

## Hearing Protection with flexible Microphone

Specification	Description
Overview	<b>Active Hearing Protection headset with built-in communication capabilities</b> <ul style="list-style-type: none"> <li>✓ Two ear muffs with padding and noise attenuation foam</li> <li>✓ Ear cup height adjustment system for optimal wearing position</li> <li>✓ Flexible microphone attached to the left muff</li> <li>✓ Downlead cable with anti-tearing, LEMO connecting plug (green)</li> </ul>
Interoperability	<ul style="list-style-type: none"> <li>✓ Operates with an MSA Push-to-Talk (PTT) module or MSA HandyCom enabling connection to the PMR radio</li> <li>✓ Connection through LEMO plug with standard MSA PTT (colour codification)  <i>PTT module with yellow connector: non ATEX system</i>  <i>PTT module with green connector: ATEX system (for use with approved ATEX radios only)</i></li> <li>✓ Connection through a NEXUS type plug with MSA HandyCom RSM</li> </ul>
Technical Specifications	<ul style="list-style-type: none"> <li>✓ <b>Microphone:</b> Noise cancelling electret, 100Hz-10kHz, sensitivity -61 dB (nominal) at 50% humidity</li> <li>✓ <b>Loudspeaker:</b> 32 Ω, 100Hz-20kHz, max. power 100mW</li> <li>✓ <b>Material:</b> Cup: PC/ABS, Cushion: Synthetic leather</li> <li>✓ <b>Downlead cable:</b> Fire retardant, shielded cable</li> <li>✓ <b>Battery:</b> 2xAAA batteries, Duracell, Varta, Energizer (ATEX versions)</li> <li>✓ <b>Surrounding sound amplifiers:</b> Omnidirectional, sensitivity -38±2dB, max input 110dB S.P.L</li> <li>✓ <b>Operation temperature:</b> -20°C to +65°C, humidity &lt;98%</li> </ul>
Weight	<ul style="list-style-type: none"> <li>✓ 390g ± 10g (including batteries)</li> </ul>
Testing / Approvals	<ul style="list-style-type: none"> <li>✓ EMC performance: ESD/EMI: 10 V/m</li> <li>✓ Fully watertight – equivalent to IP67</li> <li>✓ GA010002D3X: ATEX II 2G Ex ib IIC T4</li> <li>✓ SNR value: 26 dB; H=26, M=23, L=18 (attenuation data in appendix)</li> </ul>
Ordering Information	<b>Part number (when ordered separately from the helmet):</b> <ul style="list-style-type: none"> <li>✓ GA010002D3X – Headset, GALLET F1XF, Hearing Protection, boom microphone, LEMO plug</li> <li>✓ GAY30211222123000X – Headset, GALLET F1XF, Hearing Protection, boom microphone, NEXUS plug</li> </ul>



Headset general view



Headset mounted inside the helmet



Connecting LEMO plug, headset to PTT



Ambient sound microphone and button (on/off and Volume +/-)



Battery compartment



Connecting NEXUS plug, headset to PTT

## Appendix: Attenuation Data

The tests were made for the 3 following references:

GA010002E3X – Active listening headset, GALLET F1XF

GA010002D3X – Hearing Protection with boom microphone

GA010002C3X – Hearing protection with bone conductive microphone (replaced by GAY30103232123000X)

*When we made the tests, the hearing protection with the new bone conductive microphone (GAY30103232123000X) did not yet exist but the ear muffs are the same (only the bone conductive sensor changed) so the values of attenuation data should be comparable with the ones shown below.*

Tested to EN 352-3:2002, §4.3.12; EN 13819-1, § 4.1.3.10, EN 13819-2, §4.2

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Mean attenuation, $M_f$ (dB)	18,4	18,4	17,9	24,4	28,5	26,8	48,6	49,6
Stand. Deviation, $s_f$ (dB)	3,6	3,8	2,8	2,7	2,8	4,0	2,4	2,4
APV ( $M_f - s_f$ ) (dB)	14,8	14,6	15,1	21,7	25,7	22,8	46,2	47,2

SNR=26 dB; H=26 dB, M=23 dB, L=18 dB