

ENGLISH

AESEM1

INSTRUCTION MANUAL

Bluetooth® Earmuffs

- **PASSIVE HEARING PROTECTION (UP TO 22 NRR)**
- **BLUETOOTH® 5.0 CONNECTIVITY AND HANDS-FREE CALLING**
- **RECHARGEABLE LI-ION BATTERY OFFERS 90+ HOURS OF RUNTIME**
- **VENTED HEADBAND FOR COOL COMFORT**
- **ENVIRONMENTAL NOISE-CANCELLING MICROPHONE**
- **OVERSIZED BUTTONS WITH RAISED SURFACES FOR EASY IDENTIFICATION**



**KLEIN
TOOLS®**



GENERAL SPECIFICATIONS

Klein Tools Bluetooth® Earmuffs confidently protect a user's hearing up to 22dB NRR while providing an immersive audio experience via Bluetooth technology. Ergonomic earmuff design comfortably rests on the head and long-lasting battery allows for all-day use.

- **Hearing Protection:** 22dB NRR (Noise Reduction Rating)
- **Bluetooth Version:** 5.3
- **Wireless Connection Range:** 32.8 ft. (10 m) in open space
- **Frequency Response:** 20Hz - 20kHz
- **Maximum Bluetooth Volume:** 92 dBA
- **Support Profiles:** A2DP v1.3.2/AVRCP v1.6.2/HFP v1.7.2/HSP v1.2.10/SPP v1.2.4/HID v1.0.14
- **Battery Type:** Internal, Li-Ion, 3.7V / 800mAh (2.96Wh)
- **Runtime:** Approx. 30 hours @ 70% Volume
- **Charging Requirements:** Maximum 5V DC, Minimum 1A
- **Charging Time:** Approx. 2.5 hours
- **Dimensions:** 7.72" × 6.85" × 3.90" (196 × 174 × 99 mm)
- **Weight:** 14.07 oz. (399 g)

Specifications subject to change.

GENERAL SPECIFICATIONS

- **Operating Temperature:** -4° to 140F (-20° to 60°C)
- **Charging Temperature:** 32° to 113°F (0° to 45°C)
- **Storage Temperature:** 14° to 131°F (-10° to 55°C)
- **Relative Humidity:** <90% non-condensing
- **Drop Protection:** 6.6' (2 m)
- **Ingress Protection (IP) Rating:** IPX54
- **Certifications:** FCC, IC, DOE/CEC, NrCan, BQB
 - **FCC ID:** 2A128-AESEM1
 - **IC:** 21655-AESEM1

WARNINGS

Read, understand, and follow these instructions to ensure safe operation. Keep these instructions for future reference.

These hearing protectors help reduce exposure to hazardous noise and other loud sounds. Misuse or failure to wear hearing protection at all times that you are exposed to noise may result in hearing loss or injury.

- Inspect earmuffs before each use; damage to the earmuffs can reduce noise reduction performance.

 **WARNINGS**

- Improper fit of this device will reduce its effectiveness in attenuating noise. Consult the FITTING EARMUFFS section for best protection.
- Do not bend or reshape the headband as this will cause a reduced clamping force reducing the specified NRR (Noise Reduction Rating).
- Prolonged exposure to high volumes can cause hearing damage. It is the responsibility of the user to set the audio input level to the recommended volume. See table in FEATURE DETAILS section for noise exposure levels.
- DO NOT use this product in situations that require special attention: using noise reduction equipment and listening to audio can reduce awareness of the surrounding environment.






Failure to observe these warnings can result in risk of fire or electric shock.

- DO NOT use the product if it is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or injury.
- Risk of fire and burns. DO NOT open, crush, heat above specified maximum temperature or incinerate. Prolonged exposure to direct sunlight can result in elevated temperatures.
- DO NOT immerse in water or other liquids.

WARNINGS

- Properly seal the charging port cover to achieve specified water & foreign object ingress protection. Keep seal free of dirt, oil, sand, or other material that interferes with proper sealing. Failure to do so can result in risk of fire or electric shock.
- DO NOT open the charging port cover if wet or in a wet environment. Thoroughly dry the unit and the seal around water-resistant cover completely before opening water resistant cover.
- DO NOT subject to impacts or drops greater than 6.6ft. (2m). Drops larger than this may not show signs of damage, but internal components may have been compromised. It is advisable to replace the unit if any such severe events occur.
- DO NOT attempt to repair the product or charging cable. There are no user-serviceable parts.

SYMBOLS ON PRODUCT

- | | | | |
|--|---------------------------------|---|--|
|  | Warning or Caution |  | FCC: Conforms with particular Code of Federal Regulations |
|  | Risk of Electrical Shock |  | Bluetooth® SIG Certified |
|  | Read Instructions | | |

NOISE REDUCTION RATING (NRR)

The NRR for the AESEM1 Bluetooth Earmuffs is 22dB. It is tested and in accordance with ANSI S3.19-1974. To ensure adequate hearing protection, the earmuffs must be properly fitted according to the FITTING EARMUFFS section.

ANSI S3.19-1974 TESTING

Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000	NRR
Mean Attenuation	16.5	20.8	23	27.4	35.1	42.3	40.7	39.2	36.8	22
Standard Deviation	2.6	2.2	2.1	2.2	2.7	3	2.2	1.5	2.1	

NOTE: The above table is based on a headband force of 13N.

The level of noise entering a person's ear when the hearing protector is worn as directed, is closely approximated by the difference between the A-Weighted environmental noise level and the Noise Reduction Rating (NRR).

EXAMPLE:

- The environmental noise level as measured at the ear is 89dB(A).
- The NRR is 22dB.
- The level of noise entering the ear is approximately equal to 67dB(A).

NOISE REDUCTION RATING (NRR)

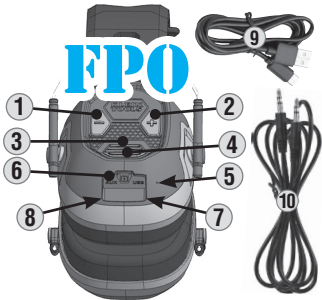
⚠ CAUTION: For noisy environments dominated by frequencies below 500 Hz, the C-weighted environmental noise level should be used.

NOTE: *Although hearing protectors can be recommended for protection against the harmful effects of impulsive noise, the Noise Reduction Rating (NRR) is based on the attenuation of continuous noise and may not be an accurate indicator of the protection attainable against impulsive noise such as gunfire. The Environmental Protection Agency uses the Noise Reduction Rating (NRR) as a rating of a hearing protector's noise-reducing performance. Klein Tools cannot guarantee the suitability of the NRR as a method of rating protection as protection relies on the level and exposure of sound and how well a product fits.*

AUDIO INPUT LEVEL

The audio level in the hearing protector is dependent on the audio input level. To prevent harmful noise levels, the AESEM1 Bluetooth Earmuffs automatically default to 85dB(A) when wirelessly connected to a music device. If the hearing protector is either wirelessly connected or wired to a music device with a high audio output level, it is the user's responsibility to set the audio input level to safe level. See table in FEATURE DETAILS section for noise exposure levels.

FEATURE DETAILS



1. Volume Down Button
2. Volume Up Button
3. Indicator LED
4. Multi-Function Button
5. Bluetooth® Microphone
6. Silicone Port Cover
7. USB-C Charging Port
8. 1/8" (3.5mm) AUX Input
9. 2' (61 cm) long USB-A to USB-C Charging Cable
10. 1/8" (3.5 mm) AUX Cable, 3.6' (110 cm) long

NOISE EXPOSURE VALUES

EXPOSURE TIME	EXPOSURE LEVEL PER NIOSH RECOMMENDED EXPOSURE LIMIT	EXPOSURE LEVEL PER OSHA PERMISSIBLE EXPOSURE LIMIT
8 hours	85 dBA	90 dBA
4 hours	88 dBA	95 dBA
2 hours	91 dBA	100 dBA
1 hour	94 dBA	105 dBA
30 minutes	97 dBA	110 dBA
15 minutes	100 dBA	115 dBA

See www.cdc.gov/niosh/topics/noise/reducenoiseexposure for more details.

OPERATING INSTRUCTIONS

CHARGING EARMUFFS

Klein Tools' AESEM1 features a non-replaceable rechargeable lithium-ion battery pack.

1. Open the Silicone Port Cover **6** to access the USB-C Charging Port **7**.
2. Using the included USB-A to USB-C charging cable **9**, plug the USB-C end into the USB-C Charging Port **7** of the earmuffs while plugging the USB-A end into an appropriate charging source, such as a third party certified USB to AC wall adapter (not included, see GENERAL SPECIFICATIONS for charging requirements).
3. While the earmuffs are charging (0-99%), the Indicator LED **3** will breathe (dim to bright) red, and will illuminate solid green when fully (100%) charged.

FITTING EARMUFFS

1. Fold out the earcups from the storage position by extending the slider arms (FIG. 1).
2. Place earmuffs on the head positioning the earcups over each ear (FIG. 2). The inner headband is labeled (R or L) for convenience.

OPERATING INSTRUCTIONS

3. When placing the earcups over the ears be sure to:

- Completely cover the ear, the ears should never be exposed (FIG. 3).
- Avoid obstructions (such as hair) that would prevent a firm seal (FIG. 4).

4. Adjust the slider arms up or down to tighten or loosen the headband until a hugging seal and comfortable fit is achieved (FIG. 5).



OPERATING INSTRUCTIONS

POWER ON/OFF

ON: Press and hold the Multi-Function Button ④ for 1.5 seconds. “Power ON” voice prompt will be heard and the LED will turn solid green for one second, then turn off.

OFF: Press and hold the Multi-Function Button ④ for 3 seconds. “Power OFF” voice prompt will be heard and the Indicator LED ③ will turn solid red for one second, then turn off.

BLUETOOTH® PAIRING

After successfully powering on, the earmuffs will automatically enter Bluetooth® pairing mode. “Pairing” voice prompt will be heard and the Indicator LED ③ will breathe (dim to bright) blue every three seconds.

1. Ensure Bluetooth is enabled on your device and it has discovered “Klein Bluetooth Muffs” in the pairing list.
2. Select “Klein Bluetooth Muffs” and upon successful connection, “Connected” voice prompt will be heard and the Indicator LED ③ will turn solid blue for three seconds, then turn off.
3. In the event pairing fails, double press the Multi-Function Button ④ to manually enter Bluetooth pairing mode.

NOTE: *The earmuffs will automatically attempt to re-connect to the last known paired wireless device when turned on, but are ready to pair with any Bluetooth compliant device within two minutes of powering on if the last paired device is not detected.*

OPERATING INSTRUCTIONS

AUX INPUT

If a wireless connection is not available, a wired connection can be by using the included 1/8" (3.5mm) AUX cable ⑩. Open the Silicone Port Cover ⑥ to access the the AUX Input ⑧. All controls will switch over to the connected device.

AUTO POWER-OFF

After two minutes of unsuccessful pairing, pairing mode will be exited and the Indicator LED ③ will flash red once. After fifteen minutes of either no Bluetooth connection or audio input (via AUX port) the earmuffs will automatically power off.

MUSIC OPERATION

Play/Pause: Single-press the Multi-Function Button ④.

Next Track: Double-press the Multi-Function Button ④.

Previous Track: Triple-press the Multi-Function Button ④.

Volume Up: Single-press the Volume Up Button ②.

Volume Down: Single-press the Volume Down Button ①.

OPERATING INSTRUCTIONS

PHONE CALL OPERATION

Answer/End Calls: Single press the Multi-Function Button ④.

Reject Call: Press and hold the Multi-Function Button ④ for one second.

Hold Current Caller and Answer New Incoming Call: Double-press the Multi-Function Button ④.

End Current Call and Other Call on Hold: Press and hold the Multi-Function Button ④ for one second to end new call, then single-press to end initial call.

Switch Between Two Active Calls: Double-press the Multi-Function Button ④.

OTHER OPERATIONS

Voive Command: Press and hold Multi-Function Button ④ for one second.

Pairing List Reset: Press and hold Multi-Function Button ④ for ten seconds. The Indicator LED ③ will flash purple three times.

CLEANING

The earmuff shell and cushion can be gently wiped clean with lukewarm mild soapy water and dried with a soft cloth without rubbing. ***Do not submerge earmuffs in water or treat with abrasive cleaners or solvents.***

STORAGE

If earmuffs are to be left unused for an extended period of time, charge before storing and recharge periodically during storage to maintain battery's capacity/life.

MAINTENANCE

Regularly inspect earmuffs and ear cushions for excessive wear such as tears and/or visible cracks. Replace earmuffs if tears and/or cracks are visible on the shell and/or cushion. Replace earmuffs if there is a noticeable change in the fit and no longer sealing firmly against your head.

COMPLIANCE

FCC COMPLIANCE

⚠ This device complies with part 15 of the FCC RULES. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

COMPLIANCE

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF EXPOSURE STATEMENTS:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC RF Exposure Guidelines.

This device must not be co - located or operated in conjunction with any other antenna or transmitter.

The device can be used in portable exposure condition without restriction.

COMPLIANCE

IC COMPLIANCE

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation of the device.

This device complies with RSS-247 of Industry Canada. Operation is subject to the condition that this device does not cause harmful interference. This Class B digital apparatus complies with Canadian ICES-003.

IC RADIATION EXPOSURE STATEMENT:

The equipment complies with SAR limits set forth for an uncontrolled environment and meets the RSS-102 of the IC RF Exposure Rules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

WARRANTY

www.kleintools.com/warranty

DISPOSAL / RECYCLE

Do not place equipment and its accessories in the trash. Items must be properly disposed of in accordance with local regulations. Please see www.epa.gov/recycle for additional information.

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