

## I. Device under test

Test object: Active over-the-head earmuff  
Trade name / Model reference: HEA 371  
AirLink 2085 WI407  
State of construction: Pre-Production  
Serial No./WE No.: See chapter III.  
Manufacturer: Globalsys  
Country: France  
Arrival test sample: 2018-07-23



AirLink 2085 WI407

Issue date of test report: 2019-10-15

Amount of pages: 7

Enclosures: --



Test conducted by: Anja Biedermann



Reviewed by: Christian Gerdés



HEA 371

**II. Description of the device under test**

The product is an over-the-head earmuff with communication device available as wireless version (WI 407) and wired version (HEA 371). Both variants are mechanically identical and were mixed during the sound attenuation measurements.

**III. Samples provided for testing**

Model name	Sample No	PZT WE number	Serial number
HEA 371	1	2072	1201
	2	2073	1193
	3	2074	1191
	4	2075	1194
	5	2076	1195
	6	2077	1196
	7	2078	1198
	8	2079	1192
	9	2080	1200
	10	2081	1202

Model name	Sample No	PZT WE number	Serial number
WI 407	1	2084	X0573
	2	2085	X0574
	3	2086	X0575
	4	2087	X0576

**IV. Conformance test conducted on:** 2019-03-11 to 2019-08-01**V. General notes**

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## VII. Accredited Laboratory

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Accredit by DAkkS Certificate No D-PL-12127-01-01  
Notified Body: EU-Identification Number: 1974

Reference: Ge / AB

Third-party laboratory: --

## VIII. Testing Standards:

ANSI S3.19-1974 (ASA STD 1-1975)	Acoustical Society of America Standard Method for the Measurement of Real-Ear Protection of Hearing Protectors and Physical Attenuation of Earmuffs
40 C.F.R. Part 211	Product Noise Labeling

## IX. Testing environment

The climatic conditions in acc. were continuously controlled during the approval test.  
The requirements according to EN 13819-12002 were met.

Temperature: 22 ±5 °C  
Humidity: < 85 %

## X. Measurement equipment

The measurements were conducted at measurement station No. 1 / 2.

The measuring equipment is calibrated regularly; the measuring devices are maintained regularly.

## XI. Abbreviations

In the opinion of the testing laboratory

P requirement fulfilled  
F requirement not fulfilled  
X no requirements defined  
N/A requirement not relevant  
# requirement not specified  
U for result see test report from third-party laboratory  
M Mandatory  
N None



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## Results:

### 1 Sound-Attenuation

<b>P</b>
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Measurement conditions: Attenuation measurement conducted with 4 samples (samples No. 1 to 4) and 10 subjects with three measures each.  
The experimenter fit method is used.

Result: **NRR = 25 dB**

Subject ID	Individual attenuation values [dB]								
	Frequency [Hz]								
	125	250	500	1000	2000	3150	4000	6300	8000
1	16.3	25.0	32.6	40.7	32.7	34.4	37.4	38.7	35.4
	19.3	25.0	33.3	37.0	30.7	31.0	31.4	35.7	39.0
	18.3	27.0	32.0	39.0	32.3	32.4	37.0	41.3	41.4
2	18.4	24.6	35.0	33.7	32.3	36.7	40.6	43.0	37.3
	19.7	24.6	33.7	35.0	31.0	35.7	40.0	46.3	39.3
	17.7	23.6	33.0	36.0	31.3	35.0	39.3	45.0	39.3
3	19.4	23.0	33.0	37.7	33.7	41.4	41.0	38.3	37.6
	20.4	24.7	34.4	37.7	34.7	41.7	39.6	36.7	38.0
	19.0	19.7	34.0	37.0	34.7	42.4	40.6	38.0	36.0
4	23.4	22.7	30.0	36.6	31.0	37.6	43.6	38.0	34.3
	22.4	19.4	27.0	31.6	31.0	33.6	41.3	41.0	35.3
	26.0	23.4	27.7	32.0	31.7	37.6	43.6	39.3	37.0
5	17.7	21.6	30.4	38.6	29.0	37.0	41.6	40.4	36.3
	17.7	21.0	29.0	35.6	28.4	34.3	40.0	39.4	31.7
	17.4	18.0	29.4	35.6	29.4	34.6	39.3	40.0	31.0
6	19.0	25.0	33.3	38.4	37.0	43.6	46.0	46.3	40.6
	19.3	25.0	34.6	39.4	39.6	38.0	46.0	49.3	43.6
	21.6	23.7	34.3	37.7	37.3	38.6	46.3	48.3	44.3
7	15.7	24.6	32.0	40.0	31.7	34.7	41.0	45.7	43.0
	17.3	23.6	32.0	38.4	30.4	34.7	39.3	43.0	42.3
	15.0	24.6	33.0	38.0	29.4	32.0	39.3	48.4	43.6
8	14.6	20.0	26.7	36.6	31.0	42.3	39.0	40.0	32.0
	16.0	20.7	28.4	38.0	27.0	39.3	43.4	39.0	31.0
	16.6	22.7	29.4	38.6	29.7	39.3	40.0	36.0	30.3
9	21.7	27.3	34.4	37.0	36.3	38.7	41.6	44.6	36.3
	16.3	26.3	34.4	31.3	36.3	42.0	43.0	42.6	38.6
	18.0	22.0	36.0	33.0	34.0	42.4	42.6	42.6	37.0
10	15.7	22.3	33.3	35.7	34.7	31.0	36.3	42.6	41.0
	18.7	20.7	33.0	35.4	34.7	29.7	36.0	39.3	38.3
	24.0	21.7	33.0	36.7	34.0	30.0	33.0	39.6	38.7
<b>Mean (dB)</b>	<b>18.8</b>	<b>23.1</b>	<b>32.1</b>	<b>36.6</b>	<b>32.6</b>	<b>36.7</b>	<b>40.3</b>	<b>41.6</b>	<b>37.7</b>
<b>Std dev (dB)</b>	<b>2.7</b>	<b>2.3</b>	<b>2.5</b>	<b>2.4</b>	<b>3.0</b>	<b>4.1</b>	<b>3.4</b>	<b>3.7</b>	<b>3.9</b>



**2 Headband force**

**P**

Measurement conditions: Over-the-head ear-muff  
Temperature: 22,3 °C  
Humidity: 42 %

Results:

Sample	1	2	3	4	5	6
Test height/width	Force [N]					
130 / 145	12.6	12.7	12.7	13.4	13.1	13.2

Mean value: 13.0 N