

# Users Guide

## LeoSounds AvMike-1

Pilot microphone and cable set

### How it works

As an addition to a commercially available ANR (Active-Noise-Reduction) headphone for the hi-fi range, the AvMike-1 provides a microphone cable harness with a clamp that turns the customer-supplied headphone into a wholesome and extremely lightweight ANR pilot headset. The microphone corresponds in its performance, electr. 100% of the GA range Carbon standard and is equipped with noise canceling properties. As usual, the microphone capsule is supplied via the phantom voltage present at the cockpit microphone input. The microphone is attached to a very stable but flexible high quality goose neck. The stiffness of the goose neck is designed in such a way that even in severe turbulence the micro remains in its adjusted position. The entire microphone unit can be mounted on the headphone without the need for tools and without the need for a change of the headphone via the clamping device and the clamping screw - can be removed at any time. Thus, the headphone can also be used without any restrictions for regular audio use without being altered or damaged..





## Design and scope of delivery

- 1 Clamping nut
- 2 Mounting Clamp
- 3 Microphone with windscreen
- 4 Flexible goose neck
- 5 Connector headphones
- 6 Supply cable with splitting and volume control with retractable adjustment knob
- 7 PJ connector headphone cockpit
- 8 PJ connector microphone cockpit

## Installation and operation

AvMike-1 is mounted on the left side of the headphone – for this purpose, the clamping device must be opened beforehand. Make sure that the clamping device is at the lowest position on the headband (see pictures). The knurled screw of the clamping device should be tightened in this position, the firm seat of the microphone device must be checked and corrected if necessary.



After the mechanical assembly has been completed, the plug (5) must be plugged into the headphone. A noticeable, complete insertion ensures the proper connection to the headphones - if the plug is not fully inserted, there may be interference / malfunction in the headphone. The complete insertion must be checked before each flight - if the plug has loosened it can lead to malfunctions on the right and / or the left earcup. Finally attach the cables with the Velcro tape. The velcro should be carried only one layer between the fork and the auricle so that the auricle can move freely.



### **Adjustments :**

**Headphones Volume :** Adjust Volume to your needs as necessary, standard position is max. volume - that is the clockwise end-position. The volume knob is retractable - knob is lifted by a short push on the knobs head. Another Push will bring the knob back in its idle position - preventing any unintended volume adjust.

**The squelch / VOX - level :** is part of you avionics intercom - should be checked at the aircraft and shall be readjusted if necessary .The correct mic position is rather at the angle of the mouth than directly before it.

**Mic position :** The mic itself, like most carbon standard / noise cancelling microphones, has a active "TALK" side facing to the mouth – correct positioning : the white label on the micro indicates the talk-side - and is directly facing your mouth - or mouth-corner ideally - distance 0 ... 10 mm max.

**Mic output readjustment :** in nearly all cases you will not need to readjust the factory preadjustment ( TSO level calibrated ) - but in some cases you will need to adjust the mic-level : Pull back the mics windscreen - you will see a recessed small slotted screw. Use a fine

watchmakers slot-screwdriver: a full 360 deg turn clockwise ( counterclockwise ) will increase (decrease ) the mic-output by about 60mV - the trimmer has a mechanical range of about 12 \* full 360 deg turns or electr. appr. 100-800mV linear adjustment. How to adjust : dial clockwise or counterclockwise ( as needed ) 180 deg and test, dial another 180 deg and test ... and so on. Preadjustment is about 400mV mean TSO-Level - which is Ok for most cases.

### **Important notes for operation:**

#### 1.) EASA ETSO / FAA TSO Approvals AvMike-1:

although it would be techn. Possible - currently there are no ETSO or TSO approvals - possibly these will be carried out in the future. In areas (commercial aviation: regulated individually in the companies, IFR operation not clearly regulated (know-how status of the author)) in which these approvals are required : AvMike-1 can not be used - although techn. no problem. There is no need for approvals in VFR general aviation flying in general. According to which the headsets have to be certified - for the operation in the European area the CE-conformity as a crew equipment object is decisive - AvMike-1 is CE certified.

#### 2.) Operation of AvMike-1

in conjunction with ANR headphones: we strictly point out that the operation of active headphones in exceptional cases can lead to surprising problems. If an ANR headphones with a weak battery / rechargeable battery is out of operation, it must be ensured that the operation of the headphone can be carried out without ANR and missing battery power in the least restricted form (this is the case with the BOSE QC-25 and 35 ). The headphone output can sometimes be greatly reduced in case of a failed battery. - If necessary, adjust the volume at the Intercom. We do not recommend using AvMike-1 with headphones, which have a 100% loss of functionality (currently BOSE QC15 – not supported by AvMike1) in case of a battery failure, so that no reception / understanding via this headset is possible – blind messages can be sent via the microphone that will always work independent from the phones. With careful preliminary planning, testing and backup headset, these headphones can also be used - but we do not recommend this.

#### 3.) Before each start and departure:

- Check for sufficient battery power on the headphones  
(depending on type - mostly LED indication)
- Check whether remaining battery-life is suitable for your trip
- Check the fixed mechanical seat of the microphone set on the headphone
- Check if the cable is fully inserted into the ANR headphones
- Check / setup correct position of the micro and observe the micro "TALK" side
- Check the basic headset functions at the cockpit intercom  
(Voice test, squelch to be adjusted if necessary)

### **Technical specifications**

Total weight: ca. 200 grams

Microphone: GA carbon standard capsule, active amplified, noise canceling

Audio: Mono - suitable for 150 Ohm GA standard

Volume control: 3dB maximum attenuation

Connections cockpit side: PJ standard or XLR5 or Bose-Lemo

Clamping device suitable for BOSE QC25 and QC35

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## **Manufacture and distribution**

LeoSounds  
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### **More information :**

The name BOSE, QC15, QC25, QC35 and the corresponding photos in this manual are given here only to clarify the characteristics and assembly of the LeoSound AvMike-1 - with BOSE does not connect us any business or other relationship, we are not a dealer of BOSE headphones.

- CE Declaration of Conformity for AvMike-1 is available
- Model protection applied Gebrauchsmuster Patentamt Munich Germany
- WEEE RegNr. For AvMike-1 94899094