## Audiogram of the ground-gleaning bat (Megaderma lyra)

**Data from**: Schmidt, S., Turke, B., and Vogler, B. (1983). Behavioural audiogram from the bat, *Megaderma lyra. Myotis*, 21/22, 62-66.

Neuweiler, G. (1984). Foraging, echolocation, and audition in bats. *Naturwissenschaften*, 71, 446-455.

## Average absolute thresholds (in dB re 20 $\mu\text{N/m}^2\text{)}$ for an unknown number of ground gleaning bats

Frequency (in kHz)     Average Threshold (in dB)       1     68       4     47       7     49       10     36       13.3     18       15     20       16     -6       18     -10       22     -7       30     -16       35     -10       40     -9       45     -5       50     2       55     -2       60     -1       65     -6       75     -5       83     -3       90     8       105     22       110     25       130     35	greating bats	
(in kHz)   (in dB)     1   68     4   47     7   49     10   36     13.3   18     15   20     16   -6     18   -10     22   -7     30   -16     35   -10     40   -9     45   -5     50   2     55   -2     60   -1     65   -6     75   -5     83   -3     90   8     105   22     110   25		
1 68   4 47   7 49   10 36   13.3 18   15 20   16 -6   18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25		
4 47   7 49   10 36   13.3 18   15 20   16 -6   18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	(in kHz)	(in dB)
7   49     10   36     13.3   18     15   20     16   -6     18   -10     22   -7     30   -16     35   -10     40   -9     45   -5     50   2     55   -2     60   -1     65   -6     75   -5     83   -3     90   8     105   22     110   25	1	68
10 36   13.3 18   15 20   16 -6   18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	4	47
13.3 18   15 20   16 -6   18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	7	49
15 20   16 -6   18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	10	36
16 -6   18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	13.3	18
18 -10   22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	15	20
22 -7   30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	16	-6
30 -16   35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	18	-10
35 -10   40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	22	-7
40 -9   45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	30	-16
45 -5   50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	35	-10
50 2   55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	40	-9
55 -2   60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	45	-5
60 -1   65 -6   75 -5   83 -3   90 8   105 22   110 25	50	2
65 -6   75 -5   83 -3   90 8   105 22   110 25	55	-2
75 -5   83 -3   90 8   105 22   110 25	60	-1
83 -3   90 8   105 22   110 25	65	-6
90 8   105 22   110 25	75	-5
105 22   110 25	83	-3
110 25	90	8
	105	22
130 35	110	25
	130	35

## Lowest and highest frequencies audible at sound pressure levels (SPL) ranging from 30 to 70 dB SPL

SPL (in dB)	Lowest audible frequency (in kHz)	Highest audible frequency (in kHz)
70	.900	
60	1.7	
50	3.2	(160)
40	9	(140)
30	11	120

## **Additional Parameters:**

**Body weight** = 50 g

Functional interaural distance= ? µs

(Time required for sound to travel around the head from one auditory meatus to the other.)

**Comments**: Threshold values taken from table in Fay, R.R.(1988) *Hearing in Vertebrates: A Psychophysics Databook*. Hill-FayAssociates, Winnetka, IL.