

Westone[®]

DefendEar[®] Digital

SHOOTER

WITH CENS[®] DIGITAL TECHNOLOGY



User's Manual

Level Dependent

Electronic Hearing Protection

Contains important information - do not throw away

DefendEar® Digital Shooter

The DefendEar Digital Shooter is manufactured for protection against noise.

ADJUSTABLE DIGITAL AMPLIFICATION

Boosts low-level sounds for detecting game moving through leaves and undergrowth.

COMFORTABLE, LOW-PROFILE DESIGN

Universal-fit provides effective, low-profile comfort.

MAINTAINS SITUATIONAL AWARENESS

Block harmful noise (gun shots) while maintaining situational awareness.

WHAT IS CENS®?

CENS® technology is a digital microelectronic amplifier/limiter that provides a natural listening experience and unsurpassed suppression.

Contents of Pack

- 2 DefendEar Digital Universals (L & R)
- 2 spare wax guards
- Brush with magnet
- 6 size 10 batteries
- 5 pairs of reusable foam eartips (10.5 mm–14 mm)
- Monitor Vault



dB EXAMPLE SOUNDS

INSTANT DAMAGE	147	Gun Shot
	130	Jackhammer
THRESHOLD OF PAIN	120	Rock concert
	110	Power tools
SHOOTER™ PROTECTION KICKS-IN	90	Lawn mower
	85	Begin Danger Zone*
	80	City traffic
	50	Normal conversation
	30	Whisper
	20	Rustling leaves

* BASED ON NOISH STANDARDS

CENS® Hydrophobic Protection

DefendEar Digital Hearing Protection devices are protected with Water-Shield™

The Water-Shield bio-compatible coating is a highly durable “Teflon-like” amorphous carbon polymer coating that protects DefendEar Digital modules from accidental liquid exposure.

Tests have shown that a hydrophobic coating can reduce water penetration by 3–5 times over an unprotected product.

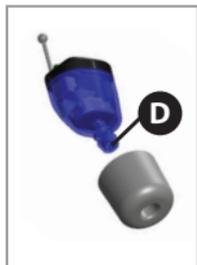
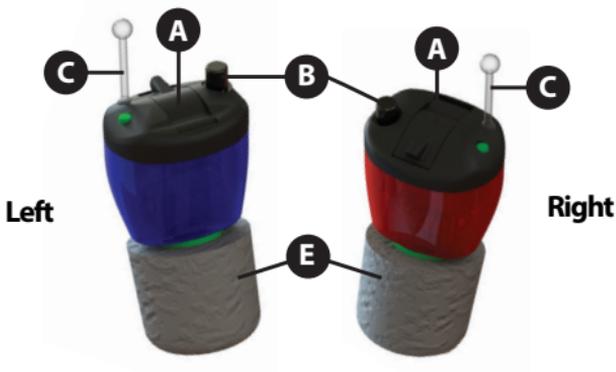
The Water-Shield process is created at reduced pressures of deep outer-space (an equivalent altitude of 200,000 feet above sea level) and applied at nanometre film thickness, only about 1/2000th the thickness of an average human hair, so that the carbon atoms can diffuse deep into the product, resulting in a hydrophobic coating over every exposed surface. It is completely invisible to the naked eye.

ADDITIONAL BENEFITS:

- Greater protection from water
- Improves reliability
- More hygienic
- Increases device life



Your Westone Shooter



- A** Battery tray
- B** Push-Button volume control
- C** Extraction cord
- D** Wax guard
- E** Foam ear tip

Product Markings

The left and right models can be identified by the color of the shell:

BLUE for left-ear

RED for right-ear

Every Westone Shooter can be identified by a unique serial number located on the side of the device, and by the manufacturer's name and model ID on the opposite side of the device.



Warnings & Safety Notes

CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THIS PRODUCT

This product is designed to protect your hearing. However, always remember that no item of Personal Protection Equipment (PPE) can provide full protection and care must always be taken while carrying out the risk-relation activity.

EXPLANATION OF SYMBOLS:



Points out a situation that could lead to possible injuries.

NOTICE Indicates possible device damage.



Advice and tips on how to handle your device better.

PERFORMANCE & LIMITATIONS OF USE



Failure to follow these instructions may reduce the product life and reduce the hearing protection.

The output of the level dependent circuit of this hearing protector may exceed the daily limit sound level.

Always wear your Westone Shooter in noisy environments.

If children or disabled persons need to wear Westone Shooter, ensure adequate supervision.

Small parts present a choking hazard. Keep away from children.

If swallowed, consult medical advice immediately.

Do not expose Westone Shooter to extreme heat or moisture.

Do not expose Westone Shooter to strong magnetic fields (>0.1T).

Continued on next page.

Warnings & Safety Notes

PERFORMANCE & LIMITATIONS OF USE (CONTINUED)



Do not expose Westone Shooter to X-rays.

Do not use Westone Shooter in areas with explosive hazards (i.e. mines).



Always ensure the Westone Shooter is working correctly. A melody will be heard when activated initially.

It is recommended to always carry spare batteries.

Performance may deteriorate with battery usage. The typical period of continuous use that can be expected from the Westone Shooter battery is over 50 hours. For infrequent use replace the battery each time used.

A series of warning bleeps will periodically sound when the battery becomes low and requires changing.

NOTICE Always switch off when not in use.

FITTING AND SIZING



Always use the correct size tip (see instructions) to maintain protection levels (see page 7).

Do not wear without an ear tip fitted as the hearing protection will be severely degraded.

Always inspect the ear tips before use and replace if damaged.

As a reusable device, ensure the fit is correct and providing adequate protection, see instructions for "clap test" (see page 11).



Sizes supplied are 10.5 mm to 14 mm.

It is recommended to replace the ear tips every 30 days.

Warnings & Safety Notes

COMPATIBILITY - Only use spare parts designed for the Westone Shooter. Lists of spare ear tips, wax guards and batteries are in this manual.



The design of the device makes it compatible for use with most other types of PPE equipment. If unsure consult the supplier/manufacturer.

STORAGE & TRANSPORT

Always place the Westone Shooter in the supplied case after use to keep them safe.

If the Westone Shooter become wet, remove the battery and ear tip and then wipe with a dry cloth and leave in a warm place to dry out.

REPAIR



If the product becomes damaged, it will NOT provide the optimum level of protection, and therefore should be immediately either replaced or repaired. There are no serviceable parts (except those listed as spares). A troubleshooting guide is contained in this manual (see page 14).

CLEANING



This product may be adversely affected by certain chemical substances. Further information should be sought from the manufacturer.

RECYCLING

Recycle Westone Shooter, batteries and accessories according to national regulations.

MARKING - The product is marked on the shell with a serial number and a model ID.

Foam Ear Tips

Westone Shooter devices are supplied with 5 different sized foam ear tips:

To find out which ear tip suits the size of your ear canal you will need to try all 5 to see which is the most comfortable and creates the best seal. If the tip is too small then the device could fall out. If the ear tip is too large then it will be uncomfortable and hard to insert.



Gently push the foam ear tip onto the Westone Shooter (1) until it fits against the shell of the device (2).

After each use the ear tips should be cleaned with a dry cloth or replaced if damaged.

Ear Tip Range



Colour	Size	Manufacturer's Part Number (per pair)
Green	10.5 mm - Short	62804 Green
Blue	10.5 mm - Long	62803 Blue
Black	12 mm - Short	62801 Black
Red	12 mm - Long	62802 Red
Orange	14 mm - Long	62800 Orange

To order replacement foam ear tips please consult your supplier or purchase from our online shop: westone.com/store.

Handling Batteries

10 Zinc Air Battery



Always use the correct size of batteries, as supplied with your Westone Shooter.

Remove the tab on new batteries only when you are ready to use them. Once the tab is removed the battery will discharge and will only last up to one month while the Westone Shooter is not in use.

Always keep spare batteries with you. Use a fresh battery each time if you only use Westone Shooter infrequently.

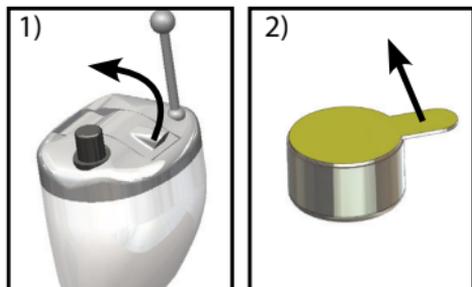


If the battery fails during use and is not replaced, your protection will not be compromised, but ambient awareness will be lost.

To order replacement batteries please consult your supplier or purchase from our online shop: westone.com/store.

Inserting the Battery

1. Open the battery tray with a fingernail and swing outwards until fully open (do not use force, stop when you feel resistance).
2. Pull off the protective tab from the new battery and wait a few seconds for air to enter the battery and begin to activate.
3. Insert the new battery with the small shouldered side first into the largest opening of the battery compartment.



Removing The Battery

Open the battery tray. Gently ease the battery out of the battery compartment. Using the magnet on the end of the brush supplied with Westone Shooter may make this easier.

Turning Your Westone Shooter On & Off

Westone Shooter is switched on automatically with the insertion of the battery and the closing of the battery tray.

After a five second delay a melody will play indicating that the Westone Shooter is active.



Device is on



Device is off

Cleaning and Disinfection

Westone Shooter are highly sensitive systems. It is recommended that Westone Shooter are cleaned after every use to keep them in perfect working condition and to avoid health problems.

Clean the outside housing and foam ear tip of Westone Shooter with a soft dry cloth or tissue, removing any debris or moisture.

Replace the foam ear tip if the ear tip looks damaged or debris cannot be removed.

Holding Westone Shooter with the foam ear tip pointing down over a tissue, use the brush to gently remove debris around the sound outlet and wax guard. Any debris should fall onto the tissue which can then be discarded.

Adjusting the Volume

The volume is adjustable via the push-button.



The volume push-button has three preset levels:

Level 1: Low (+5dB)

Level 2: Medium (+11dB)

Level 3: High (+18dB)

By default, when the device is turned on Level 1 (low) will always be active.

Pressing the button once will increase the volume to Level 2 (medium).

Pressing the button again will increase the volume to Level 3 (high).

Pressing the button for a third time will reduce the volume back to Level 1 (low).

Each time you change levels, a number of confirmation beep(s) will be heard corresponding to the level of volume selected (1-3).

Once the devices are switched on, you will be able to hear sound as normal; however, when a loud sound is detected the device will automatically reduce the volume to a safe and comfortable level. After the loud sound has passed the volume is automatically returned to normal.

The volume push-button must only be operated with light pressure. Applying excessive pressure can result in the volume push-button being damaged. This is a precision miniature device that must be handled with care.

This ear tip is provided with level-dependent attenuation. The wearer should check correct operation before use. If distortion or failure is detected, the wearer should refer to the manufacturer's advice for maintenance and replacement of the battery.

Inserting Your Westone Shooter

1. Hold the Westone Shooter with the volume push-button at the top.

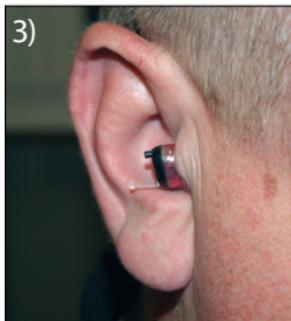
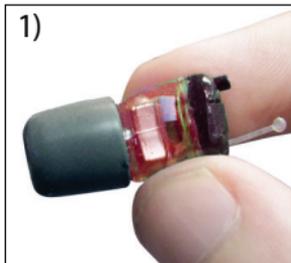
Reduce the diameter of the foam ear tip by gently rolling it in your fingers before pressing it into the ear.

2. Pull the ear up while inserting.
3. Push gently until the foam ear tip seals in the ear canal.

Allow at least 10 seconds for the foam ear tip to expand and take up the shape of your ear canal.

Clap Test

It is important that each device is fitted correctly to ensure safe and effective use. To check the fit is correct, clap your hands near each ear. You should hear the sound but at a lower level.



Removing Your Westone Shooter

Removal

Gripping the extraction cord, gently withdraw the Westone Shooter from the ear. After removal, clean the Westone Shooter and place in the protective case provided.

In the extremely unlikely event of the ear tip remaining in the ear on removal:

Do not panic

Do not attempt to remove by yourself

Seek medical advice

Wax Guards

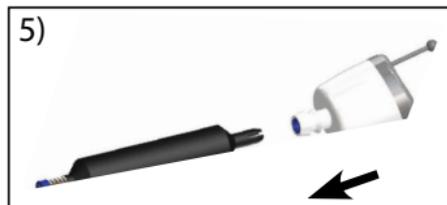
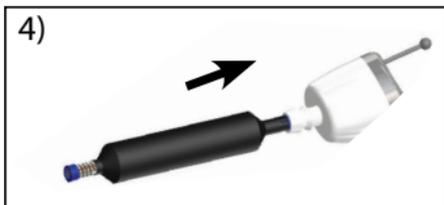
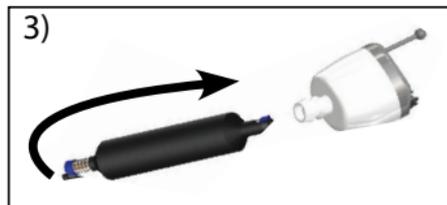
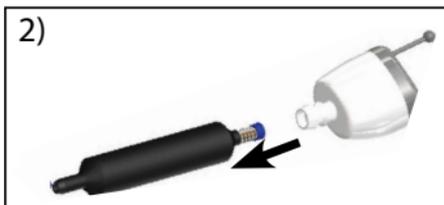
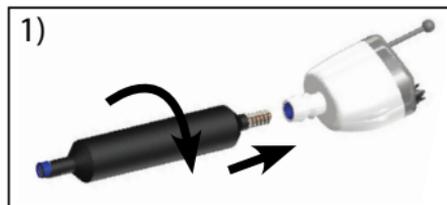
To minimize the risk of blockage and damage caused by the build-up of earwax, each Westone Shooter is fitted with a wax guard. Westone Shooter is supplied with two wax guard changing tools, with a spare red and blue wax guard attached. Replacement packs of wax guards are available separately.

To order replacement wax guards please consult your supplier or purchase from our online shop: westone.com/store.

Side	Color	Quantity	Manufacturers Part Number
Right	Red	15	78347 Replacement Right
Left	Blue	15	78348 Replacement Left

Changing the wax guard requires the use of the wax guard tool (supplied initially with Westone Shooter, as well as with replacement wax guard kits). Please see below for the correct procedure for changing the wax guard. Do not attempt to change the wax guard without using the tool.

Changing the Wax Guard (Blue/Left Side Shown)



Troubleshooting

Use these tips to resolve simple issues.

PROBLEM

POSSIBLE SOLUTION

Sound is weak.

Replace empty battery.
Replace blocked wax guard.
Increase volume.
Clean instrument.
Close battery door completely.

Westone Shooter emits whistling sounds.

Re-insert the instrument until it fits securely.
Clean instrument.
Fit new ear tip.

Sound is distorted.

Replace empty battery.
Replace blocked wax guard.
Lower volume.
Clean instrument.

Westone Shooter emits a series of warning beeps.

Replace empty battery.

Westone Shooter does not work.

Check if the Westone Shooter is turned on.
Gently close battery compartment completely.
Replace empty battery.
Make sure battery is inserted correctly.
Replace blocked wax guard.

Consult your supplier if you encounter further problems.

Technical Information (ANSI S3.10-1974)

SOUND ATTENUATION

FREQUENCY	125	250	500	1000	2000	3150	4000	6300	8000
MEAN ATTENUATION	35.9	33.8	39.2	38.6	40	41.1	40.9	41.7	46.1
STANDARD DEVIATION	4.9	4.2	4.5	4.0	2.5	3.7	4.0	3.3	3.0

NRR = 30

NRR = Noise Reduction Rating

Measurements were made according to American National Standards Institute Specifications ANSI S3.10-1974.

These data were obtained through measurements made at the laboratories of Michael and Associates, Inc., State College, PA, USA. Michael and Associates, Inc. is accredited to test to ANSI S3. 19-1974, ANSI S12.6-2008, ANSI S12.42-2010, EN352 parts 1-8 and AS/NZ S1270:2002 by the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP).

Further information can be obtained from Westone Laboratories, 2235 Executive Circle, Colorado Springs, CO 80906

Westone[®]

THE IN-EAR EXPERTS[®]

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