

# LOUISIANA DIVISION INDUSTRIAL HYGIENE DEPARTMENT NOISE MONITORING RECORD

EMPLOYEE JOHN PATRICK I.D.#/S.S.# 435-87-6087  
 DATE 3-31-72 DESCRIBE TASKS PERFORMED DURING MONITORING PERIOD INCLUDING ANY UNUSUAL ACTIVITIES  
CONTRACT LABORER

LHC3 vent, Spite burning/pole, tie in water

## PLANT/DEPT.

BLOCK 40 CAUSTIC CELL SERVICE CELLULOSE CHLOR-ALKALI #2  
 CHLO-ALKALI GRP.MAINT. CHLORINATED POLYETHYLENE CHLORINATED METHANES CHLORINE  
 CHLORHYDROCARBON GRP. MAINT. ENVIRONMENTAL OPER. ETHANOLAMINES/GLYCOL/GLYCOL ETHERS  
 GLYCOL 1 GLYCOL 2 GRAND BAYOU OPER. INST./ELEC. DEPT. LIGHT HYDROCARBONS #1  
 LIGHT HYDROCARBONS #2 - ETHYLENE/BENZENE LOUISIANA GASIFICATION TECH. INC. MAINTENANCE TECH. SERVICES  
 MARINE/RAILROADS/PLASTIC SERVICES POLYETHYLENE A POLYETHYLENE B POLYETHYLENE C  
 POWER 1/UTILITIES POWER 2 R & D PILOT PLANTS SLOVENTS/EDC 1 VECTOR SBC VINYL 2

## CONTRACTOR

ADVANCE BUSINESS CONSULT. ALL AMERICAN WELDING ANCO ASHTON & ASS. BARBAY ENGRG BASIC  
 CASE CONTRACTORS C J LAICH DESIGN DRAFTING DOWELL DYER MOODY FAUCHEAUX RANDY  
 GATE HARMONY HEBERT BROTHERS HERNDON JOHN HUFFMASTER & ASS. HYMEL'S  
 INDUSTRIAL DESIGN INDUSTRIAL ELECTRIC INDUSTRIAL TECH. SERV. INSYNCR IPS JACOBS J E MERIT  
 JIMCO J L NEWMAN JOHN CAMPBELL JOHN LOWERY MCCARTY MILLER JOHN ~~ROTHWELL~~  
 OIL FIELD MAINT. OSBORNE & ASS. PETRIN PETROLUM SERVICES PSV JANITORIAL RIVER VALLY  
 R M HALEY & ASS. SHELBY GAUDET SIPC0 SLINE SOUTHERN CONSULTANTS TANSY TED L  
 TAYCO TEMPERATURE CONTROL TERRACINA LAND SURYR TIGER X-RAY VOLKS CONSTRUCTION  
 WESTGATE WOODWARD CLYDE

## TYPE NOISE SAMPLE

           10-HOUR 12-HOUR PERSONNEL EXCURSION

## HEARING PROTECTION WORN?

           NO

## TYPE WORN

AMERICAN OPTICAL MUFF (21) BILSON COMFORT EARMUFF ( ) BILSON COMFORT MUFF (23)  
 BILSON FOAM FIT EARPLUG (24) BILSON P.O.P. FIBER PLUG (22) BILSON SOFT NOISE FILTERS (25)  
 BILSON PER-FIT EARPLUG (26) BILSON ULTRA SOFT NOISE FILTERS (26)  
 BILSON ULTRA SOFT NOISE FILTERS (26) BILSON UNIVERSAL 1 (BLUE CUP) (25) BILSON UNIVERSAL 2 (YELLOW CUP) (22) BILSON VIKING EARMUFF (29)  
 BILSON VIKING MUFF (29)  
 4B DOWN EARMUFF (24) 4B DOWN EXPAND-O-FIT (24) E-A-R CABOFLEX BAND (28)  
 E-A-R CAPS BAN (16)  
 E-A-R CLASSIC EARPLUG (35) E-A-R ULTRA FIT EARPLUG (27) H. S. LEIGHT AIR SOFT EARPLUG (27)  
 H. S. LEIGHT MAX EARPLUG (33)  
 H. S. LEIGHT QUIET EARPLUG (26) H. S. LEIGHT QUIET BAND (24) H. S. LEIGHT QUIET MUFF (27)  
 MOLDEX PURA-FIT TO BE TRIED EARPLUG (31)  
~~WILLSON SOUND BAN (22)~~ NORTH DECI DAMP EARPLUG (29) NORTH SILENT PARTNER EARPLUG (25)  
 SILENTA UNICAP MUFF ( ) TASCO T250 MUFF ( ) WILLSON HEARING PROTECTOR EARPLUG ( )  
 WILLSON SOUND BAN (22)

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# DOSIMETER USED

## DUPONT MK-2'S

CA2 BLANK 15210 15211 14317 14318 14319 10125  
10126 17780 17781

## QUEST M-15'S

EV 1030012

## QUEST M-27'S

GW 1030001 GW 1120007 GW 1120008 GW 1120009 GW 1120010 GW 1090012 GW 1050034

## CALIBRATOR

MODEL QUEST CA-12 SERIAL NUMBER 509052U  
CALIBRATION RESULTS BEFORE 109.2 CALIBRATION RESULTS AFTER 109.3  
RUN TIME (HR:MIN) 7:18

## MONITORING RESULTS

### DUPONT MK-2

DOSE % (80 dB THRESHOLD) \_\_\_\_\_  
L avg dB (80 dB THRESHOLD) \_\_\_\_\_  
DOSE % #2 (90 dB THRESHOLD) \_\_\_\_\_  
L avg dB #2 (90 dB THRESHOLD) \_\_\_\_\_  
L max 1 dB (1 SECOND) \_\_\_\_\_  
L MAX Time (HR:MIN) \_\_\_\_\_  
L MAX 2 dB (1/16 SECOND) \_\_\_\_\_  
DOSE/TIME (8-HOUR Projected dose%) \_\_\_\_\_  
> 115 dB Time(HR:MIN) \_\_\_\_\_

### QUEST M-14.M-15/M-27

LTL DOSE % 113.4  
LTL L Avg dB 91.5  
HTL DOSE % 90.6  
HTL L-Avg dB 89.9  
MAX LEVEL dB (1 SECOND) 119.2  
PEAK LEVEL dB (50 MICRO SECONDS) 135.3  
LTL TWA dB 90.9  
HTL TWA dB 89.3  
M-15 O. L. Time(MIN:SEC) \_\_\_\_\_  
M-27 U. L. Time(MIN:SEC) 0:20

SAMPLED BY [Signature]

RESTRICTED FOR USE WITHIN THE DOW CHEMICAL COMPANY

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## QUEST M-27 NOISE LOGGING DOSIMETER

NAME

John Patrick

I.D. #

435-87-6087

WORK STATION

COMMENTS

3-31-92

CAL LEVEL---49.8dB UNIT-----1

START TIME--00:00H:M END TIME---07:36H:M RUN TIME----7:18:32 PAUSE-----:17:51

PEAK LEVEL--135.3dB MAX LEVEL---119.2dB MIN LEVEL----53.2dB UPPER LIMIT---115dB

PEAK TIME--05:59H:M MAX TIME---06:36H:M MIN TIME---04:56H:M U.L. TIME----:00:20

EXCHANGE RATE---5dB --90dB THRESHOLD --80dB THRESHOLD 3dB EXCHANGE RATE

CRITERION-----90dB LAVG-----89.9dB LAVG-----91.5dB LEQ-----95.6dB

RANGE-----50dB TWA-----89.3dB TWA-----90.9dB SEL-----139.8dB

TIME CONSTANT -SLOW DOSE-----90.6% DOSE-----113.4% DOSE-----338%

WEIGHTING-----A 8hr DOSE-----99.2% 8hr DOSE-----124.1% 8hr DOSE-----370%

--90dB THRESHOLD 5dB EXCHANGE RATE

1 MIN HISTOGRAM

|       |     |     |     |     |       |                          |
|-------|-----|-----|-----|-----|-------|--------------------------|
| 00:00 | 79  | 00  | 00  | 00  | 00dB  | +----- 67dB              |
| 00:05 | 00  | 00  | 00  | 00  | 52dB  | dB                       |
| 00:10 | 00  | 00  | 67  | 67  | 00dB  | +----- 61dB              |
| 00:15 | 00  | 00  | 00  | 52  | 00dB  | dB                       |
| 00:20 | 00  | 00  | 00  | 00  | 00dB  | dB                       |
| 00:25 | 00  | 65  | 00  | 00  | 63dB  | +---- 58dB               |
| 00:30 | 00  | 00  | 67  | 74  | 67dB  | +----- 66dB              |
| 00:35 | 82  | 87  | 89  | 92  | 94dB  | +-----+----- 90dB        |
| 00:40 | 82  | 00  | 69  | 84  | 00dB  | +-----+----- 77dB        |
| 00:45 | 85  | 85  | 70  | 75  | 00dB  | +-----+----- 80dB        |
| 00:50 | 84  | 00  | 00  | 63  | 60dB  | +-----+----- 73dB        |
| 00:55 | 58  | 52  | 65  | 00  | 00dB  | +---- 57dB               |
| 01:00 | 82  | 75  | 63  | 90  | 71dB  | +-----+----- 83dB        |
| 01:05 | 81  | 75  | 91  | 72  | 73dB  | +-----+----- 82dB        |
| 01:10 | 83  | 59  | 82  | 77  | 70dB  | +-----+----- 78dB        |
| 01:15 | 77  | 87  | 85  | 86  | 82dB  | +-----+----- 85dB        |
| 01:20 | 61  | 80  | 79  | 87  | 80dB  | +-----+----- 81dB        |
| 01:25 | 76  | 85  | 82  | 91  | 93dB  | +-----+----- 88dB        |
| 01:30 | 90  | 94  | 95  | 91  | 95dB  | +-----+----- 93dB        |
| 01:35 | 86  | 94  | 96  | 95  | 92dB  | +-----+----- 94dB        |
| 01:40 | 92  | 89  | 97  | 81  | 67dB  | +-----+----- 90dB        |
| 01:45 | 79  | 80  | 90  | 80  | 87dB  | +-----+----- 85dB        |
| 01:50 | 95  | 104 | 103 | 106 | 106dB | +-----+-----+----- 104dB |
| 01:55 | 102 | 102 | 96  | 75  | 91dB  | +-----+-----+----- 98dB  |
| 02:00 | 108 | 102 | 86  | 83  | 86dB  | +-----+-----+----- 100dB |
| 02:05 | 77  | 75  | 91  | 94  | 96dB  | +-----+-----+----- 91dB  |
| 02:10 | 94  | 94  | 87  | 89  | 88dB  | +-----+-----+----- 91dB  |
| 02:15 | 75  | 99  | 96  | 90  | 77dB  | +-----+-----+----- 92dB  |
| 02:20 | 78  | 84  | 79  | 94  | 98dB  | +-----+-----+----- 91dB  |
| 02:25 | 86  | 81  | 70  | 84  | 86dB  | +-----+-----+----- 83dB  |
| 02:30 | 84  | 80  | 80  | 80  | 87dB  | +-----+-----+----- 83dB  |
| 02:35 | 00  | 84  | 65  | 58  | 82dB  | +-----+----- 77dB        |
| 02:40 | 69  | 00  | 61  | 00  | 00dB  | +-----+----- 60dB        |
| 02:45 | 68  | 77  | 100 | 102 | 100dB | +-----+-----+----- 97dB  |
| 02:50 | 107 | 100 | 100 | 97  | 94dB  | +-----+-----+----- 101dB |

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|       |     |     |    |     |       |                    |
|-------|-----|-----|----|-----|-------|--------------------|
| 03:00 | 100 | 101 | 99 | 85  | 71dB  | +-----+-----+ 96dB |
| 03:05 | 95  | 82  | 92 | 92  | 89dB  | +-----+-----+ 91dB |
| 03:10 | 86  | 80  | 84 | 95  | 93dB  | +-----+-----+ 90dB |
| 03:15 | 98  | 89  | 95 | 80  | 80dB  | +-----+-----+ 92dB |
| 03:20 | 86  | 85  | 86 | 90  | 84dB  | +-----+-----+ 87dB |
| 03:25 | 94  | 90  | 92 | 87  | 92dB  | +-----+-----+ 91dB |
| 03:30 | 80  | 86  | 86 | 107 | 92dB  | +-----+-----+ 97dB |
| 03:35 | 95  | 98  | 96 | 93  | 103dB | +-----+-----+ 98dB |
| 03:40 | 100 | 97  | 92 | 89  | 95dB  | +-----+-----+ 95dB |
| 03:45 | 87  | 94  | 88 | 94  | 95dB  | +-----+-----+ 92dB |
| 03:50 | 85  | 79  | 85 | 86  | 86dB  | +-----+-----+ 85dB |
| 03:55 | 82  | 84  | 83 | 88  | 92dB  | +-----+-----+ 87dB |
| 04:00 | 87  | 90  | 89 | 92  | 91dB  | +-----+-----+ 90dB |
| 04:05 | 85  | 90  | 90 | 85  | 94dB  | +-----+-----+ 89dB |
| 04:10 | 94  | 84  | 85 | 84  | 50dB  | +-----+-----+ 86dB |
| 04:15 | 56  | 00  | 00 | 00  | 00dB  | dB                 |
| 04:20 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 04:25 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 04:30 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 04:35 | 00  | 00  | 00 | 50  | 00dB  | dB                 |
| 04:40 | 74  | 69  | 00 | 00  | 71dB  | +-----+ 68dB       |
| 04:45 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 04:50 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 04:55 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 05:00 | 00  | 62  | 00 | 00  | 00dB  | + 50dB             |
| 05:05 | 00  | 00  | 57 | 00  | 00dB  | dB                 |
| 05:10 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 05:15 | 00  | 52  | 79 | 78  | 54dB  | +-----+ 72dB       |
| 05:20 | 61  | 55  | 00 | 00  | 54dB  | + 54dB             |
| 05:25 | 75  | 89  | 89 | 89  | 89dB  | +-----+ 87dB       |
| 05:30 | 95  | 91  | 86 | 90  | 81dB  | +-----+ 90dB       |
| 05:35 | 65  | 92  | 95 | 99  | 85dB  | +-----+ 93dB       |
| 05:40 | 80  | 94  | 89 | 75  | 90dB  | +-----+ 86dB       |
| 05:45 | 82  | 95  | 00 | 80  | 99dB  | +-----+ 92dB       |
| 05:50 | 97  | 81  | 80 | 91  | 86dB  | +-----+ 90dB       |
| 05:55 | 95  | 89  | 85 | 91  | 100dB | +-----+ 94dB       |
| 06:00 | 83  | 94  | 95 | 89  | 97dB  | +-----+ 94dB       |
| 06:05 | 92  | 95  | 88 | 90  | 70dB  | +-----+ 90dB       |
| 06:10 | 91  | 92  | 89 | 92  | 91dB  | +-----+ 91dB       |
| 06:15 | 90  | 87  | 86 | 87  | 89dB  | +-----+ 88dB       |
| 06:20 | 95  | 79  | 92 | 80  | 80dB  | +-----+ 85dB       |
| 06:25 | 74  | 90  | 71 | 85  | 00dB  | +-----+ 84dB       |
| 06:30 | 77  | 00  | 87 | 75  | 85dB  | +-----+ 81dB       |
| 06:35 | 84  | 100 | 82 | 61  | 80dB  | +-----+ 90dB       |
| 06:40 | 81  | 83  | 86 | 87  | 75dB  | +-----+ 84dB       |
| 06:45 | 00  | 87  | 65 | 68  | 00dB  | +-----+ 63dB       |
| 06:50 | 00  | 84  | 90 | 85  | 86dB  | +-----+ 85dB       |
| 06:55 | 85  | 84  | 89 | 85  | 64dB  | +-----+ 85dB       |
| 07:00 | 00  | 00  | 80 | 91  | 85dB  | +-----+ 83dB       |
| 07:05 | 85  | 76  | 85 | 89  | 70dB  | +-----+ 84dB       |
| 07:10 | 93  | 92  | 82 | 82  | 80dB  | +-----+ 88dB       |
| 07:15 | 74  | 74  | 72 | 74  | 00dB  | +-----+ 72dB       |
| 07:20 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 07:25 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 07:30 | 00  | 00  | 00 | 00  | 00dB  | dB                 |
| 07:35 | 00  | 00  | 00 | 00  | 00dB  | dB                 |

--80dB THRESHOLD 5dB EXCHANGE RATE  
1 MIN HISTOGRAM

|       |    |    |    |    |      |              |
|-------|----|----|----|----|------|--------------|
| 00:00 | 80 | 00 | 68 | 69 | 00dB | +-----+ 71dB |
| 00:05 | 00 | 00 | 00 | 00 | 72dB | +-----+ 60dB |
| 00:10 | 67 | 75 | 80 | 80 | 00dB | +-----+ 75dB |
| 00:15 | 00 | 00 | 00 | 64 | 00dB | + 52dB       |
| 00:20 | 65 | 74 | 71 | 67 | 00dB | +-----+ 68dB |
| 00:25 | 00 | 79 | 70 | 64 | 76dB | +-----+ 73dB |
| 00:30 | 00 | 00 | 00 | 00 | 00dB | +-----+ 72dB |

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|       |     |     |     |     |       |       |
|-------|-----|-----|-----|-----|-------|-------|
| 00:30 | 86  | 90  | 91  | 82  | 84dB  | 77dB  |
| 00:35 | 86  | 90  | 91  | 82  | 84dB  | 91dB  |
| 00:40 | 87  | 71  | 82  | 86  | 83dB  | 83dB  |
| 00:45 | 89  | 89  | 84  | 83  | 75dB  | 85dB  |
| 00:50 | 87  | 82  | 82  | 82  | 82dB  | 83dB  |
| 00:55 | 84  | 85  | 84  | 84  | 84dB  | 84dB  |
| 01:00 | 87  | 86  | 89  | 92  | 85dB  | 88dB  |
| 01:05 | 87  | 85  | 92  | 85  | 86dB  | 88dB  |
| 01:10 | 88  | 85  | 88  | 86  | 86dB  | 87dB  |
| 01:15 | 87  | 91  | 89  | 90  | 88dB  | 89dB  |
| 01:20 | 85  | 87  | 87  | 90  | 84dB  | 87dB  |
| 01:25 | 84  | 89  | 88  | 92  | 94dB  | 90dB  |
| 01:30 | 92  | 95  | 95  | 93  | 95dB  | 94dB  |
| 01:35 | 90  | 94  | 98  | 95  | 93dB  | 95dB  |
| 01:40 | 92  | 91  | 97  | 87  | 84dB  | 92dB  |
| 01:45 | 86  | 87  | 91  | 87  | 90dB  | 89dB  |
| 01:50 | 97  | 104 | 103 | 106 | 106dB | 104dB |
| 01:55 | 102 | 102 | 97  | 87  | 92dB  | 98dB  |
| 02:00 | 108 | 102 | 90  | 86  | 90dB  | 100dB |
| 02:05 | 86  | 86  | 93  | 94  | 97dB  | 92dB  |
| 02:10 | 95  | 95  | 90  | 91  | 90dB  | 92dB  |
| 02:15 | 84  | 99  | 97  | 91  | 86dB  | 93dB  |
| 02:20 | 84  | 87  | 86  | 94  | 98dB  | 92dB  |
| 02:25 | 90  | 87  | 85  | 89  | 90dB  | 88dB  |
| 02:30 | 89  | 87  | 87  | 87  | 90dB  | 88dB  |
| 02:35 | 77  | 87  | 80  | 80  | 87dB  | 83dB  |
| 02:40 | 82  | 79  | 80  | 79  | 76dB  | 79dB  |
| 02:45 | 84  | 84  | 100 | 102 | 100dB | 98dB  |
| 02:50 | 107 | 101 | 100 | 98  | 95dB  | 101dB |
| 02:55 | 102 | 102 | 107 | 100 | 104dB | 103dB |
| 03:00 | 100 | 101 | 99  | 88  | 85dB  | 97dB  |
| 03:05 | 96  | 89  | 92  | 92  | 91dB  | 92dB  |
| 03:10 | 91  | 87  | 87  | 95  | 94dB  | 92dB  |
| 03:15 | 96  | 92  | 95  | 87  | 87dB  | 93dB  |
| 03:20 | 90  | 89  | 91  | 92  | 89dB  | 90dB  |
| 03:25 | 95  | 92  | 94  | 90  | 93dB  | 93dB  |
| 03:30 | 87  | 90  | 90  | 107 | 94dB  | 98dB  |
| 03:35 | 95  | 99  | 97  | 94  | 103dB | 98dB  |
| 03:40 | 100 | 97  | 93  | 91  | 95dB  | 96dB  |
| 03:45 | 90  | 94  | 91  | 94  | 95dB  | 93dB  |
| 03:50 | 90  | 87  | 89  | 90  | 90dB  | 89dB  |
| 03:55 | 87  | 88  | 88  | 91  | 94dB  | 90dB  |
| 04:00 | 90  | 92  | 91  | 94  | 92dB  | 92dB  |
| 04:05 | 89  | 91  | 92  | 87  | 94dB  | 91dB  |
| 04:10 | 94  | 89  | 89  | 88  | 77dB  | 89dB  |
| 04:15 | 74  | 59  | 70  | 74  | 00dB  | 70dB  |
| 04:20 | 55  | 00  | 65  | 00  | 00dB  | 55dB  |
| 04:25 | 69  | 00  | 00  | 00  | 55dB  | 58dB  |
| 04:30 | 00  | 70  | 71  | 55  | 62dB  | 65dB  |
| 04:35 | 57  | 52  | 52  | 67  | 72dB  | 65dB  |
| 04:40 | 84  | 81  | 75  | 71  | 84dB  | -80dB |
| 04:45 | 80  | 67  | 00  | 61  | 52dB  | 70dB  |
| 04:50 | 00  | 00  | 00  | 54  | 55dB  | dE    |
| 04:55 | 00  | 00  | 00  | 60  | 64dB  | 56dB  |
| 05:00 | 00  | 67  | 56  | 57  | 00dB  | 59dB  |
| 05:05 | 00  | 00  | 65  | 00  | 61dB  | 57dB  |
| 05:10 | 00  | 64  | 50  | 00  | 00dB  | 53dB  |
| 05:15 | 74  | 75  | 85  | 82  | 67dB  | 79dB  |
| 05:20 | 74  | 76  | 65  | 00  | 69dB  | 71dB  |
| 05:25 | 85  | 91  | 91  | 90  | 91dB  | 90dB  |
| 05:30 | 96  | 92  | 90  | 91  | 87dB  | 92dB  |
| 05:35 | 90  | 94  | 95  | 99  | 90dB  | 94dB  |
| 05:40 | 87  | 95  | 91  | 85  | 92dB  | 91dB  |
| 05:45 | 87  | 96  | 85  | 87  | 99dB  | 93dB  |
| 05:50 | 97  | 86  | 87  | 92  | 91dB  | 92dB  |
| 05:55 | 95  | 91  | 89  | 93  | 100dB | 95dB  |
| 06:00 | 92  | 97  | 93  | 91  | 87dB  | 85dB  |

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|       |    |     |    |    |      |              |
|-------|----|-----|----|----|------|--------------|
| 06:05 | 93 | 95  | 90 | 91 | 85dB | +-----+ 91dB |
| 06:10 | 93 | 92  | 91 | 93 | 92dB | +-----+ 92dB |
| 06:15 | 91 | 90  | 90 | 90 | 91dB | +-----+ 90dB |
| 06:20 | 90 | 87  | 93 | 85 | 87dB | +-----+ 89dB |
| 06:25 | 85 | 93  | 80 | 88 | 79dB | +-----+ 87dB |
| 06:30 | 86 | 85  | 90 | 85 | 90dB | +-----+ 88dB |
| 06:35 | 89 | 101 | 89 | 86 | 87dB | +-----+ 93dB |
| 06:40 | 86 | 89  | 90 | 90 | 86dB | +-----+ 89dB |
| 06:45 | 86 | 85  | 85 | 86 | 86dB | +-----+ 86dB |
| 06:50 | 71 | 88  | 92 | 90 | 90dB | +-----+ 89dB |
| 06:55 | 90 | 89  | 91 | 89 | 86dB | +-----+ 89dB |
| 07:00 | 85 | 86  | 89 | 92 | 90dB | +-----+ 89dB |
| 07:05 | 90 | 87  | 90 | 92 | 85dB | +-----+ 89dB |
| 07:10 | 94 | 92  | 86 | 88 | 87dB | +-----+ 90dB |
| 07:15 | 84 | 95  | 77 | 75 | 00dB | +-----+ 80dB |
| 07:20 | 00 | 00  | 00 | 00 | 00dB |              |
| 07:25 | 00 | 00  | 00 | 00 | 00dB |              |
| 07:30 | 00 | 00  | 00 | 00 | 00dB |              |
| 07:35 | 00 | 00  | 00 | 00 | 00dB |              |

dB  
dB  
dB  
dB

### 3dB EXCHANGE RATE

#### 1 MIN HISTOGRAM

|       |     |     |     |     |       |               |
|-------|-----|-----|-----|-----|-------|---------------|
| 00:00 | 86  | 73  | 77  | 77  | 69dB  | +-----+ 80dB  |
| 00:05 | 64  | 66  | 63  | 63  | 78dB  | +-----+ 72dB  |
| 00:10 | 77  | 79  | 83  | 83  | 66dB  | +-----+ 80dB  |
| 00:15 | 65  | 63  | 68  | 73  | 67dB  | +-----+ 69dB  |
| 00:20 | 74  | 80  | 78  | 75  | 66dB  | +-----+ 76dB  |
| 00:25 | 70  | 69  | 76  | 74  | 81dB  | +-----+ 79dB  |
| 00:30 | 67  | 72  | 82  | 85  | 84dB  | +-----+ 82dB  |
| 00:35 | 68  | 91  | 93  | 93  | 94dB  | +-----+ 90dB  |
| 00:40 | 88  | 78  | 84  | 90  | 84dB  | +-----+ 86dB  |
| 00:45 | 90  | 90  | 84  | 85  | 79dB  | +-----+ 87dB  |
| 00:50 | 93  | 83  | 82  | 83  | 63dB  | +-----+ 87dB  |
| 00:55 | 84  | 85  | 85  | 84  | 84dB  | +-----+ 85dB  |
| 01:00 | 90  | 87  | 90  | 93  | 86dB  | +-----+ 90dB  |
| 01:05 | 88  | 85  | 95  | 87  | 87dB  | +-----+ 90dB  |
| 01:10 | 89  | 95  | 91  | 87  | 86dB  | +-----+ 88dB  |
| 01:15 | 88  | 94  | 92  | 92  | 90dB  | +-----+ 92dB  |
| 01:20 | 85  | 89  | 88  | 93  | 87dB  | +-----+ 90dB  |
| 01:25 | 87  | 90  | 90  | 93  | 94dB  | +-----+ 91dB  |
| 01:30 | 93  | 95  | 96  | 94  | 96dB  | +-----+ 95dB  |
| 01:35 | 90  | 94  | 100 | 95  | 94dB  | +-----+ 96dB  |
| 01:40 | 93  | 92  | 100 | 90  | 84dB  | +-----+ 95dB  |
| 01:45 | 88  | 88  | 93  | 88  | 93dB  | +-----+ 91dB  |
| 01:50 | 98  | 105 | 105 | 108 | 108dB | +-----+ 106dB |
| 01:55 | 103 | 103 | 97  | 88  | 93dB  | +-----+ 100dB |
| 02:00 | 110 | 103 | 90  | 90  | 91dB  | +-----+ 104dB |
| 02:05 | 87  | 87  | 94  | 94  | 97dB  | +-----+ 94dB  |
| 02:10 | 95  | 96  | 91  | 92  | 91dB  | +-----+ 93dB  |
| 02:15 | 86  | 100 | 98  | 90  | 87dB  | +-----+ 96dB  |
| 02:20 | 88  | 89  | 87  | 95  | 99dB  | +-----+ 94dB  |
| 02:25 | 90  | 89  | 86  | 90  | 91dB  | +-----+ 89dB  |
| 02:30 | 90  | 87  | 89  | 86  | 91dB  | +-----+ 89dB  |
| 02:35 | 81  | 90  | 84  | 83  | 88dB  | +-----+ 86dB  |
| 02:40 | 84  | 81  | 82  | 82  | 81dB  | +-----+ 82dB  |
| 02:45 | 85  | 87  | 103 | 103 | 102dB | +-----+ 101dB |
| 02:50 | 108 | 103 | 102 | 101 | 97dB  | +-----+ 104dB |
| 02:55 | 102 | 105 | 108 | 103 | 105dB | +-----+ 105dB |
| 03:00 | 101 | 102 | 101 | 90  | 86dB  | +-----+ 99dB  |
| 03:05 | 93  | 89  | 92  | 93  | 91dB  | +-----+ 94dB  |
| 03:10 | 93  | 88  | 89  | 96  | 95dB  | +-----+ 93dB  |
| 03:15 | 99  | 93  | 96  | 88  | 87dB  | +-----+ 94dB  |
| 03:20 | 91  | 90  | 92  | 94  | 90dB  | +-----+ 92dB  |
| 03:25 | 98  | 94  | 96  | 92  | 94dB  | +-----+ 95dB  |
| 03:30 | 88  | 91  | 91  | 108 | 95dB  | +-----+ 102dB |

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|                                 |       |       |       |       |        |   |       |
|---------------------------------|-------|-------|-------|-------|--------|---|-------|
| 110dB                           | -.04  | -.03  | -.00  | -.00  | -.00   | + | .0%   |
| 120dB                           | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 125dB                           | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| % DOSE STATISTICAL DISTRIBUTION |       |       |       |       |        |   |       |
| 50dB                            | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 55dB                            | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 60dB                            | --.00 | --.00 | --.01 | --.01 | --.02% | + | .0%   |
| 65dB                            | --.02 | --.03 | --.04 | --.05 | --.06% | + | .2%   |
| 70dB                            | --.07 | --.08 | --.09 | --.10 | --.12% | + | .4%   |
| 75dB                            | --.14 | --.15 | --.18 | --.22 | --.29% | + | .9%   |
| 80dB                            | --.40 | --.58 | --.89 | -1.39 | -2.02% | + | 5.2%  |
| 85dB                            | -2.70 | -3.10 | -3.20 | -3.19 | -3.40% | + | 15.5% |
| 90dB                            | -3.62 | -4.22 | -4.47 | -4.70 | -4.93% | + | 21.9% |
| 95dB                            | -5.32 | -5.13 | -4.73 | -4.18 | -3.72% | + | 23.0% |
| 100dB                           | -3.56 | -3.52 | -3.36 | -3.29 | -3.41% | + | 17.1% |
| 105dB                           | -3.35 | -3.45 | -3.57 | -3.33 | -2.84% | + | 16.5% |
| 110dB                           | -2.09 | -2.50 | -2.19 | -1.59 | -1.13% | + | 9.5%  |
| 115dB                           | -1.26 | -1.14 | --.34 | --.29 | --.39% | + | 3.4%  |
| 120dB                           | --.01 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 125dB                           | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |

# 3dB EXCHANGE RATE

|                                 |       |       |       |       |        |   |       |
|---------------------------------|-------|-------|-------|-------|--------|---|-------|
| % TIME STATISTICAL DISTRIBUTION |       |       |       |       |        |   |       |
| 50dB                            | --.00 | --.00 | --.00 | --.04 | --.28% | + | .3%   |
| 55dB                            | --.63 | --.76 | --.81 | --.85 | --.88% | + | 3.9%  |
| 60dB                            | --.94 | --.96 | -1.02 | -1.03 | -1.04% | + | 4.9%  |
| 65dB                            | -1.05 | -1.08 | -1.04 | --.99 | -1.00% | + | 5.1%  |
| 70dB                            | -1.05 | -1.14 | -1.12 | -1.09 | -1.11% | + | 5.5%  |
| 75dB                            | -1.18 | -1.25 | -1.41 | -1.56 | -1.75% | + | 7.1%  |
| 80dB                            | -2.28 | -3.14 | -4.31 | -5.64 | -6.37% | + | 21.7% |
| 85dB                            | -6.29 | -5.50 | -4.78 | -4.03 | -3.68% | + | 24.3% |
| 90dB                            | -3.40 | -3.32 | -2.96 | -2.55 | -2.42% | + | 14.6% |
| 95dB                            | -2.19 | -1.72 | -1.37 | -1.02 | --.77% | + | 7.0%  |
| 100dB                           | --.64 | --.51 | --.50 | --.43 | --.39% | + | 2.4%  |
| 105dB                           | --.35 | --.31 | --.31 | --.28 | --.22% | + | 1.4%  |
| 110dB                           | --.17 | --.13 | --.12 | --.10 | --.08% | + | .6%   |
| 115dB                           | --.05 | --.03 | --.02 | --.01 | --.00% | + | .1%   |
| 120dB                           | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 125dB                           | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |

|                                 |       |       |       |       |        |   |       |
|---------------------------------|-------|-------|-------|-------|--------|---|-------|
| % DOSE STATISTICAL DISTRIBUTION |       |       |       |       |        |   |       |
| 50dB                            | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 55dB                            | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 60dB                            | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 65dB                            | --.00 | --.00 | --.00 | --.00 | --.00% | + | .0%   |
| 70dB                            | --.00 | --.01 | --.01 | --.02 | --.02% | + | .0%   |
| 75dB                            | --.03 | --.04 | --.06 | --.09 | --.13% | + | .3%   |
| 80dB                            | --.21 | --.37 | --.64 | -1.05 | -1.50% | + | 3.7%  |
| 85dB                            | -1.87 | -2.06 | -2.25 | -2.42 | -2.75% | + | 11.3% |
| 90dB                            | -3.21 | -3.95 | -4.44 | -4.81 | -5.75% | + | 22.1% |
| 95dB                            | -6.56 | -6.48 | -6.53 | -6.16 | -5.85% | + | 31.5% |
| 100dB                           | -6.11 | -6.17 | -7.60 | -8.24 | -9.52% | + | 37.6% |
| 105dB                           | 10.63 | 11.85 | 14.88 | 16.97 | 17.46% | + | 71.8% |
| 110dB                           | 16.90 | 16.60 | 19.16 | 20.38 | 20.32% | + | 93.3% |
| 115dB                           | 16.31 | 12.83 | 13.85 | -9.38 | -6.18% | + | 58.5% |
| 120dB                           | -3.89 | -2.88 | -1.82 | --.91 | -1.73% | + | 11.2% |
| 125dB                           | --.00 | --.00 | -2.30 | --.00 | --.00% | + | 2.3%  |

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