59.4	53.5	46.2	37.9
TAX902	E	T	69.0	58.5	55.4	53.3	51.0	47.1	41.9	36.4	28.6	14.8	-6.5
TAX902	E	T	137.9	67.0	63.8	61.5	59.0	54.7	49.2	43.9	36.5	23.8	4.2
TAX902	E	T	275.9	75.6	72.2	69.7	67.0	62.3	56.6	51.3	44.4	32.8	14.9
TAX902	E	T	551.7	84.1	80.6	77.9	75.0	69.9	63.9	58.7	52.3	41.8	25.5
TAX902	M	T	69.0	51.7	46.7	43.2	39.4	32.9	25.2	19.0	11.8	2.8	-7.7
TAX902	M	T	137.9	58.8	53.6	50.0	46.0	39.3	31.2	25.0	17.6	8.6	-1.6
TAX902	M	T	275.9	66.0	60.6	56.8	52.6	45.6	37.3	30.9	23.5	14.5	4.5
TAX902	M	T	551.7	73.1	67.5	63.6	59.2	51.9	43.4	36.9	29.3	20.4	10.7
TAX902	P	T	69.0	58.9	53.0	49.1	44.8	38.4	32.8	25.3	17.4	1.0	-22.1
TAX902	P	T	137.9	67.2	61.1	57.1	52.6	45.8	39.7	32.2	24.7	9.3	-12.0
TAX902	P	T	275.9	75.4	69.3	65.1	60.4	53.2	46.5	39.0	32.0	17.7	-1.9
TAX902	P	T	551.7	83.7	77.4	73.0	68.2	60.6	53.4	45.8	39.3	26.1	8.2
TAX902	S	T	69.0	61.7	59.5	57.9	55.9	52.2	47.1	42.8	37.0	29.2	19.5
TAX902	S	T	137.9	69.1	66.7	64.9	62.7	58.8	53.4	48.9	43.1	35.5	26.3
TAX902	S	T	275.9	76.5	73.9	71.9	69.5	65.3	59.6	55.0	49.2	41.8	33.1
TAX902	S	T	551.7	84.0	81.1	78.9	76.3	71.8	65.9	61.2	55.3	48.0	39.9

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX905	E	T	1549.4	94.8	91.2	88.6	85.9	81.6	77.3	73.9	69.6	62.1	50.4
TAX905	E	T	3098.7	102.4	98.6	95.8	92.7	87.8	82.7	79.0	74.6	67.3	56.3
TAX905	E	T	6197.5	110.1	106.0	102.9	99.5	94.0	88.1	84.1	79.6	72.4	62.1
TAX905	E	T	12394.9	117.7	113.4	110.1	106.3	100.2	93.6	89.2	84.6	77.6	68.0
TAX905	M	T	1549.4	82.4	77.1	73.4	69.5	62.7	54.7	48.6	41.6	33.3	24.1
TAX905	M	T	3098.7	88.5	82.9	79.1	74.8	67.7	59.5	53.2	45.9	37.4	28.2
TAX905	M	T	6197.5	94.5	88.8	84.7	80.2	72.8	64.3	57.8	50.3	41.6	32.2
TAX905	M	T	12394.9	100.5	94.6	90.3	85.6	77.9	69.1	62.4	54.7	45.7	36.3
TAX905	P	T	1549.4	92.1	86.3	82.2	77.9	71.1	65.5	59.1	54.8	44.9	32.5
TAX905	P	T	3098.7	99.6	93.5	89.1	84.4	76.9	70.6	64.0	59.7	49.9	38.0
TAX905	P	T	6197.5	107.1	100.7	96.0	90.9	82.7	75.6	68.9	64.5	55.0	43.5
TAX905	P	T	12394.9	114.5	107.8	102.9	97.4	88.6	80.7	73.7	69.4	60.1	49.0
TAX905	S	T	1549.4	94.5	91.7	89.7	87.3	83.0	77.7	73.4	68.1	61.5	53.9
TAX905	S	T	3098.7	101.1	98.0	95.7	93.1	88.5	82.8	78.2	72.6	65.7	58.1
TAX905	S	T	6197.5	107.6	104.3	101.8	99.0	94.0	87.9	83.0	77.0	69.9	62.3
TAX905	S	T	12394.9	114.1	110.5	107.9	104.8	99.5	93.0	87.8	81.5	74.1	66.5
TAX906	E	T	1549.4	94.8	91.2	88.6	85.9	81.6	77.3	73.9	69.6	62.1	50.4
TAX906	E	T	3098.7	102.4	98.6	95.8	92.7	87.8	82.7	79.0	74.6	67.3	56.3
TAX906	E	T	6197.5	110.1	106.0	102.9	99.5	94.0	88.1	84.1	79.6	72.4	62.1
TAX906	E	T	12394.9	117.7	113.4	110.1	106.3	100.2	93.6	89.2	84.6	77.6	68.0
TAX906	M	T	1549.4	82.4	77.1	73.4	69.5	62.7	54.7	48.6	41.6	33.3	24.1
TAX906	M	T	3098.7	88.5	82.9	79.1	74.8	67.7	59.5	53.2	45.9	37.4	28.2
TAX906	M	T	6197.5	94.5	88.8	84.7	80.2	72.8	64.3	57.8	50.3	41.6	32.2
TAX906	M	T	12394.9	100.5	94.6	90.3	85.6	77.9	69.1	62.4	54.7	45.7	36.3
TAX906	P	T	1549.4	92.1	86.3	82.2	77.9	71.1	65.5	59.1	54.8	44.9	32.5
TAX906	P	T	3098.7	99.6	93.5	89.1	84.4	76.9	70.6	64.0	59.7	49.9	38.0
TAX906	P	T	6197.5	107.1	100.7	96.0	90.9	82.7	75.6	68.9	64.5	55.0	43.5
TAX906	P	T	12394.9	114.5	107.8	102.9	97.4	88.6	80.7	73.7	69.4	60.1	49.0
TAX906	S	T	1549.4	94.5	91.7	89.7	87.3	83.0	77.7	73.4	68.1	61.5	53.9
TAX906	S	T	3098.7	101.1	98.0	95.7	93.1	88.5	82.8	78.2	72.6	65.7	58.1
TAX906	S	T	6197.5	107.6	104.3	101.8	99.0	94.0	87.9	83.0	77.0	69.9	62.3
TAX906	S	T	12394.9	114.1	110.5	107.9	104.8	99.5	93.0	87.8	81.5	74.1	66.5
TAX910	E	T	576.2	84.7	81.1	78.5	75.5	70.4	64.3	59.2	52.8	42.3	26.2
TAX910	E	T	1152.3	93.2	89.5	86.7	83.5	78.0	71.7	66.6	60.7	51.3	36.9
TAX910	E	T	2304.6	101.8	97.8	94.9	91.5	85.6	79.0	74.1	68.6	60.3	47.6
TAX910	E	T	4609.2	110.3	106.2	103.1	99.6	93.2	86.3	81.5	76.5	69.3	58.3
TAX910	M	T	576.2	73.6	67.9	64.0	59.6	52.3	43.8	37.2	29.7	20.7	11.0
TAX910	M	T	1152.3	80.7	74.9	70.8	66.2	58.7	49.9	43.2	35.5	26.6	17.2
TAX910	M	T	2304.6	87.9	81.8	77.6	72.8	65.0	56.0	49.1	41.4	32.5	23.3
TAX910	M	T	4609.2	95.0	88.8	84.3	79.4	71.4	62.0	55.1	47.2	38.4	29.5
TAX910	P	T	576.2	84.2	77.9	73.5	68.7	61.0	53.8	46.3	39.8	26.6	8.8
TAX910	P	T	1152.3	92.4	86.0	81.5	76.6	68.4	60.7	53.1	47.1	35.0	19.0
TAX910	P	T	2304.6	100.7	94.2	89.5	84.4	75.8	67.5	59.9	54.4	43.3	29.1
TAX910	P	T	4609.2	108.9	102.3	97.5	92.2	83.2	74.4	66.8	61.7	51.7	39.2
TAX910	S	T	576.2	84.4	81.5	79.3	76.8	72.2	66.3	61.6	55.6	48.4	40.3
TAX910	S	T	1152.3	91.9	88.7	86.3	83.6	78.7	72.6	67.7	61.7	54.7	47.1
TAX910	S	T	2304.6	99.3	95.9	93.3	90.4	85.2	78.8	73.8	67.8	60.9	53.8
TAX910	S	T	4609.2	106.7	103.1	100.3	97.2	91.7	85.1	79.9	73.9	67.2	60.6
TAX911	E	T	576.2	84.7	81.1	78.5	75.5	70.4	64.3	59.2	52.8	42.3	26.2
TAX911	E	T	1152.3	93.2	89.5	86.7	83.5	78.0	71.7	66.6	60.7	51.3	36.9
TAX911	E	T	2304.6	101.8	97.8	94.9	91.5	85.6	79.0	74.1	68.6	60.3	47.6
TAX911	E	T	4609.2	110.3	106.2	103.1	99.6	93.2	86.3	81.5	76.5	69.3	58.3
TAX911	M	T	576.2	73.6	67.9	64.0	59.6	52.3	43.8	37.2	29.7	20.7	11.0
TAX911	M	T	1152.3	80.7	74.9	70.8	66.2	58.7	49.9	43.2	35.5	26.6	17.2
TAX911	M	T	2304.6	87.9	81.8	77.6	72.8	65.0	56.0	49.1	41.4	32.5	23.3
TAX911	M	T	4609.2	95.0	88.8	84.3	79.4	71.4	62.0	55.1	47.2	38.4	29.5
TAX911	P	T	576.2	84.2	77.9	73.5	68.7	61.0	53.8	46.3	39.8	26.6	8.8
TAX911	P	T	1152.3	92.4	86.0	81.5	76.6	68.4	60.7	53.1	47.1	35.0	19.0
TAX911	P	T	2304.6	100.7	94.2	89.5	84.4	75.8	67.5	59.9	54.4	43.3	29.1
TAX911	P	T	4609.2	108.9	102.3	97.5	92.2	83.2	74.4	66.8	61.7	51.7	39.2
TAX911	S	T	576.2	84.4	81.5	79.3	76.8	72.2	66.3	61.6	55.6	48.4	40.3
TAX911	S	T	1152.3	91.9	88.7	86.3	83.6	78.7	72.6	67.7	61.7	54.7	47.1
TAX911	S	T	2304.6	99.3	95.9	93.3	90.4	85.2	78.8	73.8	67.8	60.9	53.8
TAX911	S	T	4609.2	106.7	103.1	100.3	97.2	91.7	85.1	79.9	73.9	67.2	60.6

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX912	E	T	53.2	55.3	52.3	50.2	48.0	44.2	39.2	33.6	25.7	11.4	-10.5
TAX912	E	T	106.3	63.8	60.7	58.4	56.0	51.8	46.5	41.1	33.6	20.4	0.2
TAX912	E	T	212.7	72.4	69.0	66.6	64.0	59.4	53.8	48.5	41.5	29.4	10.9
TAX912	E	T	425.3	80.9	77.4	74.9	72.0	67.0	61.1	56.0	49.4	38.4	21.5
TAX912	M	T	53.2	49.0	44.1	40.7	37.0	30.5	22.9	16.8	9.6	0.5	-10.0
TAX912	M	T	106.3	56.1	51.0	47.5	43.6	36.9	29.0	22.8	15.4	6.4	-3.9
TAX912	M	T	212.7	63.3	58.0	54.2	50.2	43.2	35.0	28.7	21.3	12.3	2.2
TAX912	M	T	425.3	70.4	64.9	61.0	56.8	49.6	41.1	34.6	27.1	18.2	8.4
TAX912	P	T	53.2	55.8	49.9	46.1	41.8	35.6	30.3	22.8	14.6	-2.2	-25.9
TAX912	P	T	106.3	64.1	58.1	54.1	49.6	43.0	37.1	29.6	22.0	6.2	-15.8
TAX912	P	T	212.7	72.3	66.2	62.1	57.5	50.4	44.0	36.4	29.3	14.6	-5.7
TAX912	P	T	425.3	80.6	74.3	70.1	65.3	57.8	50.8	43.3	36.6	22.9	4.4
TAX912	S	T	53.2	58.9	56.8	55.3	53.4	49.8	44.8	40.5	34.7	26.9	17.0
TAX912	S	T	106.3	66.3	64.0	62.3	60.2	56.3	51.0	46.6	40.8	33.2	23.8
TAX912	S	T	212.7	73.7	71.2	69.3	67.0	62.8	57.3	52.8	46.9	39.4	30.6
TAX912	S	T	425.3	81.2	78.4	76.3	73.8	69.3	63.6	58.9	53.0	45.7	37.3
TAX923	E	T	126.8	66.0	62.8	60.5	58.0	53.8	48.3	43.0	35.6	22.7	2.9
TAX923	E	T	253.6	74.6	71.2	68.7	66.1	61.4	55.7	50.4	43.5	31.7	13.6
TAX923	E	T	507.2	83.1	79.5	76.9	74.1	69.0	63.0	57.8	51.4	40.7	24.2
TAX923	E	T	1014.3	91.7	87.9	85.2	82.1	76.6	70.3	65.3	59.3	49.7	34.9
TAX923	M	T	126.8	57.9	52.8	49.2	45.2	38.5	30.5	24.3	16.9	7.9	-2.4
TAX923	M	T	253.6	65.1	59.7	56.0	51.8	44.8	36.6	30.2	22.8	13.8	3.8
TAX923	M	T	507.2	72.2	66.7	62.7	58.4	51.2	42.7	36.2	28.6	19.7	9.9
TAX923	M	T	1014.3	79.4	73.6	69.5	65.0	57.5	48.8	42.1	34.4	25.5	16.1
TAX923	P	T	126.8	66.2	60.1	56.1	51.6	44.9	38.9	31.3	23.8	8.3	-13.2
TAX923	P	T	253.6	74.4	68.3	64.1	59.5	52.3	45.7	38.2	31.1	16.7	-3.1
TAX923	P	T	507.2	82.7	76.4	72.1	67.3	59.7	52.6	45.0	38.4	25.1	7.0
TAX923	P	T	1014.3	90.9	84.5	80.1	75.1	67.0	59.4	51.8	45.8	33.4	17.1
TAX923	S	T	126.8	68.2	65.8	64.1	61.9	58.0	52.6	48.2	42.3	34.7	25.5
TAX923	S	T	253.6	75.6	73.0	71.0	68.7	64.5	58.9	54.3	48.4	41.0	32.3
TAX923	S	T	507.2	83.1	80.2	78.0	75.5	71.0	65.1	60.4	54.5	47.3	39.0
TAX923	S	T	1014.3	90.5	87.4	85.0	82.3	77.5	71.4	66.5	60.6	53.5	45.8
TAX953	E	T	1700.8	91.3	87.8	85.4	82.9	78.9	74.9	71.6	67.3	59.8	47.8
TAX953	E	T	3401.6	99.0	95.2	92.5	89.6	85.0	80.3	76.7	72.3	65.0	53.6
TAX953	E	T	6803.3	106.6	102.6	99.7	96.4	91.2	85.7	81.8	77.3	70.1	59.5
TAX953	E	T	13606.6	114.3	110.0	106.8	103.2	97.4	91.1	86.9	82.3	75.3	65.4
TAX953	M	T	1700.8	79.7	74.5	70.9	67.0	60.4	52.5	46.5	39.6	31.4	22.3
TAX953	M	T	3401.6	85.8	80.3	76.5	72.4	65.4	57.3	51.1	44.0	35.5	26.4
TAX953	M	T	6803.3	91.8	86.1	82.2	77.8	70.5	62.1	55.7	48.3	39.7	30.4
TAX953	M	T	13606.6	97.8	92.0	87.8	83.1	75.6	66.9	60.3	52.7	43.8	34.5
TAX953	P	T	1700.8	88.7	83.1	79.1	74.9	68.4	63.2	56.9	52.6	42.6	30.0
TAX953	P	T	3401.6	96.2	90.3	86.0	81.4	74.3	68.3	61.8	57.5	47.7	35.5
TAX953	P	T	6803.3	103.7	97.4	92.9	87.9	80.1	73.4	66.7	62.3	52.7	41.0
TAX953	P	T	13606.6	111.2	104.6	99.8	94.4	85.9	78.4	71.6	67.2	57.8	46.5
TAX953	S	T	1700.8	91.6	88.9	86.9	84.7	80.6	75.5	71.3	66.1	59.6	52.0
TAX953	S	T	3401.6	98.1	95.2	93.0	90.5	86.1	80.5	76.0	70.5	63.8	56.2
TAX953	S	T	6803.3	104.7	101.4	99.1	96.3	91.5	85.6	80.8	75.0	68.0	60.4
TAX953	S	T	13606.6	111.2	107.7	105.1	102.2	97.0	90.7	85.6	79.5	72.2	64.6
TAX954	E	T	1575.6	98.1	94.4	91.8	88.9	84.4	79.7	76.2	71.8	64.4	53.0
TAX954	E	T	3151.1	105.8	101.8	98.9	95.7	90.5	85.1	81.3	76.8	69.6	58.9
TAX954	E	T	6302.3	113.4	109.2	106.0	102.5	96.7	90.5	86.4	81.8	74.7	64.7
TAX954	E	T	12604.5	121.1	116.6	113.2	109.3	102.9	96.0	91.5	86.8	79.9	70.6
TAX954	M	T	1575.6	85.1	79.7	75.9	71.8	64.9	56.8	50.6	43.5	35.1	25.9
TAX954	M	T	3151.1	91.1	85.5	81.5	77.2	69.9	61.6	55.2	47.8	39.2	30.0
TAX954	M	T	6302.3	97.1	91.3	87.2	82.5	75.0	66.4	59.8	52.2	43.4	34.0
TAX954	M	T	12604.5	103.1	97.1	92.8	87.9	80.1	71.2	64.4	56.6	47.5	38.1
TAX954	P	T	1575.6	95.4	89.5	85.2	80.7	73.6	67.7	61.3	56.9	47.1	34.9
TAX954	P	T	3151.1	102.9	96.6	92.1	87.2	79.5	72.8	66.1	61.8	52.2	40.4
TAX954	P	T	6302.3	110.3	103.8	99.0	93.7	85.3	77.9	71.0	66.6	57.2	45.9
TAX954	P	T	12604.5	117.8	111.0	105.9	100.2	91.1	82.9	75.9	71.5	62.3	51.4
TAX954	S	T	1575.6	97.4	94.5	92.3	89.9	85.4	80.0	75.5	70.1	63.3	55.7
TAX954	S	T	3151.1	103.9	100.7	98.4	95.7	90.9	85.0	80.3	74.5	67.5	59.9
TAX954	S	T	6302.3	110.5	107.0	104.5	101.5	96.4	90.1	85.1	79.0	71.7	64.2
TAX954	S	T	12604.5	117.0	113.3	110.5	107.4	101.9	95.2	89.9	83.4	75.9	68.4

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX955	E	T	2021.0	93.2	89.7	87.2	84.5	80.4	76.2	72.9	68.6	61.1	49.2
TAX955	E	T	4041.9	100.9	97.1	94.3	91.3	86.6	81.6	78.0	73.6	66.2	55.1
TAX955	E	T	8083.8	108.5	104.5	101.5	98.1	92.7	87.1	83.1	78.6	71.4	61.0
TAX955	E	T	16167.6	116.2	111.9	108.6	104.9	98.9	92.5	88.2	83.6	76.6	66.8
TAX955	M	T	2021.0	81.2	76.0	72.3	68.4	61.6	53.7	47.7	40.7	32.4	23.3
TAX955	M	T	4041.9	87.2	81.8	77.9	73.7	66.7	58.5	52.3	45.1	36.6	27.4
TAX955	M	T	8083.8	93.3	87.6	83.6	79.1	71.8	63.3	56.9	49.4	40.7	31.4
TAX955	M	T	16167.6	99.3	93.4	89.2	84.5	76.8	68.1	61.5	53.8	44.9	35.5
TAX955	P	T	2021.0	90.6	84.9	80.8	76.6	69.9	64.5	58.1	53.8	43.9	31.4
TAX955	P	T	4041.9	98.1	92.0	87.7	83.1	75.7	69.5	63.0	58.7	48.9	36.9
TAX955	P	T	8083.8	105.6	99.2	94.6	89.6	81.6	74.6	67.9	63.5	54.0	42.4
TAX955	P	T	16167.6	113.0	106.4	101.5	96.0	87.4	79.7	72.8	68.4	59.0	47.9
TAX955	S	T	2021.0	93.2	90.5	88.4	86.1	81.9	76.7	72.4	67.2	60.7	53.0
TAX955	S	T	4041.9	99.7	96.7	94.5	92.0	87.4	81.8	77.2	71.7	64.8	57.2
TAX955	S	T	8083.8	106.3	103.0	100.6	97.8	92.9	86.9	82.0	76.1	69.0	61.5
TAX955	S	T	16167.6	112.8	109.2	106.6	103.6	98.4	91.9	86.8	80.6	73.2	65.7
TAX956	E	T	1616.1	98.4	94.7	92.0	89.1	84.6	79.9	76.4	72.0	64.6	53.2
TAX956	E	T	3232.2	106.1	102.1	99.2	95.9	90.8	85.3	81.5	77.0	69.7	59.1
TAX956	E	T	6464.4	113.7	109.5	106.3	102.7	96.9	90.7	86.6	82.0	74.9	64.9
TAX956	E	T	12928.8	121.4	116.9	113.5	109.5	103.1	96.2	91.7	87.0	80.1	70.8
TAX956	M	T	1616.1	85.3	79.9	76.1	72.0	65.1	56.9	50.8	43.6	35.2	26.1
TAX956	M	T	3232.2	91.3	85.7	81.7	77.4	70.1	61.7	55.4	48.0	39.4	30.1
TAX956	M	T	6464.4	97.3	91.5	87.4	82.7	75.2	66.5	60.0	52.4	43.5	34.2
TAX956	M	T	12928.8	103.3	97.3	93.0	88.1	80.3	71.3	64.6	56.7	47.7	38.2
TAX956	P	T	1616.1	95.7	89.7	85.5	81.0	73.8	67.9	61.5	57.1	47.3	35.1
TAX956	P	T	3232.2	103.1	96.9	92.4	87.5	79.7	73.0	66.3	62.0	52.4	40.6
TAX956	P	T	6464.4	110.6	104.1	99.3	93.9	85.5	78.0	71.2	66.8	57.4	46.1
TAX956	P	T	12928.8	118.1	111.2	106.2	100.4	91.3	83.1	76.1	71.7	62.5	51.6
TAX956	S	T	1616.1	97.6	94.7	92.6	90.1	85.6	80.2	75.7	70.2	63.5	55.9
TAX956	S	T	3232.2	104.2	101.0	98.6	95.9	91.1	85.2	80.5	74.7	67.7	60.1
TAX956	S	T	6464.4	110.7	107.2	104.7	101.7	96.6	90.3	85.3	79.1	71.9	64.3
TAX956	S	T	12928.8	117.2	113.5	110.7	107.6	102.1	95.4	90.0	83.6	76.1	68.5
TAX960	E	T	23.0	87.7	84.6	82.3	79.1	72.5	65.3	59.7	52.3	41.3	28.0
TAX960	E	T	46.1	91.7	88.4	85.8	82.6	76.0	68.9	63.6	56.7	47.0	35.0
TAX960	E	T	92.1	95.8	92.2	89.4	86.0	79.6	72.5	67.5	61.2	52.8	41.9
TAX960	E	T	184.2	99.9	96.0	93.0	89.4	83.1	76.1	71.4	65.6	58.5	48.9
TAX960	M	T	23.0	74.3	68.7	64.4	59.5	50.5	39.5	31.6	22.9	13.4	6.3
TAX960	M	T	46.1	77.2	71.4	67.1	62.2	53.4	42.9	35.3	27.1	18.4	11.5
TAX960	M	T	92.1	80.1	74.1	69.7	64.8	56.3	46.2	38.9	31.3	23.3	16.7
TAX960	M	T	184.2	83.0	76.8	72.4	67.5	59.2	49.5	42.6	35.5	28.2	22.0
TAX960	P	T	23.0	85.4	79.0	74.2	68.0	58.7	49.2	41.6	33.7	17.4	0.2
TAX960	P	T	46.1	89.4	82.8	78.0	72.0	62.8	53.1	45.8	38.3	24.3	8.9
TAX960	P	T	92.1	93.4	86.7	81.8	76.0	66.8	57.0	50.1	42.9	31.1	17.5
TAX960	P	T	184.2	97.4	90.5	85.6	79.9	70.8	60.9	54.4	47.5	38.0	26.1
TAX960	S	T	23.0	87.7	85.0	82.6	79.5	73.2	65.6	60.1	54.8	49.7	44.7
TAX960	S	T	46.1	90.6	87.7	85.2	82.1	76.0	68.7	63.5	58.4	53.5	48.6
TAX960	S	T	92.1	93.5	90.3	87.7	84.6	78.8	71.9	66.9	62.0	57.2	52.6
TAX960	S	T	184.2	96.3	92.9	90.3	87.2	81.6	75.0	70.3	65.6	60.9	56.5
TAX961	E	T	18.5	82.3	79.6	77.5	74.6	67.8	60.6	54.6	46.5	33.7	18.9
TAX961	E	T	37.0	86.4	83.4	81.1	78.1	71.4	64.2	58.5	50.9	39.5	25.8
TAX961	E	T	74.0	90.5	87.2	84.7	81.5	74.9	67.8	62.4	55.3	45.2	32.8
TAX961	E	T	148.1	94.5	91.0	88.3	84.9	78.4	71.4	66.3	59.8	51.0	39.7
TAX961	M	T	18.5	70.4	65.2	60.9	56.0	46.7	35.2	26.7	17.3	7.0	-0.6
TAX961	M	T	37.0	73.3	67.9	63.6	58.7	49.6	38.5	30.4	21.5	11.9	4.6
TAX961	M	T	74.0	76.3	70.6	66.2	61.3	52.5	41.8	34.1	25.7	16.8	9.8
TAX961	M	T	148.1	79.2	73.3	68.9	64.0	55.4	45.1	37.8	30.0	21.7	15.1
TAX961	P	T	18.5	80.1	73.9	69.2	62.8	53.5	44.1	36.0	27.7	8.4	-11.1
TAX961	P	T	37.0	84.1	77.8	73.0	66.8	57.5	48.0	40.2	32.3	15.2	-2.5
TAX961	P	T	74.0	88.1	81.6	76.8	70.8	61.5	51.9	44.5	36.9	22.1	6.1
TAX961	P	T	148.1	92.1	85.5	80.6	74.7	65.5	55.8	48.8	41.4	28.9	14.8
TAX961	S	T	18.5	83.9	81.6	79.3	76.1	69.6	61.5	55.7	50.1	44.8	39.6
TAX961	S	T	37.0	86.8	84.2	81.8	78.7	72.4	64.6	59.1	53.7	48.5	43.5
TAX961	S	T	74.0	89.7	86.8	84.4	81.3	75.1	67.7	62.5	57.3	52.3	47.4
TAX961	S	T	148.1	92.5	89.5	86.9	83.8	77.9	70.9	65.9	60.9	56.0	51.3

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX962	E	T	27.2	84.5	81.7	79.5	76.5	69.8	62.6	56.8	49.0	36.9	22.7
TAX962	E	T	54.4	88.6	85.5	83.1	80.0	73.3	66.2	60.7	53.4	42.6	29.7
TAX962	E	T	108.8	92.7	89.3	86.7	83.4	76.9	69.8	64.6	57.8	48.4	36.6
TAX962	E	T	217.5	96.8	93.1	90.3	86.8	80.4	73.4	68.4	62.2	54.2	43.6
TAX962	M	T	27.2	72.0	66.7	62.4	57.5	48.3	37.0	28.8	19.7	9.7	2.3
TAX962	M	T	54.4	75.0	69.4	65.0	60.1	51.2	40.3	32.5	23.9	14.6	7.5
TAX962	M	T	108.8	77.9	72.1	67.7	62.8	54.1	43.6	36.1	28.1	19.5	12.7
TAX962	M	T	217.5	80.8	74.8	70.4	65.5	57.0	47.0	39.8	32.3	24.4	18.0
TAX962	P	T	27.2	82.3	76.1	71.3	65.0	55.7	46.3	38.3	30.3	12.2	-6.3
TAX962	P	T	54.4	86.3	79.9	75.1	69.0	59.7	50.2	42.6	34.8	19.0	2.3
TAX962	P	T	108.8	90.3	83.8	78.9	73.0	63.7	54.1	46.9	39.4	25.9	10.9
TAX962	P	T	217.5	94.3	87.6	82.7	76.9	67.7	58.0	51.1	44.0	32.8	19.6
TAX962	S	T	27.2	85.5	83.0	80.7	77.6	71.1	63.2	57.6	52.1	46.9	41.7
TAX962	S	T	54.4	88.4	85.7	83.2	80.1	73.9	66.3	61.0	55.7	50.6	45.7
TAX962	S	T	108.8	91.3	88.3	85.8	82.7	76.7	69.5	64.3	59.3	54.4	49.6
TAX962	S	T	217.5	94.1	90.9	88.4	85.3	79.5	72.6	67.7	62.9	58.1	53.5
TAX963	E	T	27.2	84.5	81.7	79.5	76.5	69.8	62.6	56.8	49.0	36.9	22.7
TAX963	E	T	54.4	88.6	85.5	83.1	80.0	73.3	66.2	60.7	53.4	42.6	29.7
TAX963	E	T	108.8	92.7	89.3	86.7	83.4	76.9	69.8	64.6	57.8	48.4	36.6
TAX963	E	T	217.5	96.8	93.1	90.3	86.8	80.4	73.4	68.4	62.2	54.2	43.6
TAX963	M	T	27.2	72.0	66.7	62.4	57.5	48.3	37.0	28.8	19.7	9.7	2.3
TAX963	M	T	54.4	75.0	69.4	65.0	60.1	51.2	40.3	32.5	23.9	14.6	7.5
TAX963	M	T	108.8	77.9	72.1	67.7	62.8	54.1	43.6	36.1	28.1	19.5	12.7
TAX963	M	T	217.5	80.8	74.8	70.4	65.5	57.0	47.0	39.8	32.3	24.4	18.0
TAX963	P	T	27.2	82.3	76.1	71.3	65.0	55.7	46.3	38.3	30.3	12.2	-6.3
TAX963	P	T	54.4	86.3	79.9	75.1	69.0	59.7	50.2	42.6	34.8	19.0	2.3
TAX963	P	T	108.8	90.3	83.8	78.9	73.0	63.7	54.1	46.9	39.4	25.9	10.9
TAX963	P	T	217.5	94.3	87.6	82.7	76.9	67.7	58.0	51.1	44.0	32.8	19.6
TAX963	S	T	27.2	85.5	83.0	80.7	77.6	71.1	63.2	57.6	52.1	46.9	41.7
TAX963	S	T	54.4	88.4	85.7	83.2	80.1	73.9	66.3	61.0	55.7	50.6	45.7
TAX963	S	T	108.8	91.3	88.3	85.8	82.7	76.7	69.5	64.3	59.3	54.4	49.6
TAX963	S	T	217.5	94.1	90.9	88.4	85.3	79.5	72.6	67.7	62.9	58.1	53.5
TAX964	E	T	37.4	90.5	87.3	84.8	81.5	74.9	67.8	62.5	55.4	45.3	32.9
TAX964	E	T	74.7	94.6	91.1	88.3	85.0	78.5	71.4	66.3	59.8	51.0	39.8
TAX964	E	T	149.4	98.7	94.9	91.9	88.4	82.0	75.0	70.2	64.2	56.8	46.8
TAX964	E	T	298.8	102.8	98.7	95.5	91.8	85.6	78.6	74.1	68.7	62.6	53.7
TAX964	M	T	37.4	76.3	70.6	66.3	61.4	52.5	41.8	34.1	25.8	16.9	9.9
TAX964	M	T	74.7	79.2	73.3	68.9	64.0	55.4	45.2	37.8	30.0	21.8	15.1
TAX964	M	T	149.4	82.1	76.0	71.6	66.7	58.3	48.5	41.5	34.2	26.7	20.4
TAX964	M	T	298.8	85.0	78.7	74.2	69.4	61.2	51.8	45.2	38.4	31.6	25.6
TAX964	P	T	37.4	88.2	81.7	76.8	70.8	61.5	52.0	44.5	36.9	22.2	6.3
TAX964	P	T	74.7	92.2	85.5	80.6	74.8	65.6	55.9	48.8	41.5	29.0	14.9
TAX964	P	T	149.4	96.2	89.4	84.4	78.7	69.6	59.8	53.1	46.1	35.9	23.5
TAX964	P	T	298.8	100.2	93.2	88.2	82.7	73.6	63.7	57.3	50.7	42.7	32.2
TAX964	S	T	37.4	89.7	86.9	84.4	81.3	75.2	67.8	62.5	57.3	52.3	47.5
TAX964	S	T	74.7	92.6	89.5	87.0	83.9	78.0	70.9	65.9	60.9	56.1	51.4
TAX964	S	T	149.4	95.5	92.1	89.5	86.4	80.8	74.0	69.3	64.5	59.8	55.3
TAX964	S	T	298.8	98.4	94.7	92.1	89.0	83.6	77.2	72.7	68.1	63.6	59.2
TAX965	E	T	18.4	82.2	79.6	77.5	74.6	67.8	60.6	54.6	46.5	33.7	18.8
TAX965	E	T	36.9	86.3	83.4	81.1	78.0	71.3	64.2	58.5	50.9	39.4	25.8
TAX965	E	T	73.7	90.4	87.2	84.7	81.5	74.9	67.8	62.4	55.3	45.2	32.7
TAX965	E	T	147.5	94.5	91.0	88.3	84.9	78.4	71.4	66.3	59.7	50.9	39.7
TAX965	M	T	18.4	70.4	65.2	60.9	56.0	46.7	35.1	26.7	17.3	7.0	-0.6
TAX965	M	T	36.9	73.3	67.9	63.5	58.6	49.6	38.5	30.4	21.5	11.9	4.6
TAX965	M	T	73.7	76.2	70.6	66.2	61.3	52.5	41.8	34.1	25.7	16.8	9.8
TAX965	M	T	147.5	79.2	73.3	68.9	64.0	55.4	45.1	37.8	29.9	21.7	15.0
TAX965	P	T	18.4	80.1	73.9	69.2	62.8	53.4	44.1	35.9	27.7	8.4	-11.2
TAX965	P	T	36.9	84.1	77.7	73.0	66.8	57.5	48.0	40.2	32.3	15.2	-2.5
TAX965	P	T	73.7	88.1	81.6	76.8	70.7	61.5	51.9	44.5	36.8	22.1	6.1
TAX965	P	T	147.5	92.1	85.5	80.6	74.7	65.5	55.8	48.7	41.4	28.9	14.7
TAX965	S	T	18.4	83.9	81.6	79.3	76.1	69.5	61.4	55.7	50.1	44.8	39.5
TAX965	S	T	36.9	86.8	84.2	81.8	78.7	72.3	64.6	59.1	53.7	48.5	43.5
TAX965	S	T	73.7	89.6	86.8	84.4	81.3	75.1	67.7	62.4	57.3	52.3	47.4
TAX965	S	T	147.5	92.5	89.4	86.9	83.8	77.9	70.9	65.8	60.8	56.0	51.3

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX966	E	T	217.3	100.9	96.9	93.9	90.3	83.9	77.0	72.3	66.6	59.9	50.5
TAX966	E	T	434.6	105.0	100.7	97.5	93.7	87.5	80.5	76.2	71.0	65.7	57.5
TAX966	E	T	869.3	109.1	104.5	101.0	97.1	91.0	84.1	80.1	75.5	71.4	64.5
TAX966	E	T	1738.5	113.2	108.3	104.6	100.6	94.6	87.7	84.0	79.9	77.2	71.4
TAX966	M	T	217.3	83.7	77.5	73.0	68.1	59.9	50.3	43.5	36.5	29.4	23.2
TAX966	M	T	434.6	86.6	80.2	75.7	70.8	62.7	53.6	47.2	40.7	34.3	28.4
TAX966	M	T	869.3	89.5	82.9	78.3	73.5	65.6	56.9	50.9	44.9	39.2	33.7
TAX966	M	T	1738.5	92.4	85.6	81.0	76.1	68.5	60.3	54.6	49.1	44.1	38.9
TAX966	P	T	217.3	98.3	91.5	86.5	80.9	71.8	61.9	55.4	48.6	39.6	28.2
TAX966	P	T	434.6	102.3	95.3	90.3	84.8	75.8	65.8	59.6	53.1	46.4	36.8
TAX966	P	T	869.3	106.3	99.2	94.1	88.8	79.8	69.7	63.9	57.7	53.3	45.5
TAX966	P	T	1738.5	110.3	103.0	97.9	92.8	83.8	73.6	68.2	62.3	60.2	54.1
TAX966	S	T	217.3	97.0	93.5	90.9	87.8	82.3	75.7	71.1	66.4	61.8	57.4
TAX966	S	T	434.6	99.9	96.2	93.5	90.4	85.1	78.9	74.5	70.0	65.6	61.3
TAX966	S	T	869.3	102.8	98.8	96.0	92.9	87.9	82.0	77.9	73.6	69.3	65.2
TAX966	S	T	1738.5	105.7	101.4	98.6	95.5	90.7	85.2	81.3	77.2	73.1	69.2
TAX967	E	T	105.4	96.6	92.9	90.1	86.7	80.2	73.2	68.3	62.0	53.9	43.3
TAX967	E	T	210.7	100.7	96.7	93.7	90.1	83.8	76.8	72.2	66.4	59.7	50.2
TAX967	E	T	421.5	104.8	100.5	97.3	93.5	87.3	80.4	76.0	70.8	65.4	57.2
TAX967	E	T	843.0	108.9	104.3	100.9	97.0	90.9	84.0	79.9	75.3	71.2	64.2
TAX967	M	T	105.4	80.7	74.7	70.2	65.3	56.8	46.8	39.7	32.1	24.2	17.7
TAX967	M	T	210.7	83.6	77.4	72.9	68.0	59.7	50.1	43.3	36.3	29.1	23.0
TAX967	M	T	421.5	86.5	80.1	75.5	70.7	62.6	53.5	47.0	40.5	34.0	28.2
TAX967	M	T	843.0	89.4	82.8	78.2	73.3	65.5	56.8	50.7	44.7	39.0	33.4
TAX967	P	T	105.4	94.1	87.4	82.5	76.7	67.6	57.8	50.9	43.8	32.4	19.2
TAX967	P	T	210.7	98.1	91.3	86.3	80.7	71.6	61.7	55.2	48.4	39.3	27.8
TAX967	P	T	421.5	102.1	95.1	90.1	84.7	75.6	65.6	59.5	52.9	46.1	36.4
TAX967	P	T	843.0	106.1	99.0	93.9	88.6	79.6	69.5	63.7	57.5	53.0	45.1
TAX967	S	T	105.4	94.0	90.8	88.2	85.1	79.4	72.5	67.6	62.7	57.9	53.3
TAX967	S	T	210.7	96.9	93.4	90.8	87.7	82.2	75.6	71.0	66.3	61.7	57.2
TAX967	S	T	421.5	99.8	96.0	93.3	90.3	85.0	78.7	74.4	69.9	65.4	61.2
TAX967	S	T	843.0	102.7	98.7	95.9	92.8	87.8	81.9	77.7	73.5	69.2	65.1
TAX968	E	T	47.1	91.9	88.5	86.0	82.7	76.1	69.0	63.8	56.9	47.2	35.2
TAX968	E	T	94.3	96.0	92.3	89.6	86.1	79.7	72.6	67.6	61.3	53.0	42.2
TAX968	E	T	188.6	100.1	96.1	93.1	89.6	83.2	76.2	71.5	65.7	58.7	49.1
TAX968	E	T	377.2	104.2	99.9	96.7	93.0	86.8	79.8	75.4	70.1	64.5	56.1
TAX968	M	T	47.1	77.3	71.5	67.1	62.3	53.5	43.0	35.4	27.2	18.5	11.7
TAX968	M	T	94.3	80.2	74.2	69.8	64.9	56.4	46.3	39.1	31.4	23.4	16.9
TAX968	M	T	188.6	83.1	76.9	72.5	67.6	59.3	49.6	42.7	35.6	28.3	22.1
TAX968	M	T	377.2	86.0	79.6	75.1	70.2	62.1	52.9	46.4	39.8	33.3	27.4
TAX968	P	T	47.1	89.5	83.0	78.1	72.1	62.9	53.3	46.0	38.5	24.5	9.2
TAX968	P	T	94.3	93.5	86.8	81.9	76.1	66.9	57.2	50.2	43.0	31.3	17.8
TAX968	P	T	188.6	97.5	90.7	85.7	80.1	70.9	61.1	54.5	47.6	38.2	26.4
TAX968	P	T	377.2	101.5	94.5	89.5	84.0	74.9	65.0	58.8	52.2	45.0	35.1
TAX968	S	T	47.1	90.7	87.7	85.3	82.2	76.1	68.8	63.7	58.5	53.6	48.8
TAX968	S	T	94.3	93.6	90.4	87.8	84.7	78.9	72.0	67.0	62.1	57.3	52.7
TAX968	S	T	188.6	96.4	93.0	90.4	87.3	81.7	75.1	70.4	65.7	61.1	56.6
TAX968	S	T	377.2	99.3	95.6	92.9	89.9	84.5	78.2	73.8	69.3	64.8	60.5
TAX969	E	T	47.1	91.9	88.5	86.0	82.7	76.1	69.0	63.8	56.9	47.2	35.2
TAX969	E	T	94.3	96.0	92.3	89.6	86.1	79.7	72.6	67.6	61.3	53.0	42.2
TAX969	E	T	188.6	100.1	96.1	93.1	89.6	83.2	76.2	71.5	65.7	58.7	49.1
TAX969	E	T	377.2	104.2	99.9	96.7	93.0	86.8	79.8	75.4	70.1	64.5	56.1
TAX969	M	T	47.1	77.3	71.5	67.1	62.3	53.5	43.0	35.4	27.2	18.5	11.7
TAX969	M	T	94.3	80.2	74.2	69.8	64.9	56.4	46.3	39.1	31.4	23.4	16.9
TAX969	M	T	188.6	83.1	76.9	72.5	67.6	59.3	49.6	42.7	35.6	28.3	22.1
TAX969	M	T	377.2	86.0	79.6	75.1	70.2	62.1	52.9	46.4	39.8	33.3	27.4
TAX969	P	T	47.1	89.5	83.0	78.1	72.1	62.9	53.3	46.0	38.5	24.5	9.2
TAX969	P	T	94.3	93.5	86.8	81.9	76.1	66.9	57.2	50.2	43.0	31.3	17.8
TAX969	P	T	188.6	97.5	90.7	85.7	80.1	70.9	61.1	54.5	47.6	38.2	26.4
TAX969	P	T	377.2	101.5	94.5	89.5	84.0	74.9	65.0	58.8	52.2	45.0	35.1
TAX969	S	T	47.1	90.7	87.7	85.3	82.2	76.1	68.8	63.7	58.5	53.6	48.8
TAX969	S	T	94.3	93.6	90.4	87.8	84.7	78.9	72.0	67.0	62.1	57.3	52.7
TAX969	S	T	188.6	96.4	93.0	90.4	87.3	81.7	75.1	70.4	65.7	61.1	56.6
TAX969	S	T	377.2	99.3	95.6	92.9	89.9	84.5	78.2	73.8	69.3	64.8	60.5

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX970	E	T	77.0	98.9	95.0	92.1	88.6	82.2	75.2	70.4	64.4	57.1	47.1
TAX970	E	T	154.0	103.0	98.8	95.7	92.0	85.7	78.8	74.3	68.8	62.8	54.0
TAX970	E	T	308.0	107.1	102.6	99.3	95.4	89.3	82.3	78.2	73.3	68.6	61.0
TAX970	E	T	616.0	111.2	106.4	102.8	98.9	92.8	85.9	82.1	77.7	74.3	68.0
TAX970	M	T	77.0	82.3	76.1	71.7	66.8	58.4	48.6	41.7	34.4	26.9	20.6
TAX970	M	T	154.0	85.2	78.8	74.3	69.5	61.3	52.0	45.4	38.6	31.8	25.8
TAX970	M	T	308.0	88.1	81.5	77.0	72.1	64.2	55.3	49.0	42.8	36.7	31.1
TAX970	M	T	616.0	91.0	84.2	79.7	74.8	67.1	58.6	52.7	47.0	41.6	36.3
TAX970	P	T	77.0	96.3	89.5	84.6	78.9	69.8	59.9	53.3	46.3	36.2	23.9
TAX970	P	T	154.0	100.3	93.4	88.4	82.9	73.8	63.8	57.5	50.9	43.0	32.5
TAX970	P	T	308.0	104.3	97.2	92.2	86.8	77.8	67.7	61.8	55.4	49.9	41.2
TAX970	P	T	616.0	108.3	101.1	96.0	90.8	81.8	71.7	66.1	60.0	56.8	49.8
TAX970	S	T	77.0	95.6	92.2	89.6	86.5	80.9	74.2	69.4	64.7	60.0	55.5
TAX970	S	T	154.0	98.5	94.9	92.2	89.1	83.7	77.3	72.8	68.2	63.7	59.4
TAX970	S	T	308.0	101.4	97.5	94.7	91.7	86.5	80.5	76.2	71.8	67.5	63.3
TAX970	S	T	616.0	104.3	100.1	97.3	94.2	89.3	83.6	79.6	75.4	71.2	67.2
TAX971	E	T	99.5	96.3	92.6	89.8	86.4	79.9	72.9	68.0	61.6	53.4	42.7
TAX971	E	T	199.0	100.4	96.4	93.4	89.8	83.5	76.5	71.8	66.1	59.2	49.7
TAX971	E	T	398.0	104.5	100.2	97.0	93.3	87.0	80.1	75.7	70.5	64.9	56.6
TAX971	E	T	796.0	108.6	104.0	100.6	96.7	90.6	83.7	79.6	74.9	70.7	63.6
TAX971	M	T	99.5	80.4	74.4	70.0	65.1	56.6	46.5	39.4	31.8	23.8	17.3
TAX971	M	T	199.0	83.3	77.1	72.7	67.8	59.5	49.9	43.0	36.0	28.7	22.5
TAX971	M	T	398.0	86.2	79.8	75.3	70.5	62.4	53.2	46.7	40.2	33.6	27.8
TAX971	M	T	796.0	89.2	82.5	78.0	73.1	65.2	56.5	50.4	44.4	38.6	33.0
TAX971	P	T	99.5	93.8	87.1	82.2	76.4	67.2	57.5	50.6	43.4	31.9	18.5
TAX971	P	T	199.0	97.8	91.0	86.0	80.4	71.2	61.4	54.8	48.0	38.7	27.1
TAX971	P	T	398.0	101.8	94.8	89.8	84.3	75.3	65.3	59.1	52.6	45.6	35.7
TAX971	P	T	796.0	105.8	98.7	93.6	88.3	79.3	69.2	63.4	57.1	52.4	44.4
TAX971	S	T	99.5	93.8	90.6	88.0	84.9	79.1	72.2	67.3	62.4	57.6	53.0
TAX971	S	T	199.0	96.7	93.2	90.6	87.5	81.9	75.3	70.7	66.0	61.4	56.9
TAX971	S	T	398.0	99.6	95.8	93.1	90.1	84.7	78.5	74.1	69.6	65.1	60.8
TAX971	S	T	796.0	102.4	98.4	95.7	92.6	87.5	81.6	77.5	73.2	68.8	64.7
TAX972	E	T	16.6	81.6	79.1	77.0	74.1	67.3	60.1	54.0	45.8	32.8	17.8
TAX972	E	T	33.2	85.7	82.8	80.6	77.5	70.8	63.6	57.9	50.2	38.6	24.7
TAX972	E	T	66.5	89.8	86.6	84.2	81.0	74.3	67.2	61.8	54.7	44.3	31.7
TAX972	E	T	133.0	93.9	90.4	87.7	84.4	77.9	70.8	65.7	59.1	50.1	38.7
TAX972	M	T	16.6	70.0	64.7	60.5	55.6	46.3	34.6	26.2	16.7	6.2	-1.4
TAX972	M	T	33.2	72.9	67.5	63.1	58.3	49.2	38.0	29.8	20.9	11.1	3.8
TAX972	M	T	66.5	75.8	70.2	65.8	60.9	52.0	41.3	33.5	25.1	16.0	9.0
TAX972	M	T	133.0	78.7	72.9	68.5	63.6	54.9	44.6	37.2	29.3	21.0	14.3
TAX972	P	T	16.6	79.5	73.3	68.6	62.2	52.8	43.5	35.3	27.0	7.3	-12.5
TAX972	P	T	33.2	83.5	77.2	72.4	66.2	56.9	47.4	39.6	31.6	14.2	-3.8
TAX972	P	T	66.5	87.5	81.0	76.2	70.1	60.9	51.3	43.8	36.2	21.0	4.8
TAX972	P	T	133.0	91.5	84.9	80.0	74.1	64.9	55.2	48.1	40.7	27.9	13.4
TAX972	S	T	16.6	83.4	81.2	78.9	75.7	69.1	61.0	55.2	49.5	44.2	39.0
TAX972	S	T	33.2	86.3	83.8	81.4	78.3	71.9	64.1	58.6	53.1	48.0	42.9
TAX972	S	T	66.5	89.2	86.4	84.0	80.9	74.7	67.2	61.9	56.7	51.7	46.8
TAX972	S	T	133.0	92.1	89.0	86.5	83.4	77.5	70.4	65.3	60.3	55.4	50.7
TAX973	E	T	22.7	83.5	80.8	78.6	75.6	68.8	61.7	55.8	47.8	35.4	20.9
TAX973	E	T	45.3	87.6	84.5	82.2	79.1	72.4	65.2	59.7	52.2	41.1	27.9
TAX973	E	T	90.6	91.6	88.3	85.8	82.5	75.9	68.8	63.5	56.6	46.9	34.8
TAX973	E	T	181.3	95.7	92.1	89.3	85.9	79.5	72.4	67.4	61.1	52.7	41.8
TAX973	M	T	22.7	71.3	66.0	61.7	56.8	47.6	36.1	27.8	18.6	8.4	0.9
TAX973	M	T	45.3	74.2	68.7	64.3	59.4	50.5	39.5	31.5	22.8	13.3	6.1
TAX973	M	T	90.6	77.1	71.4	67.0	62.1	53.3	42.8	35.2	27.0	18.2	11.4
TAX973	M	T	181.3	80.0	74.1	69.7	64.8	56.2	46.1	38.9	31.2	23.2	16.6
TAX973	P	T	22.7	81.3	75.0	70.3	64.0	54.6	45.2	37.2	29.0	10.4	-8.6
TAX973	P	T	45.3	85.3	78.9	74.1	68.0	58.7	49.1	41.5	33.6	17.2	0.0
TAX973	P	T	90.6	89.3	82.7	77.9	71.9	62.7	53.0	45.7	38.2	24.1	8.7
TAX973	P	T	181.3	93.3	86.6	81.7	75.9	66.7	56.9	50.0	42.8	31.0	17.3
TAX973	S	T	22.7	84.7	82.3	80.0	76.9	70.4	62.4	56.7	51.2	45.9	40.7
TAX973	S	T	45.3	87.6	85.0	82.6	79.5	73.2	65.5	60.1	54.7	49.6	44.6
TAX973	S	T	90.6	90.5	87.6	85.1	82.0	76.0	68.6	63.5	58.3	53.4	48.5
TAX973	S	T	181.3	93.4	90.2	87.7	84.6	78.8	71.8	66.8	61.9	57.1	52.5

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX974	E	T	174.5	99.6	95.7	92.7	89.2	82.8	75.8	71.1	65.2	58.1	48.3
TAX974	E	T	349.0	103.7	99.5	96.3	92.6	86.4	79.4	75.0	69.6	63.9	55.3
TAX974	E	T	698.1	107.8	103.3	99.9	96.0	89.9	83.0	78.9	74.1	69.6	62.3
TAX974	E	T	1396.2	111.9	107.1	103.5	99.5	93.4	86.6	82.8	78.5	75.4	69.2
TAX974	M	T	174.5	82.8	76.6	72.2	67.3	58.9	49.2	42.3	35.2	27.8	21.5
TAX974	M	T	349.0	85.7	79.3	74.8	70.0	61.8	52.6	46.0	39.4	32.7	26.8
TAX974	M	T	698.1	88.6	82.0	77.5	72.6	64.7	55.9	49.7	43.6	37.6	32.0
TAX974	M	T	1396.2	91.5	84.7	80.1	75.3	67.6	59.2	53.4	47.8	42.5	37.2
TAX974	P	T	174.5	97.0	90.2	85.3	79.6	70.5	60.6	54.0	47.1	37.4	25.5
TAX974	P	T	349.0	101.0	94.1	89.1	83.6	74.5	64.5	58.3	51.7	44.3	34.1
TAX974	P	T	698.1	105.0	97.9	92.9	87.6	78.5	68.5	62.6	56.3	51.1	42.7
TAX974	P	T	1396.2	109.0	101.8	96.7	91.5	82.5	72.4	66.8	60.8	58.0	51.4
TAX974	S	T	174.5	96.1	92.7	90.1	87.0	81.4	74.8	70.0	65.3	60.7	56.2
TAX974	S	T	349.0	99.0	95.3	92.6	89.6	84.2	77.9	73.4	68.9	64.4	60.1
TAX974	S	T	698.1	101.9	98.0	95.2	92.1	87.0	81.0	76.8	72.5	68.1	64.0
TAX974	S	T	1396.2	104.8	100.6	97.8	94.7	89.8	84.2	80.2	76.1	71.9	67.9
TAX975	E	T	18.9	82.4	79.8	77.6	74.7	67.9	60.7	54.8	46.6	33.9	19.1
TAX975	E	T	37.8	86.5	83.5	81.2	78.2	71.5	64.3	58.6	51.1	39.6	26.0
TAX975	E	T	75.5	90.6	87.3	84.8	81.6	75.0	67.9	62.5	55.5	45.4	33.0
TAX975	E	T	151.1	94.7	91.1	88.4	85.0	78.5	71.5	66.4	59.9	51.1	39.9
TAX975	M	T	18.9	70.5	65.2	61.0	56.1	46.8	35.3	26.8	17.5	7.1	-0.5
TAX975	M	T	37.8	73.4	67.9	63.6	58.7	49.7	38.6	30.5	21.7	12.0	4.8
TAX975	M	T	75.5	76.3	70.7	66.3	61.4	52.6	41.9	34.2	25.9	16.9	10.0
TAX975	M	T	151.1	79.3	73.4	69.0	64.1	55.5	45.2	37.9	30.1	21.9	15.2
TAX975	P	T	18.9	80.2	74.0	69.3	62.9	53.6	44.2	36.1	27.8	8.6	-10.9
TAX975	P	T	37.8	84.2	77.9	73.1	66.9	57.6	48.1	40.4	32.4	15.4	-2.2
TAX975	P	T	75.5	88.2	81.7	76.9	70.9	61.6	52.0	44.6	37.0	22.3	6.4
TAX975	P	T	151.1	92.2	85.6	80.7	74.8	65.6	55.9	48.9	41.6	29.1	15.0
TAX975	S	T	18.9	84.0	81.7	79.4	76.2	69.6	61.5	55.8	50.2	44.9	39.7
TAX975	S	T	37.8	86.9	84.3	81.9	78.8	72.4	64.7	59.2	53.8	48.7	43.6
TAX975	S	T	75.5	89.7	86.9	84.5	81.3	75.2	67.8	62.6	57.4	52.4	47.5
TAX975	S	T	151.1	92.6	89.5	87.0	83.9	78.0	71.0	66.0	61.0	56.1	51.4
TAX976	E	T	17.6	82.0	79.4	77.3	74.4	67.5	60.3	54.3	46.2	33.3	18.3
TAX976	E	T	35.1	86.1	83.1	80.9	77.8	71.1	63.9	58.2	50.6	39.0	25.3
TAX976	E	T	70.3	90.1	86.9	84.4	81.2	74.6	67.5	62.1	55.0	44.8	32.3
TAX976	E	T	140.5	94.2	90.7	88.0	84.7	78.2	71.1	66.0	59.4	50.5	39.2
TAX976	M	T	17.6	70.2	65.0	60.7	55.8	46.5	34.9	26.5	17.0	6.6	-1.0
TAX976	M	T	35.1	73.1	67.7	63.4	58.5	49.4	38.2	30.1	21.2	11.5	4.2
TAX976	M	T	70.3	76.0	70.4	66.0	61.1	52.3	41.6	33.8	25.4	16.4	9.5
TAX976	M	T	140.5	79.0	73.1	68.7	63.8	55.2	44.9	37.5	29.6	21.3	14.7
TAX976	P	T	17.6	79.8	73.6	68.9	62.5	53.2	43.8	35.6	27.4	7.9	-11.8
TAX976	P	T	35.1	83.8	77.5	72.7	66.5	57.2	47.7	39.9	31.9	14.7	-3.2
TAX976	P	T	70.3	87.8	81.3	76.5	70.5	61.2	51.6	44.2	36.5	21.6	5.5
TAX976	P	T	140.5	91.8	85.2	80.3	74.4	65.2	55.5	48.4	41.1	28.4	14.1
TAX976	S	T	17.6	83.7	81.4	79.1	76.0	69.3	61.2	55.4	49.8	44.5	39.3
TAX976	S	T	35.1	86.6	84.0	81.6	78.5	72.1	64.4	58.8	53.4	48.3	43.2
TAX976	S	T	70.3	89.4	86.6	84.2	81.1	74.9	67.5	62.2	57.0	52.0	47.1
TAX976	S	T	140.5	92.3	89.3	86.7	83.6	77.7	70.6	65.6	60.6	55.7	51.0
TAX977	E	T	13.6	84.5	81.7	79.5	76.5	69.8	62.6	56.8	49.0	36.9	22.7
TAX977	E	T	27.2	88.6	85.5	83.1	80.0	73.3	66.2	60.7	53.4	42.6	29.7
TAX977	E	T	54.4	92.7	89.3	86.7	83.4	76.9	69.8	64.6	57.8	48.4	36.6
TAX977	E	T	108.8	96.8	93.1	90.3	86.8	80.4	73.4	68.4	62.2	54.2	43.6
TAX977	M	T	13.6	72.0	66.7	62.4	57.5	48.3	37.0	28.8	19.7	9.7	2.3
TAX977	M	T	27.2	75.0	69.4	65.0	60.1	51.2	40.3	32.5	23.9	14.6	7.5
TAX977	M	T	54.4	77.9	72.1	67.7	62.8	54.1	43.6	36.1	28.1	19.5	12.7
TAX977	M	T	108.8	80.8	74.8	70.4	65.5	57.0	47.0	39.8	32.3	24.4	18.0
TAX977	P	T	13.6	82.3	76.1	71.3	65.0	55.7	46.3	38.3	30.3	12.2	-6.3
TAX977	P	T	27.2	86.3	79.9	75.1	69.0	59.7	50.2	42.6	34.8	19.0	2.3
TAX977	P	T	54.4	90.3	83.8	78.9	73.0	63.7	54.1	46.9	39.4	25.9	10.9
TAX977	P	T	108.8	94.3	87.6	82.7	76.9	67.7	58.0	51.1	44.0	32.8	19.6
TAX977	S	T	13.6	85.5	83.0	80.7	77.6	71.1	63.2	57.6	52.1	46.9	41.7
TAX977	S	T	27.2	88.4	85.7	83.2	80.1	73.9	66.3	61.0	55.7	50.6	45.7
TAX977	S	T	54.4	91.3	88.3	85.8	82.7	76.7	69.5	64.3	59.3	54.4	49.6
TAX977	S	T	108.8	94.1	90.9	88.4	85.3	79.5	72.6	67.7	62.9	58.1	53.5

TAXI_NOISE_ID	NOISE_TYPE	OP_MODE	THR_SET	L_200	L_400	L_630	L_1000	L_2000	L_4000	L_6300	L_10000	L_16000	L_25000
TAX978	E	T	26.4	88.5	85.4	83.0	79.8	73.2	66.0	60.5	53.2	42.4	29.4
TAX978	E	T	52.8	92.6	89.2	86.6	83.3	76.7	69.6	64.4	57.6	48.2	36.4
TAX978	E	T	105.7	96.6	93.0	90.1	86.7	80.3	73.2	68.3	62.0	53.9	43.3
TAX978	E	T	211.4	100.7	96.8	93.7	90.1	83.8	76.8	72.2	66.4	59.7	50.3
TAX978	M	T	26.4	74.8	69.3	64.9	60.0	51.1	40.2	32.3	23.7	14.4	7.3
TAX978	M	T	52.8	77.8	72.0	67.6	62.7	54.0	43.5	36.0	27.9	19.3	12.5
TAX978	M	T	105.7	80.7	74.7	70.2	65.4	56.9	46.8	39.7	32.1	24.2	17.8
TAX978	M	T	211.4	83.6	77.4	72.9	68.0	59.7	50.2	43.4	36.3	29.2	23.0
TAX978	P	T	26.4	86.2	79.7	74.9	68.8	59.5	50.0	42.4	34.6	18.8	1.9
TAX978	P	T	52.8	90.2	83.6	78.7	72.8	63.6	53.9	46.7	39.2	25.6	10.6
TAX978	P	T	105.7	94.2	87.5	82.5	76.8	67.6	57.8	50.9	43.8	32.5	19.2
TAX978	P	T	211.4	98.2	91.3	86.3	80.7	71.6	61.7	55.2	48.4	39.3	27.8
TAX978	S	T	26.4	88.3	85.5	83.1	80.0	73.8	66.2	60.8	55.5	50.5	45.5
TAX978	S	T	52.8	91.1	88.2	85.7	82.6	76.6	69.3	64.2	59.1	54.2	49.4
TAX978	S	T	105.7	94.0	90.8	88.2	85.2	79.4	72.5	67.6	62.7	57.9	53.3
TAX978	S	T	211.4	96.9	93.4	90.8	87.7	82.2	75.6	71.0	66.3	61.7	57.3
TAX979	E	T	86.2	95.4	91.9	89.1	85.7	79.2	72.2	67.1	60.7	52.2	41.3
TAX979	E	T	172.5	99.5	95.6	92.7	89.1	82.8	75.8	71.0	65.2	58.0	48.2
TAX979	E	T	345.0	103.6	99.4	96.3	92.5	86.3	79.3	74.9	69.6	63.8	55.2
TAX979	E	T	689.9	107.7	103.2	99.8	96.0	89.8	82.9	78.8	74.0	69.5	62.1
TAX979	M	T	86.2	79.8	73.9	69.5	64.6	56.0	45.9	38.6	30.9	22.8	16.2
TAX979	M	T	172.5	82.7	76.6	72.1	67.2	58.9	49.2	42.3	35.1	27.7	21.5
TAX979	M	T	345.0	85.6	79.3	74.8	69.9	61.8	52.5	46.0	39.3	32.6	26.7
TAX979	M	T	689.9	88.6	82.0	77.4	72.6	64.7	55.8	49.6	43.5	37.5	31.9
TAX979	P	T	86.2	93.0	86.3	81.4	75.6	66.4	56.7	49.7	42.5	30.5	16.7
TAX979	P	T	172.5	97.0	90.2	85.2	79.6	70.4	60.6	54.0	47.0	37.3	25.3
TAX979	P	T	345.0	101.0	94.0	89.0	83.5	74.4	64.5	58.2	51.6	44.2	34.0
TAX979	P	T	689.9	105.0	97.9	92.8	87.5	78.4	68.4	62.5	56.2	51.0	42.6
TAX979	S	T	86.2	93.2	90.0	87.5	84.4	78.6	71.6	66.6	61.7	56.8	52.2
TAX979	S	T	172.5	96.1	92.7	90.0	87.0	81.4	74.7	70.0	65.2	60.6	56.1
TAX979	S	T	345.0	99.0	95.3	92.6	89.5	84.2	77.8	73.4	68.8	64.3	60.0
TAX979	S	T	689.9	101.8	97.9	95.2	92.1	87.0	81.0	76.8	72.4	68.1	63.9
TAX980	E	T	102.7	96.5	92.8	90.0	86.5	80.1	73.1	68.1	61.9	53.7	43.0
TAX980	E	T	205.5	100.6	96.6	93.6	90.0	83.7	76.7	72.0	66.3	59.5	50.0
TAX980	E	T	411.0	104.7	100.4	97.2	93.4	87.2	80.3	75.9	70.7	65.2	56.9
TAX980	E	T	822.0	108.8	104.2	100.8	96.9	90.7	83.8	79.8	75.1	71.0	63.9
TAX980	M	T	102.7	80.5	74.6	70.1	65.3	56.7	46.7	39.5	31.9	24.0	17.5
TAX980	M	T	205.5	83.5	77.3	72.8	67.9	59.6	50.0	43.2	36.2	29.0	22.8
TAX980	M	T	411.0	86.4	80.0	75.5	70.6	62.5	53.3	46.9	40.4	33.9	28.0
TAX980	M	T	822.0	89.3	82.7	78.1	73.2	65.4	56.7	50.6	44.6	38.8	33.2
TAX980	P	T	102.7	94.0	87.3	82.4	76.6	67.4	57.7	50.8	43.6	32.2	18.9
TAX980	P	T	205.5	98.0	91.1	86.2	80.6	71.4	61.6	55.0	48.2	39.0	27.5
TAX980	P	T	411.0	102.0	95.0	90.0	84.5	75.4	65.5	59.3	52.8	45.9	36.1
TAX980	P	T	822.0	106.0	98.8	93.8	88.5	79.5	69.4	63.6	57.4	52.7	44.8
TAX980	S	T	102.7	93.9	90.7	88.1	85.0	79.3	72.4	67.5	62.6	57.8	53.2
TAX980	S	T	205.5	96.8	93.3	90.7	87.6	82.1	75.5	70.8	66.2	61.5	57.1
TAX980	S	T	411.0	99.7	95.9	93.2	90.2	84.9	78.6	74.2	69.7	65.3	61.0
TAX980	S	T	822.0	102.6	98.6	95.8	92.7	87.7	81.8	77.6	73.3	69.0	64.9

Spectral Class ID												
Freq. (Hz)	401	402	403	404	405	406	407	408	409	410	411	412
50.0	68.8	75.1	74.4	73.8	71.6	73.9	66.3	69.5	80.8	74.9	73.3	72.4
63.0	67.5	74.3	74.2	73.6	69.4	72.2	67.0	70.7	80.8	71.6	73.2	73.3
80.0	68.7	73.1	75.2	73.9	69.5	70.9	67.2	72.2	80.6	71.8	73.7	73.8
100.0	74.1	78.2	77.8	76.7	72.0	75.3	73.1	72.7	76.9	75.2	80.6	74.2
125.0	74.9	79.2	78.2	78.8	72.2	78.6	74.0	72.4	76.5	74.3	79.6	74.2
160.0	71.7	79.1	77.6	80.5	74.6	72.6	71.9	73.1	77.9	76.6	80.4	73.3
200.0	79.1	71.9	70.7	71.9	67.5	74.0	69.5	69.5	80.4	66.0	82.7	72.0
250.0	80.3	71.4	71.6	71.3	67.1	75.6	69.6	70.4	81.1	66.0	83.5	72.9
315.0	78.5	72.6	72.0	71.6	63.8	74.8	69.4	69.5	80.7	65.8	83.5	73.9
400.0	69.4	72.1	72.5	71.5	66.8	70.8	69.0	69.0	77.5	68.9	77.3	69.0
500.0	69.3	72.3	71.8	71.0	68.4	70.5	69.0	69.9	77.6	68.6	77.8	68.3
630.0	69.1	71.8	71.1	69.8	69.0	70.9	68.8	70.9	75.8	69.6	77.3	67.5
800.0	69.9	70.6	70.1	70.0	70.3	71.9	70.1	71.1	72.9	70.3	73.5	70.2
1000.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
1250.0	61.9	71.9	73.1	71.2	69.1	72.4	71.0	70.3	69.0	69.8	66.9	67.8
1600.0	66.8	66.2	67.4	70.3	67.1	75.6	66.4	69.6	71.1	72.8	65.6	63.9
2000.0	62.7	63.2	63.0	68.3	66.9	74.7	63.9	68.1	70.9	71.1	65.8	65.9
2500.0	59.2	61.9	61.8	68.3	66.2	75.4	63.0	69.1	72.8	73.5	64.4	66.5
3150.0	61.6	61.3	61.3	69.4	64.9	77.7	59.9	70.2	66.1	77.5	63.4	66.6
4000.0	57.0	62.5	62.2	69.2	64.2	75.9	60.0	67.9	64.9	74.3	60.7	64.8
5000.0	61.1	60.8	60.5	67.0	61.0	73.0	58.0	66.3	62.5	72.4	62.3	61.6
6300.0	65.0	52.7	52.0	60.6	54.9	64.6	55.3	59.5	60.8	71.1	64.9	57.5
8000.0	52.2	50.0	48.9	51.3	46.9	57.7	50.3	49.2	57.0	62.4	57.7	52.1
10000.0	40.9	40.0	39.4	40.6	34.9	47.4	42.5	38.9	46.7	52.0	46.9	42.2

Spectral Class ID												
Freq. (Hz)	413	414	415	416	417	418	419	420	421	422	423	424
50.0	72.2	77.7	65.4	65.4	65.2	72.8	70.9	69.1	69.2	62.2	69.5	64.8
63.0	72.9	76.9	65.5	65.5	65.2	72.8	73.9	70.5	72.6	63.9	69.7	67.1
80.0	73.1	76.5	66.9	66.7	65.6	72.6	74.1	69.8	70.9	60.4	70.0	69.8
100.0	76.0	78.9	74.6	73.4	73.3	73.8	80.8	72.4	69.7	59.4	74.4	72.3
125.0	76.9	79.9	75.0	74.9	70.8	72.5	79.0	71.2	71.0	58.3	76.1	72.4
160.0	74.9	78.7	73.6	73.3	72.6	73.0	75.1	72.3	69.6	58.9	74.2	73.9
200.0	70.8	72.0	68.5	68.2	67.6	70.5	70.2	74.4	66.6	62.8	68.4	75.6
250.0	70.9	72.8	69.3	69.4	66.9	70.0	69.5	79.6	68.2	63.6	68.3	78.0
315.0	70.7	72.3	70.2	70.1	66.6	69.8	66.9	91.1	65.6	63.8	69.4	75.9
400.0	71.2	70.4	71.7	72.9	68.6	71.5	68.2	77.4	63.4	65.3	65.4	74.3
500.0	71.2	70.8	71.7	73.1	68.9	71.5	69.9	77.7	64.5	69.0	64.0	75.3
630.0	71.0	69.1	71.7	72.3	69.0	71.6	70.7	79.6	65.8	66.5	62.4	72.4
800.0	70.1	69.8	70.8	70.7	69.8	69.9	70.1	70.5	68.7	67.1	65.7	72.0
1000.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
1250.0	71.0	73.0	67.4	67.6	70.2	70.2	70.7	72.0	69.7	67.6	72.0	70.0
1600.0	71.6	79.2	61.6	64.7	70.3	70.4	72.8	77.3	74.0	70.3	76.0	69.2
2000.0	69.0	77.2	58.6	60.7	70.3	70.4	73.1	70.6	72.6	79.1	81.2	69.6
2500.0	68.1	76.6	64.0	64.4	70.7	70.4	73.5	69.9	75.3	68.2	83.8	69.2
3150.0	63.1	74.2	61.3	64.1	69.4	68.6	71.8	68.6	74.9	67.5	79.3	72.9
4000.0	63.2	73.4	59.3	60.5	67.5	67.0	69.8	65.9	73.7	65.4	83.0	69.9
5000.0	61.3	68.7	59.9	61.6	64.7	64.4	68.5	64.9	66.3	59.8	76.1	69.6
6300.0	59.8	61.4	63.7	66.6	60.1	59.1	63.5	59.7	61.9	54.6	72.9	61.8
8000.0	54.8	54.7	57.1	59.6	53.1	51.9	57.1	53.3	55.2	47.0	65.1	55.5
10000.0	46.9	44.3	45.8	48.8	42.7	41.5	47.6	42.1	41.9	36.2	54.9	45.9

Spectral Class ID											
Freq. (Hz)	425	426	427	428	429	430	431	433	435	436	437
50.0	65.7	67.6	60.8	68.2	71.7	91.1	79.9	91.2	72.8	65.2	68.9
63.0	66.1	70.8	63.1	68.2	73.3	88.0	70.4	95.1	72.8	65.1	64.9
80.0	68.7	72.9	62.8	72.2	75.1	85.1	74.9	93.2	72.6	65.5	67.0
100.0	71.4	76.9	63.6	77.2	70.4	85.8	89.0	99.4	73.8	73.2	70.8
125.0	69.7	73.7	67.6	83.5	74.2	96.7	87.3	86.1	72.5	70.7	71.7
160.0	72.6	66.6	67.1	79.6	79.2	93.3	82.1	88.6	73.0	72.6	70.0
200.0	69.3	63.5	65.3	74.6	76.3	84.2	79.3	86.0	70.5	67.6	74.3
250.0	65.1	65.3	66.4	68.3	84.6	85.3	78.5	82.7	70.0	66.9	76.3
315.0	69.6	64.7	66.9	68.1	83.7	84.5	80.5	82.8	69.8	66.6	73.4
400.0	71.5	63.5	70.4	67.8	78.0	81.3	79.1	82.1	71.5	68.6	72.3
500.0	68.7	65.0	70.1	67.4	78.8	74.8	75.1	80.2	71.5	68.9	70.1
630.0	71.5	61.4	69.4	68.0	74.7	75.5	77.3	74.4	71.6	69.0	78.2
800.0	67.9	63.9	69.2	68.9	71.8	71.8	71.6	73.7	69.9	69.8	71.9
1000.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
1250.0	73.3	74.5	71.0	71.0	66.6	68.5	67.9	70.3	70.2	70.2	71.9
1600.0	75.9	67.6	72.0	72.2	64.1	66.3	70.2	70.3	70.4	70.2	70.1
2000.0	74.3	65.8	76.7	73.9	61.7	63.0	70.8	69.2	70.4	70.2	67.5
2500.0	75.8	72.9	71.4	74.8	61.0	60.4	68.5	67.3	70.4	70.7	66.3
3150.0	71.4	66.2	72.0	75.7	61.5	60.8	67.4	65.1	68.6	69.3	64.0
4000.0	71.0	65.5	74.0	76.6	58.3	59.9	65.2	62.4	67.0	67.5	65.2
5000.0	65.1	67.9	70.7	73.3	59.0	58.2	65.8	58.8	64.4	64.6	63.1
6300.0	62.3	61.3	67.7	68.4	55.8	54.5	66.3	54.4	59.1	60.1	62.0
8000.0	54.1	58.6	60.0	61.1	50.5	48.6	53.7	48.2	51.9	53.0	53.7
10000.0	43.0	46.1	46.9	48.8	41.2	36.7	44.3	36.8	41.5	42.6	49.9