



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: MEASURED OR ESTIMATED(UNCERTIFICATED)AIRPLANE NOISE LEVELS

1. PURPOSE. This circular provides estimates of noise levels or measured noise levels from airplanes not certificated to FAR Part 36.

2. BACKGROUND

- a. Both present and future rulemaking activities require knowledge of the noise levels of aircraft that may be operated in the United States. Advisory Circular (AC) 36-1B was published December 5, 1977, which lists the results of significant noise certification actions. To supplement that tabulation this circular provides estimates or measurements of the noise from airplanes not required to meet FAR Part 36 standards.
- b. Progress in the control and abatement of airplane noise has been, and will continue to be, made. A summary listing of existing airplane noise levels will provide both private and public exposure to this progress, as well as offering a common noise level reference for potential future reductions.

3. NOISE LEVELS

- a. The noise levels were measured or estimated for each airplane as they might occur during type certification tests conducted under FAR Part 36. However, it should be specifically noted that the estimated levels do not represent the results of actual tests, and the measured noise levels contained in this circular were obtained from tests which were made for purposes other than type certification.
 - b. These noise levels were obtained from data submitted to the Federal Aviation Administration (FAA) by the manufacturers
-

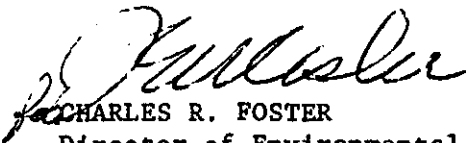
2/6/78

and from the International Civil Aviation Organization. While the FAA has attempted to verify the reasonableness of these numbers by comparison with those from certified aircraft and (in some instances) by independent measurements, the FAA does not warrant these estimates.

- c. Appendices I and IA show the measured or estimated levels for turbojet powered airplanes. Appendix II shows the measured or estimated levels for large transport category aircraft, and Appendix IV contains the levels for civil supersonic airplanes. These appendices include tabulations of engine type, thrust or equivalent shaft horsepower and gross weight for various aircraft as well as the measured Effective Perceived Noise Level in decibels (EPNdB) compared with the appropriate FAR part 36 noise level limits (takeoff, sideline and approach) for each aircraft. Appendix III shows the noise levels for propeller driven small airplanes. This appendix includes a tabulation of the engine type, horsepower and gross weight for the various aircraft along with the measured A-weighted sound level in decibels (dBA) for flyover as compared to the FAR Part 36, Appendix F noise levels for each aircraft. Appendix V shows the noise levels for rotary wing aircraft. This appendix includes a tabulation of the engine type, horsepower or equivalent shaft horsepower, rotor size and aircraft weight along with measured EPNL for a level flyover at 500 ft. altitude. In each case, the FAR Part 36 standard sea level, 77°F, 70% relative humidity conditions have been assumed.

4. REVISIONS. The airplane noise level listing of this Advisory Circular will be revised and updated periodically.

5. CANCELLATION. Advisory Circular 36-2, Estimated (Uncertificated) Noise Levels of Aircraft, dated September 21, 1976, is cancelled.



CHARLES R. FOSTER

Director of Environmental Quality

APPENDIX I
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

TURBOJET POWERED AIRCRAFT

Airplane	ENGINES			TAKEOFF			SIDELINE		APPROACH		Notes
	Model	No.	Thrust 10 ³ lbs.	Gr. Wgt. 10 ³ lbs.	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	
BOEING											
B-707-120	JT3C-6	4	13.5	258.0	113.0	102.0	109.0	105.5	111.0	105.5	1
B-706-120B	JT3D-3	4	18.0	258.0	108.0	102.0	108.0	105.5	118.0	105.5	1
B-707-220	JT4A-3	4	15.8	248.0	105.0	101.8	111.0	105.4	110.0	105.4	1
B-707-320	JT4A-11	4	17.5	316.0	107.0	103.5	110.0	106.0	108.0	106.0	1
B-707-320B	JT3D-3B	4	18.0	328.0	113.0	103.7	108.0	106.2	119.0	106.2	1
B-707-320C	JT3D-3B	4	18.0	332.0	114.0	104.0	108.0	106.5	120.0	106.5	1
B-707-420	RCo. Mk508	4	17.5	316.0	116.0	103.5	112.0	106.0	112.0	106.0	1
B-720	JT3C-7	4	12.0	230.0	108.0	101.0	109.0	105.4	108.0	105.4	1
B-720B	JT3D-1	4	17.0	235.0	104.0	101.0	108.0	105.4	117.0	105.4	1
B-727-100	JT8D-1	3	14.0	161.0	100.0	98.5	102.0	104.0	110.0	104.0	1
B-727-100C	JT8D-7	3	14.0	160.5	96.5	98.5	100.0	104.0	110.0	104.0	1
B-727-200	JT8D-9	3	14.5	172.5	101.0	99.0	100.5	104.5	109.5	104.5	1
B-727-200	JT8D-15	3	15.5	190.5	102.0	100.0	102.0	105.0	109.5	105.0	1
B-737-100	JT8D-9	2	14.5	111.0	96.0	96.0	100.0	103.0	111.0	103.0	1
B-737-200	JT8D-9	2	14.5	110.7	93.5	96.0	100.5	103.0	111.5	103.0	1
B-737-200C	JT8D-15	2	15.5	115.5	94.5	96.0	103.0	103.5	111.5	103.5	1
DOUGLAS (McDONNELL DOUGLAS)											
DC8 Series 10	JT3C-6	4	13.5	273.0	113.0	102.4	109.0	105.9	111.0	105.9	1
DC8 Series 20	JT4A-3	4	15.8	276.0	105.0	102.4	111.0	105.9	111.0	105.9	1
DC8 Series 30	JT4A-9	4	16.8	315.0	113.0	103.5	109.0	106.0	111.0	106.0	1
DC8 Series 40	RCo. 12	4	17.5	315.0	113.0	103.5			115.0	106.0	1
DC8-50	JT3D-1	4	17.0	300.0	115.0	103.0	106.0	106.0	116.0	106.0	1
DC8-50	JT3D-3B	4	18.0	315.0	114.0	103.5	106.0	106.0	118.0	106.0	1
DC8-55	JT3D-3B	4	18.0	328.0	116.0	103.7	106.0	106.2	118.0	106.2	1
DC8-61	JT3D-3B	4	18.0	328.0	116.0	103.7	106.0	106.2	118.0	106.2	1
DC8-62	JT3D-3B	4	18.0	335.0	112.0	104.0	104.0	106.5	112.0	106.5	1

APPENDIX I
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

TURBOJET POWERED AIRCRAFT

Airplane	ENGINES		TAKEOFF				SIDELINE		APPROACH		Notes
	Model	No.	Thrust 10 ³ lbs.	Gr. Wgt. 10 ³ lbs.	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	
DC8-62	JT3D-3B	4	18.0	350.0	115.0	104.0	104.0	106.5	112.0	106.5	1
DC8-62	JT3D-7	4	19.0	350.0	112.0	104.0	106.0	106.5	115.0	106.5	1
DC8-63	JT3D-3B	4	18.0	350.0	115.0	104.0	104.0	106.5	112.0	106.5	1
DC8-63	JT3D-7	4	19.0	355.0	112.0	104.1	106.0	106.5	115.0	106.5	1
DC9-10	JT8D-1	2	14.0	90.7	90.0	94.5	102.0	102.5	109.0	102.5	1
DC9-10	JT8D-5	2	12.25	86.3	90.0	94.1	98.0	102.4	109.0	102.4	1
DC9-10	JT8D-7	2	14.0	90.7	90.0	94.5	102.0	102.5	109.0	102.5	1
DC9-20	JT8D-9	2	14.5	98.0	90.0	95.0	103.0	103.0	109.0	103.0	1
DC9-30	JT8D-1	2	14.0	98.0	91.0	90.0	102.0	103.0	109.0	103.0	1
DC9-30	JT8D-7	2	14.0	108.0	93.0	95.8	102.0	103.0	110.0	103.0	1
DC9-30	JT8D-9	2	14.5	114.0	97.0	96.0	103.0	103.5	110.0	103.5	1
DC9-30	JT8D-11	2	15.0	114.0	95.0	96.0	103.0	103.5	109.0	103.5	1
DC9-80	JT8D-109	3	16.0	140.0	90.8	90.6	93.5	96.2	98.8	99.8	1

GENERAL DYNAMICS

CV 880 22	CJ-805-3	4	11.2	184.0	115.0	99.5	109.0	104.5	106.0	104.5	1
CV 880 22M	CJ-805-3B	4	11.65	193.0	117.0	99.9	109.0	105.5	106.0	105.5	1
CV 990A	CJ-805-23	4	16.1	253.0	110.0	102.0	111.0	105.5	112.0	105.5	1

LEARJET (GATES LEARJET)

Learjet 23	CJ-610-1	2	2.85	12.5	96.1	93.0	103.4	102.0	96.7	102.0	1
------------	----------	---	------	------	------	------	-------	-------	------	-------	---

LOCKHEED

1329 Jetstar	JT12A-8	4	3.3	42.0	106.6	93.0	103.3	102.0	107.5	102.0	1
--------------	---------	---	-----	------	-------	------	-------	-------	-------	-------	---

NORTH AMERICAN ROCKWELL (ROCKWELL INTERNATIONAL)

Sabre 40A	JT12A-8	2	3.3	19.6	100.3	93.0	100.2	102.0	98.5	102.0	1
-----------	---------	---	-----	------	-------	------	-------	-------	------	-------	---

APPENDIX 1A
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

TURBOJET POWERED AIRCRAFT

Airplane	ENGINES			TAKEOFF			SIDELINE		APPROACH		Notes
	Model	No.	Thrust 10 ³ lbs.	Gr. Wgt. 10 ³ lbs.	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	
BAC											
VC10 Series 1100	RCo. 42	4	20.37	314.0	110.2	103.4	113.2	106.0	114.8	106.0	
Super VC10	RCo. 43	4	21.8	335.0	110.1	104.0	113.5	106.5	115.1	106.5	
1-11 Srs 300/400	Spey Mk511	2	11.4	98.9	94.2	106.5	102.4	104.6	102.4	104.6	
1-11 Series 500	Spey Mk512	2	12.55	99.65	102.4	95.1	108.0	102.9	105.7	102.9	
1-11 Series 500	Spey Mk512	2	12.55	104.5	131.8	95.5	108.0	103.0	105.7	103.0	
HAWKER SIDDELEY											
Comet 4	RA29 Mk524	4	10.5	162.0	103.0	98.5	104.0	104.2	112.0	104.2	1
Comet 4B	RA29 Mk525	4	10.5	158.0	102.0	98.5	104.0	104.2	112.0	104.2	1
Comet 4C	RA29 Mk525B	4	10.5	162.0	103.0	98.5	104.0	104.2	112.0	104.2	1
Trident 1	RB163 Mk505-5	3	10.05	115.0	100.0	96.0	100.0	103.2	108.0	103.2	1
Trident 1E	RB163 Mk511-5	3	11.4	130.0	108.0	97.0	106.0	103.6	109.0	103.6	1
Trident 2E	RB163 Mk512-5	3	11.96	143.5	108.0	97.9	106.0	104.0	109.0	104.0	1
Trident 3B	RB163 Mk512-5	4	11.6	150.0	104.0	98.0	105.0	104.0	110.0	104.0	1,2
	RB162		5.25								
HS 125 Series 1A	Viper 521	2	3.0	19.55	88.0	93.0	99.0	102.0	103.0	102.0	1
HS 125 Series 3	Viper 522	2	3.36	21.0	89.0	93.0	99.0	102.0	104.0	102.0	1
HS 125-400	Viper 522	2	3.36	23.3	90.0	93.0	99.0	102.0	104.0	102.0	1
HS 125-600	Viper 601-22	2	3.75	25.0	89.0	93.0	99.0	102.0	105.0	102.0	1
IAI											
1121 Commodore	CJ610-5	2	2.95	18.5	100.9	93.0	104.2	102.0	107.0	102.0	
1123 Westwind	CJ610-9	2	3.1	20.7	100.9	93.0	105.0	102.0	106.0	102.0	

APPENDIX IA
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

TURBOJET POWERED AIRCRAFT

Airplane	ENGINES			TAKEOFF			SIDELINE		APPROACH		Notes
	Model	No.	Thrust 10 ³ lbs.	Gr. Wgt. 10 ³ lbs.	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	
MESSERSCHMITT-BOLKOW-BLOHM											
HFB 320 Hansa	CJ610-5	2	2.95	20.2	100.9	93.0	105.0	102.0	106.0	102.0	
SUD-AVIATION											
Caravelle III	RA29 Mk527	2	11.4	101.4	104.0	95.1	109.0	102.9	110.0	102.9	1
Caravelle VIN	RA29 Mk531	2	12.2	105.8	104.0	95.5	111.0	103.0	106.5	103.0	1
Caravelle VIR	Avon 533R	2	12.6	110.2	104.0	96.0	111.0	103.0	107.0	103.0	1
Caravelle 10R	JT8D-7	2	14.0	114.6	97.0	96.0	102.0	106.5	107.5	106.5	1
VFW-FOKKER											
VFW 614	M45H Mk501	2	7.2	44.0	90.5	93.0	92.2	102.0	97.1	102.0	1

APPENDIX II
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

LARGE TRANSPORT CATEGORY AIRCRAFT

Airplane	ENGINES			TAKEOFF			SIDELINE		APPROACH		Notes	
	Model	No.	shp.	Gr. 10 ³	Wgt. lbs.	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB		Part 36 EPNdB
AEROSPATIALE												
Nord 262C	Bastan VIIA	2	1,065		22.93	90.0	93.0	92.0	102.0	99.0	102.0	1
FOKKER												
F-27 Mk.200	Mk532-7	2	2,050		43.49	90.6	93.0	102.0	102.0	100.3	102.0	1
F-27 Mk.400/600	Mk532-7R	2	2,140		43.50	89.0	93.0	92.5	102.0	99.0	102.0	1
LOCKHEED												
L-188	501-D13	4	3,750		116.0	95.0	96.1	93.0	103.2	99.0	103.2	1
L-100-50	501-D22A	4	4,200		170.0	99.8	99.0	93.5	104.4	98.2	104.4	1
L-400	501-D22A	2	4,591		84.0	92.7	94.0	91.7	102.3	97.5	102.3	1

APPENDIX III
MEASURED OR ESTIMATED NOISE LEVELS FOR UNCERTIFICATED AIRPLANES
PROPELLER DRIVEN SMALL AIRPLANES

Airplane	Model	ENGINES			FLYOVER			Notes
		No.	Hp.	Propeller	Gr. Wgt.	M/Est. dBA	Part 36 dBA	
BEECH								
C 18 S	R-985-AN-1	2	400	Ham. 2D-30-237	7,850	86.0	82.0	
23	O-320-D2B	1	160	HC-82XL-6F	2,300	70.0	73.9	
C23	O-320-D2B	1	180	Sens. 76EM8S5-0-60	2,450	70.0	74.9	
A23-24	IO-360-A2B	1	200	McC. 1B235/BFA7762	2,550	78.0	75.6	
A24R	IO-360-A1B	1	200	McC. 2D34C9-N	2,750	74.0	76.7	
B24R	IO-360-A1B6	1	200	HC-M2YR-1BF/F7666-2R	2,750	72.0	76.7	
35	E-185-11	1	165	B-215-107	2,550	71.0	75.6	
C35	E-225-8	1	185	B-215-107	2,700	74.0	76.3	
D35	E-225-8	1	185	HC-A2X20-4A1	2,725	70.0	76.5	
E35	E-225-8	1	185	B-215-107	2,725	75.0	76.5	
F35	E-225-8	1	185	B-215-107	2,750	73.0	76.7	
G35	E-225-8	1	185	B-215-107	2,775	70.0	76.8	
35S	IO-520-BA	1	285	McC. 2A36C23	3,300	86.0	80.0	
V35	IO-520-B	1	285	McC. 2A36C23-CP	3,400	80.0	80.6	
V35	TSIO-520-D	1	285	PHC-A3VF-4	3,400	83.0	80.6	
V35B	IO-520-BA	1	285	McC. 3A32C76/S82NB-2	3,400	78.0	80.6	
V35B	TSIO-520-D	1	285	McC. 2A32C76	3,400	83.0	80.6	
35-33	IO-470-J	1	225	BHC-92ZF-1D1	2,900	79.0	77.6	
35-A33	IO-470-K	1	225	F-12	3,000	81.0	78.2	
35-B33	IO-470-K	1	225	BHC-92ZF-1D1	3,000	78.0	78.2	
35-C33	IO-470-K	1	225	McC. 2A36C23-CD	3,050	80.0	78.5	
35-C33A	IO-520-B	1	285	McC. 2A36C23-CP	3,300	86.0	80.0	
F33	IO-470-K	1	225	McC. 2A36C23	3,050	80.0	78.5	
F33A	IO-520-B	1	285	McC. 2A36C23	3,400	81.0	80.6	
36	IO-520-B	1	285	McC. 2A36C23-CP	3,600	83.0	81.8	
G50	IGSO-480-A1A6	2	230	HC-93Z20-2C1	7,150	89.0	82.0	
56TC	TIO-541-E1B4	2	380	HC-F3YR-2	5,990	82.0	82.0	
60	TIO-541-E1A4	2	320	HC-F3YR-2	6,725	87.0	82.0	

APPENDIX III
MEASURED OR ESTIMATED NOISE LEVELS FOR UNCERTIFICATED AIRPLANES

PROPELLER DRIVEN SMALL AIRPLANES

Airplane	Model	ENGINES			FLYOVER			Notes
		No.	Hp.	Propeller	Gr. Wgt.	M/Est. dBA	Part 36 dBA	
A60	T10-541-E1A4	2	380	HC-F3YR-2	6,775	90.0	82.0	
A60	T10-541-E1A4	2	323	HC-F3YR-2	6,775	86.0	82.0	
65	IGSO-480-A1A6	2	320	HC-93Z20-2C1	7,700	90.0	82.0	
D95A	IO-360-B1B	2	180	HC-92WK-2B	4,200	78.0	82.0	
95-A55	IO-470L	2	260	McC. 2AF34C55-D78FF-0	4,880	83.0	82.0	
95-B55	IO-470L	2	260	BHC-C2YF-2CHR/FC8465-6	5,100	84.0	82.0	
95-B55	IO-470L	2	260	PHC-3YF-2F/FC-7663-2R	5,100	78.0	82.0	
95-D55	IO-520C	2	285	McC. 3AF32C75	5,300	83.0	82.0	
95-E55	IO-520C	2	285	PHC-C3YF-2/FC7663-2R	5,300	81.0	82.0	
58	IO-520C	2	285	PHC-J3YF-2F/FC7663-2R	5,400	82.0	82.0	
BELLANCA (CHAMPION)								
7 ECA	0-200-A	1	100	McC. 1A100ACM6948	1,650	69.0	70.0	
7 GCAA	0-320-A2B	1	150	McC. 1A170/7448	1,650	76.0	70.0	
7 GCB	0-320-A2B	1	150	McC. 1A170/7448	1,650	70.0	70.0	
8 GCBC	0-360-A2A	1	180	McC. 1A200FA/7846	2,150	79.0	73.0	
CESSNA								
150D	0-200-A	1	100	McC. 1A101	1,600	67.0	69.7	
F150L	0-200-A	1	100	McC. 1A101/HCM6948	1,600	69.0	69.7	
F150J	0-240-A	1	130	McC. 1A135/BRM7150	1,600	72.5	69.7	
FRA-150L	0-240-A	1	130	McC. 1A135/Brm7150	1,600	73.0	69.7	
170	C-145-2	1	145	McC. 1A170/DM7656	2,200	73.0	73.3	
170A	0-340-A1A	1	170	HC-82XL-1D/8433-12	2,200	70.0	73.3	
170B	C-145-2	1	145	McC. 1A170/DM7656	2,200	75.0	73.3	
172	0-300-A	1	145	McC. 1A172/EM7653	2,300	72.0	74.0	
F172L	0-320-E2D	1	150	McC. 1C160/CTM7553	2,300	74.0	74.0	
FR172F	IO-360-D	1	210	McC. D2A34C67L	2,220	81.0	73.4	
FR172G	IO-360-D	1	210	McC. D2A34C67L	2,220	77.0	73.4	

APPENDIX III
MEASURED OR ESTIMATED NOISE LEVELS FOR UNCERTIFICATED AIRPLANES

PROPELLER DRIVEN SMALL AIRPLANES

Airplane	Model	ENGINES			FLYOVER			Notes
		No.	Hp.	Propeller	Gr. Wgt.	M/Est. dBA	Part 36 dBA	
175	6A-350-C2	1	180	McC. 2A31C21/84S-6	2,350	86.0	74.2	
175A	0-360-A1D	1	180	HC-C2YK-1	2,350	72.0	74.2	
175B	0-360-A1D	1	180	McC. 2D36C14/78KM-4	2,350	74.0	74.2	
177	0-360-A1F6	1	180	McC. 2D34C202	2,500	74.0	75.2	
F177RG	IO-360-A1B6	1	200	McC. B2D34C206/78TA	2,800	76.0	77.0	
180	0-470-J	1	225	HC-82XF-1-DB	2,800	76.0	77.0	
180	0-470-J	1	225	HC-82XF-1C	2,800	78.0	77.0	
182H	0-470-R	1	230	McC. 2A34C50	2,800	76.0	77.0	
182P	0-470-R	1	230	McC. 2A34C203	2,950	78.0	77.9	
A185F	IO-520-D	1	285	McC. D2A34C58/90AT-9.5	3,350	82.0	80.3	
A188B	IO-520-D	1	285	McC. D2A34C58/90AT-8	4,000	85.0	82.0	
TU-206-C	TSIO-520-C	1	285	McC. D3A32C90/82NC	3,600	77.0	81.8	
T207	TSIO-520-G	1	285	McC. D2A34C78-L	3,800	82.0	82.0	
210	IO-470-E	1	260	McC. D2A36C33	3,800	77.0	82.0	
T210G	TSIO-520-C	1	285	McC. D3A32C88/82NC-2	3,400	78.0	80.6	
T210L	TSIO-520-H	1	285	McC. D3A32C88/82NC-2	3,800	82.0	82.0	
310C	IO-470-D	2	260	HC-A2XF-2	4,830	84.0	82.0	
310F	IO-470-D	2	260	HC-A2XF-2	4,830	81.0	82.0	
310N	IO-470-V	2	260	McC. D3AF32C80/82NC-4	5,200	80.0	82.0	
310Q	IO-470-VO	2	260	McC. D3AF32C71/84JF-3	5,300	86.0	82.0	
310Q	IO-470-VO	2	260	McC. 3AF32C87/82NC-4	5,300	81.0	82.0	
T310P	TSIO-520-B	2	285	McC. D2AF34C71L	5,400	82.0	82.0	
T310R	TSIO-520-B	2	285	McC. 3AF32C87/82NC-4	5,500	84.0	82.0	
320A	TSIO-470-B	2	260	HC-A2XF-2	5,200	82.0	82.0	
320C	TSIO-470-D	2	260	McC. D2AF34C54	5,200	83.0	82.0	
337F	IO-360-C	2	210	McC. D2AF34C	4,630	85.0	82.0	
340	TSIO-520-K	2	285	McC. 3AF32C87/82NC-4	5,975	83.0	82.0	
401	TSIO-520-E	2	300	McC. 3AF32C87	6,300	79.0	82.0	
414	TSIO-520-J	2	310	McC. 3AF32C93	6,350	82.0	82.0	
421	GTSIO-520-D	2	375	McC. 3AF34C92	7,450	83.0	82.0	
421B	GTSIO-520-H	2	375	McC. 3AF34C92	7,450	81.0	82.0	

APPENDIX III
MEASURED OR ESTIMATED NOISE LEVELS FOR UNCERTIFICATED AIRPLANES

PROPELLER DRIVEN SMALL AIRPLANES

Airplane	Model	ENGINES			FLYOVER			Notes
		No.	Hp.	Propeller	Gr. Wgt.	M/Est. dBA	Part 36 dBA	
GRUMMAN AMERICAN								
AA-1A	O-235-C2C	1	108	McC.1A105SCM7153	1,560	70.0	69.4	
AA-5	O-320-E2G	1	150	McC.1C172BTM7359	2,200	72.0	73.3	
MAULE								
M-4-210C	IO-369-A	1	195	McC.D2A34C67	2,300	76.0	73.9	
M-4-220C	6A-350-C1	1	194	McC.2A31C21	2,300	76.0	73.9	
MOONEY								
M 20 C	O-360-A1D	1	180	HC-C2YK-1A	2,575	74.0	75.6	
M 20 C	O-360-A1D	1	180	McC.2D34C53A	2,575	74.0	75.6	
M 20 E	IO-360-A1A	1	200	HC-C2YK-1A	2,575	74.0	75.6	
M 20 F	IO-360-A1A	1	200	HC-C2YK-1B	2,740	75.0	76.6	
M 22	TIO-541-A1A	1	310	HC-C2YK-1B/8475-4	3,680	80.0	82.0	
PIPER								
PA-18-150	O-320-A2B	1	150	M74DM-56	1,750	70.0	70.6	
PA-18-150	O-320-A2B	1	150	M74DM-0-50	1,750	72.0	70.6	
PA-22-135	O-290-D2	1	135	M74DM	1,950	74.0	71.8	
PA-23-160	O-320-B1A	2	160	HC-82XG-2B	3,800	75.0	82.0	
PA-23-250	TIO-540-C1A	2	250	HC-E2YR-2RB	5,200	77.0	82.0	
PA-24-250	O-540-A1D5	1	250	HC-A2XK-1	2,800	76.0	77.0	
PA-24-260	IO-540-R1A5	1	260	HC-E2YR-1B	2,900	76.0	77.6	
PA-28-140	O-320-E2A	1	150	M74DM-0-60	2,150	73.0	73.0	
PA-28-151	O-320-E3D	1	150	74DM6-0-58	2,325	75.0	74.1	
PA-28-180	O-360-A3A	1	180	M76	2,400	74.0	74.6	
PA-28-180	O-360-A4A	1	180	76EM8S5-0-60	2,400	78.0	74.6	

APPENDIX III
MEASURED OR ESTIMATED NOISE LEVELS FOR UNCERTIFICATED AIRPLANES
PROPELLER DRIVEN SMALL AIRPLANES

Airplane	Model	ENGINES			Gr. Wgt.	FLYOVER		Notes
		No.	Hp.	Propeller		N/Est. dBA	Part 36 dBA	
PA-28-180	IO-360-B1E	1	180	HC-C2YK-1	2,500	73.0	75.2	
PA-28-200	IO-360-C1C	1	200	HC-C2YK-1	2,600	77.0	75.8	
PA-28-235	O-540-B4B5	1	235	HC-C2YK-1	2,900	77.0	77.6	
PA-30	IO-320-C1A	2	160	HC-E2YL-2B	3,600	76.0	81.8	
PA-31	TIO-540-A2B	2	310	HC-E3YR-2A	6,500	81.0	82.0	
PA-31	TIO-540-A1A	2	310	HC-E2YR-2B	6,500	86.0	82.0	
PA-31P	TIGO-541-E1A	2	425	HC-C3YN-2L	7,800	85.0	82.0	
PA-31-350	TIO-540-J2BD/LTIO-540-J2BD	2	350	HC-E3YR-2AF/HC-E3YR-2ALF	7,000	87.0	82.0	
PA-32-260	O-540-E4D5	1	260	HC-C2YK-1B	3,400	81.0	80.6	
PA-32-300	IO-540-K1A5	1	300	HC-C2YK-1B	3,400	83.0	80.6	
PA-34-200	IO-360-C1E6	2	200	HC-C2YK-2	4,200	79.0	82.0	
PA-34-200T	TSIO-360-E/LTSIO-360-E	2	215	BHC-C2YF-2/FC8459-8R/FJC8459-8R	4,570	77.0	82.0	
ROCKWELL INTERNATIONAL								
112	IO-360-C1D6	1	200	HC-E2YR-1BF/F7666-A	2,550	72.0	75.6	
680	GSO-480-A1A6	2	320	HC-83X20-2C	6,750	88.0	82.0	
680FL	IGSO-540-B1A	2	360	HC-B3230-2B	8,500	79.0	82.0	
TED SMITH								
Aerostar 601	IO-540-PLA5	2	290	HC-C3YR/C8468-8R	5,700	84.0	82.0	

APPENDIX IV
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

CIVIL SUPERSONIC AIRCRAFT

Aircraft	ENGINES			TAKEOFF			SIDELINE		APPROACH		Notes
	Model	No.	Thrust 10 ³ lbs.	Gr. Wgt. 10 ³ lbs.	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	M/Est. EPNdB	Part 36 EPNdB	
CONCORDE											
Concorde	0-593/M-602	4	38.5	400.0	119.5		112.0		116.5		
TUPOLEV											
TU-144	NK-144	4	38.58	360.0	110.0		114.0		110.0		

APPENDIX V
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

ROTARY WING AIRCRAFT

Airplane	Model	ENGINES		ROTOR		FLYOVER		
		No.	Hp./shp	Diameter Main/Tail	No. of Blades Main/Tail	Max Gr. Wgt.	Meas. Gr. Wgt.	Meas EPNL @ 500 ft.
AEROSPATIALE								
SA 321	Tur. Turmo 3C	3	1,550	18.9m/4.0m	6/5	28,660	24,240	92.8
SA 330	Tur. Turmo 4C	2	1,435	15.0m/3.04m	4/5	15,430	12,214	93.6
SA 342	Tur. Astazou 3A	1	870	10.5m/.695m	3/13	3,970	3,189	85.5
SA 360	Tur. Astazou 16A	1	1,050	11.5m/.9m	4/13	5,950	4,190	89.9
AGUSTA								
A 109	All. 250-C20B	2	420	11.0m/2.0m	4/2	5,400	5,200	94.2
BELL								
Model 47G	Lyc. VO-540-B1B	1	305	11.32m/1.78m	2/2	2,950	2,850	90.2
Model 206L	All. 250-C20	1	400	10.16m/1.57m	2/2	3,900	3,420	89.4
Model 212	P&W PT6T-3	1	1,800	14.69m/2.59m	2/2	10,500	9,600	98.2
BOEING VERTOL								
Model 234	Lyc. T55-L-11C	2	3,750	18.29m/18.29m	1/1	45,000	41,000	107.0
HUGHES								
300C	Lyc. H10-360-D1A	1	190	8.18m/1.3m	3/2	1,900	1,800	82.0
369A	All. T63-A-5A	1	317	8.03m/1.3m	4/2	2,700	2,412	91.1
500D	All. 250-C20B	1	420	8.05m/1.3m	5/2	3,000	1,850	88.7

APPENDIX V
MEASURED OR ESTIMATED NOISE LEVELS FROM UNCERTIFICATED AIRPLANES

ROTARY WING AIRCRAFT

Airplane	Model	ENGINES		ROTOR		FLYOVER		
		No.	Hp./shp	Diameter Main/Tail	No. of Blades Main/Tail	Max Gr. Wgt.	Meas. Gr. Wgt.	Meas EPNL @ 500 ft.
MIL								
M1-6A	Sol. D-25V(TV-2BM)	2	5,500	35.0m/6.3m	5/4	93,700	93,696	101.3
SIKORSKY								
S-61	GE T58-GE-10	2	1,400	18.9m/3.23m	5/5	19,000	18,725	89.5
S-64	P&W JFTD12-5A	2	4,800	21.95m/4.88m	6/4	47,000	42,900	96.1
WESTLAND								
606 Lynx	RR BS.360-07-26	2	750	12.8m/2.21m	4/4	9,500	9,500	96.9

2/6/78

Notes

1. Thrust cutback used.
2. Aircraft equipped with boost engine.

Page 16

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Washington, D.C. 20591

Official Business

PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
FEDERAL AVIATION
ADMINISTRATION
DOT 515

