

User Manual – EON Complete V2 Gearbox with TITAN II Bluetooth®

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General Information

Congratulations on your purchase of the GATE EON V2 Complete Gearbox with built-in TITAN II Bluetooth®. We've gathered the best technology available for electric replicas and built a top-notch gearbox without compromising on any part. Instead of thinking about tuning, you can now buy a ready-to-use gearbox with warranty at a reasonable price. Over a million shots fired to build the best and most reliable hi-end gearbox.

 The information contained in this document is subject to change without notice.

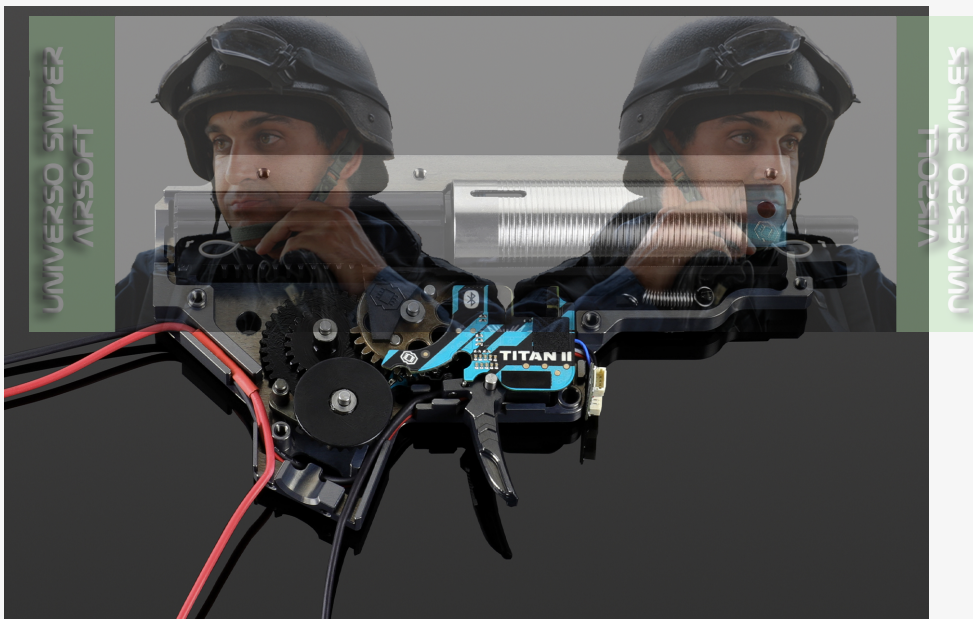
 Read carefully before use. Keep for future reference.

 Failing to read this information may void the guarantee!

 When using the product, always follow basic safety rules to reduce the risk of injury from fire or electrical shock.

Device Structure

1. GATE EON gearbox
2. TITAN II Bluetooth®
3. Nova Trigger
4. High speed gear set 13:1
5. Reinforced CNC Piston
6. Full GATE EON Pneumatics Set:
 - a. EON Protector Cylinder Head
 - b. EON High Speed Piston Head
7. CNC POM sealed nozzle - 21.25mm
8. Polished stainless steel Cylinder
9. EON Tappet Plate
10. Reinforced Anti-reversal latch
11. Reinforced and low friction 8mm bearings
12. Mainspring
13. Minor items



Safety Summary

Please read this to ensure safe and correct use. Retain for future reference. The information contained in this document is subject to update without notice. When using a product listed here be sure to obtain the latest specifications.

For your safety, **we recommend this product to be installed by a skilled person.** |

Warning

Situations that may cause injury to yourself or others.

Caution

Situations that may cause damage to your device or other equipment.

Note

Notes, usage tips or additional information.

Warning

This device is not a toy and may not be operated by people (including children) with limited physical or mental abilities. They may use the device only under the supervision of people responsible for their safety.

Warning

Before starting the installation process, make sure that your AEG magazine is empty and there are no BBs in the replica.

Warning

When installing the device, every person within the replica's range must wear personal protective equipment.

Warning

This equipment is not suitable for use in locations where children are likely to be present.

Warning

Persons under 18 years of age ought not stay unattended near the device during the installation or servicing of a device installed in an ASG replica.

Warning

Persons under 18 years of age ought not stay unattended near an ASG replica ready for use with the device attached to it.

Warning

Persons under 18 years of age are not allowed to install or commission the device in an ASG replica.

Warning

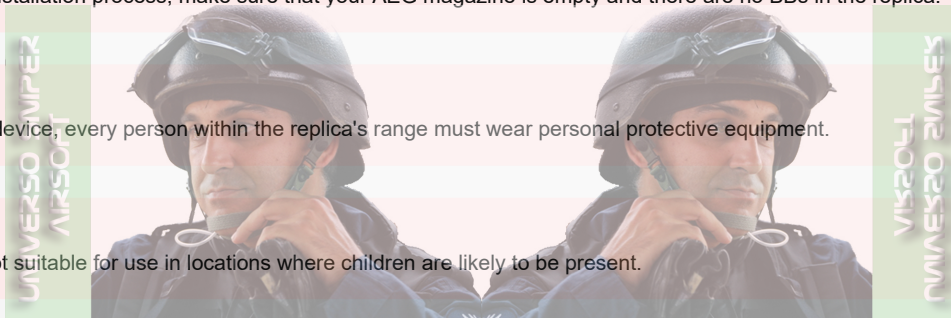
Persons under 18 years of age are not allowed to service this device.

Warning

Do not store or carry flammable liquids, gases or explosive materials in the same compartment as the device, its parts or accessories.

Warning

Do not dispose of your device in a fire.



Warning

Incorrectly connecting positive and negative battery terminals will cause immediate damage to the device, which is not covered by warranty, and can lead to fire.

Warning

Take caution to prevent short-circuiting the battery as the consequences may be very dangerous.

Warning

Excessive trigger sensitivity may cause unintentional discharge (firing).

Warning

When an airsoft replica is not in use, its battery must be disconnected and the hop-up chamber must be empty.

Warning

While handling an AEG replica with a connected battery, anyone within the range of the replica must wear personal protective equipment.

Warning

When not in SAFE mode, avoid using the device around strong electromagnetic fields, such as PMR transmitters exceeding European standards or when electrostatic discharges, e.g. lightning, occur in the atmosphere, which may cause malfunction of the device and unintentional discharge (firing).

Warning

When an airsoft gun is not in use, its magazine must be detached or kept empty with no BBs inside.

Caution

Do not remove the warranty seals. Removing them will void the warranty.

Caution

For your own safety you ought to use an additional fuse between the battery and the device.

Caution

When operating under unusual conditions, perform maintenance outlined below for the climate similar to your area. Operating in extremely cold temperatures is not recommended. Do not expose gearbox to direct sunlight for long periods of time. Keep away from dust or sand, which can cause malfunctions and/or excessive wear. Keep gearbox out of snow, rain, and water. This will prevent electrical failure and fluid buildup inside the gearbox.

Caution

GATE recommends 7.4 V & 11.1 V batteries with 1200 mAh capacity or higher. We do not recommend 14.8 V batteries.

Note

The product Warranty Form is available here: <http://www.gatee.eu/warranty>.



✔ **Note**

In case you have any difficulties while installing or using this product:

- contact us via <https://help.gatee.eu>
- send us an e-mail: support@gatee.eu
- join [GATE Airsoft Community Discord Server](#)

Installation

Introductory information

⚠ **Caution**

Regardless of your previous experience, follow all safety precautions to prevent any damage to your EON Complete V2 Gearbox.

⚠ **Caution**

EON Complete V2 Gearbox installation requires deep technical knowledge of gearbox internals. To avoid damage, we recommend it to be installed by a skilled person. If, however, you wish to proceed with EON Complete V2 Gearbox installation on your own, you must read this full-length document and watch the installation video beforehand. Incorrect installation may result in, among others, wire damage, which is not covered by warranty.

Full Installation Manual

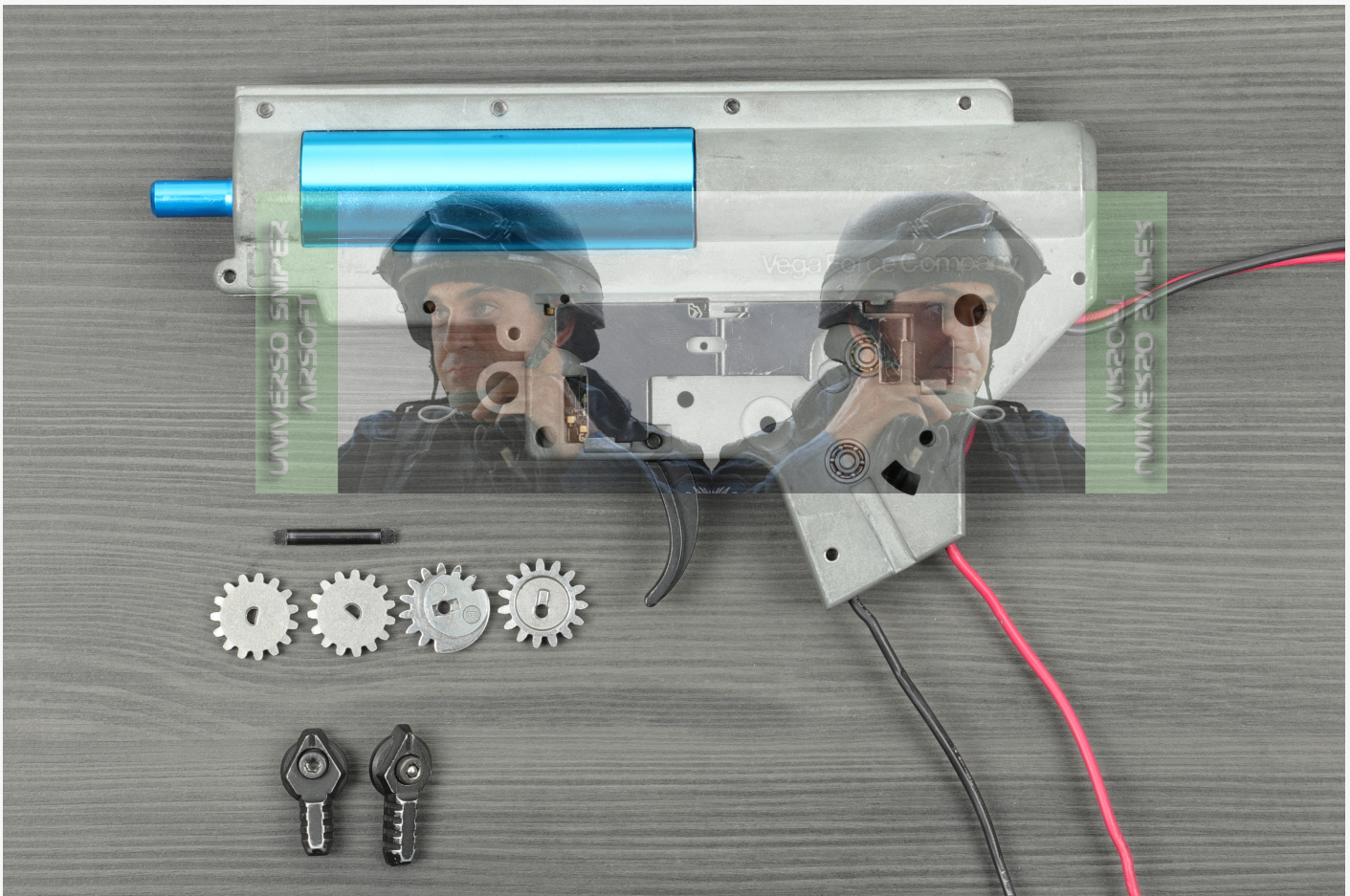
Removing the upper part of the receiver



1. Disassemble all body components so as to remove the gearbox shell from the body of the replica.



2. Remove the current gearbox from the body. Check how the wires are arranged in your replica before disassembly? This will help to place the wires in the right way afterwards.



✔ **Information**

The EON gearbox is compatible with the two-sided VFC selector – so, if you have one, also remove the selector plate to use it in your new EON Complete Gearbox.



Caution

The EON Complete Gearbox is unfortunately not compatible with the Krytac double-sided selector, so for these replicas, you must remove the double-sided selector from the replica and install a standard selector or a VFC standard double-sided selector. In the case of the standard single-sided selector, the selector hole on the other side of the barrel must be sealed.



3. Install all the components of the double-sided selector.



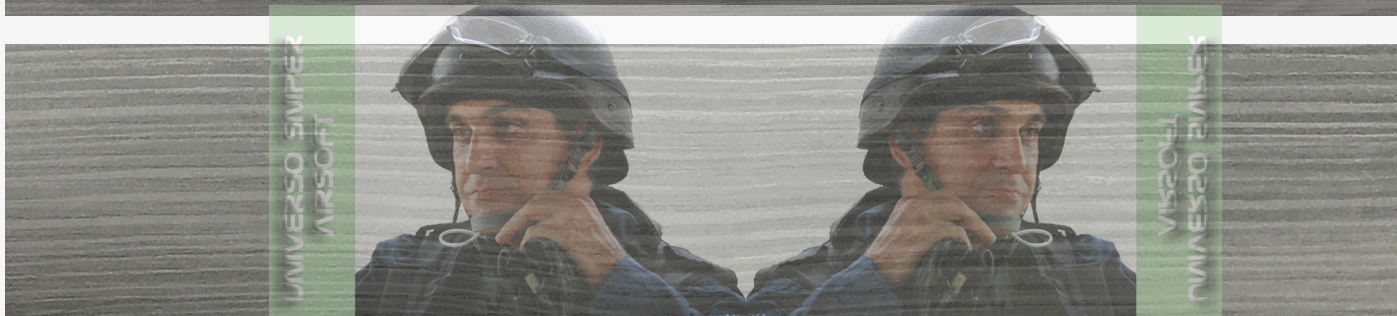
4. For a standard single-sided fire selector, use the supplied selector plate.



Preparing the body for installation of the EON Complete Gearbox:

Information

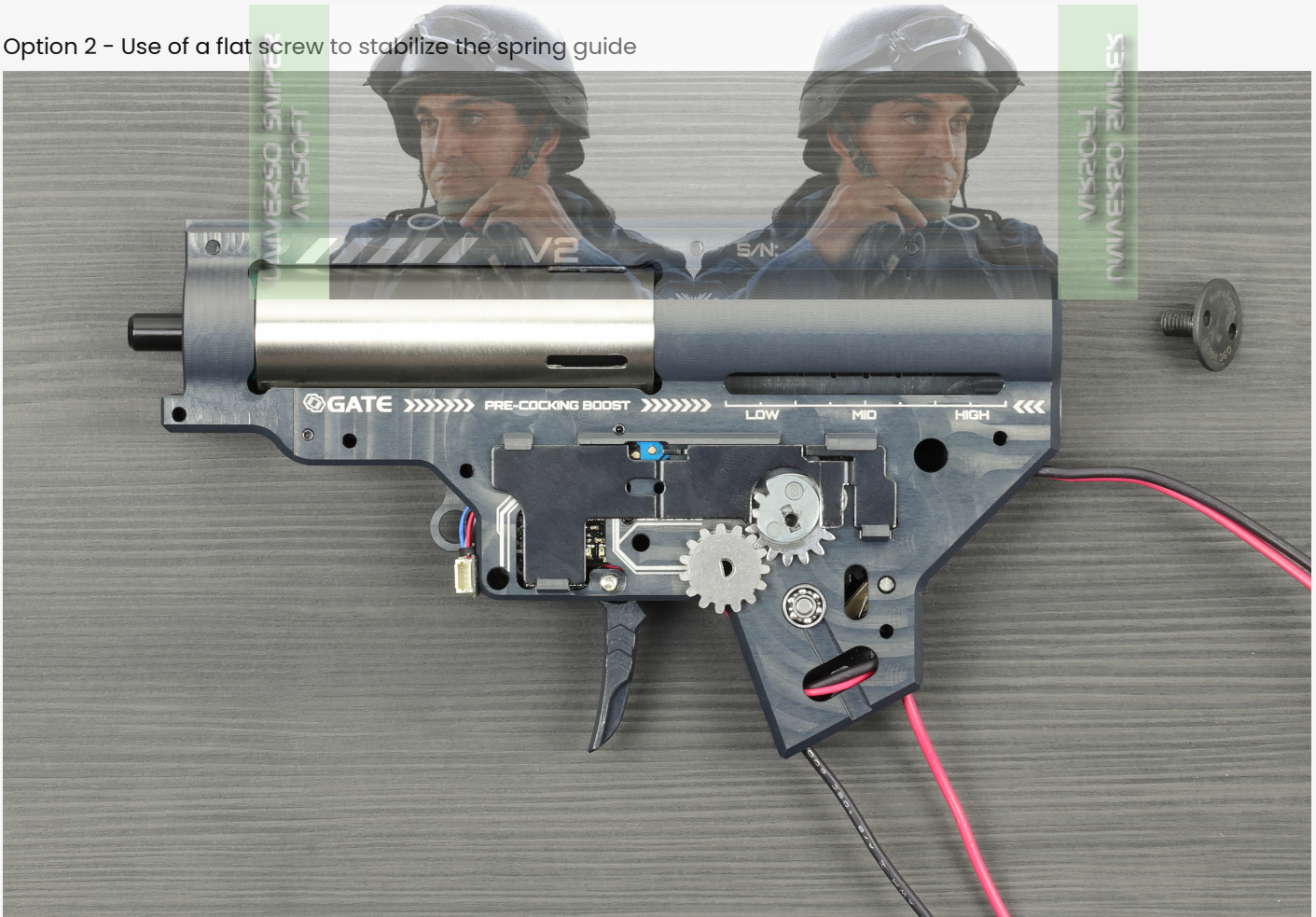
For VFC replicas, where the buffer tube is fastened to the thread in the body, either remove the threaded sleeve, allowing you to use a standard spring guide screw, or use a flat screw to stabilize the barrel.



If the sleeve is removed, it will be necessary to use a longer buffer tube mounting screw.



Option 2 - Use of a flat screw to stabilize the spring guide





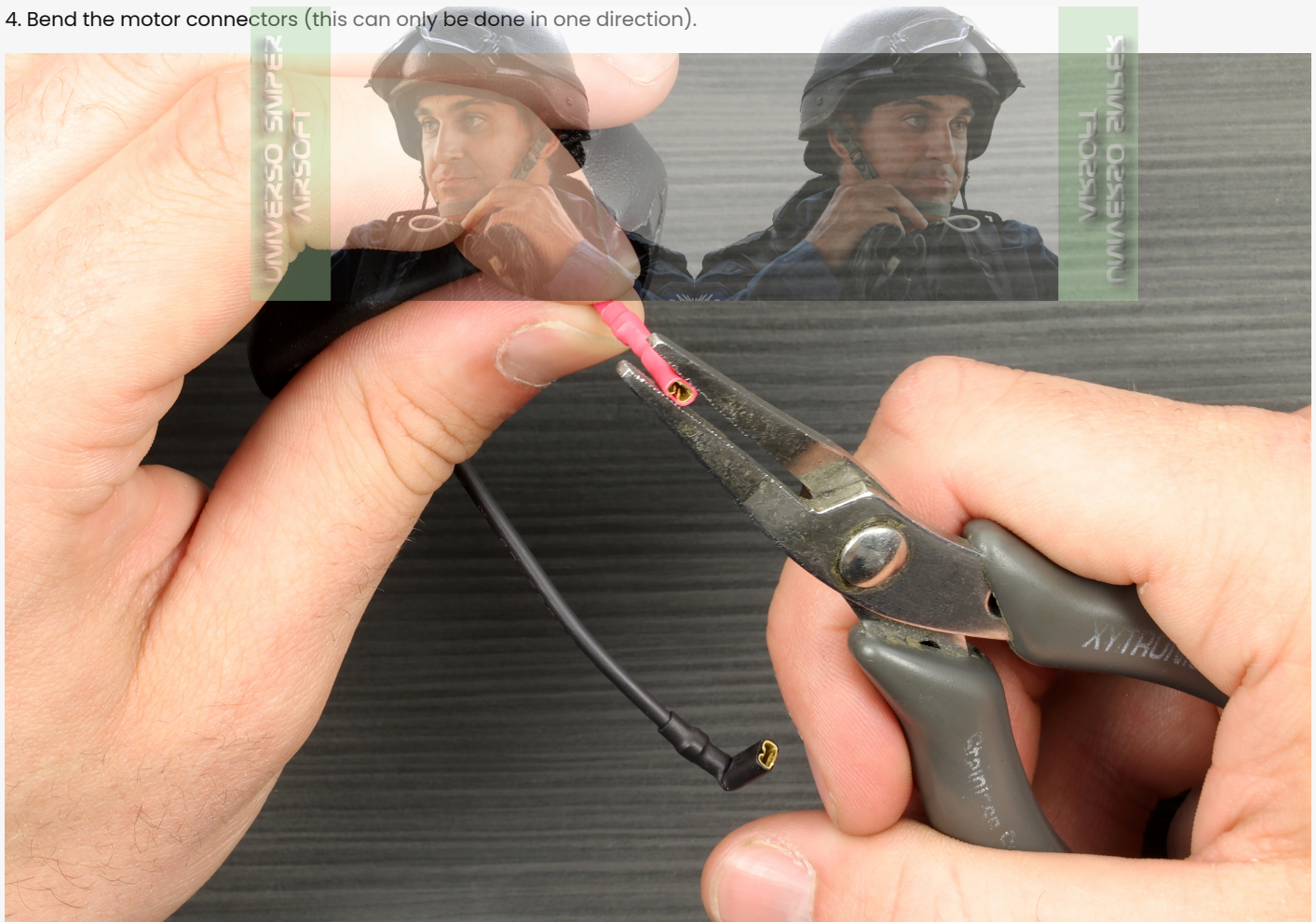
Information

For Specna Arms replicas with the ESA-2 system, use a flat screw to stabilize the spring guide or use a washer that fits in the buffer tube and a sufficiently long screw so as to fasten the guide. If you're willing to waive the warranty, you can remove the guide from the EON Complete Gearbox and instead use the guide from the ESA-2 system which our gearbox is compatible with.

1. Place the shell in the replica body and make sure you are able to install the positioning pins in the body without any problems. If not, your body may require some modifications. If this is the case, make the necessary modifications or use a service technician.
2. Install the buffer tube guide – **never fire a shot when the guide is not screwed or stabilized with a screw.**
3. Run the wires through the holes in the motor grip and screw on the motor grip.



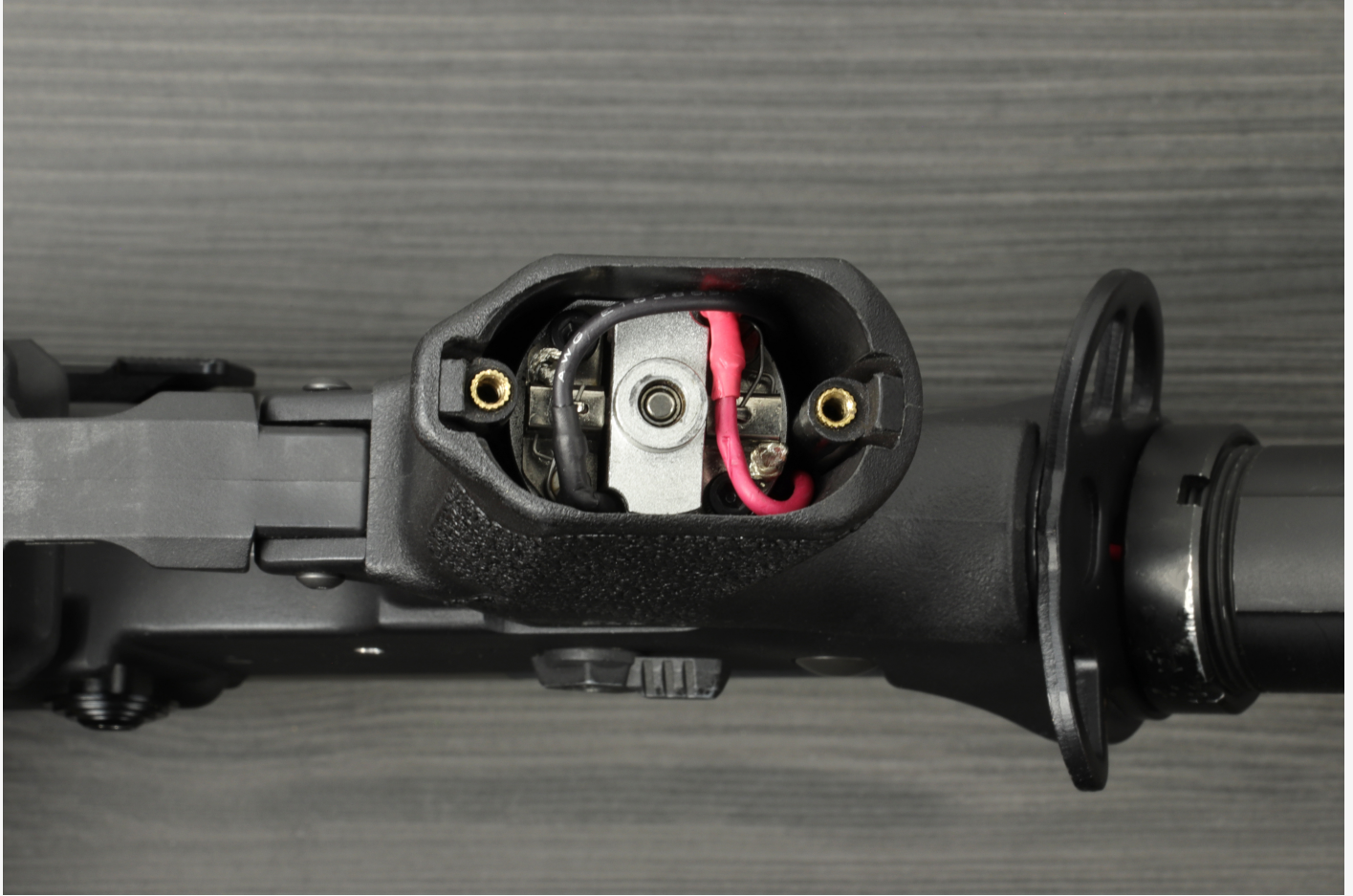
4. Bend the motor connectors (this can only be done in one direction).



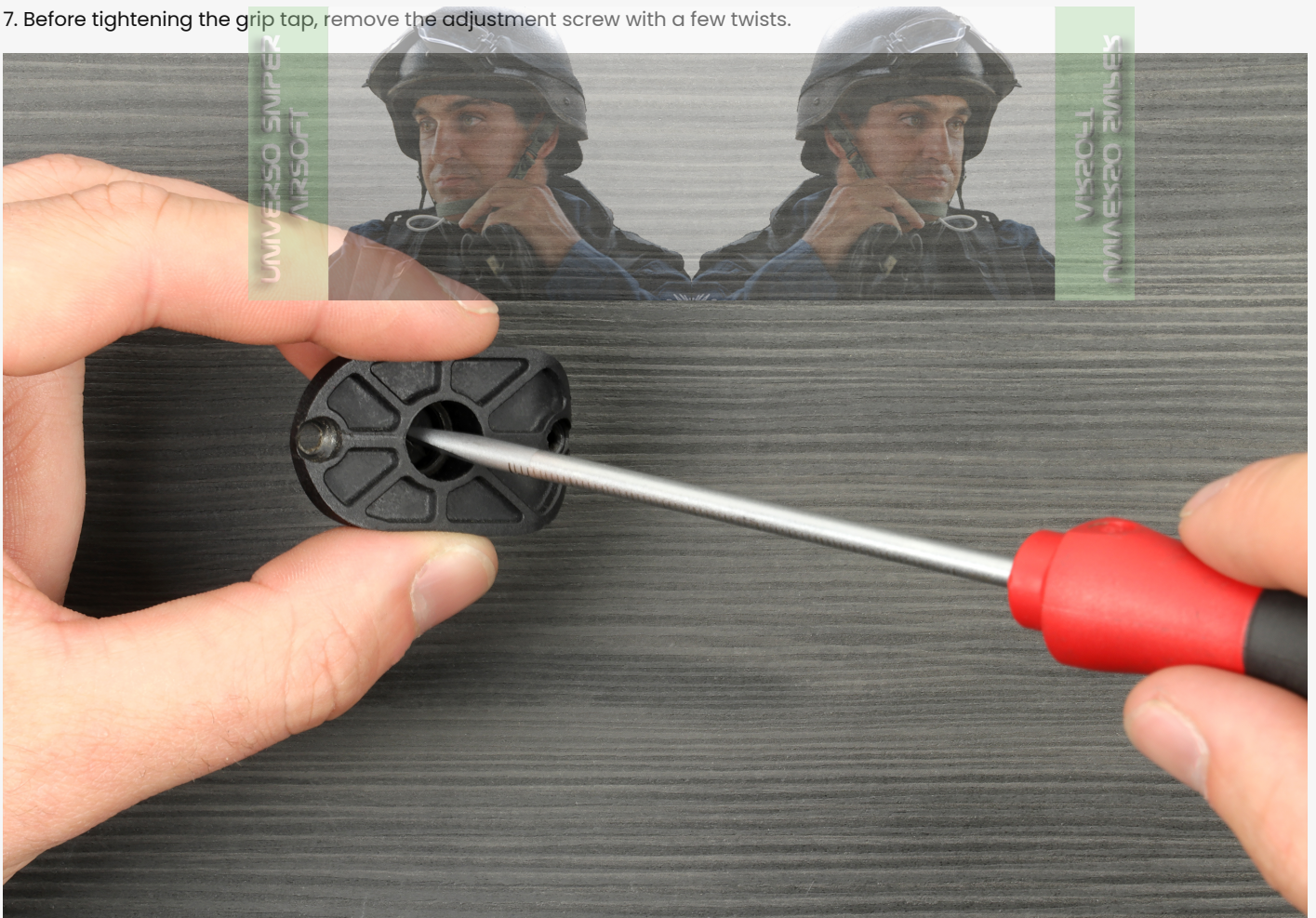


5. Arrange the wires in the same way as in your old gearbox.

6. Place the motor in the grip and connect the connectors (pay attention to the poles of the motor and the wires).



7. Before tightening the grip tap, remove the adjustment screw with a few twists.



8. Screw on the grip tap.

Motor height screw adjustment:

1. Tighten the motor screw to a perceptible resistance (do it gently so as not to damage anything).



2. Untighten the motor screw by about 1-1.5 turns.



3. Thus adjusted, the motor screw will provide optimal operation. After calibration and at the first use of the replica, the motor screw may still require delicate adjustments. Once you've set it correctly, secure the screw to prevent it from getting loose.

Installing bolt-catch:

1. Make sure that the wires from the divider do not in collide with the bolt-catch.



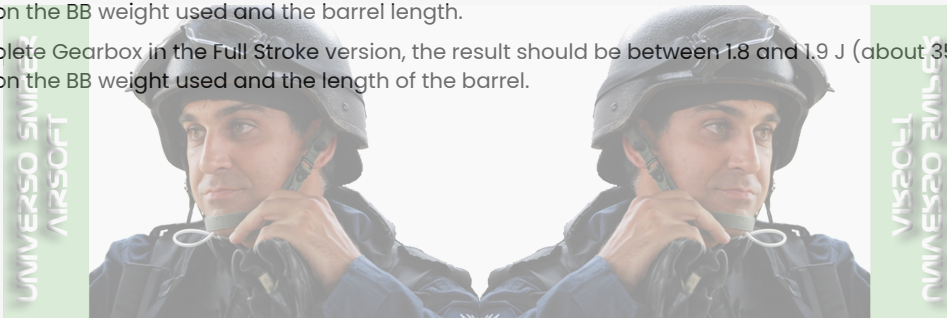
2. If they enter the opening of the gearbox, they should be gently bent to lie closer to the surface of the gearbox.



1. Connect the battery and calibrate the trigger and selector – [Installation procedure – points 27 & 28.](#)
2. Fire the first shot and evaluate the motor screw. It may still need adjustment – tighten or loosen the pressure screw. Secure the screw against loosening. You should aim for such a setting of the motor screw, in which the operation of the replica is the quietest.
3. Install the upper part of the replica body including the barrel and chamber.

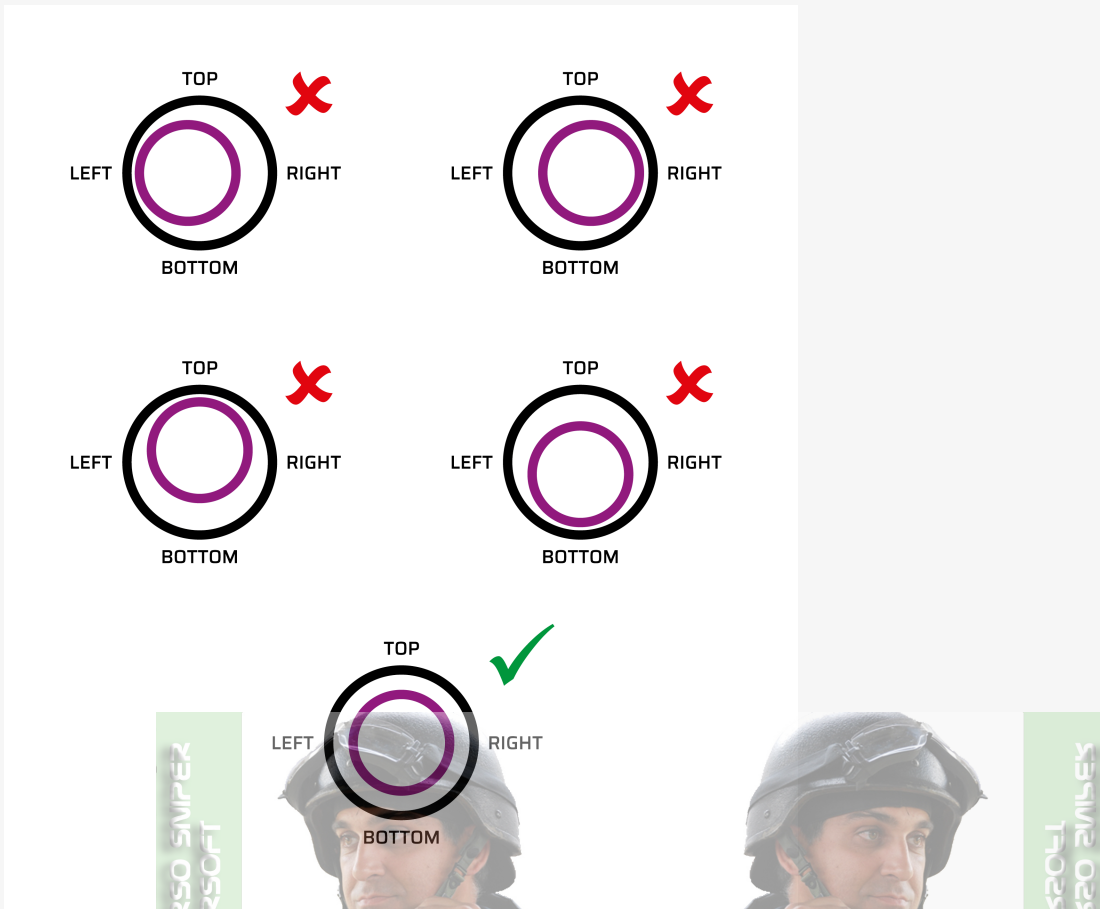


4. Insert your magazine loaded with the BBs of the weight you're going to be using.
5. Carry out FPS measurements using a chronograph.
 - a. For the EON Complete Gearbox in the Short Stroke version, the result should be between 1.1 and 1.2 J (about 350 FPS with 0.2 g BBs), depending on the BB weight used and the barrel length.
 - b. For the EON Complete Gearbox in the Full Stroke version, the result should be between 1.8 and 1.9 J (about 350 FPS with 0.2 g BBs), depending on the BB weight used and the length of the barrel.



6. If you have encountered FPS spikes or results that are too low, then probably the gearbox has not been installed axially in the lower receiver.

- a. If you have specialized knowledge of replica building, you can correct the gearbox deviation from the body axis yourself. Otherwise, it is best to have a reliable service technician align the replica.
- b. Using an inspection camera with a diameter of less than 6 mm is most effective in assessing the deviation from the axis.
 - i. Insert the camera through the barrel and bring it close to the hop-up bucking.
 - ii. You may then see an image similar to one of the four situations.



iii. The deviations shown above will result in a sudden change in the trajectory of the BB in the same direction as the deviation from the axis. Example: The BBs are drifted to the left - the nozzle is moved more to the left. Solution - you need to move the front of the gearbox to the right, aiming at the centric location of the nozzle in relation to the hop-up bucking.

iv. Right-left correction will be carried out with the help of the adjustment screws supplied with our gearbox, which should be screwed into these holes marked in the photo and with them change the position of the gearbox. You can secure these screws with thread glue or a specific number of washers.



- v. You will carry out the top correction by shimming a spacer in the form of, for example, a piece of artificial material with a width equal to or less than the inner width of the body of the replica under the gearbox in the area in front of the trigger or by collecting material from the surface in contact with the rear of the gearbox/rear of the replica body around the location of buffer tube guide.
- vi. You will make the bottom correction by shimming something on the surface in contact with the spring guide or collecting material from under the gearbox in the area in the front of the body.
- vii. In each replica, these values will vary and it may require many hours of correction to achieve perfect alignment of the replica. However, this will bring very good results in the form of stable FPS measurements and a repeatable BB trajectory, resulting in high accuracy.
- viii. If you overcome the problem and improve the axiality of your replica, it is ready for use.

Technical Specifications

The design and production of the device is based on harmonized standards.

| | |
|--|---------------------------|
| Supply Voltage Range | 3.75-17 VDC |
| Rated Current | 30 A |
| Current Consumption | 27 mA |
| Low Power Mode | 100 μ A |
| Connectivity | Bluetooth® 5.2 Low Energy |
| Dimensions (Length x Width x Thickness) | 98,4 x 25,4 x 163 mm |
| Finished Product Weight | 170 g |
| Operating Temperature Range | min. -15° C, max. +50° C |
| Relative Humidity | \leq 80% |

Legal Notice

Please read the Legal Notice before operating your device and keep it for future reference. This document contains important terms and conditions with respect to your device. By using this device, you accept these terms and conditions.

Exclusion of Liability

GATE Enterprise sp. z o.o. sp. k. is not liable for any damages, injuries or accidents of any kind resulting from the use of this product or airsoft gun with the product installed, including (but not limited to) incidental or special damages to airsoft gun, airsoft gun parts, batteries and gearbox internals.

Disclaimer

GATE Enterprise sp. z o.o. sp. k. takes no responsibility regarding compliance of the product with the requirements of any law, rule or airsoft restrictions pertaining thereto.

Intellectual Property

Intellectual Property owned by GATE Enterprise sp. z o.o. sp. k., including but not limited to, devices, accessories, parts, software, documentation, is proprietary to GATE Enterprise sp. z o.o. sp. k. and protected under Polish laws, EU laws, and international treaty provisions. You may not violate the rights of the Intellectual Property and you will not prepare derivative works of or reverse engineer the device or software. No ownership in the Intellectual Property is transferred to you.

GATE Limited Warranty Policy

GATE Enterprise sp. z o.o. sp. k. warrants that its Product is free from manufacturing and material defects at the date of purchase and for a period of two (2) years from the date of purchase and it is nonextendable. This Limited Warranty is conditioned upon proper use of Product by Purchaser.

This Limited Warranty is valid provided that the owner provides a proof of purchase and properly completed warranty form.

This Limited Warranty does not cover: (a) defects or damage (e.g. mechanical, thermal or chemical) resulting from accident, misuse (misinterpretation of the instructions), abuse, neglect, unusual physical, electrical or electromechanical stress, water immersion, repairs or structural modification of any part of Product, or (b) the Product that has its serial number removed or made illegible; (c) defects or damage from improper operation, maintenance or installation, (d) installation of the products.

Requests for warranty are processed as soon as possible, not exceeding seven (7) working days. The company's obligation under this Limited Warranty shall be limited to providing replacement of parts only.

The color of the product may vary slightly depending on the batch.

Product Disposal Instructions

The symbol shown here means that the product is classified as Electrical or Electronic Equipment and should not be disposed with other household and commercial waste at the end of its working life. The Waste of Electrical and Electronic Equipment (WEEE

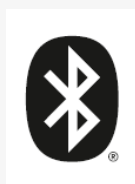
Directive 2012/19/EU) has been put in place to recycle products using best available recovery and recycling techniques to minimize the impact on the environment. Purchasers shall take any old electrical equipment to waste recycling public centres or points of sale.



Certificates and Regulations

Bluetooth® Trademark Attribution

The Bluetooth® by both, the word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by GATE Enterprise sp. z o.o. sp. k. is subject to licensing. Other trademarks and trade names are those of their respective owners.



Product Compliance

Declaration of Conformity

GATE Enterprise sp. z o.o. sp. k. hereby declare under our sole responsibility that GATE TITAN II Bluetooth® is in conformity with the essential requirements of the following directives: 2014/53/UE, 2011/65/UE.



Product Compliance Regarding the Use of the BGM220S Module

The BGM220S modules have been tested against the relevant harmonized standards and are in conformity with the essential requirements and other relevant requirements of the Radio Equipment Directive (RED) (2014/53/EU)

This device complies with FCC's e-CFR Title 47, Part 15, Subpart C, Section 15.247 (and related relevant parts of the ANSI C63.10.2013 standard) when operating with the embedded antenna or with the antenna type(s) listed in 11.1.1 Qualified Antennas. Operation is subject to the following two conditions:

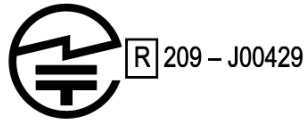
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesirable operation. Any changes or modifications not expressly approved by Silicon Labs could void the user's authority to operate the equipment

This radio transmitter (IC: 5123A-BGM220S for the BGM220S12A and IC: 5123A-BGM220S2 for the BGM220S22A) has been approved by Innovation, Science and Economic Development Canada (ISED Canada, formerly Industry Canada) to operate with the embedded antenna and with the antenna type(s) listed in 11.1.1 Qualified Antennas, with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain listed, are strictly prohibited for use with this device. This device complies with ISED's license-exempt RSS standards. Operation is subject to the following two conditions:

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

Contains a radio module

当該機器には電波法に基づく、
技術基準適合証明等を受けた
特定無線設備を装着している。



This device contains
FCC ID: QOQ-BGM220S2
IC: 5123A-BGM220S2

Contient le module transmetteur: 5123A-BGM220S

当該機器には電波法に基づく、技術基準適合証明等を受けた特定無線設備を装着している。

This equipment operates on a secondary basis and, consequently, must accept harmful interference, including from stations of the same kind, and may not cause harmful interference to systems operating on a primary basis.

The BGM220S22A are certified in Japan with certification number 209-J00429.

The BGM220S22A modules have a RF certification for import and use in South-Korea. Certification number is: R-R-BGT-BGM220S2. The BGM220S modules come at launch with a pre-qualified Bluetooth Low Energy RF-PHY Tested Component having Declaration ID of D044526 and QDID of I55407, and having a listing date of 2020-09-04.

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GATE HELP CENTER

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Error

GateMovies

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GATE Enterprise

Aún no le ha gustado a nadie