

ISOtunes Sport logo

FALCON

[Product render to be inserted here]

IT-121 IT-122

ANSI S3.19-1974 Table (NRR Table)

A1: Frequency, Hz

A2: Grand Mean Attenuation, dB

A3: Standard Deviation, dB

A1:	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA
A2:	15.2	17.4	21.9	25.9	31.3	36.1	37.9	40.7	40.0	21	B
A3:	2.8	2.2	2.1	2.4	3.0	2.2	3.0	3.1	1.9		

EN352-1:2002 Table (SNR Table)

B1: Frequency (Hz)	125	250	500	1000	2000	4000	8000
B2: Mf (dB)	17.2	18.6	23.5	28.9	30.7	35.3	38.9
B3: sf (dB)	3.2	2.7	2.1	2.4	3.0	3.4	4.1
B4: APVf	14.0	15.9	21.3	26.5	27.7	31.9	34.8

EN352-4:2020

Criterion Level

H:

M:

L:

EN352-4:2020

Relationship between sound output level and input signal level

Input Level (mV)	17.8	31.6	56.2	100.0	177.8	316.2
SPL [dB(A)]	64.0	68.8	73.7	78.2	82.7	85.9

Maximum sound pressure level at ____ mV is ____ dB(A)

Criterion Input Signal: ____ mV

Language and its corresponding pages

Full manual can be found at

ISOtunes.eu/documents

Important

Please read, understand, and follow all safety information.

Introduction

Thank you for purchasing the ISOtunes Sport FALCON Earmuff with Tactical Sound Control (TSC). The FALCON is engineered to help reduce your exposure to hazardous noise levels while keeping you connected on the range, in the field, or at the job site.

To achieve the best comfort, fit, and protection, please read this entire guide before using the product. Retain this guide for future reference. Noise attenuation data are provided in the Noise Attenuation section.

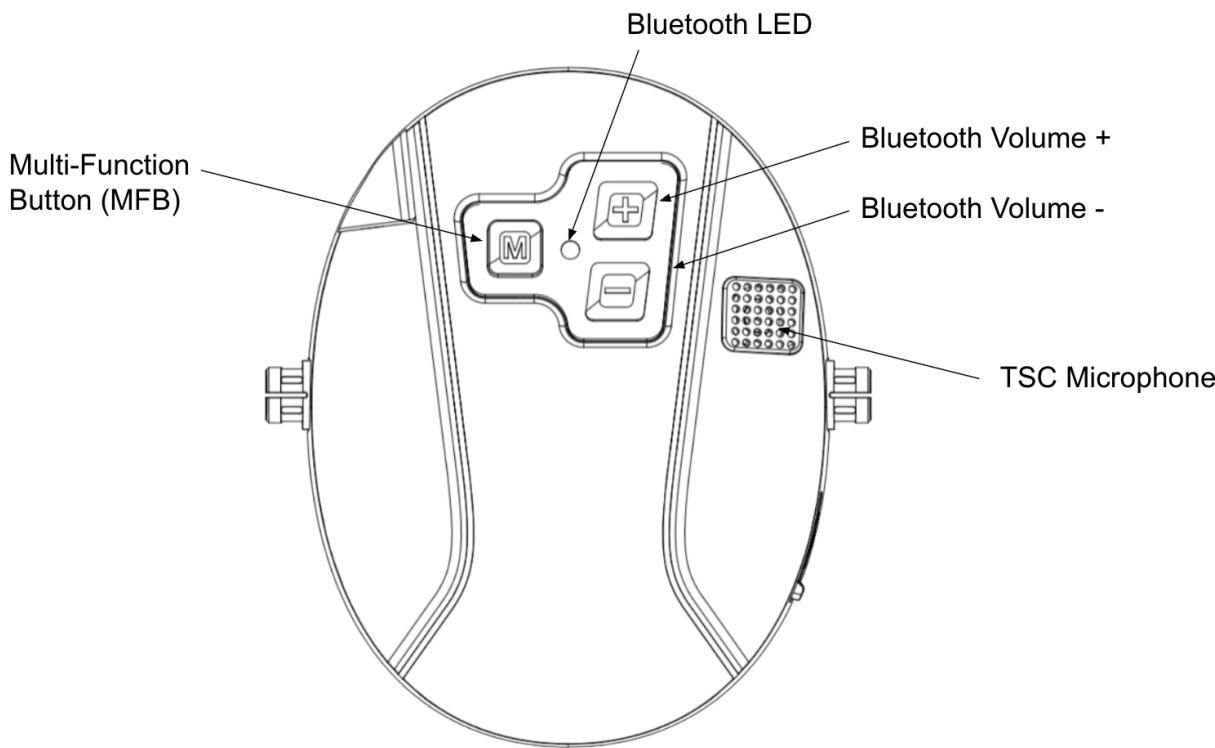
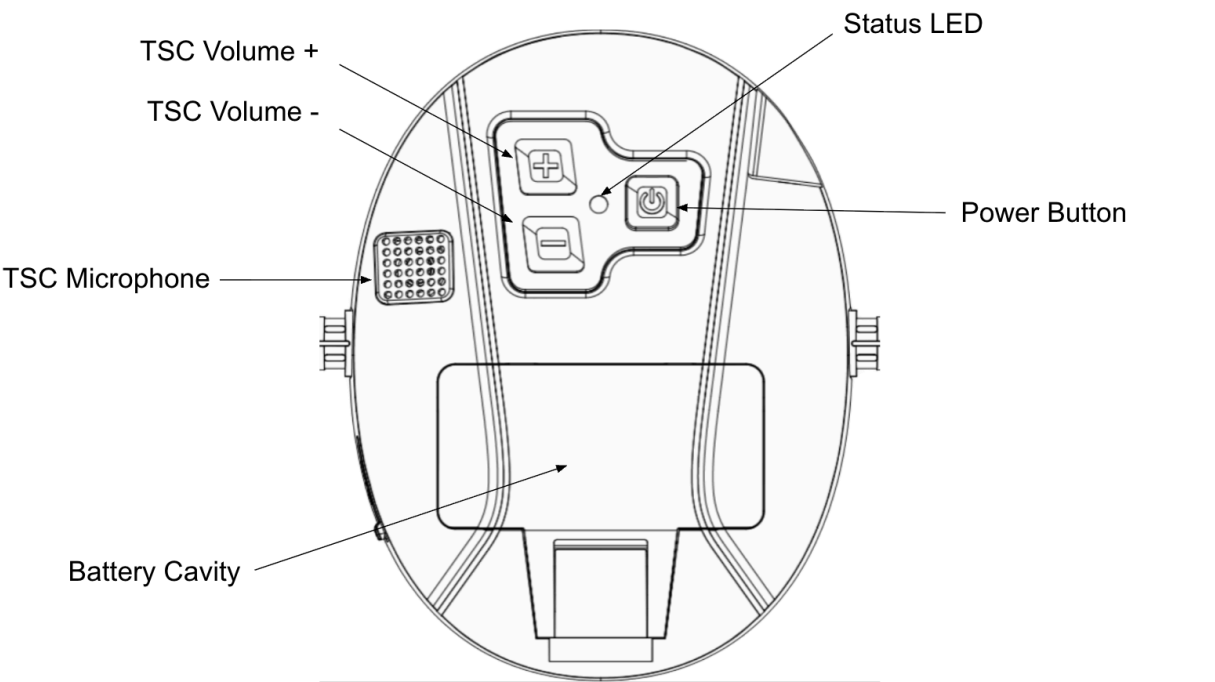
WARNING: Improper fit, damage to the earmuff, or failure to follow these instructions will reduce or eliminate the hearing protection provided by this product. Read all warnings before use.

In the Box

- FALCON Earmuff
- Drawstring bag
- Rechargeable lithium-ion battery pack
- USB-C charging cable
- USB-A to USB-C adapter
- User manual

Note: The Boom Microphone is sold separately. See the Boom Microphone section for details.

Product Overview



Control / Indicator	Location / Description
POWER button	Left earcup — powers unit on/off
Status LED	Left earcup — indicates charge level and power state
TSC + / TSC – buttons	Left earcup — adjusts Tactical Sound Control volume
Microphone port cover	Left earcup — silicone tab; covers 3.5 mm boom mic port
MFB (Multi-Function Button)	Right earcup — controls Bluetooth, calls, and media playback
VOL + / VOL – buttons	Right earcup — adjusts Bluetooth audio volume
Bluetooth LED	Right earcup — indicates Bluetooth status (BT On/ Off, BT Pairing)
Charging port cover	Right earcup — silicone tab; covers USB-C charging port

Power

Powering On

1. Press and hold the POWER button on the left earcup for 3 seconds.
2. The earmuff announces “Power On.”
3. The Status LED (left earcup) glows solid green when the battery is adequately charged, or flashes red when the battery is low.

NOTE: After powering on, the FALCON restores the TSC volume level and Bluetooth state from the previous session. If Bluetooth was active before shutdown, you will hear “Bluetooth On” immediately after power-on, and the earmuff will attempt to reconnect automatically.

Powering Off

1. Press and hold the POWER button for 3 seconds.
2. The earmuff announces “Power Off.”
3. The Status LED shines solid red briefly before going dark.

Auto Power-Off

To conserve battery life, the FALCON will power off automatically after four hours of inactivity (no button presses and no incoming calls). The earmuff announces “Power Off” and the Status LED flashes red twice before shutting down.

Bluetooth Pairing and Connection

Initial Pairing

Use this procedure when pairing the FALCON to a new device for the first time.

When the earmuff is on and Bluetooth is off:

1. Press and hold the MFB on the right earcup for 5 seconds.

2. The FALCON announces “Bluetooth On,” followed by “Bluetooth Pairing Mode.”
3. The Bluetooth LED alternates flashing red and blue.
4. Open Bluetooth settings on the device you wish to pair.
5. Select “ISOtunes Sport FALCON” from the list of available devices.
6. When successfully paired, you will hear “Bluetooth Connected.”

When the earmuff is on and Bluetooth is already on but not connected:

1. Press and hold the MFB for 5 seconds.
2. The FALCON announces “Bluetooth Off,” followed by “Bluetooth Pairing Mode.”
3. The Bluetooth LED alternates flashing red and blue.
4. Open Bluetooth settings on the device you wish to pair.
5. Select “ISOtunes Sport FALCON” and confirm pairing.
6. You will hear “Bluetooth Connected” when the connection is established.

NOTE: If no device is found or pairing is not completed within 2 minutes, the FALCON announces “Pairing Failed” and the Bluetooth LED flashes red. Repeat the pairing procedure to try again.

Turning Bluetooth On / Reconnecting

Press and hold the MFB for 3 seconds. The FALCON announces “Bluetooth On” and the Bluetooth LED flashes blue twice. The earmuff will attempt to reconnect to the last paired device automatically.

Turning Bluetooth Off / Disconnecting

Press and hold the MFB for 3 seconds. The FALCON announces “Bluetooth Off,” followed by “Disconnected.”

NOTE: When the FALCON is manually disconnected, it will automatically enter reconnection mode and attempt to reconnect to the last known device.

Dual Connect

The FALCON supports simultaneous connection to two Bluetooth devices. To connect a second device, ensure the FALCON is already connected to the first device, then open Bluetooth settings on the second device and select “ISOtunes Sport FALCON.” Audio from both devices can be played through the earmuffs, but not simultaneously; incoming calls take priority over media playback.

Audio and Media Controls

All media controls are located on the right earcup.

Action	Button Operation
Play / Pause	Single-press MFB

Volume Up	Single-press VOL +
Volume Down	Single-press VOL –
Next Track	Double-press MFB
Previous Track	Triple-press MFB

NOTE: A double-beep tone confirms when the maximum or minimum volume limit has been reached.

Call Controls

Action	Button Operation
Answer incoming call	Single-press MFB (when ringing)
End active call	Press and hold MFB for 1 second
Decline incoming call	Press and hold MFB for 1 second
Mute / Unmute during call	Single-press MFB
Answer second call (end current)	Single-press MFB
Hold active / Answer second call	Double-press MFB

Boom Microphone (Sold Separately)

The ISOTunes Sport FALCON Boom Microphone accessory enhances audio clarity for phone calls and radio communication in noisy and outdoor environments. It is available through ISOTunes and authorized retailers.

[Boom Mic diagram to be inserted here]

Installing the Boom Microphone

1. Open the microphone port cover on the left earcup by pulling down on the exposed silicone tab.
2. Align the 3.5 mm jack of the Boom Mic with the port. Use the arrow indicator on the base of the mic as a guide.
3. Push the jack firmly into the port until fully seated.
4. When not in use, remove the Boom Mic and store it safely.

Tactical Sound Control (TSC)

What Is Tactical Sound Control?

Tactical Sound Control (TSC) is a level-dependent microphone technology that amplifies low-level ambient sounds—such as quiet footsteps or conversation—while automatically suppressing impulsive, harmful noise such as gunshots to a safe listening level. TSC activates automatically each time the FALCON powers on.

NOTE: TSC provides level-dependent attenuation. Check correct TSC operation before each use. If distortion or malfunction is detected, discontinue use and contact ISOTunes Support.

Seven TSC volume levels are available.

Enabling and Disabling TSC

- TSC On: Press TSC + repeatedly from the Off state to activate and increase TSC volume.
- TSC Off: Press TSC – repeatedly until reaching the Off state.

NOTE: On first power-on, TSC defaults to the Medium level. TSC state (on/off and volume level) is saved automatically and restored at the next power-on.

Adjusting TSC Volume

Action	Button Operation
TSC Volume Up	Single-press TSC + on the left earcup; press repeatedly to reach the desired level
TSC Volume Down	Single-press TSC – on the left earcup; press repeatedly to reach the desired level

NOTE: A double-beep tone confirms when the maximum TSC level or the Off state has been reached.

Charging

Connecting to Power

1. Plug the USB-C end of the included charging cable into a suitable USB power source (a standard 5 V / 1 A wall adapter or a computer USB port).
2. Open the charging port cover on the right earcup by pulling down on the exposed silicone tab.
3. Insert the USB-C connector into the charging port.

WARNING: Charging input must not exceed 5 V / 1 A. Using a power source with a higher voltage or current rating may damage the device or cause charging failure and will void the warranty. Do not attempt to charge the AAA batteries with the earmuff charging port.

CAUTION: Avoid low-quality or uncertified USB chargers. Use the included cable with a standard USB power adapter or a computer USB port. The FALCON incorporates overcharge and short-circuit protection; however, this does not substitute for using an appropriate power source.

Charge Status Indicators

Monitor the Bluetooth LED on the left earcup during charging:

LED State	Status
Solid red	Charging in progress

Solid green	Fully charged
-------------	---------------

NOTE: When connected to a paired device, the current battery level may also be viewed on that device's screen.

Maintenance and Storage

Regular inspection and proper care are essential to maintaining the protective performance of the FALCON.

Cleaning

- Wipe earcups and headband with a clean, slightly damp cloth and a mild soap solution.
- Dry thoroughly before storage or use.
- Do not immerse the earmuff in water.
- Do not use abrasive cleaning agents, solvents, or aerosol sprays (including sunscreen and insect repellent) on any part of the earmuff. These substances may degrade materials and affect acoustic performance.

If the Earmuff Gets Wet

If the earmuff becomes wet from rain or perspiration, discontinue use immediately, turn the earcups outward, and allow the unit to dry completely in a well-ventilated area before resuming use.

Ear Cushion Inspection

Inspect the ear cushions and foam liners regularly for deterioration, cracking, hardening, or other visible damage. Damaged cushions compromise the acoustic seal and reduce hearing protection effectiveness. Replace cushions as needed; contact ISOtunes Support for replacement parts.

CAUTION: The fitting of hygiene covers to the cushions may affect the acoustic performance of the earmuffs. Verify fit and seal integrity whenever accessories are used.

Storage

Store the FALCON in the included carrying bag in a clean, dry location, away from direct sunlight and extreme temperatures when not in use.

Fitting Instructions

4. Pull the earcups apart gently.
5. Place the headband over your head and position the earcups to fully cover both ears.
6. Extend the headband to achieve a secure, comfortable fit. The cushions should form a continuous seal against the sides of your head.
7. To verify passive attenuation, check the fit with the unit powered off. Properly fitted earmuffs will noticeably and significantly reduce ambient noise.

WARNING: Noise reduction will be adversely affected by anything that breaks the cushion seal against the head, including thick spectacle frames, balaclavas, or other headwear. Ensure a complete seal is achieved before entering a noisy environment.

Troubleshooting

Issue	Resolution
Earmuff does not power on	Charge the unit. Verify the battery is inserted correctly (if using AAA batteries).
Bluetooth will not connect	Ensure Bluetooth is enabled on the source device. Move devices closer together. Verify the FALCON is in pairing mode.
Bluetooth reset (factory clear)	Press and hold VOL + and VOL – simultaneously on the right earcup for 3 seconds. All paired device records will be erased.
Audio is distorted or absent	Check TSC and audio volume levels. Inspect ear cushions for damage. Power cycle the unit.
Unit not charging	Verify the power source does not exceed 5 V / 1 A. Ensure the USB-C cable is fully seated. Try a different cable or power adapter.

Noise Attenuation Data

SafeMax™ Technology

The ISOtunes Sport FALCON incorporates SafeMax™ Technology, which limits the maximum audio output to 90 dB (IT-121) or 82 dB (IT-122). ISOtunes products designated with SafeMax™ Technology meet the applicable European Safety Standard EN 352.

ANSI S3.19-1974 — Noise Reduction Rating (NRR)

Model IT-121 has been tested in accordance with ANSI S3.19-1974 and carries an NRR of 21 dB.

The noise level at the ear, when the FALCON is worn as directed, is approximated by subtracting the NRR from the A-weighted environmental noise level. Improper fit will reduce attenuation. Consult the Fitting Instructions section above.

Example calculation:

- Measured A-weighted environmental noise level: 100 dB
- NRR of ISOtunes Sport FALCON (IT-121): 21 dB
- Estimated noise level at the ear: approximately 79 dB

CAUTION: The NRR is derived from continuous noise testing and may not accurately reflect the protection achievable against impulsive noise such as gunfire. Refer to EN 352-4:2020 data (IT-122) for level-dependent performance.

EN 352 — European Standard (IT-122)

Model IT-122 is certified in accordance with EN 352-1:2020, EN 352-4:2020, EN 352-6:2020, and EN 352-8:2020, with an SNR of 27 dB.

To maintain the level of protection provided by this product, ensure that:

- The earmuffs are fitted, adjusted, and maintained in accordance with these instructions.
- The earmuffs are worn at all times while in noisy surroundings.
- The earmuffs are regularly inspected for serviceability and replaced if damaged.

NOTE: Failure to follow these recommendations will severely impair the protection provided by the earmuffs.

Safety Warnings

Failure to observe the following warnings may result in serious personal injury or death. Read all warnings before use.

WARNING: SITUATIONAL AWARENESS: The FALCON is highly effective at blocking ambient sound. Do NOT wear this product while driving a motor vehicle, operating machinery that requires full auditory awareness, riding a motorcycle, or cycling on public roads. The user is solely responsible for ensuring the product is used only in safe environments.

WARNING: IMPULSIVE NOISE: The NRR is based on continuous noise testing. It may not accurately reflect protection against impulsive noise, such as gunfire. Always verify fit before use in shooting environments.

WARNING: FLAMMABLE OR EXPLOSIVE ATMOSPHERES: This product contains batteries and electronic components that may cause ignition. Do NOT use in environments where flammable gases, vapors, or explosive atmospheres may be present.

WARNING: CHOKING HAZARD: This product contains small parts. Not suitable for children under 3 years of age.

CAUTION: Setting audio volume too high reduces your ability to hear external warning signals, alarms, and other important cues. Adjust volume appropriately for your working environment.

CAUTION: Do not disassemble the earmuffs. Unauthorized repair or modification voids the warranty and may compromise hearing protection performance.

CAUTION: Do not drop the earmuffs. The electronics are sensitive to impact damage.

CAUTION: Keep the earmuffs away from sources of strong radio frequency interference, which may degrade audio quality or cause malfunction.

CAUTION: Do not insert foreign objects into any port or opening on the earmuffs.

CAUTION: Do not allow liquid to enter the earmuffs. If the earmuffs become wet, discontinue use and allow them to dry completely before use.

CAUTION: Do not charge the AAA batteries using the earmuff charging port. The charging circuit is designed for the built-in lithium-ion battery only.

Additional notes:

- The output of the electrical audio circuit of this hearing protector may exceed safe daily exposure limits if used at high volume for extended periods. Use at the lowest effective volume setting.
- The earmuffs satisfy the optional requirements at temperatures between -10°C and $+40^{\circ}\text{C}$ (-14°F and $+104^{\circ}\text{F}$).
- This product is not a toy. Keep out of reach of children.
- In noisy environments, the earmuffs must be worn and properly positioned at all times.
- Performance may deteriorate with battery usage. The battery life varies depending on the mode of use and volume output.
- ISOtunes® Sport DEFY Slim is compliant with Bluetooth® 5.4. We do not guarantee compatibility of all functions on every Bluetooth®-enabled device. Please check your device's user manual for compatibility and functionality.
- Materials:
 - Cup: ABS
 - Cover: ABS
 - Headband: Synthetic Leather
 - Button: TPE
 - Cushion: Polyurethane, PVC
 - Attenuation Foam (inserts): Polyurethane
- Weight: 346 grams
- Service Life: 1 year

Regulatory and Legal Information

FCC Statement (United States)

CAUTION: Changes or modifications not expressly approved by the party responsible for FCC compliance may void the user's authority to operate this 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 one or more of the following corrective measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the affected receiver.
- Connect the equipment to an outlet on a circuit separate from that of the affected receiver.
- Consult the dealer or an experienced radio/TV technician for assistance.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

ISED Statement (Canada)

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Approval

The product meets the Basic Safety Requirements of the European Community regulations. The certificates are issued by Notified Body 2834, CCQS Certification Services Limited, Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin 15 D15 AKK1 Dublin Country: Ireland

Hereby, Haven Technologies declares that the IT-122 complies with Regulation (EN)2016/425 and EN352-1:2020, EN352-4:2020, EN352-6:2020, EN352-8:2020, and the RED Directive.

Support and Contact Information

For the full digital version of this guide, spare parts, accessories, and additional product information, visit:

ISOtunes.com/[vanity link to be inserted]

North America

Email: support@isotunes.com

Phone: 1-844-396-3737 | +1 (317) 740-0419

Hours: Monday–Friday, 9:00 AM–5:00 PM EDT

UK & Europe

Email: uk-eurosupport@isotunes.com