Decibel Conversion Tables (Octave-Band to dBA Noise Levels

Template (Example)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	70.9	78.4	83.3	87.6	87.3	93.5	93.8	97	99.9
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-1.1
Result	31.5	52.2	67.2	79	84.1	93.5	95	98	98.8
Antilog	1412.537545	165958.7	5248075	79432823	2.57E+08	2.24E+09	3.16E+09	6.31E+09	7.59E+09
Sum	19638235841								
Log of Sum	10.29310247								
Multiply by 10 (Equals dBA)	102.9310247								

IPCB Permissible Levels

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	69	67	62	54	47	41	36	32	32
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	29.6	40.8	45.9	45.4	43.8	41	37.2	33	21
Antilog	912.0108394	12022.64	38904.51	34673.69	23988.33	12589.25	5248.075	1995.262	125.8925
Sum	130459.6675								
Log of Sum	5.115476267								
Multiply by 10	51.15476267								

Modeled Levels (DNV-GL, Receptor 35)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	65.7	65.7	48.4	40.2	38.4	38.8	31.2	0	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	26.3	39.5	32.3	31.6	35.2	38.8	32.4	1	-11
Antilog	426.5795188	8912.509	1698.244	1445.44	3311.311	7585.776	1737.801	1.258925	0.079433
Sum	25118.99848								
Log of Sum	4.40000232								
Multiply by 10	44.0000232								

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Modeled Levels (DNV-GL, Receptor 36)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	65.2	54.5	47.6	39	37.8	38.7	31.3	0	0

Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	25.8	28.3	31.5	30.4	34.6	38.7	32.5	1	-11
Antilog	380.1893963	676.083	1412.538	1096.478	2884.032	7413.102	1778.279	1.258925	0.079433
Sum	15642.0398								
Log of Sum	4.194293386								
Multiply by 10	41.94293386								

Modeled Levels (DNV-GL, Receptor 40)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	64.7	55.3	47.7	40.1	38	38	30.5	0	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	25.3	29.1	31.6	31.5	34.8	38	31.7	1	-11
Antilog	338.8441561	812.8305	1445.44	1412.538	3019.952	6309.573	1479.108	1.258925	0.079433
Sum	14819.6239								
Log of Sum	4.170837182								
Multiply by 10	41.70837182								

Modeled Levels (DNV-GL, Receptor 48)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	65	57.3	49.3	42.6	39.7	38.7	31.4	9.1	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	25.6	31.1	33.2	34	36.5	38.7	32.6	10.1	-11
Antilog	363.0780548	1288.25	2089.296	2511.886	4466.836	7413.102	1819.701	10.23293	0.079433
Sum	19962.46172								
Log of Sum	4.300214096								
Multiply by 10	43.00214096								

Modeled Levels (DNV-GL, Receptor 58)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	64.4	54.9	47.4	39.6	37.5	38.1	31.4	0	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	25	28.7	31.3	31	34.3	38.1	32.6	1	-11
Antilog	316.227766	741.3102	1348.963	1258.925	2691.535	6456.542	1819.701	1.258925	0.079433
Sum	14634.54261								

Log of Sum	4.165379154
Multiply by 10	41.65379154

Modeled Levels (DNV-GL, Receptor 70)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	63.3	55.5	47.8	41	38.5	38.4	32	8.6	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	23.9	29.3	31.7	32.4	35.3	38.4	33.2	9.6	-11
Antilog	245.4708916	851.138	1479.108	1737.801	3388.442	6918.31	2089.296	9.120108	0.079433
Sum	16718.76509								
Log of Sum	4.223204196								
Multiply by 10	42.23204196								

Modeled Levels (DNV-GL, Receptor 13)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	65.9	57.3	50	42.7	40.5	40.9	35.2	11.3	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	26.5	31.1	33.9	34.1	37.3	40.9	36.4	12.3	-11
Antilog	446.6835922	1288.25	2454.709	2570.396	5370.318	12302.69	4365.158	16.98244	0.079433
Sum	28815.26371								
Log of Sum	4.459622598								
Multiply by 10	44.59622598								

Modeled Levels (DNV-GL, Receptor 1)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	64.2	58.5	50.4	44.4	41.3	40.3	34.3	12.3	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	24.8	32.3	34.3	35.8	38.1	40.3	35.5	13.3	-11
Antilog	301.995172	1698.244	2691.535	3801.894	6456.542	10715.19	3548.134	21.37962	0.079433
Sum	29234.99588								
Log of Sum	4.465903037								
Multiply by 10	44.65903037								

Modeled Levels (DNV-GL, Receptor 5)

Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	65.1	55.2	48.5	40.3	38.8	40	34.2	7.2	0
Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	25.7	29	32.4	31.7	35.6	40	35.4	8.2	-11
Antilog	371.5352291	794.3282	1737.801	1479.108	3630.781	10000	3467.369	6.606934	0.079433
Sum	21487.6081								
Log of Sum	4.332188075								
Multiply by 10	43.32188075								

Modeled Levels (DNV-GL, Receptor 18)

Frequency	Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	Octave Level	65.9	54.9	48.6	39.7	38.8	40.3	34.5	7.2	0
Correction	Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	Result	26.5	28.7	32.5	31.1	35.6	40.3	35.7	8.2	-11
Antilog	Antilog	446.6836	741.3102	1778.279	1288.25	3630.781	10715.19	3715.352	6.606934	0.079433
Sum	Sum	22322.54								
Log of Sum	Log of Sum	4.348744								
Multiply by 10	Multiply by 10	43.48744								

Modeled Levels (DNV-GL, Receptor 68)

Frequency	Frequency	**31.5**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Octave Level	Octave Level	65.2	56.5	49.7	42.1	40.2	40.9	35.8	12.4	0
Correction	Correction	-39.4	-26.2	-16.1	-8.6	-3.2	0	1.2	1	-11
Result	Result	25.8	30.3	33.6	33.5	37	40.9	37	13.4	-11
Antilog	Antilog	380.1894	1071.519	2290.868	2238.721	5011.872	12302.69	5011.872	21.87762	0.079433
Sum	Sum	28329.69								
Log of Sum	Log of Sum	4.452242								
Multiply by 10	Multiply by 10	44.52242								