Summary				
File Name on Meter	831_Data.534.s			
File Name on PC	831_0001742-20200727 113747-83	1_Data.534.ldbin		
Serial Number	0001742			
Model	Model 831			
Firmware Version	2.300			
User				
Location				
Job Description				
Note				
N 4				
Description				
Start	2020 07 27 11.27.47			
Ston	2020-07-27 11.37.47			
Duration	2020-07-28 11:47:51			
Bun Time	24:10:04:102			
Pause	00:00:00 0			
	00.00.00.0			
Pre-Calibration	2020-07-27 11:33:58			
Post-Calibration	None			
Calibration Deviation				
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamplifier	PRM831			
Microphone Correction	Off			
Integration Method	Linear			
Gain	0.0 dB			
Overload	142.2 dB			
	А	с	Z	
Under Range Peak	74.6	71.6	76.6 dB	
Under Range Limit	26.0	26.2	31.3 dB	
Noise Floor	16.8	17.0	22.1 dB	
Results				

LAeq	67.0					
LAE	116.4					
EA	48.520	mPa²h				
LApeak (max)	2020-07-27 11:38:52	124.0	dB			
LASmax	2020-07-28 06:10:00	95.1	dB			
LASmin	2020-07-28 00:56:29	40.5	dB			
SEA	135.7	dB				
LAS > 60.0 dB (Exceedance Counts / Duration)	1930	35266.5	s			
LAS > 90.0 dB (Exceedance Counts / Duration)	7	12.0	S			
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0	S			
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0	S			
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s			
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00
	69.6	68.6	60.9	70.3	68.8	67.6
LCeq	72.6	dB				
LAeq	67.0	dB				
LCeq - LAeq	5.6	dB				
LAleq	71.0	dB				
LAeq	67.0	dB				
LAleg - LAeg	4.0	dB				
[Α			с		Z
	A dB	Time Stamp	dB	C Time Stamp	dB	Z Time Stamp
Leq	A dB 67.0	Time Stamp	dB 72.6	C Time Stamp	dB 80.1	Z Time Stamp
Leq Ls(max)	A dB 67.0 95.1	Time Stamp 2020/07/28 6:10:00	dB 72.6 106.5	C Time Stamp 2020/07/27 11:42:26	dB 80.1 120.8	Z Time Stamp 2020/07/27 11:42:26
Leq Ls(max) LF(max)	A dB 67.0 95.1 100.5	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30	dB 72.6 106.5 114.2	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26	dB 80.1 120.8 128.0	Z Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26
Leq LS(max) LF(max) LI(max)	A dB 67.0 95.1 100.5 104.8	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30	dB 72.6 106.5 114.2 117.8	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26	dB 80.1 120.8 128.0 131.0	Z Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26
Leq LS(max) LF(max) L(max) LS(min)	A dB 67.0 95.1 100.5 104.8 40.5	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29	dB 72.6 106.5 114.2 117.8 57.7	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46	dB 80.1 120.8 128.0 131.0 60.1	Z Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 2:13:03
Leq Ls(max) LF(max) Ll(max) Ls(min) LF(min)	A dB 67.0 95.1 100.5 104.8 40.5 39.6	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29	dB 72.6 106.5 114.2 117.8 57.7 55.3	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02	dB 80.1 120.8 128.0 131.0 60.1 57.4	Z Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 2:13:03 2020/07/28 2:52:02
Leq LS(max) LF(max) LI(max) LS(min) LI(min)	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29 2020/07/28 1:03:34	dB 72.6 106.5 114.2 117.8 57.7 55.3 58.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6	Z Time Stamp 2020/07/27 11:42:62 2020/07/27 11:42:62 2020/07/28 2:13:03 2020/07/28 2:52:02 2020/07/28 1:26:38
Leq Ls(max) LF(max) Ll(max) Ls(min) LF(min) Ll(min) LPeak(max)	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4 124.0	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52	dB 72.6 106.5 114.2 117.8 55.3 58.0 127.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp 2020/07/27 11:42:62 2020/07/27 2020/07/27 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/27 11:42:26
Leq LS(max) LF(max) L(max) LS(min) LF(min) L(min) LPeak(max) Overload Count	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4 124.0	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52	dB 72.6 106.5 114.2 117.8 57.7 55.3 58.0 127.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp 2020/07/27 11:42:66 2020/07/27 11:42:66 2020/07/28 2:13:03 2020/07/28 2:52:02 2020/07/28 1:26:38 2020/07/27 11:42:26
Leq LS(max) LF(max) LI(max) LS(min) LF(min) L(min) L(min) LPeak(max) Overload Count Overload Duration	A dB 67.0 95.1 100.5 1004.8 40.5 39.6 40.4 124.0 0 0.0	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52	dB 72.6 106.5 114.2 117.8 57.7 55.3 58.0 127.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp
Leq Ls(max) Lf(max) Ll(max) Ls(min) Lf(min) Lf(min) LPeak(max) Overload Count Overload Duration Statistics	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4 124.0 0 0.0	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52	dB 72.6 106.5 114.2 117.8 57.7 55.3 58.0 127.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 1:55:17 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp
Leq LS(max) LF(max) LI(max) LS(min) LF(min) LI(min) LPeak(max) Overload Count Overload Duration Statistics LAI1.70	A dB 67.0 95.1 100.5 1004.8 40.5 39.6 40.4 124.0 0 0.0	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52 S dB	dB 72.6 106.5 114.2 117.8 57.7 55.3 58.0 127.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp
Leq LS(max) LF(max) Lf(max) LS(min) LF(min) LI(min) LPeak(max) Overload Count Overload Duration Statistics LAI1.70 LAI8.30	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4 124.0 0 0.0 77.4 71.5	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52	dB 72.6 106.5 114.2 117.8 57.7 55.3 58.0 127.0	C Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 2:13:03 2020/07/28 2:52:02 2020/07/28 1:26:38 2020/07/28 1:26:38 2020/07/27 11:42:26
Leq Ls(max) LF(max) L(max) Ll(min) Ls(min) LF(min) Ll(min) LPeak(max) Overload Count Overload Duration Statistics LAI1.70 LAI8.30 LAI3.00	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4 124.0 0 0.0 77.4 71.5 70.5	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 10:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52 s s dB dB dB dB	dB 72.6 106.5 114.2 117.8 55.3 58.0 127.0	C 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 2:13:03 2020/07/28 2:52:02 2020/07/28 1:26:38 2020/07/27 11:42:26
Leq Ls(max) LF(max) Ll(max) Ll(min) Ls(min) LF(min) Ll(min) LPeak(max) Overload Count Overload Duration Statistics LAI1.70 LAI8.30 LAI12.00	A dB 67.0 95.1 100.5 104.8 40.5 39.6 40.4 124.0 0 0.0 77.4 71.5 70.5 63.6	Time Stamp 2020/07/28 6:10:00 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/27 11:42:30 2020/07/28 0:56:29 2020/07/28 1:03:34 2020/07/27 11:38:52 s S dB dB dB dB	dB 72.6 106.5 114.2 117.8 55.3 58.0 127.0	C 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/27 11:42:26 2020/07/28 1:55:46 2020/07/28 2:52:02 2020/07/28 1:55:17 2020/07/27 11:42:30	dB 80.1 120.8 128.0 131.0 60.1 57.4 60.6 133.8	Z Time Stamp 2020/07/27 11:42:66 2020/07/27 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 2020/07/28 11:42:26

LAI25.00 LAI50.00 LAI75.00 50.2 dB Summary File Name on Neter File Name on PC Serial Number Model Firmware Version User Location Job Description Note

LxT_Data.027.s LxT_0004615-20200727 122034-LxT_Data.027.ldbin 0004615 SoundTrack LxT® 2.301

Measurement

Description		
Start	2020-07-27 12:20:34	
Stop	2020-07-28 12:36:01	
Duration	24:15:27.102	
Run Time	24:15:27.102	
Pause	00:00:00.0	
Pre-Calibration	2020-07-27 12:18:49	
Post-Calibration	None	
Calibration Deviation		
Overall Settings		
RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1	
Microphone Correction	Off	
Integration Method	Linear	
Overload	142.0 dB	
	Α	C Z
Under Range Peak	98.2	95.2 100.2 dB
Under Range Limit	36.1	34.1 42.1 dB
Noise Floor	23.4	23.9 31.3 dB

Results				
LAeq	55.2			
LAE	104.6			
EA	3.214	mPa²h		
EA8	1.060	mPa²h		
EA40	5.300	mPa²h		
LApeak (max)	2020-07-27 12:20:39	115.2	dB	
LASmax	2020-07-27 12:20:39	90.8	dB	
LASmin	2020-07-28 02:43:13	40.6	dB	
SEA	-99.94	dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	1	3.2	s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0	s	
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0	s	
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0	s	
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0	s	
LCeq	67.5	dB		
LAeq	55.2	dB		
LCeq - LAeq	12.3	dB		
LAleq	59.2	dB		
LAeq	55.2	dB		
LAIeq - LAeq	4.0	dB		•
	A	-		C
	dB	Time Stamp	dB	Time Stamp
Leq	55.2		67.5	
LS(max)	90.8	2020/07/27 12:20:39		
LS(min)	40.6	2020/07/28 2:43:13		
LPeak(max)	115.2	2020/07/27 12:20:39		
Overload Count	0			
Overload Duration	0.0	s		
Dose Settings				
Dose Name	OSHA-1	OSHA-2		
Exchange Rate	5	5	dB	
Threshold	90	80	dB	
Criterion Level	90	90	dB	
Criterion Duration	8	8	h	

Results		
Dose	0.00	0.01 %
Projected Dose	0.00	0.00 %
TWA (Projected)	-0.4	15.9 dB
TWA (t)	7.6	23.9 dB
Lep (t)	60.0	60.0 dB
Statistics		
LAI1.70	62.2 dB	
LAI8.30	57.7 dB	
LAI25.00	54.1 dB	
LAI50.00	50.9 dB	
LAI75.00	49.0 dB	
1 4 19 0.00	47.5 dB	

Summary						
File Name on Meter	831 Data.536.s					
File Name on PC	831 0001742-20200728 1254	10-831 Data 536 ld	lhin			
	0001742-20200728 1234	13-031_Data.550.10	15111			
Serial Number	0001742					
Model	Model 831					
Firmware Version	2.300					
User						
location						
Location .						
Job Description						
Note						
Measurement						
Description						
Start	2020-07-28 12:54:19					
Ston	2020-07-28 13:17:00					
Duration	00:22:40 6					
	00.22.40.8					
Run Time	00:22:40.6					
Pause	00:00:00.0					
Pre-Calibration	2020-07-28 12:51:55					
Post-Calibration	None					
Calibration Deviation						
Cambration Deviation						
Overall Settings						
DMS Weight	A Woighting					
Rivis weight	A weighting					
Peak Weight	A Weighting					
Detector	Slow					
Preamplifier	PRM831					
Microphone Correction	Off					
Integration Method	Linear					
Gain	0.0 dB					
Overload	141.9 dB					
	A	с	Z			
Under Range Peak	74.4	71.4	76.4 dB			
Under Range Limit	25.9	26.1	31.2 dB			
Noise Floor	16.8	17.0	22.0 dB			
Results						
LAea	50.5					
	81.8					
EA	16.004	h				
	16.904 µPa		10			
LApeak (max)	2020-07-28 13:16:57	85.4	ав			
LASmax	2020-07-28 13:08:47	61.3	dB			
LASmin	2020-07-28 13:16:43	46.7	dB			
SEA	-99.94 dB					
LAS > 60.0 dB (Exceedance Counts / Duration)	3	7.3	s			
LAS > 90.0 dB (Exceedance Counts / Duration)	0	0.0	s			
LAngel > 12E 0 dB (Exceedance Counts / Duration)	ů 0	0.0	5 C			
Exceedance Counts / Duration)	0	0.0	3			
LApeak > 137.0 dB (Exceedance Counts / Duration)	U	0.0	S			
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0	S			
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00
	50.5	50.5	-99.94	50.5	50.5	-99.94
LCeq	65.4 dB					
LAeq	50.5 dB					
I Ceg - I Aeg	14.9 dB					
	14.2 UD					
	52.5 dB					
LAR	50.5 dB					
LAleq - LAeq	1.8 dB					

Α		С		Z	
dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
50.5		65.4		73.3	
61.3	2020/07/28 13:08:47	73.6	2020/07/28 12:54:31	86.2	2020/07/28 13:16:25
65.1	2020/07/28 13:16:57	76.6	2020/07/28 12:54:31	89.9	2020/07/28 13:16:44
71.2	2020/07/28 12:54:19	77.7	2020/07/28 12:54:31	93.0	2020/07/28 13:16:44
46.7	2020/07/28 13:16:43	61.3	2020/07/28 12:55:39	65.0	2020/07/28 13:03:40
46.1	2020/07/28 13:16:26	59.7	2020/07/28 13:03:29	62.8	2020/07/28 12:55:19
46.4	2020/07/28 13:16:26	62.4	2020/07/28 13:02:49	66.1	2020/07/28 12:55:22
85.4	2020/07/28 13:16:57	84.2	2020/07/28 13:08:47	95.2	2020/07/28 13:16:44
	A dB 50.5 61.3 65.1 71.2 46.7 46.1 46.4 85.4	A dB Time Stamp 50.5	A Time Stamp dB dB Time Stamp dB 50.5 65.4 65.4 66.1 2020/07/28 13:08:47 73.6 65.1 2020/07/28 13:16:57 76.6 71.2 2020/07/28 12:16:43 61.3 46.7 2020/07/28 13:16:26 59.7 46.4 2020/07/28 13:16:26 62.4 85.4 2020/07/28 13:16:27 84.2	K C dB Time Stamp dB Time Stamp 50.5 65.4 55.4 2020/07/28 13:08:47 73.6 2020/07/28 12:54:31 65.1 2020/07/28 13:16:57 76.6 2020/07/28 12:54:31 71.2 2020/07/28 12:54:19 77.7 2020/07/28 12:54:31 46.7 2020/07/28 13:16:26 59.7 2020/07/28 13:03:29 46.4 2020/07/28 13:16:26 62.4 2020/07/28 13:02:49 85.4 2020/07/28 13:16:57 84.2 2020/07/28 13:08:47	A C C dB Time Stamp dB Time Stamp dB 50.5 65.4 73.3 73.6 2020/07/28 12:54:31 86.2 65.1 2020/07/28 13:08:47 73.6 2020/07/28 12:54:31 88.9 71.2 2020/07/28 12:54:19 77.7 2020/07/28 12:54:31 93.0 46.7 2020/07/28 13:16:43 61.3 2020/07/28 12:55:39 65.0 46.4 2020/07/28 13:16:26 59.7 2020/07/28 13:03:29 62.8 46.4 2020/07/28 13:16:26 62.4 2020/07/28 13:02:49 66.1 85.4 2020/07/28 13:16:57 84.2 2020/07/28 13:08:47 95.2

Overload Count Overload Duration 0 0.0 s

Statistics	
LAI1.70	56.9 dB
LAI8.30	52.6 dB
LAI10.00	52.2 dB
LAI25.00	50.4 dB
LAI50.00	49.3 dB
LAI75.00	48.6 dB

Summary				
File Name on Meter	831 Data.537.s			
File Name on PC	831 0001742-20200728 132117-831	Data 537 Idhin		
Serial Number	0001742			
Model	Model 831			
Firmware Version	2 300			
User	2.000			
Location				
Job Description				
Note				
Measurement				
Description				
Start	2020-07-28 13:21:17			
Stop	2020-07-28 13:46:22			
Duration	00:25:05.7			
Run Time	00:25:05.7			
Pause	00:00:00.0			
Pre-Calibration	2020-07-28 12:49:01			
Post-Calibration	None			
Calibration Deviation				
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamplifier	PRM831			
Microphone Correction	Off			
Integration Method	Linear			
Gain	0.0 dB			
Overload	141.9 dB			
	А	с	z	
Under Range Peak	74.4	71.4	76.4 dB	
Under Range Limit	25.9	26.1	31.2 dB	
Noise Floor	16.8	17.0	22.0 dB	
Results				
LAeq	45.7			
LAE	77.5			
EA	6.209 μPa²h			
LApeak (max)	2020-07-28 13:46:21	77.5 dB		
LASmax	2020-07-28 13:29:31	53.2 dB		
LASmin	2020-07-28 13:22:35	42.4 dB		
SEA	-99.94 dB			
	2			
LAS > 60.0 dB (Exceedance Counts / Duration)	U	U.U S		
LAS > 90.0 dB (Exceedance Counts / Duration)	0	0.0 s		

LApeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s LApeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s LApeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s Community Noise Ldn LDay 07:00-22:00 LNight 22:00-07:00 Lden LDay 07:00-19:00 LEvening 19:00-22:00 45.7 45.7 45.7 45.7 60.6 dB 45.7 dB 14.9 dB 47.6 dB LCeq LAeq LCeq - LAeq LAleq LAeq 45.7 dB LAleq - LAeq 1.9 dB С z Α dB Time Stamp dB Time Stamp dB Time Stamp Leq 45.7 60.6 70.1

LS(max)	53.2	2020/07/28 13:29:31	67.2	2020/07/28 13:23:27	82.5	2020/07/28 13:40:47
LF(max)	56.8	2020/07/28 13:29:29	70.1	2020/07/28 13:23:27	88.0	2020/07/28 13:40:46
LI(max)	60.3	2020/07/28 13:46:21	71.8	2020/07/28 13:23:27	91.2	2020/07/28 13:40:46
LS(min)	42.4	2020/07/28 13:22:35	57.3	2020/07/28 13:25:32	58.9	2020/07/28 13:21:17
LF(min)	41.6	2020/07/28 13:29:54	55.2	2020/07/28 13:25:23	58.5	2020/07/28 13:25:31
LI(min)	42.3	2020/07/28 13:22:30	58.2	2020/07/28 13:31:45	62.4	2020/07/28 13:32:22
LPeak(max)	77.5	2020/07/28 13:46:21	78.1	2020/07/28 13:46:21	93.5	2020/07/28 13:40:46

0

0.0 s

Overload Count Overload Duration

Statistics	
LAI1.70	50.3 dB
LAI8.30	48.2 dB
LAI10.00	47.8 dB
LAI25.00	46.1 dB
LAI50.00	44.8 dB
LA175.00	44.0 dB

Construction Generated Noise Building Type D Construction Noise at 50 Feet (dBA Leq)	Domestic Housing		Distance (ft) 50
Construction Phase	All Applicable Equipment in Use	Minimum Required Equipment in Use	
Ground Clearing/Demolition	83 88	83 75	
Foundation Construction	81	81	
Building Construction	81	65	
Finishing and Site Cleanup	88	72	
North - Residential			
Maximum Construction Noise (dBA Leq)			20
Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹	
Ground Clearing/Demolition	91	91	
Excavation (Site Preparation)	96	83	
Foundation Construction	89	89	
Building Construction	89	73	
Paving	96	80	
Average Construction Noise (dBA Leq) Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹	310
Ground Clearing/Demolition	67	67	
Excavation (Site Preparation)	12	59	
Foundation Construction	65 65	00	
Building Construction	65 72	49 56	
	12	50	
West - Residential Maximum Construction Noise (dBA Leg)			20
Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹	20
Ground Clearing/Demolition			
Excavation (Site Preparation)	96	83	
Foundation Construction	89	89	
Building Construction	89	73	
Paving	96	80	
Average Construction Noise (dBA Leq)	AU A P 1		305
	All Applicable Equipment in Use	Minimum Required Equipment in Use	
Ground Clearing/Demolition	6/	67	
Excavation (Sile Preparation)	65	59	
Building Construction	65	49	
Paving	72	56	
Courth Desidential			
South - Residential Maximum Construction Noise (dBA Leg)			110
Construction Phase	All Applicable Equipment in Lice ¹	Minimum Required Equipment in Lice ¹	110
Ground Clearing/Demolition	76	76	
Excavation (Site Preparation)	81	00	
Poundation Construction	74	74	
Paving Construction	81	65	
Average Construction Noise (dBA Leq)	All Applicable Equipment in Lise ¹	Minimum Required Equipment in Use ¹	400
Ground Clearing/Demolition	65	65	
Excavation (Site Preparation)	70	57	
Foundation Construction	63	63	
Building Construction	63	47	
Paving	70	54	
East - Commercial			
Maximum Construction Noise (dBA Leq)			20
Construction Phase	All Applicable Equipment in Use ¹	Minimum Required Equipment in Use ¹	
Ground Clearing/Demolition	91	91	
Excavation (Site Preparation)	96	83	
Foundation Construction	89	89	
Building Construction Paving	89 96	73 80	
		~~	
Average Construction Noise (dBA Leq)		Minimum Density (Extra sector 1, 1	305
	All Applicable Equipment in Use	Minimum Required Equipment in Use	
Ground Clearing/Demolition	0/	۵/ ۶۵	
Excavation (Site Preparation)	12	09 65	
Building Construction	65	CΟ ΔΛ	
Paving	72	49 56	
·g			
1			

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Office Building, Hotel, Hospital, School, and Public Works.

Unmitigated Construction Generated Vibration

North - Residential		Closest Distance (feet):							
	Approximate RMS a	Approximate RMS							
	66	73.000							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	2.348							
Caisson Drill	0.089	0.995							
Large bulldozer	0.089	0.995							
Small bulldozer	0.003	0.034							
Jackhammer	0.035	0.391							
Loaded trucks	0.076	0.850							
	Criteria	0.300	1700						
West - Residential		Closest Distance (feet):	5						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	Inch/second							
Vibratory roller	0.21	2.348							
Large bulldozer	0.089	0.995							
Small buildozer	0.003	0.034							
Jacknammer	0.035	0.391							
	0.076	0.850							
South - Residential	Gillena	Closest Distance (feet):	125						
	Approximate RMS a	Approximate RMS							
	Velocity at 25 ft,	Velocity Level,							
Equipment	inch/second	inch/second							
Vibratory roller	0.21	0.019							
Large bulldozer	0.089	0.008							
Small bulldozer	0.003	0.000							
Jackhammer	0.035	0.003							
Loaded trucks	0.076	0.007							
	Criteria	0.300							
East - Commercial		Closest Distance (feet):	25						
	Approximate RMS a	Approximate RMS							
Equipment	velocity at 20 ft,	inch/second							
Vibratory roller	0.21	0.210							
	0.21	0.210							
Small bulldozer	0.009	0.009							
Jackhammer	0.000	0.000							
Loaded trucks	0.000	0.000							
	Criteria	0.070							
Based on distance to nearest strue	cture	0.300							
^{1.} Determined based on use of lackhamme	ers or pneumatic hammers that may be used for payo	ement demolition at a distance of 25 feet							
Notes: RMS velocity calculated from vibra	tion level (VdB) using the reference of one microinch	/second.							
	(,								

Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* (2006).

Mitigated Construction Generated Vibration

North - Residential		Closest Distance (feet):	25
	Approximate RMS a	Approximate RMS	ļ
	00	73.000	
Equipment	inch/second	inch/second	
Vibratory roller	0.21	0.210	
Caisson Drill	0.089	0.089	I
Large bulldozer	0.089	0.089	
Small bulldozer	0.003	0.003	I
Jackhammer	0.035	0.035	I
Loaded trucks	0.076	0.076	I
	Criteria	0.300	1700
West - Residential		Closest Distance (feet):	25
	Approximate RMS a	Approximate BMS	
	Velocity at 25 ft.	Velocity Level.	ļ
Fauinment	inch/second	inch/second	ļ
Vibratory roller	0.21	0.210	ļ
Large hulldozer	0.089	0.089	ļ
Small hulldozer	0.003	0 003	1
lackhammer	0.035	0.035	I
Looded trucks	0.000	0.076	1
	Criteria	0.300	I
South - Residential		Closest Distance (feet):	125
	Approvimate RMS a	Approvimate RMS	
	Approximate runs a		
Environment	velocity at 20 m,	veloury Level,	
		Πιση/second Λ Λ10	
	0.21	0.019	
	0.003	0.000	
	0.003	0.000	
	0.035	0.003	
Loaded trucks	0.076	0.007	
Fast Commercial	Criteria	U.SUU Classet Distance (feet):	25
East - Commercial		Closest Distance (leet).	20
	Approximate RMS a	Approximate RMS	
	Velocity at 25 ft,	Velocity Level,	
Equipment	inch/second	inch/second	
Vibratory roller	0.21	0.210	
Large bulldozer	0.089	0.089	
Small bulldozer	0.003	0.003	
Jackhammer	0.035	0.035	
Loaded trucks	0.076	0.076	
	Criteria	0.300	
Based on distance to nearest structure			
^{1.} Determined based on use of jackhammers or pneumatic !	hammers that may be used for pave	ment demolition at a distance of 25 feet	
Notes: RMS velocity calculated from vibration level (VdB) u	using the reference of one microinch/	/second.	
Source: Based on methodology from the United Stat	es Department of Transportatio	n Federal Transit Administration, Transit Noise an	d Vibration Impact

Assessment (2006).

Home (/) > Programs (/programs/) > Environmental Review (/programs/environmental-review/) > BPM Calculator

Barrier Performance Module

This module provides to the user a measure on the barrier's effectiveness on noise reduction. A list of the input/output variables and their definitions, as well as illustrations of different scenarios are provided.

Calculator

View Day/Night Noise Level Calculator (/programs/environmental-review/dnl-calculator/)

View Descriptions of the Input/Output variables.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the Input and Output variables with the mouse.

WARNING: If there is direct line-of-sight between the Source and the Observer, the module will report erroneous attenuation. "Direct line-of-sight" means if the 5' tall Observer can see the noise Source (cars, trucks, trains, etc.) over the Barrier (wall, hill/excavation, building, etc.), the current version of Barrier Performance Module will not accurately calculate the attenuation provided. In this instance, there is unlikely to be any appreciable attenuation.

Road/Rail Site DNL:

Note: Barrier height must block the line of sight

Input Data



· · · ·

Output Data

h	4	R	10
D	10	FS	13.1752

New Site DNL:

-13.1752

Refresh

Note: If you have separate Road and Rail DNL values, please enter the values below to calculate the new site DNL:

Road DNL:

Rail DNL:

Calculate

Combined New Site DNL:

Input/Output Variables Input Variables

.

The following variables and definitions from the barrier being assessed are the input required for the web-based barrier performance module:

- H = Barrier Height
- S = Noise Source Height
- O = Observer Height (known as the receiver)
- R¹ = Distance from Noise Source to Barrier
- D¹ = Distance from the Observer to the Barrier
- α = Line of sight angle between the Observer and the Noise Source, subtended by the barrier at observer's location

Output Variables

Definitions of the output variables from the mitigation module of the Day/Night Noise Level Assessment Tools as part of the Assessment Tools for Environmental Compliance:

- h = The shortest distance from the barrier top to the line of sight from the Noise source to the Observer.
- R = Slant distance along the line of sight from the Barrier to the Noise Source
- D = Slant distance along the line of sight from the Barrier to the Observer

The "actual barrier performance for barriers of finite length" is noted on the worksheets(in the Guidebook) as FS.



Barrier Implementation Scenarios

Locate the cursor on the following thumbnails to enlarge the respective scenario as implementation examples of the barrier performance module.

Scenario #1:

Noise receiver at a higher elevation than the noise source and a man-made noise barrier in between the receiver and the source.

Scenario #1:



Noise receiver at a higher elevation than the noise source and a man-made noise barrier in between the receiver and the source.

Distance from Noise Source to Barrier (R¹) Distance from Observer to Barrier (D¹) (https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-1.gif) view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-

implementation-scenarios/)

Scenario #2:



Noise receiver at a higher elevation than the noise source and a natural barrier (hill) between the receiver and the source.

Noise receiver at a higher elevation than the noise source and a natural barrier (hill) between the receiver and the source.

(https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-2.gif)

view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-

implementation-scenarios/)

Scenario #3:

Scenario #3:

Noise receiver at almost the same elevation of the noise source



and a man-made noise barrier between the receiver and the source.

(https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-3.gif) view larger version of image (/resource/3841/barrier-performance-module-bpm-barrierimplementation-scenarios/)

Scenario #4:



A noise barrier of finite length between a noise source and a receiver. This top view illustrates the angle α , subtended by the barrier at the observer's location.

(https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-4.gif)

view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-

implementation-scenarios/)

Contents

Calculator

Input/Output Variables

Barrier Implementation Scenarios

Walnut Grove Residential Project

																			Noise	e Level	(CNEL	or Ldn)					
													Noise Lev	el (CNEL or	Ldn) at D)istance	from Roa	dway	at Di	stance	rom R	oadway		Noise Level (C	NEL or Lo	in) at D	istance
	- U	24-hc	ur Traffic \	/olume	Distance to CNEL from Roadway Centerline								Centerline							Cer	terline			from Roadway Centerline			
	0																					Future		Future			
	0		Future	Future	Existing			Future No Project				Future With Project				Change	e Change E		Existing		No Proj		Plus Proj		Change C		
	<u>م</u>		Without	With	50.0	60	65	70	50.0	60	65	70	50.0	60	65	70	From	due to	50	50	50	50 50) 50	50 50	50	From	due to
Roadway Segment	S	Existing	Project	Project	Feet	CNEL	CNEL	CNEL	Feet	CNEL	CNEL	CNEL	Feet	CNEL	CNEL	CNEL	Existing	Project	feet	feet	eet fe	et fee	t feet	feet fee	t feet Ex	disting	Project
Rowland, West of Project	40.0	11,900	12,100	12,549	71.1	275	127	59	71.2	278	129	60	71.3	284	132	61	0.2	0.2	71.1	71.1 7	1.1 71	.2 71.2	2 71.2	71.3 71.3	71.3	+0.2	+0.2
Rowland, East of Project	40.0	11,900	12,100	12,774	71.1	275	127	59	71.2	278	129	60	71.4	288	134	62	0.3	0.2	71.1	71.1 7	1.1 71	.2 71.3	2 71.2	71.4 71.4	71.4	+0.3	+0.2
Rowland, East of Azusa	40.0	14,400	14,700	14,812	71.9	312	145	67	72.0	316	147	68	72.0	318	147	68	0.1	0.0	71.9	71.9 7	1.9 72	2.0 72.0	0 72.0	72.0 72.0	72.0	+0.1	+0.0
Azusa, North of Rowland	40.0	44,500	45,400	45,512	76.8	662	307	143	76.9	670	311	144	76.9	672	312	145	0.1	0.0	76.8	76.8 7	6.8 76	.9 76.9	9 76.9	76.9 76.9	76.9	+0.1	+0.0
Azusa, South of Rowland	40.0	41,500	42,300	42,749	76.5	631	293	136	76.6	640	297	138	76.6	644	299	139	0.1	0.0	76.5	76.5 7	6.5 76	6.6 76.6	6 76.6	76.6 76.6	6 76.6	+0.1	+0.0
Assumptions:			•						•								•					Fle	eet Mix	92% Aut	os		

52 /0	Autos
3%	Medium Trucks
5%	Heavy Trucks

feet from centerline feet from centerline Time of Day: 70% Day 15% Evening 15% Night

Calculations using methods of Federal Highway Administration Highway Traffic Noise Prediction Model, December, 1978. Baseline California vehicle noise levels from Caltrans, TAN 95-03, 1995 Source of standard assumptions:

Simplified to 2 lanes

future

Noise path decay parameter for hard site

6.1 meters=

6.1 meters=

24-hour distribution of traffic volumes: 24-hour distribution of trainic volumes: 70% day (7-7), 15% eventing (7-10), 15% night (10-7) Analysis of LA. County 24-hour traffic counts for selected arterial streets conducted by Pat Mann for Inglewood Noise Element, 1974 Truck Mix

20.0

20.0

ARB standard fleet mix for air quality analysis Heavy trucks for noise model includes heavy diesel tractor-trailers only Medium trucks for noise model includes buses and bobtail trucks Autos includes cars, vans, pickups and light trucks