

Safe performance
through science



Guardio

Freebird PRO & PRO X

with Sound by Harman Kardon

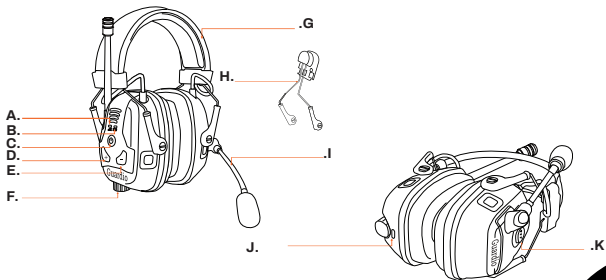
Hearing protection

Quick Guide



Visit www.bastadgruppen.com/en/manuals/
to download user manual in additional languages

Overview



Overview

- | | | | |
|----|------------------------|----|---------------------------------|
| A. | Functional LED | F. | Level dependant volume knob |
| B. | Power LED | G. | Headband |
| C. | Multi-function button | H. | Helmet mounting adapter |
| D. | Volume increase button | I. | Noise cancelling BOM-microphone |
| E. | Volume decrease button | J. | Charging port Type-C |
| | | K. | Push-To-Talk (PTT) Button |

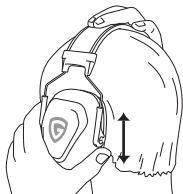
RADIO CHANNEL FREQUENCIES - FREEBIRD PRO X

Channel	Frequency (MHz)	Type	Modulation	Channel	Frequency (MHz)	Type	Modulation
1	446.00625	PMR	Analog	9	446.00625	PMR	DMR
2	446.01875	PMR	Analog	10	446.01875	PMR	DMR
3	446.03125	PMR	Analog	11	446.03125	PMR	DMR
4	446.04375	PMR	Analog	12	446.04375	PMR	DMR
5	446.05625	PMR	Analog	13	446.05625	PMR	DMR
6	446.06875	PMR	Analog	14	446.06875	PMR	DMR
7	446.08125	PMR	Analog	15	446.08125	PMR	DMR
8	446.09375	PMR	Analog	16	446.09375	PMR	DMR

RADIO CHANNEL FREQUENCIES - FREEBIRD PRO

Channel	Freequency (MHz)	Type	Modulation	Channel	Freequency (MHz)	Type	Modulation
1	446.00625	PMR	Analog	9	446.10625	PMR	Analog
2	446.01875	PMR	Analog	10	446.11875	PMR	Analog
3	446.03125	PMR	Analog	11	446.13125	PMR	Analog
4	446.04375	PMR	Analog	12	446.14375	PMR	Analog
5	446.05625	PMR	Analog	13	446.15625	PMR	Analog
6	446.06875	PMR	Analog	14	446.16875	PMR	Analog
7	446.08125	PMR	Analog	15	446.18125	PMR	Analog
8	446.09375	PMR	Analog	16	446.19375	PMR	Analog

Instructions



Wearing Instructions: Adjust the Earcups: Pull the headset outward so the top of the earcups tilt slightly. Press the headband down to ensure that the ear cushions form a tight seal around your ears.

Adjust the Height: Slide each earcup up or down as needed to fit your head comfortably. The headband should sit securely across the top of your head.

Noise-Canceling Boom Microphone The headset features a high-noise reduction microphone with speech enhancement technology, allowing for clear communication even in environments with noise levels up to 95dB. For optimal performance, position the microphone as close to your lips as possible (within 3mm) to maximize noise reduction and audio clarity.



Attach the adapter: Slide the helmet adapter into the 30mm slot on the helmet. Push it down firmly until you hear a “click.” This sound confirms that the headset is securely fastened to the helmet.

Position the Earcups: Rotate each earcup downwards so they rest between the chin straps in the proper wearing position.

Fit the Headset: Press the adapter wires inward towards your head until the headset feels snug around your ears. Make sure each earcup fully covers your ears to prevent any noise from leaking in.

Approval and technical data Helmet Mount version

SUBJECT	63	125	250	500	1000	2000	4000	8000
Means (dB)	22.1	20.3	23.8	31.1	33.5	30.7	35.2	36.4
Standard Deviation (dB)	4.3	3.8	3.8	3.2	2.0	3.2	4.2	3.8
MEAN-SD (dB)	17.8	16.5	20.0	27.9	31.4	27.5	31.0	32.6

Size range: Small/Medium/Large

Headband Force: Small = 9.4N / Medium = 10.9N / Large = 11.1N

(d) Certification and Monitoring

(a)

SUBJECT	H	M	L	SNR
Mean Attenuation - Hm, Mm, Lm, SNRm (dB)	32.2	30.8	26.1	32.2
Standard Deviation - Hs, Ms, Ls, SNRs (dB)	1.7	1.4	1.5	1.3
MEAN-SD (dB)	32	30	25	32

(b)

Attenuation data summary:

(c)

SNR=32dB H=32dB M=30dB L=25dB

(e)

CE 2834

EN352-3:2020

Conformance PPE regulation(EU)2016/425
CCQS Certification Services Limited
Block 18 Blanchardstown
Corporate Park, Ballycoolin Road
Blanchardstown, Dublin 15 D15AKK1 Dublin Ireland(NB2834)

Approval and technical data Headband version

SUBJECT	63	125	250	500	1000	2000	4000	8000
Means (dB)	24.1	21.5	25.6	30.4	34.3	33.7	37.1	37.4
Standard Deviation (dB)	4.2	2.9	3.0	2.7	2.9	3.3	3.4	2.7
MEAN-SD (dB)	19.9	18.6	22.6	27.7	31.4	30.4	33.7	34.7

Size range: Small/Medium/Large

Headband Force: Small = 9.5N / Medium = 10.9N / Large = 11.0N

(a)

SUBJECT	H	M	L	SNR
Mean Attenuation - Hm, Mm, Lm, SNRm (dB)	34.7	32	27.4	33.8
Standard Deviation - Hs, Ms, Ls, SNRs (dB)	2.4	1.8	2.4	1.8
MEAN-SD (dB)	32	30	25	32

(b)

Attenuation data summary:

(c) SNR=32dB H=32dB M=30dB L=25dB

(d) Certification and Monitoring

(e)

CE 2834

EN352-1:2020

Conformance PPE regulation(EU)2016/425
CCQS Certification Services Limited
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APPROVAL AND TECHNICAL DATA EXPLANATION

- a. Mean attenuation
- b. Standard deviation
- c. Assumed protection value
- d. Tested and certified by notified body
- e. Tested and certified to standard

INTRODUCTION Thank you for choosing the Guardio Freebird-series hearing protection. This product represents advanced personal protection, combining top-tier noise reduction with seamless communication for professionals. For any questions or issues, please reach out to us at info@guardiosafety.com or call customer service at +46 431 73 200.

Please read and follow all safety instructions in this manual before using your hearing protection to maximize safety and performance. Keep this manual for future reference.

BEFORE USING THE DEVICE Millions of workers worldwide face excessive noise levels in their workplaces, which can lead to hearing loss, tinnitus, and other permanent health issues. In compliance with the EN352 standard and the Control of Noise at Work Regulations (2005), hearing protection products sold in Europe are designed to meet essential safety and performance criteria.

WHEN IS HEARING PROTECTION NEEDED? According to the Control of Noise at Work Regulations (2005), employers in Europe must provide hearing protection for workers exposed to noise levels of 85 dB (decibels) or higher. Hearing protection should be available upon request for those working in environments with noise between 80 dB (lower action level) and 85 dB. At 85 dB or above (upper action level), appropriate hearing protection must be provided and worn. The maximum noise exposure limit is 87 dB, taking into account the reduction provided by hearing protection.

The Freebird headset complies with the EN352 standard to protect hearing by limiting exposure to noise levels exceeding 87 dB. Ensure correct and consistent use to benefit from this protection.

IMPORTANT USER INFORMATION Disclaimer: Adhere strictly to the following guidelines to maintain the Freebird Headset's protective function. Failure to do so can significantly reduce its effectiveness.

- Inspect the Headset: Check the Freebird Headset before each use for any signs of damage.
- Cleaning: Clean and disinfect the headset regularly with a moist cloth. Do not immerse it in water.
- Proper Fit: Adjust the headset to fit securely over your ears for maximum noise reduction.
- Continuous Use: Wear the headset at all times when in high-noise areas.
- Regular Inspection: Examine the headset for cracks, leaks, or other damage. Discontinue use if the headset is damaged.

- Volume Adjustment: Keep the volume at the lowest comfortable level.
- Level-Dependent Feature: Use this feature for situational awareness, allowing you to hear your surroundings while being protected from harmful noise.
- Battery: Ensure the headset is fully charged to maintain protection and communication throughout the day.
- Storage: When not in use, store the headset in a cool, dry place under 55°C.

GENERAL WARNINGS All hearing protection headsets offer limited noise reduction. It is essential to choose the correct device with appropriate noise reduction for your work environment. Using an unsuitable device or failing to maintain it properly can lead to serious hearing loss.

Material Warning The Freebird Headset includes replaceable parts, such as ear cushions and microphone shields, which may deteriorate or become damaged over time. Replace these parts if they show signs of wear or damage. This headset may be affected by certain chemical substances. For further guidance on chemical exposure, consult the manufacturer.

Battery Warning To ensure safe battery use, follow these safeguards, as specified in Clause F.5, to protect the battery from extreme conditions or misuse:

- Avoid exposing the battery to extreme temperatures or prolonged sunlight.
- Do not attempt to open or modify the battery.
- Charge only with approved chargers.
- Never dispose of batteries in fire.

Battery performance may decrease over time, affecting how long the headset can be used continuously on a single charge.

Audio Warning The Freebird Headset is equipped with level-dependent attenuation for enhanced situational awareness. Always check the operation of this feature before use. If you notice any distortion or malfunction, follow the manufacturer's maintenance instructions..

- The Freebird Headset includes a safety-related audio input feature. Before each use, check that this function is working correctly. If you notice any distortion or malfunction, consult the manufacturer's maintenance guidance.
- The audio signal output from this headset may exceed safe exposure levels. To protect your hearing, the Freebird Headset limits entertainment audio levels to 82 dB(A) at the ear. Note that using the entertainment feature may reduce your ability to hear warning signals in certain work environments.
-
- Be aware that adding hygiene covers to the ear cushions may impact the headset's acoustic performance.

LIMITATION OF LIABILITY Guardio shall not be liable for any incidental, special, indirect, punitive, exemplary, or consequential damages arising from the use, misuse, inability to use, or defects of this device, or for any damages resulting from its use.

TECHNICAL SPECIFICATIONS

- **Headband Material:** Steel, textile, and polyurethane
- **Ear Cushion Material:** PVC and polyurethane
- **Cups Material:** ABS plastic
- **Weight:** 440grams
- **Lifespan:** Periodic testing is recommended to ensure continued compliance with technical standards.
- **Battery Life (Bluetooth Mode):** Up to 120 hours
- **Battery Life (Intercom Mode):** Up to 18 hours

PPE SAFETY STATEMENT The Freebird Headset has been tested and certified in compliance with PPE Regulation (EU) 2016/425. Testing was conducted according to EN352 standards, including EN352-1:2020, EN352-3:2020, EN352-4:2020, EN352-6:2020, and EN352-8:2020.

STATEMENT NOTICES

European CE Notice Your Guardio product (the "Product") complies with the essential requirements outlined in Council Directive 2014/53/EU: Articles 3.1a, 3.1b, and 3.2. It is manufactured in accordance with Annex II of this directive. For the full EU Declaration of Conformity, please visit www.bastadgruppen.com.

- **Operating Temperature:** The product is designed to operate within a temperature range of -20°C to 55°C (-4°F to 131°F).
- **Charging Temperature:** The battery charging temperature range is 0°C to 40°C (32°F to 104°F).
- **AC/DC Adapters:** When charging from a wall outlet, ensure the plug-in AC/DC adapter meets the following specifications:
 - Input: 100-240 V, 50/60 Hz, 0.2 A maximum
 - Output: 5 V DC, 1 A maximumThe equipment must be supplied by an external, specific limited power source, classified as PS1 according to IEC 62368-1.

DECLARATION OF CONFORMITY (DoC) The product complies with the Bluetooth® 5 specification and has successfully passed all interoperability tests defined by the Bluetooth® standard. However, interoperability with other Bluetooth®-enabled devices is not guaranteed.

WARNING Please be aware that using this communication device (the "Product") requires your full and undivided attention. Failing to stay aware of your surroundings and potential hazards may lead to accidents resulting in serious injury or death.

Guardio advises staying alert and taking precautions in your work environment. Publications highlight technical capabilities and should not encourage unsafe or illegal use of Guardio products.

Always use the Product safely, avoid distractions, and follow safety laws. Do not operate the Product if unsafe. Keep body parts away from the antenna.

Use the Product in safe areas, avoiding gas stations, fuel depots, or explosive environments. Consult a physician if using with hearing aids or medical devices. Ensure proper installation and secure mounting.

HEALTH WARNINGS

Hearing Loss: Prolonged exposure to high volumes can cause hearing damage or permanent hearing loss. Use audio devices responsibly and avoid excessive volume levels to protect your hearing.

RF Signals: While most electronic equipment is shielded from RF signals, some devices may not be. Be aware of potential interference from wireless equipment.

Pacemakers: To avoid potential interference with pacemakers, the Health Industry Manufacturers Association recommends keeping a minimum distance of 6 inches (16 cm) between a wireless device and a pacemaker.

Hearing Aids: Some devices may interfere with hearing aids. If interference occurs, consult your hearing aid manufacturer for alternative solutions.

Other Medical Devices: If you use a personal medical device, consult the manufacturer or your physician to ensure it is shielded from RF interference.

PRODUCT FEATURES

Transparency Technology This product automatically suppresses sounds exceeding 82 dB while amplifying ambient noise up to 20 times, ensuring that the sound is kept below 82 dB to protect your hearing. It continuously monitors important alarms, commands, and environmental sounds, providing situational awareness while safeguarding your hearing.

Noise-Canceling Microphone The Guardio Freebird is equipped with a high-performance noise-canceling microphone, enabling clear communication even in noisy environments up to 95 dB.

Bluetooth Function The headset features multipoint Bluetooth connectivity, allowing you to connect to devices such as mobile phones for music playback and call functions. Key features include automatic connection, music control (play/pause), call answering, and volume adjustment.

Dual-Mode Usage The Freebird-Series offers flexible usage, allowing users to easily switch between headband mode and use with industrial safety helmets featuring 30mm slots.

Built-in Communication Radio: The headset have built-in programmable two-way radio allowing for integration with current analogue radio systems. The Freebird Pro headset offers 16 channels in the PMR 446 MHz band and the Pro X offers 8 digital (DMR) and 8 analog (PMR) channels.

Sonunex VoxSense: Freebird Pro headsets with batch number 2506 and all Freebird Pro X features digital Ai-trained Voice Operated Switch activating the microphone by identifying human voice.

VOX: Freebird Pro headsets with batch number prior to 2506 features analogue Voice Operated Switch activating the microphone by analysing sound levels.

APPROVED SAFETY HELMETS The headset comes with a standard 30mm helmet adapter, making it compatible with most safety helmets available on the European market. It has been specifically tested and approved for use with the following helmets:

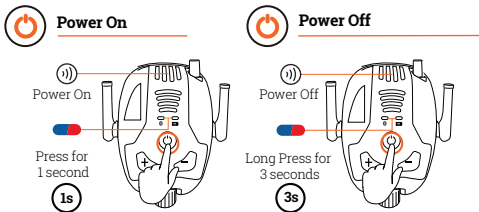
Guardio Armet Series

3M SecureFit Series

Kask Zenith-series

GETTING TO KNOW YOUR HEADSET

Follow the quick start guide below to get started with your Freebird headset.



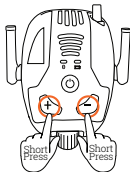
The voice guide will announce "Power On" or "Power Off" to confirm the status.

VOLUME CONTROL

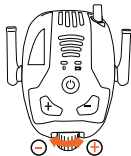
Press the + or - button briefly to adjust the headset volume, one level at a time. Use the knob to activate and adjust ambient sound volume.



System Volume + / -



Ambient Sound Volume + / -



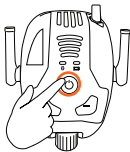
Rotate the knob to
turn on and adjust the volume

BLUETOOTH PAIRING

The headset uses Bluetooth® v5.1 for wireless connections. With Bluetooth, you can stream audio directly to your headset from any compatible device.

ACTIVATING AND CONNECTING BLUETOOTH

1. Make sure the headset is turned off, then press and hold the multifunction button for 5 seconds to enter pairing mode. A voice prompt will announce "Pairing".
2. On your device, enable Bluetooth and search for available devices.
3. Select "Freebird PRO HK" or "Freebird Pro X HK" to connect. The Bluetooth indicator will flash with blue color to confirm successful pairing. The battery indicator will flash with red color in case no Bluetooth device is connected.



Navigating the menu

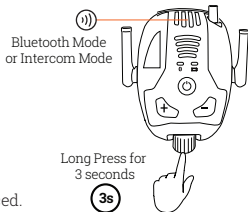
The Freebird Pro-series has two main menus: Bluetooth Mode and Intercom Mode.

To switch between these menus, press and hold the knob for 3 seconds. A voice prompt will confirm whether you are in **Bluetooth Mode** or **Intercom Mode**.

To check the current mode, press the knob briefly. The voice prompt will announce the active mode and provide additional information:

In Bluetooth Mode: The battery level will be announced.

In Intercom Mode: The battery level and the active intercom channel will be announced.



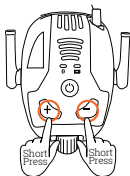
Adjusting Settings in Intercom Mode

When in Intercom Mode, you can adjust the settings of the built-in communication radio. To enter the **Settings Menu**, press the **+** and **-** buttons simultaneously. A voice prompt will announce the current setting and its preset value.

Use the **+** or **-** button to adjust the selected setting.

To navigate between different settings, **briefly press the knob** while in the Settings Menu.

If no button is pressed for a short time, a tone will sound, and the Settings Menu will close automatically.



Intercom Mode Settings

While in the **Intercom Settings Menu**, you can navigate through different settings by **briefly pressing the knob**.

The following settings are available:

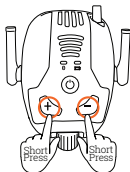
- VOX
- Self-Hearing Level
- Transmit Subchannel
- Receive Subchannel
- Squelch Level
- Transmit Power
- Maximum Transmission Time
- Automatic Shutdown Settings

BUILT IN COMMUNICATION RADIO

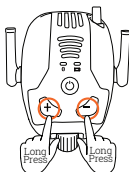
To enter Intercom Settings, long press the knob. Once in the settings menu, you can adjust the intercom volume by briefly pressing the + or - button. To change the intercom channel, press and hold the + or - button.



Intercom Volume + / -



Intercom channel + / -



ANSWERING AND ENDING CALLS

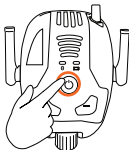
It is possible to answer, end and decline calls using the multifunction button on the headset.

To Answer a Call: When a call comes in, press the multifunction button once to answer.

To End a Call: Press the multifunction button once again to end the call.

To Decline a Call: To reject an incoming call, press and hold the multifunction button for 2 seconds.

Audio feedback will confirm each action.



AUDIO MUSIC CONTROL

When the headset is paired and playing audio, you can control music playback with the multifunction button and volume buttons.

Pause/Play Music: Press the multifunction button one to pause the music. Press it again to resume playback.

Adjust volume: Press the + or - button briefly to increase or decrease the music volume.

Skip Songs: Press and hold the + or - button to skip to the next or previous song from your Bluetooth device.

Each function provides quick control for seamless listening experience.



CHARGING INSTRUCTIONS

To charge your headset, connect the included USB-C charging cable to the charging port on the bottom of the headset (see Fig. J). Plug the other end of the cable into the provided EU power adapter, then connect the adapter to a power outlet. While charging, the power LED (Fig. B) will light up red, turning solid blue once fully charged.

A complete charge takes approximately 4 hours when using the wall power adapter, which charges faster than a computer USB port.



IMPORTANT: Use only the provided charger to charge the headset. Using a different charger may damage the battery and void the product warranty.

STORAGE GUIDELINES

- To maintain battery health, avoid letting the device lose power for extended periods; charge it at least once a month.
- Store the headset in a dry environment at room temperature. Avoid temperatures above 55°C (e.g., car dashboards or window sills exposed to sunlight) or below -40°C.
- Recommended operational temperature range: -20°C to 55°C.
- Maximum recommended storage duration is 5 year

MAINTENANCE AND CLEANING

To clean the headset, use a soft cloth dampened with warm, soapy water to wipe down the outer shells, headband, and ear cushions. **Do not submerge the headset in water.** If exposed to heavy rain, rotate the earmuffs outward, remove the ear cushions and foam liners, and allow all parts to dry completely before reassembly.

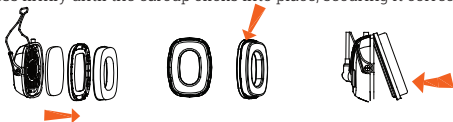
Inspecting and Replacing Ear Cushions and Foam Liners

The ear cushions and foam liners may degrade over time and should be checked regularly for cracks or other signs of wear. For optimal performance, hygiene, and comfort, Guardio recommends replacing these parts at least twice a year. Replace any damaged ear cushion immediately.

HYGIENE KIT REPLACEMENT

To replace the hygiene kit, please follow the steps below. Regular maintenance ensures your headset remains clean, comfortable, and effective over time.

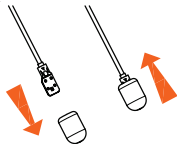
1. Insert your fingers into the inner edge of the earcup, then pull out the earmuff frame to access the noise-absorbing liner.
2. Remove the old ear pads and replace them with new ones.
3. Snap the new pads into the six attachment points on the earcup's bezel.
4. Press firmly until the earcup clicks into place, securing it correctly.



REPLACE MICROPHONES WINDSOCKS

The protective windsocks improve communication transmission by cutting noise and wind interference. By regularly change your microphone windsocks you can extend the life of your headset.

Pull the windsock off the microphone head and easily replace it by threading on a new one.



TROUBLESHOOTING

Charging Issues If the headset will not charge, follow these steps:

1. Inspect the headset's charging port (see Fig. J) and ensure it is free from dirt or debris that may interfere with the connection.
2. Try using a different charging cable to see if it resolves the issue.
3. Plug the charger into a different power outlet to verify if the socket is the problem.

Bluetooth Connection Issues If you experience problems with Bluetooth connection, try the following steps:

1. Ensure the headset is fully charged, turned on, and in pairing mode.
2. Remove all previously connected Bluetooth devices from your phone's settings.
3. Restart your phone by powering it off and on.
4. Attempt to pair the headset with your phone again.
5. If the issue persists, try pairing the headset with a different phone to determine if the problem is device-specific.

Following these steps should help resolve most connection and charging issues.

WARRANTY

Båstadgruppen AB warrants that its products will be free from defects in materials and workmanship for a period of one (1) year from the date of the original purchase (the "Warranty Period"). A dated proof of purchase, such as a bill of sale, is required to validate warranty eligibility. If the product fails to perform due to a defect in materials or workmanship during the Warranty Period, Båstadgruppen will, at its discretion, repair or replace the product with the same or a comparable item, free of charge for parts or labor. All repairs are warranted for 90 days against the same material defect or for the remainder of the original warranty period, whichever is longer.

This warranty does not cover:

- a. Damage caused by natural events such as lightning, wind, or flood;
- b. Damage caused by accidents;
- c. Damage resulting from neglect, abuse, misuse, improper installation, mishandling, or failure to follow the instructions in the product's Owner's Guide;

- d. Damage from alterations, improper maintenance, or repairs made by anyone other than a Båstadgruppen-authorized agent;
- e. Labor charges for installation, removal, reinstallation, servicing, consumables, or normal wear parts.

Båstadgruppen is not responsible for any loss or damage, including direct, special, incidental, or consequential damages arising from the use or inability to use this product. If the product is found to be defective in materials, workmanship, or not in conformity with any express warranty for a specific purpose, Båstadgruppen's only obligation and your exclusive remedy will be, at its discretion, to repair, replace, or refund the purchase price of the product or parts, upon timely notification of the issue and proof that the product has been stored, maintained, and used in accordance with Båstadgruppen's instructions.

Except where prohibited by law, this warranty is exclusive and supersedes any other express or implied warranties, including but not limited to implied warranties of merchantability, fitness for a particular purpose, or warranties arising from the course of dealing, custom, or usage of trade, except for title and patent infringement.



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