



## Allegato 5

### Risultati Delle Misure Effettuate





## P1 MISURE SPOT DIURNO

P1 10:10 10:25  
23/07/2008  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

REMARKS:

Date:.....Time:.....

SET-UP:

Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W.: "FAST"  
Freq.W.: "A"  
Rs. (dB): 40.0 - 113.0

MEASUREMENTS:

MAXP	79.8 dB
MAXL	64.4 dB
L(01.0)	56.0 dB
L(10.0)	49.5 dB
L(50.0)	40.5 dB
L(90.0)	U___ dB
L(99.0)	U___ dB
MINL	U___ dB
LEQ	45.0 dB
SEL	74.4 dB

No overload.

ELAPSED TIME:

Hours	Min.	Sec.
00	15	00

No. of interrupts: 0

P1 23/07/08  
15:50 16:05  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

REMARKS:

Date:.....Time:.....

SET-UP:

Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W.: "FAST"  
Freq.W.: "A"  
Rs. (dB): 40.0 - 113.0

MEASUREMENTS:

MAXP	89.1 dB
MAXL	70.5 dB
L(01.0)	65.5 dB
L(10.0)	56.0 dB
L(50.0)	44.5 dB
L(90.0)	U___ dB
L(99.0)	U___ dB
MINL	U___ dB
LEQ	53.4 dB
SEL	82.8 dB

No overload.

ELAPSED TIME:

Hours	Min.	Sec.
00	15	00

No. of interrupts: 0

P1 18:00 18:15  
22/07/2008  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

REMARKS:

Date:.....Time:.....

SET-UP:

Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W.: "FAST"  
Freq.W.: "A"  
Rs. (dB): 40.0 - 113.0

MEASUREMENTS:

MAXP	103.1 dB
MAXL	77.6 dB
L(01.0)	67.0 dB
L(10.0)	51.0 dB
L(50.0)	45.5 dB
L(90.0)	42.0 dB
L(99.0)	40.5 dB
MINL	U___ dB
LEQ	53.5 dB
SEL	82.9 dB

No overload.

ELAPSED TIME:

Hours	Min.	Sec.
00	15	00

No. of interrupts: 0







**Figura 1**

**Foto Punto di Misura 1**



**Figura 2**

**Foto Punto di Misura 1**







## P2 MISURE SPOT DIURNO

P2 09:45 - 10:00  
23/07/2008  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

REMARKS:  
Date:.....Time:.....  
.....  
.....  
.....

SET-UP:  
Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W. : "FAST"  
Freq.W. : "A"  
Rs. (dB): 40.0 - 113.0

MEASUREMENTS:

MAXP	93.7 dB
MAXL	74.5 dB
L(01.0)	70.0 dB
L(10.0)	63.5 dB
L(50.0)	59.5 dB
L(90.0)	54.5 dB
L(99.0)	48.5 dB
MINL	44.2 dB
LEQ	61.1 dB
SEL	90.6 dB

No overload.

ELAPSED TIME:

Hours	Min.	Sec.
00	15	00

No. of interrupts: 0

P2 15:30 - 15:45  
23/07/2008  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

REMARKS:  
Date:.....Time:.....  
.....  
.....  
.....

SET-UP:  
Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W. : "FAST"  
Freq.W. : "A"  
Rs. (dB): 40.0 - 113.0

MEASUREMENTS:

MAXP	93.2 dB
MAXL	73.7 dB
L(01.0)	69.0 dB
L(10.0)	64.0 dB
L(50.0)	58.5 dB
L(90.0)	51.0 dB
L(99.0)	47.5 dB
MINL	46.0 dB
LEQ	60.7 dB
SEL	90.1 dB

No overload.

ELAPSED TIME:

Hours	Min.	Sec.
00	15	00

No. of interrupts: 0

P2 18:35 - 18:50  
22/07/2008  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

REMARKS:  
Date:.....Time:.....  
.....  
.....  
.....

SET-UP:  
Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W. : "FAST"  
Freq.W. : "A"  
Rs. (dB): 40.0 - 113.0

MEASUREMENTS:

MAXP	113.9 dB
MAXL	91.5 dB
L(01.0)	68.5 dB
L(10.0)	63.5 dB
L(50.0)	59.5 dB
L(90.0)	54.5 dB
L(99.0)	47.0 dB
MINL	44.0 dB
LEQ	61.7 dB
SEL	91.2 dB

Overload.

ELAPSED TIME:

Hours	Min.	Sec.
00	15	00

No. of interrupts: 0





## P2 MISURE SPOT NOTTURNO

BRUEL & KJÆR  
MODULAR SLM TYPE 2231

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REMARKS:  
Date:.....Time:.....  
.....  
.....  
.....

SET-UP:  
-----  
Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W. : "FAST"  
Freq.W. : "A"  
Re. (dB): 40.0 - 113.0

MEASUREMENTS:  
-----  
MAXP 92.2 dB  
MAXL 78.7 dB  
L(01.0) 68.0 dB  
L(10.0) 62.5 dB  
L(50.0) 50.5 dB  
L(90.0) 43.0 dB  
L(99.0) U--- dB  
MINL U--- dB  
LEQ 58.5 dB  
SEL 97.9 dB

No overload.

ELAPSED TIME:  
-----  
Hours Min. Sec.  
00 15 00

No. of interrupts: 0

P2 24/07/2008  
01:05 01:25

P2 23/07/2008  
23:20 23:35  
BRUEL & KJÆR  
MODULAR SLM TYPE 2231

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REMARKS:  
Date:.....Time:.....  
.....  
.....  
.....

SET-UP:  
-----  
Module #: 2 (BZ 7101)  
Mic.Corr: + 0.0 dB  
S.I.Corr: "FRONTAL"  
Pr. Time: 00:15:00  
Time W. : "FAST"  
Freq.W. : "A"  
Re. (dB): 40.0 - 113.0

MEASUREMENTS:  
-----  
MAXP 91.5 dB  
MAXL 71.6 dB  
L(01.0) 68.0 dB  
L(10.0) 64.5 dB  
L(50.0) 59.0 dB  
L(90.0) 47.0 dB  
L(99.0) 42.0 dB  
MINL U--- dB  
LEQ 60.8 dB  
SEL 90.2 dB

No overload.

ELAPSED TIME:  
-----  
Hours Min. Sec.  
00 15 00

No. of interrupts: 0







**Figura 3**

**Foto Punto di Misura 2**



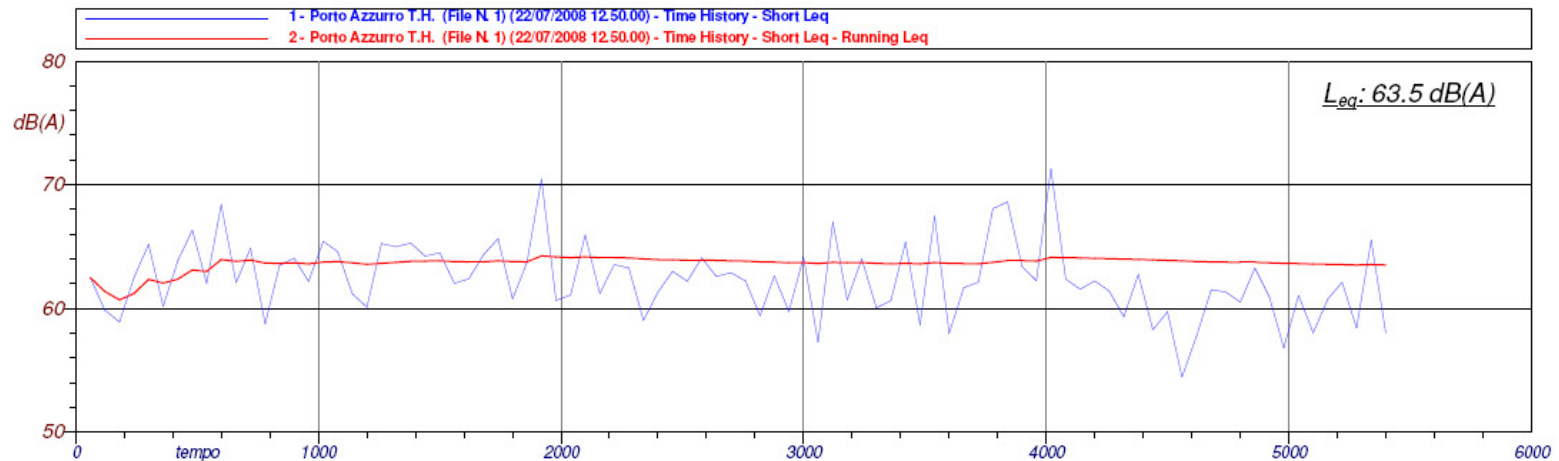
**Figura 4**

**Foto Punto di Misura 2**





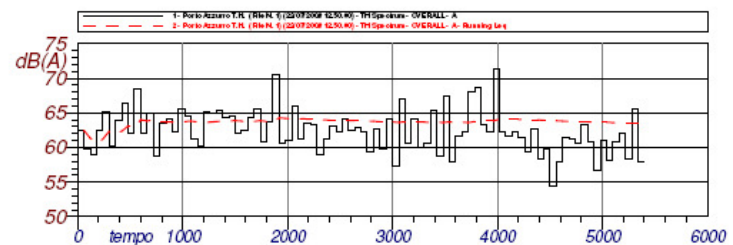
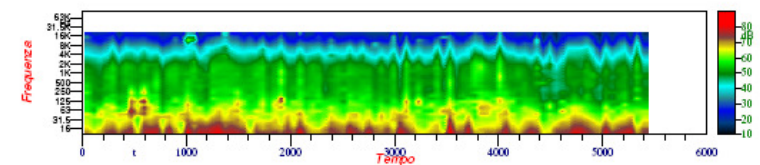
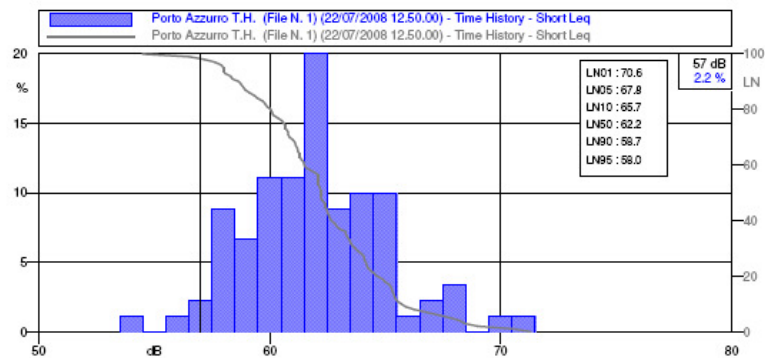
### P3 MISURA DI 90 MINUTI DIURNO



Data, ora misura : 22/07/2008 12.50.00

Durata: 5445.500 s

Strumentazione : Larson-Davis 824







Nome misura : Porto Azzurro Globali (File N. 1) (22/07/2008 12.50.00)

Data, ora misura : 22/07/2008 12.50.00

Durata Misura : 5445.5 s

Località:

Punto di Misura : P3

L1.0: 73.7 dB(A) fast  
L10.0: 66.1 dB(A) fast  
L50.0: 58.6 dB(A) fast  
L90.0: 54.0 dB(A) fast  
L95.0: 53.2 dB(A) fast  
L99.0: 51.6 dB(A) fast

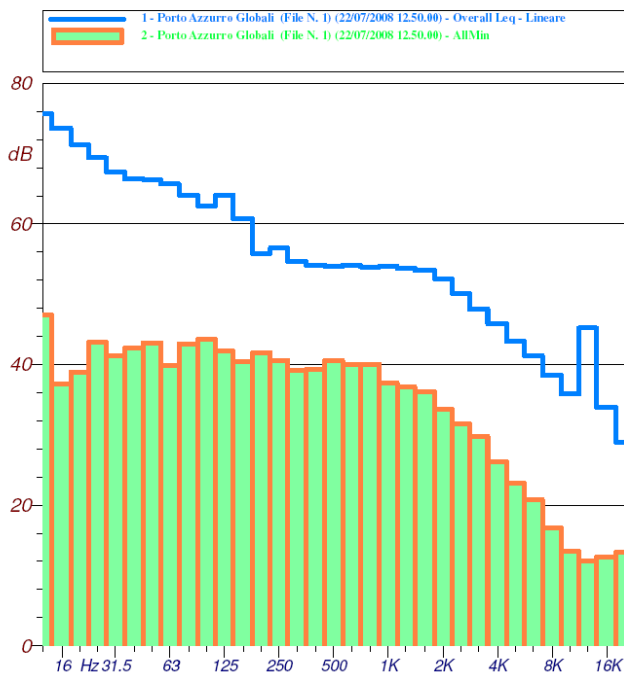
**Leq (A) : 63.5 dBA**

<i>Leq (A): 63.5 dBA</i> <i>SEL (A): 100.9 dBA</i> <i>Peak (A): 100.2 dBA</i> (22Jul2008 13:37:54)	<i>Leq (C): 76.1 dBC</i> <i>SEL (C): 113.4 dBC</i> <i>Peak (C): 105.4 dBC</i> (22Jul2008 13:48:22)	<i>Leq (Lin): 80.7 dB</i> <i>SEL (Lin): 118.1 dB</i> <i>Peak (Lin): 110.0 dB</i> (22Jul2008 13:10:28)
----------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------

	<i>Lmin (A)</i>	<i>Lmax (A)</i>	<i>Lmin (C)</i>	<i>Lmax (C)</i>	<i>Lmin (Lin)</i>	<i>Lmax (Lin)</i>
<i>S</i>	50.6 22Jul2008 14:15:08	83.9 22Jul2008 13:56:14	60.6 22Jul2008 14:11:40	94.6 22Jul2008 12:59:08	63.1 22Jul2008 14:05:42	96.0 22Jul2008 13:12:24
<i>F</i>	48.8 22Jul2008 14:12:06	86.9 22Jul2008 13:56:14	58.7 22Jul2008 14:12:11	96.8 22Jul2008 12:59:07	60.6 22Jul2008 14:11:56	102.1 22Jul2008 13:10:28
<i>I</i>	50.3 22Jul2008 14:13:11	88.1 22Jul2008 14:02:43	60.6 22Jul2008 14:11:39	99.3 22Jul2008 13:10:28	63.6 22Jul2008 14:11:56	105.4 22Jul2008 13:10:28

Livello Equivalente	
Hz	dB
12.5 Hz	75.7 dB
16 Hz	73.6 dB
20 Hz	71.3 dB
25 Hz	69.4 dB
31.5 Hz	67.4 dB
40 Hz	66.4 dB
50 Hz	66.3 dB
63 Hz	65.7 dB
80 Hz	64.1 dB
100 Hz	62.6 dB
125 Hz	64.1 dB
160 Hz	60.7 dB
200 Hz	55.8 dB
250 Hz	56.6 dB
315 Hz	54.7 dB
400 Hz	54.1 dB
500 Hz	54.0 dB
630 Hz	54.1 dB
800 Hz	53.9 dB
1000 Hz	54.0 dB
1250 Hz	53.7 dB
1600 Hz	53.4 dB
2000 Hz	52.2 dB
2500 Hz	50.1 dB
3150 Hz	47.9 dB
4000 Hz	45.8 dB
5000 Hz	43.3 dB
6300 Hz	41.3 dB
8000 Hz	38.5 dB
10000 Hz	35.8 dB
12500 Hz	45.2 dB
16000 Hz	33.9 dB
20000 Hz	28.9 dB

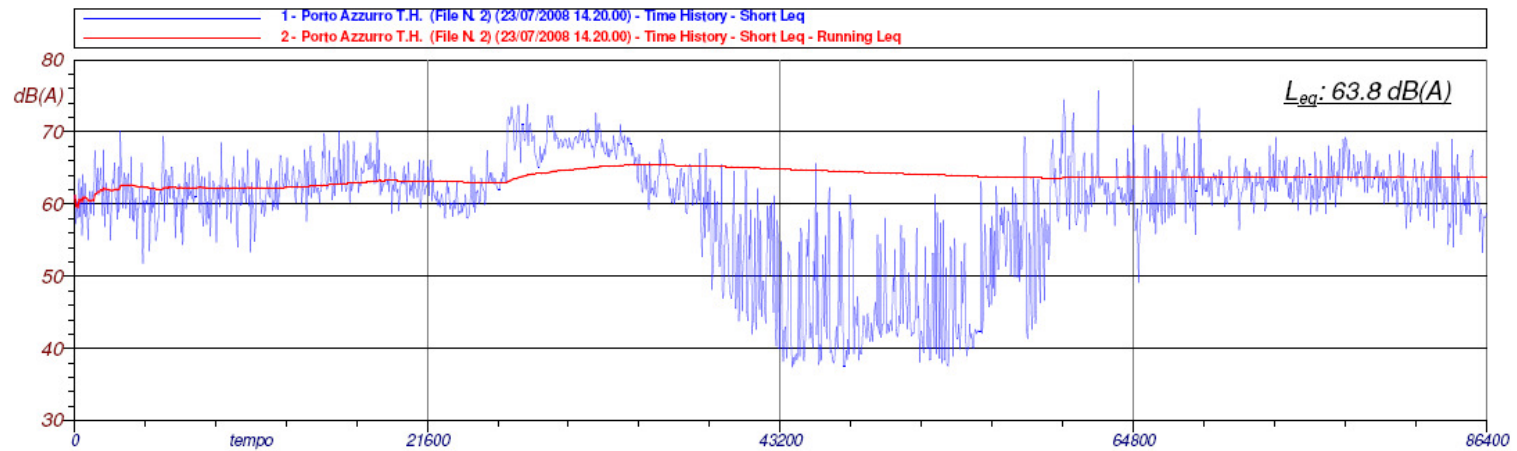
Livello Minimo	
Hz	dB
12.5 Hz	47.1 dB
16 Hz	37.3 dB
20 Hz	38.9 dB
25 Hz	43.2 dB
31.5 Hz	41.3 dB
40 Hz	42.3 dB
50 Hz	43.1 dB
63 Hz	39.9 dB
80 Hz	42.9 dB
100 Hz	43.6 dB
125 Hz	41.9 dB
160 Hz	40.4 dB
200 Hz	41.7 dB
250 Hz	40.6 dB
315 Hz	39.1 dB
400 Hz	39.3 dB
500 Hz	40.6 dB
630 Hz	40.0 dB
800 Hz	40.0 dB
1000 Hz	37.4 dB
1250 Hz	36.8 dB
1600 Hz	36.1 dB
2000 Hz	33.6 dB
2500 Hz	31.6 dB
3150 Hz	29.8 dB
4000 Hz	26.2 dB
5000 Hz	23.1 dB
6300 Hz	20.8 dB
8000 Hz	16.8 dB
10000 Hz	13.4 dB
12500 Hz	12.1 dB
16000 Hz	12.6 dB
20000 Hz	13.3 dB







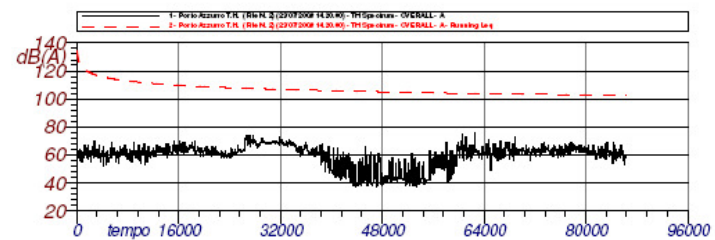
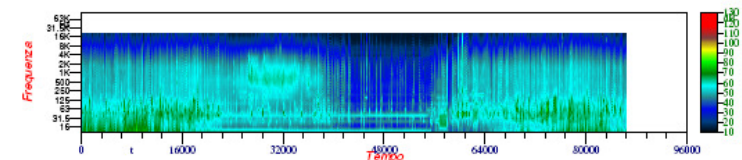
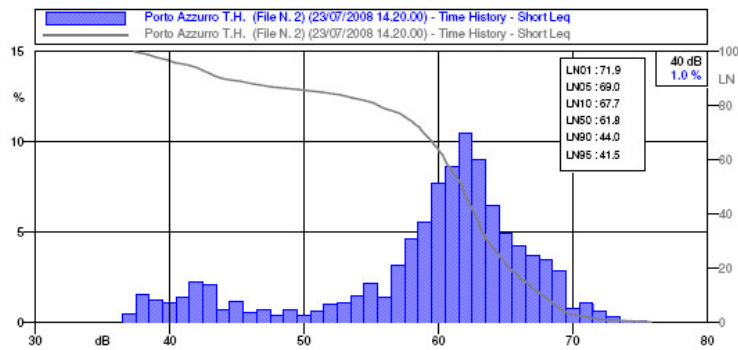
## P3 MISURA DI 24 ORE



Data, ora misura : 23/07/2008 14.20.00

Durata: 86400.000 s

Strumentazione : Larson-Davis 824





Nome misura : Porto Azzurro Globali (File N. 2) (23/07/2008 14.20.00)

Data, ora misura : 23/07/2008 14.20.00

Durata Misura : 86400.0 s

Località:

Punto di Misura :P3

L1.0: 73.8 dB(A) fast  
L10.0: 67.5 dB(A) fast  
L50.0: 58.2 dB(A) fast  
L90.0: 41.7 dB(A) fast  
L95.0: 39.0 dB(A) fast  
L99.0: 37.4 dB(A) fast

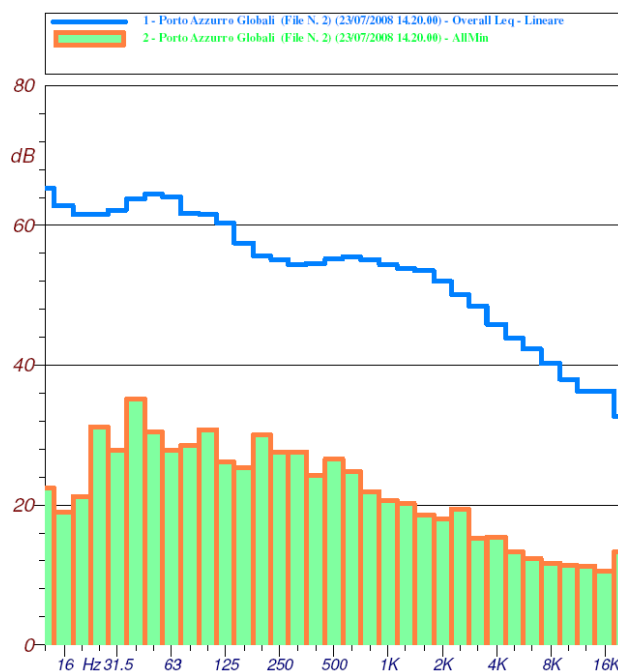
**Leq (A) : 63.8 dBA**

<i>Leq (A): 63.8 dBA</i> <i>SEL (A): 113.1 dBA</i> <i>Peak (A): 110.7 dBA</i> (23Jul2008 22:48:16)	<i>Leq (C): 72.1 dBC</i> <i>SEL (C): 121.5 dBC</i> <i>Peak (C): 108.7 dBC</i> (23Jul2008 22:48:16)	<i>Leq (Lin): 73.9 dB</i> <i>SEL (Lin): 123.3 dB</i> <i>Peak (Lin): 110.3 dB</i> (23Jul2008 22:48:16)
----------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------

	<i>Lmin (A)</i>	<i>Lmax (A)</i>	<i>Lmin (C)</i>	<i>Lmax (C)</i>	<i>Lmin (Lin)</i>	<i>Lmax (Lin)</i>
<b>S</b>	36.3 24Jul2008 04:46:01	84.9 24Jul2008 11:55:59	48.9 24Jul2008 06:43:14	94.3 24Jul2008 13:44:11	50.6 24Jul2008 06:31:50	94.5 24Jul2008 13:44:11
<b>F</b>	35.8 24Jul2008 04:46:20	91.8 24Jul2008 11:55:58	46.8 24Jul2008 06:43:18	97.0 24Jul2008 11:13:13	48.3 24Jul2008 06:43:18	97.4 24Jul2008 11:13:13
<b>I</b>	36.2 24Jul2008 04:46:20	94.1 24Jul2008 11:55:58	49.6 24Jul2008 06:31:50	98.4 24Jul2008 11:13:13	51.8 24Jul2008 06:43:18	99.6 23Jul2008 17:38:18

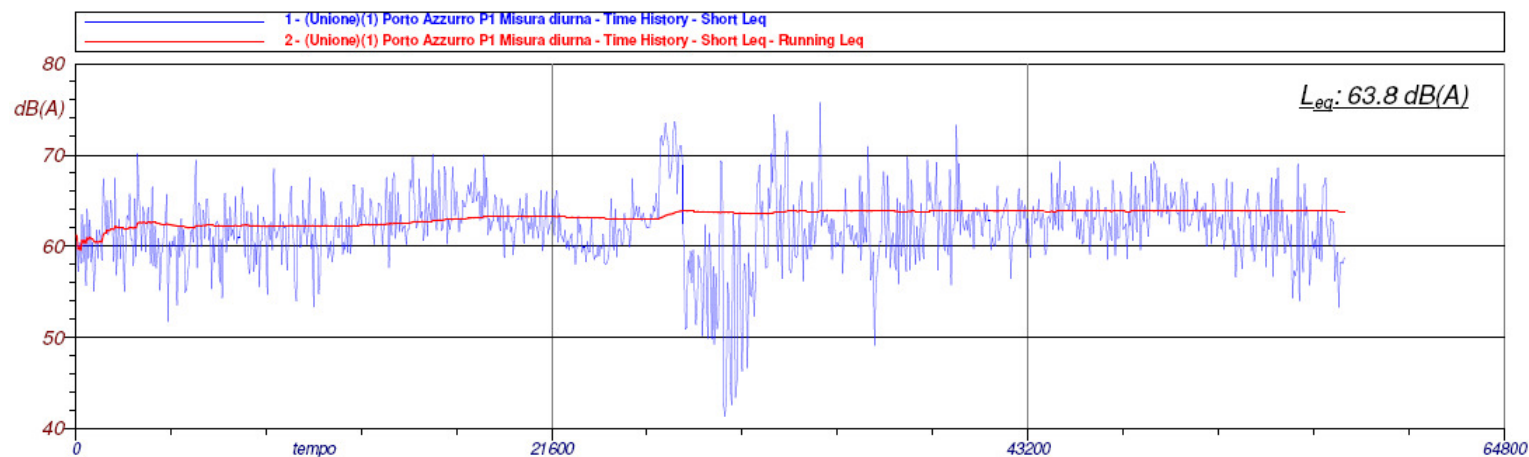
Livello Equivalente	
Hz	dB
12.5 Hz	65.3 dB
16 Hz	62.8 dB
20 Hz	61.5 dB
25 Hz	61.6 dB
31.5 Hz	62.2 dB
40 Hz	63.8 dB
50 Hz	64.5 dB
63 Hz	64.1 dB
80 Hz	61.7 dB
100 Hz	61.6 dB
125 Hz	60.3 dB
160 Hz	57.5 dB
200 Hz	55.6 dB
250 Hz	55.1 dB
315 Hz	54.4 dB
400 Hz	54.6 dB
500 Hz	55.2 dB
630 Hz	55.5 dB
800 Hz	55.1 dB
1000 Hz	54.4 dB
1250 Hz	53.9 dB
1600 Hz	53.5 dB
2000 Hz	52.0 dB
2500 Hz	50.1 dB
3150 Hz	48.5 dB
4000 Hz	45.9 dB
5000 Hz	43.9 dB
6300 Hz	42.3 dB
8000 Hz	40.3 dB
10000 Hz	38.0 dB
12500 Hz	36.3 dB
16000 Hz	36.3 dB
20000 Hz	32.7 dB

Livello Minimo	
Hz	dB
12.5 Hz	22.4 dB
16 Hz	19.0 dB
20 Hz	21.2 dB
25 Hz	31.2 dB
31.5 Hz	27.9 dB
40 Hz	35.1 dB
50 Hz	30.4 dB
63 Hz	27.8 dB
80 Hz	28.5 dB
100 Hz	30.8 dB
125 Hz	26.1 dB
160 Hz	25.3 dB
200 Hz	30.0 dB
250 Hz	27.5 dB
315 Hz	27.6 dB
400 Hz	24.2 dB
500 Hz	26.6 dB
630 Hz	24.8 dB
800 Hz	21.9 dB
1000 Hz	20.7 dB
1250 Hz	20.2 dB
1600 Hz	18.6 dB
2000 Hz	18.0 dB
2500 Hz	19.4 dB
3150 Hz	15.2 dB
4000 Hz	15.4 dB
5000 Hz	13.3 dB
6300 Hz	12.3 dB
8000 Hz	11.7 dB
10000 Hz	11.4 dB
12500 Hz	11.3 dB
16000 Hz	10.5 dB
20000 Hz	13.3 dB





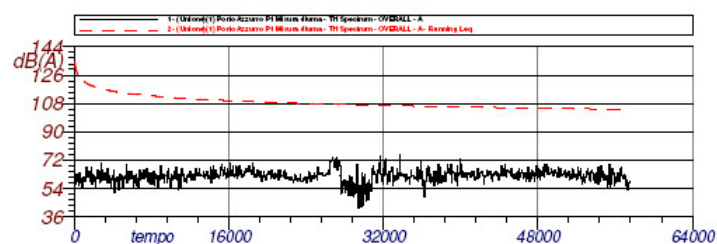
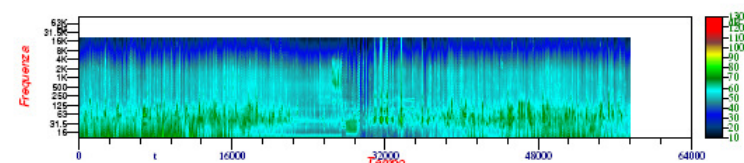
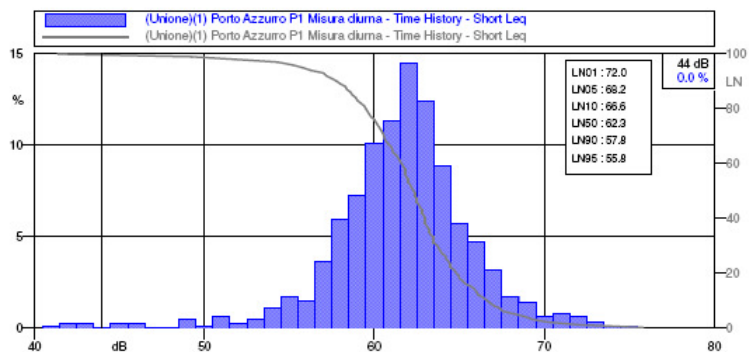
### P3 MISURA DI 16 ORE PERIODO DIURNO (06:00-22:00)



Data, ora misura : 23/07/2008 14.20.00

Durata: 57540.000 s

Strumentazione : Larson-Davis 824



PRJ. NO.: 08\_PAZ\_024 REV. 0

11

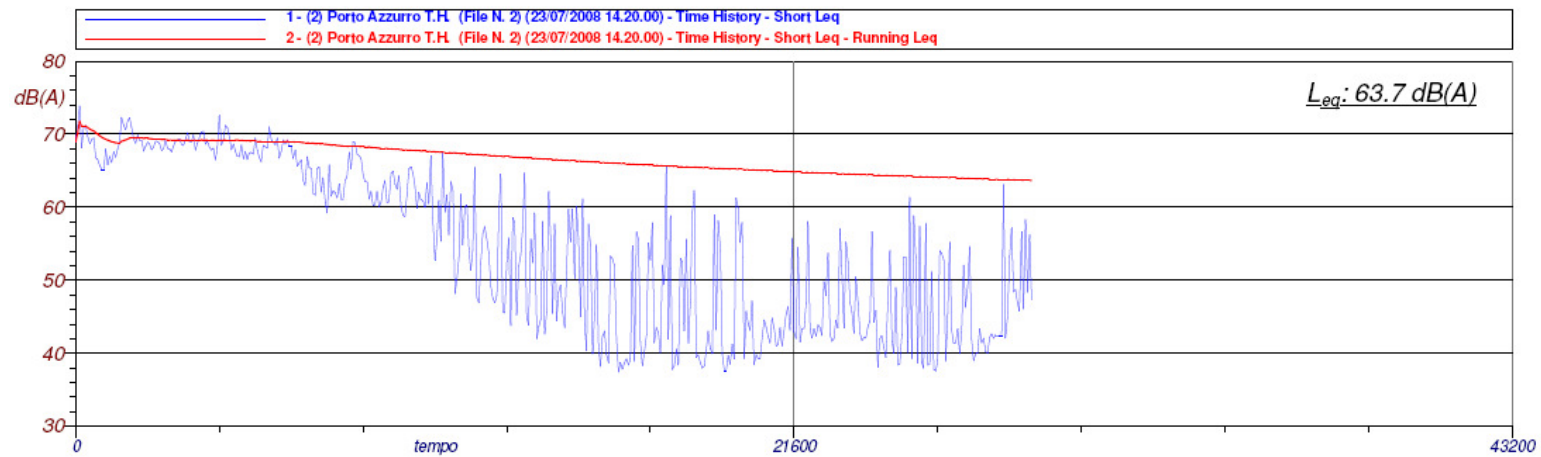
Dr. Ing. Riccardo Corsi







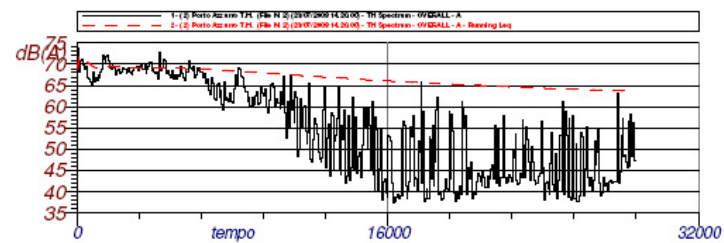
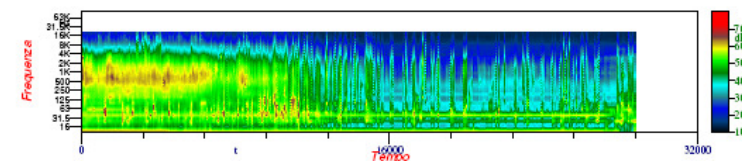
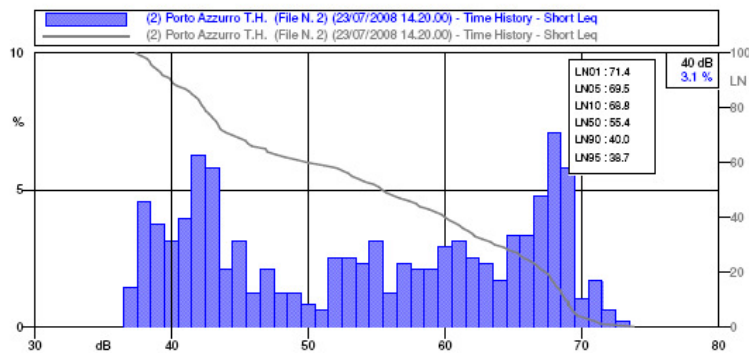
### P3 MISURA DI 8 ORE PERIODO NOTTURNO (22:00-06:00)



Data, ora misura : 23/07/2008 22.00.00

Durata: 28740.000 s

Strumentazione : Larson-Davis 824



PRJ. NO.: 08\_PAZ\_024

REV. 0

12

Dr. Ing. Riccardo Corsi





**Figura 5**

**Foto Punto di Misura 3**



**Figura 6**

**Foto Punto di Misura 3**

