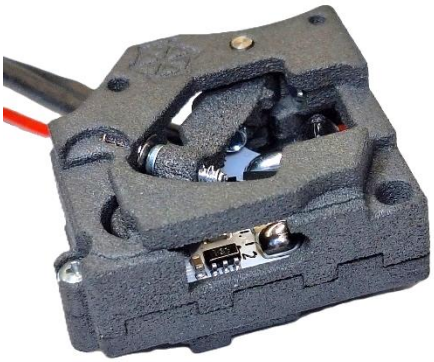
Perun for Arcturus V2

User and installation manual



Perun for Arcturus V2 replaces the mechanical contacts in the replica and adds a wide range of useful features. Optical selector-position and sector-gear sensing, together with magnetic trigger sensing, eliminates wear-prone electrical contacts and provides reliable operation. Multiple trigger adjustments, including an integrated adjustable Clicker, allow the trigger feel to be tailored to the user's preferences. Adaptive trigger control allows trigger travel to be changed in the field, from very short to long, with either the supplied trigger or a compatible stock Arcturus trigger.

Read this manual to make full use of the unit's capabilities and to find solutions if a problem occurs.

Manufacturer:
Perun Tech Sp. z o. o.
Barwicka 8 St.
60-192 Poznań, Poland
e-mail: info@perunairsoft.pl

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1. Technical data

Recommended power sources

Perun for Arcturus V2 works with any power source that provides 7–17 V and can deliver sufficient current for smooth cycling of the replica. Li-Po and Li-Ion batteries with nominal voltages of 7.4 V, 11.1 V, or 14.8 V are recommended. Use batteries with the highest practical capacity and "C" rating. This reduces battery stress by preventing operation near the battery's discharge limit. The following video explains why:
https://www.youtube.com/watch?v=s8RKcIy810A

Battery capacity and the "C" rating also affect the replica's ROF:
https://www.youtube.com/watch?v=5hO25aPvHcU

Compatibility with high-ROF and high-power builds

Perun for Arcturus V2 can be used in both standard and highly tuned replicas, including high-power and high-ROF builds.

Compatible gearboxes, gears, and triggers

Perun for Arcturus V2 is designed for selected Arcturus Version 2 gearbox variants, including the older proprietary microswitch gearbox and later variants with compatible selector geometry. Arcturus has used several gearbox and selector plate designs, sometimes within the same product family. A replica or gearbox family name alone is therefore not sufficient to confirm compatibility. Before installation, compare the selector mechanism with the supported layouts shown in the Installation section.

⚠ ***G95/G95K compatibility:*** *the split-gearbox variants are not drop-in compatible, but an experienced technician can make them compatible. Fitting may require reshaping the supplied selector-plate adapter and removing material from the unit housing and/or nearby gearbox features to provide sufficient selector travel and clearance for the ambidextrous selector components. This is a custom installation and is not covered by the standard procedure.*

Use the Arcturus microswitch-type trigger supplied with this product. A compatible stock Arcturus trigger already present in the replica may also be used. Standard Tokyo Marui Version 2 and other aftermarket triggers are not officially supported. Any gearset can be used, including DSG, TSG, short-stroked, helical, and non-helical gearsets, in any ratio. Microswitch-based gearboxes made by other manufacturers, including ZCL, Shooter, and Specna Arms, are not compatible. Selected Nuprol Delta replicas use an Arcturus gearbox and may be compatible; verify the selector layout before installation.

Electronic fuse

Perun for Arcturus V2 has an integrated electronic fuse that automatically cuts power in the event of a short circuit or gearbox jam. The fuse does not wear out when activated.

Battery connector type

Perun for Arcturus V2 is supplied with a factory-installed T-Plug (T-Deans) connector.

Standby current consumption

With the battery connected and the selector in SAFE, Perun for Arcturus V2 draws approximately 1 mA. This current is negligible during normal use but may fully discharge and damage the battery if the replica is stored with the battery connected for a week or longer. Always disconnect the battery after use!

Brushless motors (BLDC)

Perun for Arcturus V2 works with both traditional brushed and brushless (BLDC) motors. When using a brushless motor, follow the motor manufacturer's recommendations regarding active brake and, where available, PWM-based ROF reduction.

Conformal coating

Perun for Arcturus V2 is protected by a transparent conformal coating that helps protect the unit from humidity and water.

⚠ *During coating, a small amount may extend onto the first few centimeters of wire insulation. Because the wires are more flexible than the coating, the coating may crack and leave visible marks. This is normal and does not affect operation.*

2. How does it work?

Optical sector-gear and selector-position sensing, together with magnetic trigger sensing, eliminates wear-prone electrical contacts and provides reliable operation across a wide range of component combinations. The electronic sensing system contains no wear-prone electrical contacts.

Sector gear detection

During operation, the white plastic cut-off lever follows the sector gear's cut-off cam. The opposite end of the lever has a reflective surface positioned above an infrared (IR) reflective sensor. As the sector gear rotates, the cam moves the lever and changes the amount of IR light reflected back to the sensor. Perun for Arcturus V2 uses this change to determine the current phase of the gearbox cycle.

Selector sensor

Two reflective IR sensors monitor the position of the spring-loaded selector part inside the unit housing. The replica's selector plate moves this part across the sensors. Depending on its position, the part reflects IR light back to neither, one, or both sensors, allowing the microcontroller to distinguish SAFE, SEMI, and AUTO. Selector calibration compensates for minor differences in selector-system geometry and reflectivity.

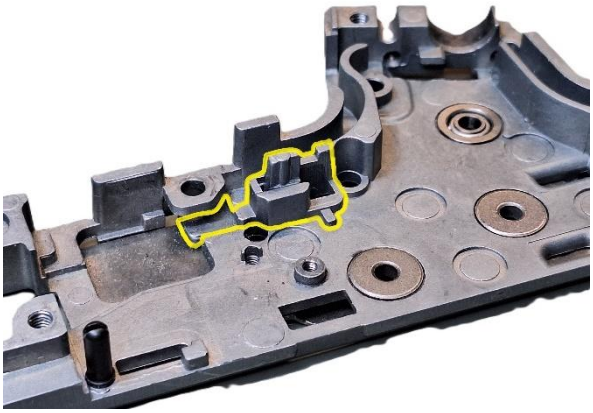
Trigger

Hall-effect sensors monitor the magnetic field generated by the magnet installed at the end of the trigger lever. The readings are sent to the unit's microcontroller, which may initiate a shot according to the trigger position and sensitivity setting. The sensors can also detect an external magnetic object near the replica. If one is detected, the unit activates the external magnetic field alarm to prevent an unintended shot.

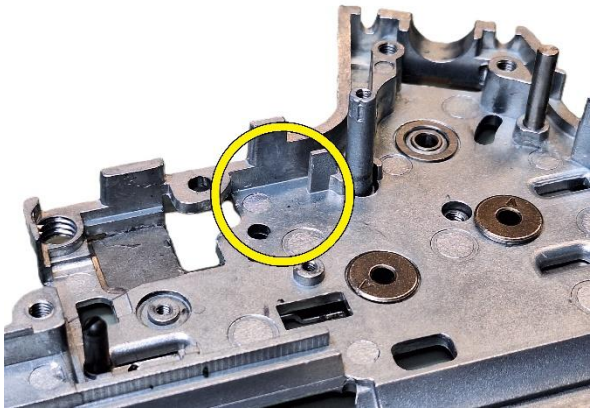
3. Installation

Before installation: *compare the selector mechanism in the gearbox with the two supported layouts shown below. If it does not match either layout, the standard installation procedure does not apply. Do not force the unit into place. G95/G95K installations require custom fitting as described in the compatibility section.*

1. **Move the selector plate to AUTO and leave it in this position until instructed otherwise. Remove the gearbox from the replica and open it. Before removing the gears, photograph or record the position of every shim washer so that the original shimming can be restored. Remove the microswitch, wiring, and original cut-off lever.**
2. Compare the selector mechanism with the two supported layouts shown below.

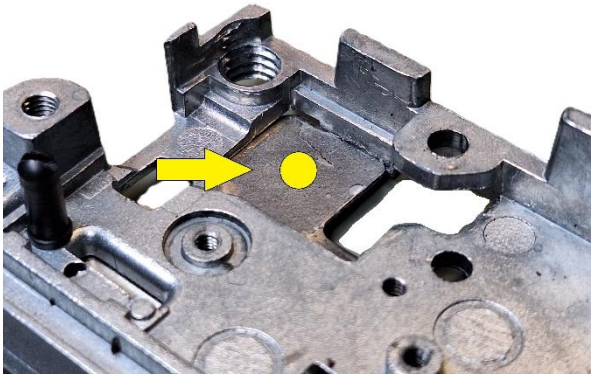


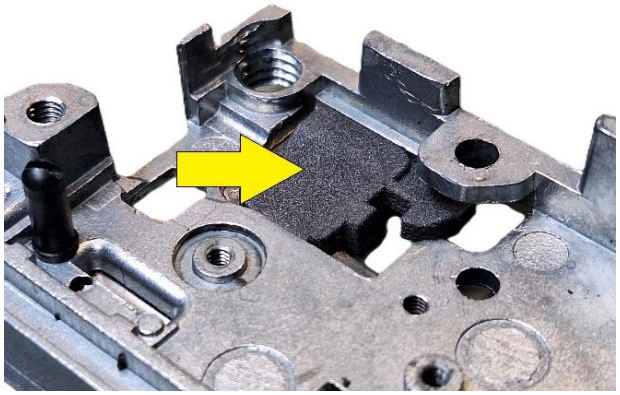
Supported layout A

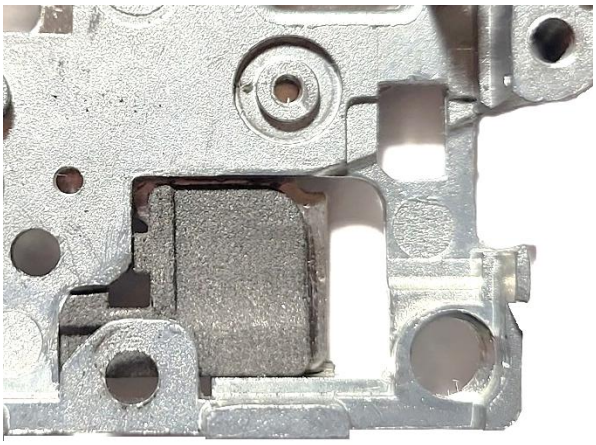


Supported layout B

Layout A uses the standard/CAT-type selector assembly. Layout B requires the supplied selector-plate adapter. For layout B, keep the selector in AUTO, degrease the selector plate, apply a small drop of cyanoacrylate adhesive, and attach the adapter as far right (toward the muzzle) as possible. If neither layout matches, stop and refer to the compatibility section.







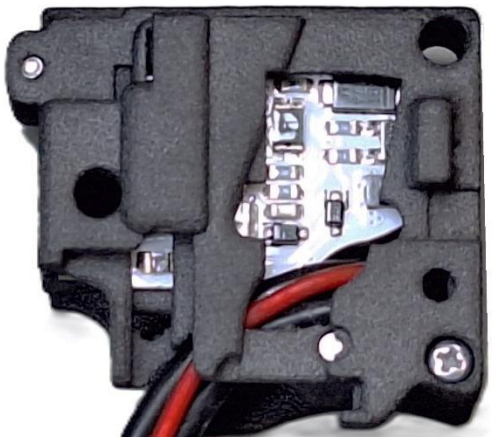


3. Secure the supplied white plastic cut-off lever with the screw.

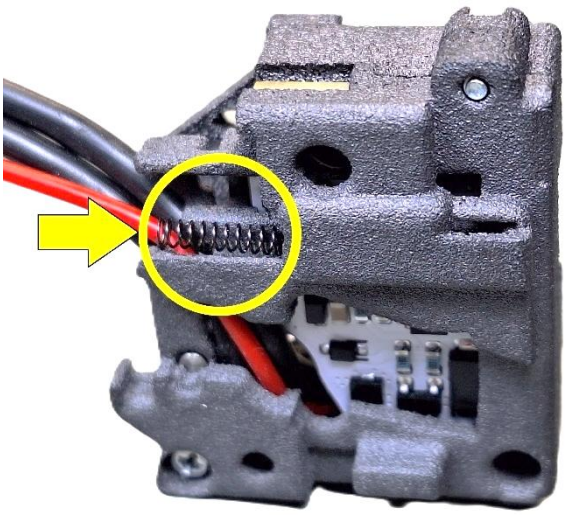


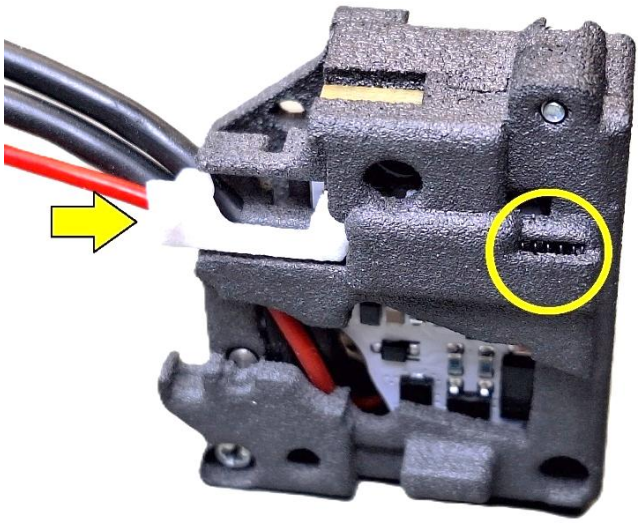
4. Prepare the selector part and its spring.



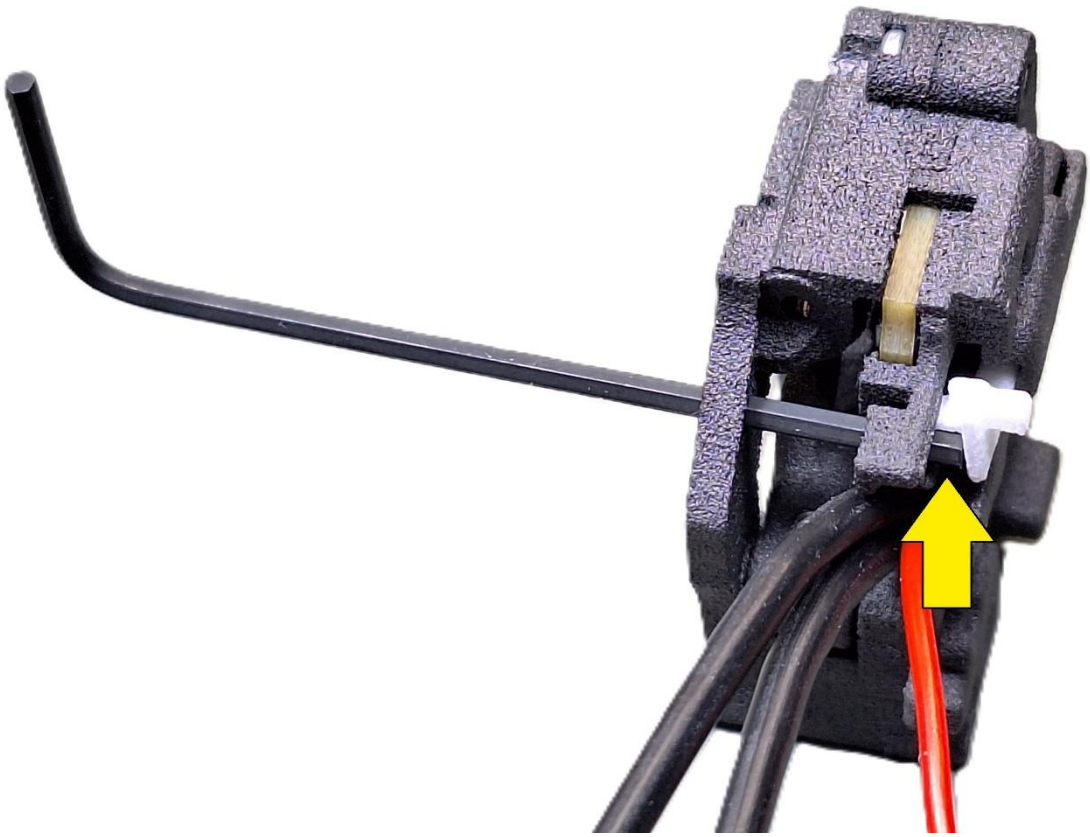


5. Insert the spring first, followed by the selector part. Ensure that the spring is correctly positioned. Do not use excessive force. The spring is very soft; when correctly positioned, it allows the selector part to slide in smoothly.

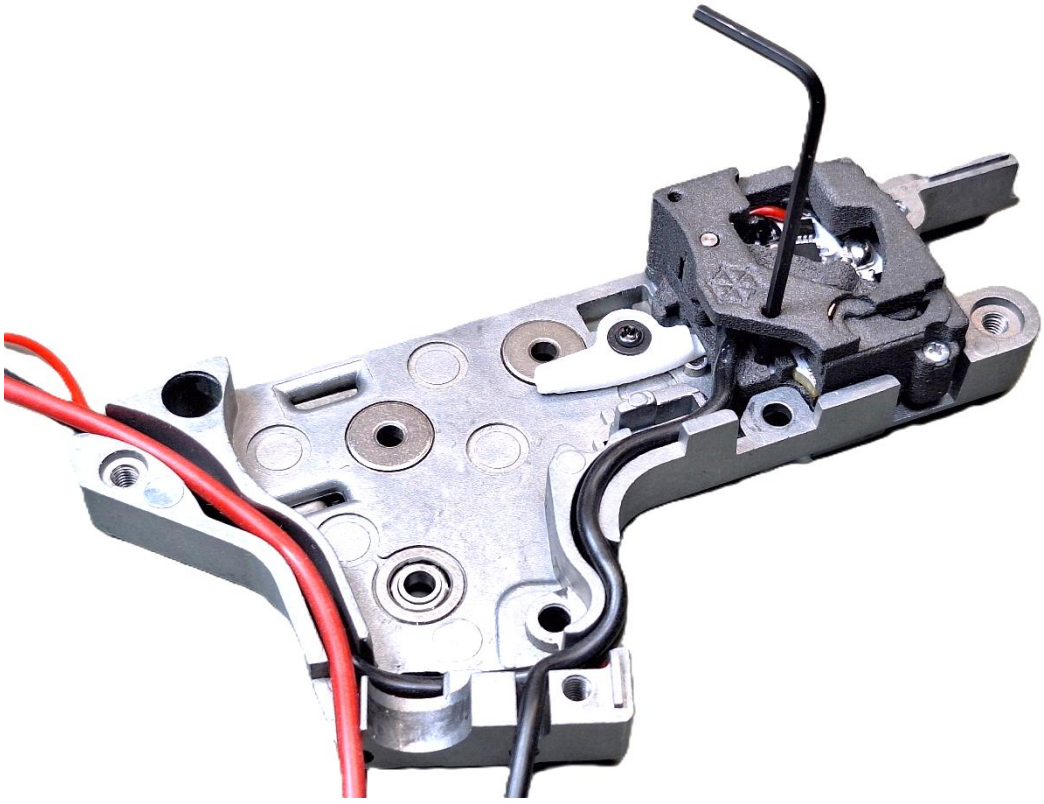




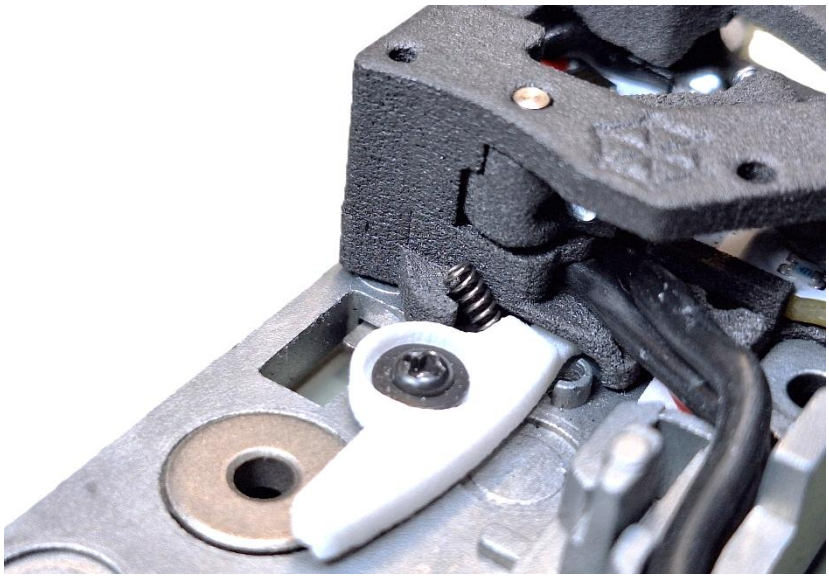
6. Push the selector part fully into the housing and lock it in place with the hex key.



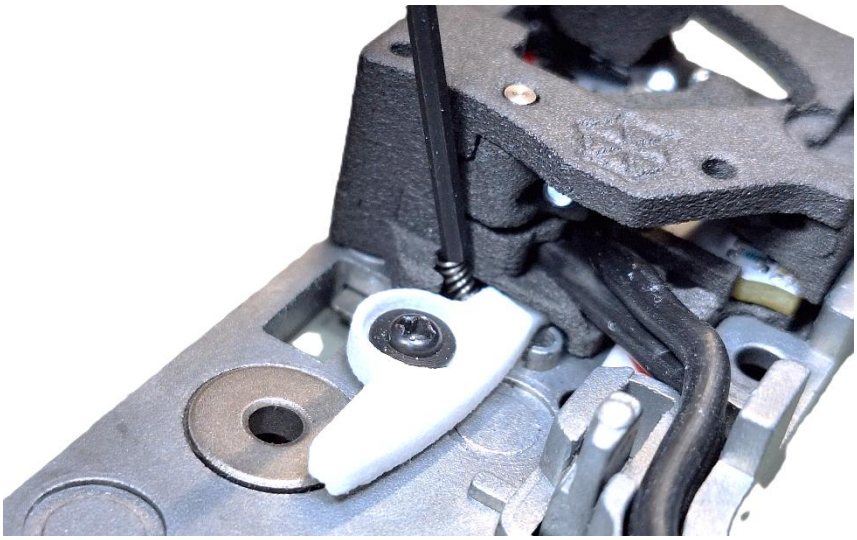
7. Place the complete assembly in the gearbox shell. Ensure that the cut-off lever does not obstruct installation; rotate it carefully as required to provide clearance. Once the assembly is seated, remove the hex key. The selector part should rest on the original selector component in supported layout A or on the supplied adapter in supported layout B.



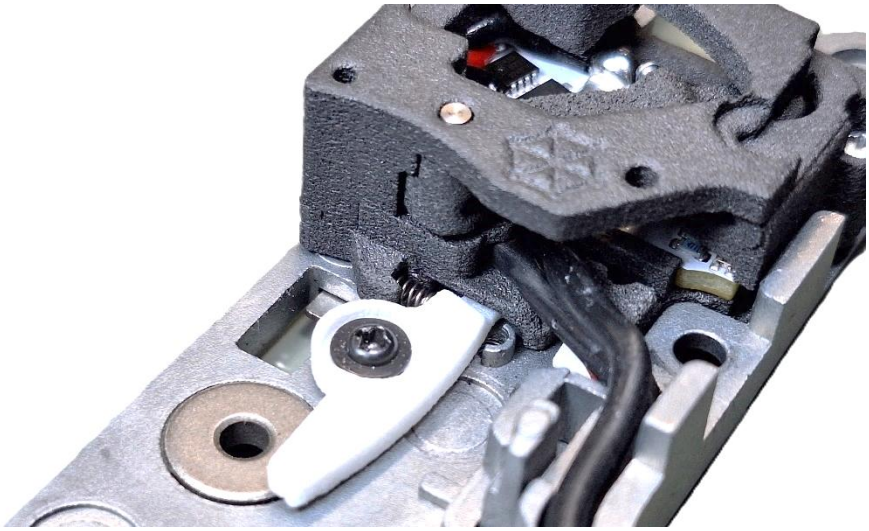
8. Install the short cut-off-lever return spring. Place the spring on the cut-off lever's post as shown below.



Push the short spring into the recess in the main housing.



The short spring should then rest in the recess as shown below.



9. Choose the trigger to be installed. If the replica already contains the Arcturus microswitch-type trigger shown on the right, it may be reused. Remove all attached parts so that only the bare metal trigger remains. If the replica uses a different trigger, use the Arcturus trigger supplied with Perun for Arcturus V2.



10. Install the prepared or supplied Arcturus trigger. The original trigger spring is optional and may be retained or removed according to the preferred trigger feel.
    - ⚠ *If the original trigger spring is not used, set pretravel to zero. This prevents the trigger from hanging loose and improves its return angle against the pretravel screw on the trigger lever.*
    - ⚠ *When the original trigger spring is not used, keep overtravel relatively short. Excessive overtravel may cause the trigger to return slowly or fail to return fully.*
11. Adjust the trigger feel before installing the remaining gearbox components, as described in the next section. After adjustment, pull and release the trigger at least 10 times, including several firm pulls. The trigger and trigger-break lever must return immediately after every pull. If either component returns slowly or sticks, correct the adjustment before continuing.
12. Install the remaining gearbox components. Before closing the shell, verify that the ambidextrous selector components, mock-bolt or bolt-return mechanism, and all gearbox-shell features move freely and do not press against the unit housing. Ensure that no wires are trapped and that the shell closes without force. Do not force the gearbox closed. Assemble the complete replica only after these checks are complete.

4. Trigger feel adjustment

Trigger break force

Trigger break force is adjusted by changing the trigger lever. Two levers are supplied: one with a small screw for a lighter break and one with a larger screw for a stronger break. The screw may also be removed from either lever to eliminate the break completely. The soft-break lever is installed by default.

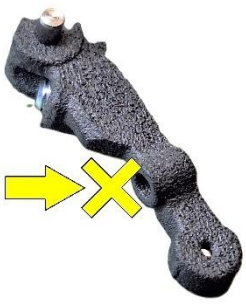
Default soft-break lever



Hard-break lever



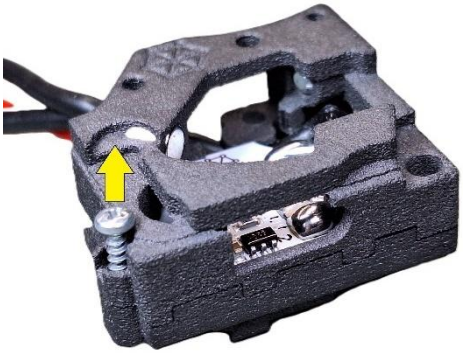
Lever with screw removed

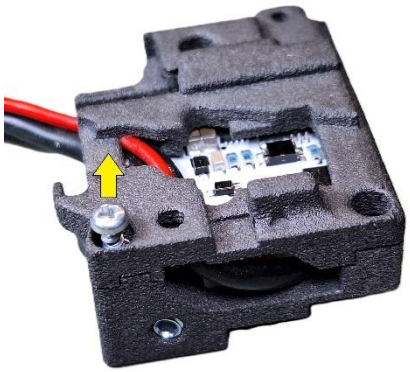


- ⚠ *In supported layout B, the default soft-break lever can be used without any modification to the gearbox. If you prefer the stronger break, the hard-break lever can also be used, but the gearbox-shell protrusion that interferes with the larger screw must be carefully ground down to provide sufficient clearance.*

To adjust trigger break force, remove the upper part of the housing as follows:

1. Remove the retaining screws from both sides of the housing.

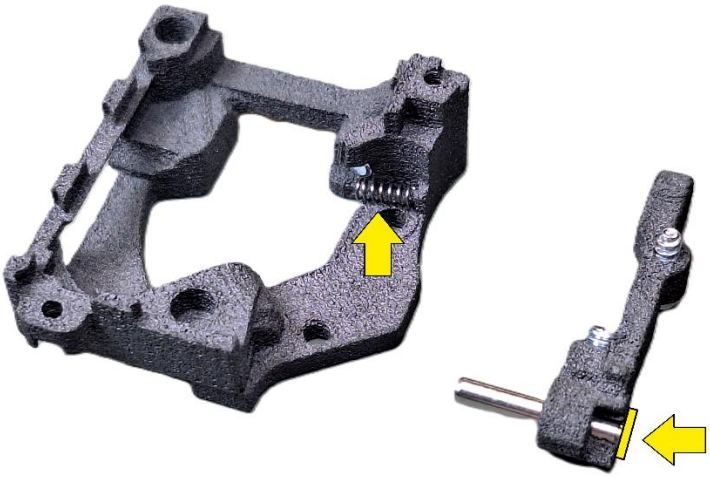




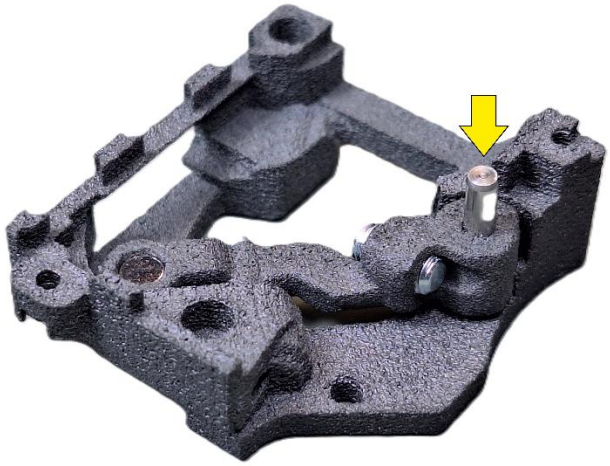
2. Remove the trigger lever.

⚠ ***Keep track of the small trigger-return spring. It is located between the lever and the upper housing. Open the housing carefully and be ready to catch the spring. If it is not visible, check whether it has adhered to the trigger-break magnet, directly or through the plastic housing.***

3. Install the required lever or remove its screw, depending on the desired trigger feel.
4. To reassemble the housing, first place the spring in its recess and slide the pin in the lever to the side as shown below. This makes installation easier.



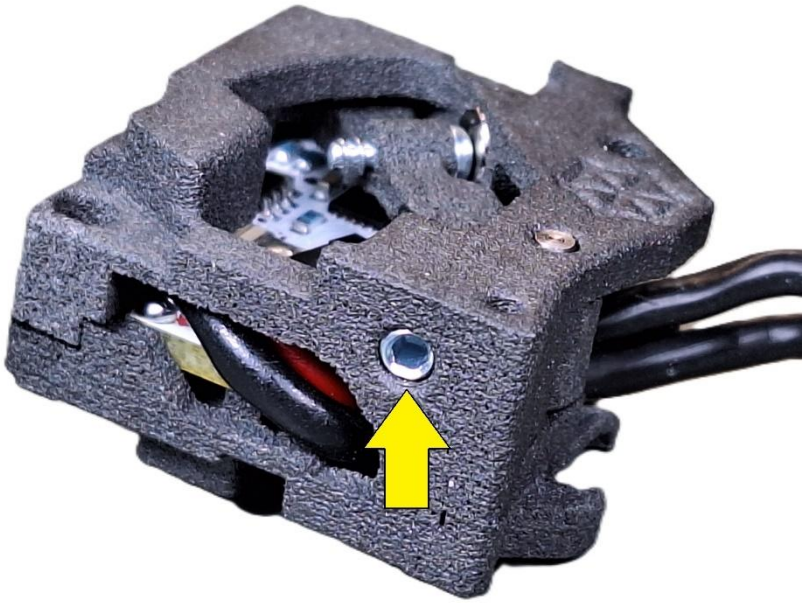
5. Install the lever and confirm that the spring is correctly positioned. Push the pin back into the hole so that it holds the lever in the upper housing during final assembly.



6. Reassemble the housing.

Overtravel

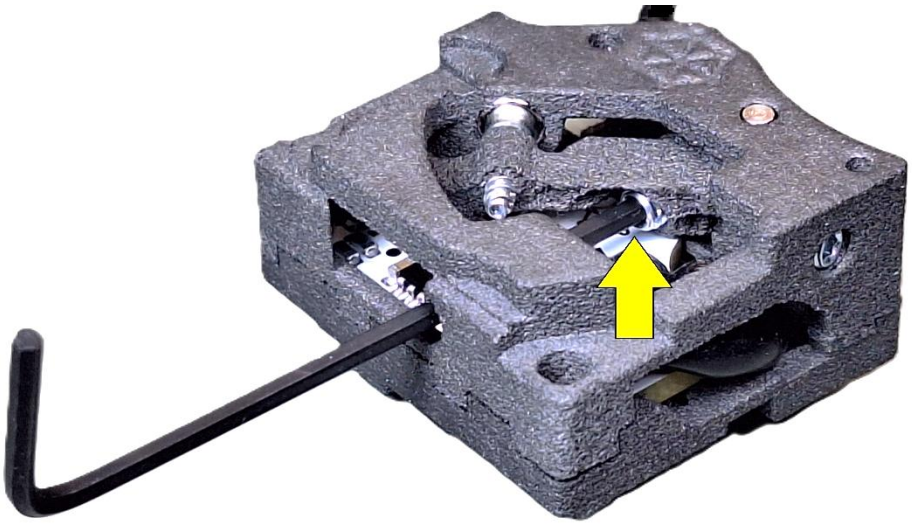
Overtravel is the distance the trigger moves after the break. Turn the screw clockwise to reduce overtravel and counterclockwise to increase it.



Pretravel

Pretravel is the distance the trigger moves before the break. Turn the screw clockwise to reduce pretravel and counterclockwise to increase it.

⚠ Turning the pretravel screw too far moves the break magnet away from the metal screw and reduces the break force. To eliminate pretravel while retaining the strongest break, turn the screw until it just contacts the trigger and removes free play without moving the magnet away from the metal screw.



5. Selector calibration

Two selector detection modes are available: default and calibrated. The default mode is the factory setting and may not provide optimal detection in every replica. Selector calibration is recommended for every installation. After successful calibration, the selector operates in calibrated mode. After an unsuccessful calibration, it returns to default mode.

Perform selector calibration only after installation is complete and all components are in place. The replica must be fully assembled, except that the motor must remain disconnected.

1) Enter Sensor check mode

Connect the battery while the motor remains disconnected.
A slowly blinking yellow LED indicates that Sensor check is active.

2) Start calibration

Pull and hold the trigger. The LED should remain solid purple while the trigger is held.
After a few seconds, the LED begins blinking white rapidly, indicating that calibration has started.

3) Calibrate the SAFE position

Set the selector to SAFE. Hold the trigger until the LED turns green, then release it.
The LED should now blink blue rapidly.

4) Calibrate the SEMI position

Set the selector to SEMI. Hold the trigger until the LED turns green, then release it.
If calibration is proceeding correctly, the LED should now blink red rapidly.

⚠ *If the LED immediately turns red instead of first turning green and then begins blinking yellow, the unit did not detect a change between SAFE and SEMI. The unit has returned to Sensor check. Refer to Unsuccessful calibration below.*

5) Calibrate the AUTO position

Set the selector to AUTO. Hold the trigger until the LED turns green, then release it.
If the LED turns red, refer to Unsuccessful calibration below.
The LED should now blink blue rapidly.

⚠ *If the LED immediately turns red instead of first turning green and then begins blinking yellow, the unit did not detect a change between AUTO and SEMI. The unit has returned to Sensor check. Refer to Unsuccessful calibration below.*

6) Confirm the SEMI position

Set the selector back to SEMI. Hold the trigger until the LED turns green, then release it.
If the LED turns red, refer to Unsuccessful calibration below.

7) Verify calibration

Remain in Sensor check.
Cycle through the selector positions and verify the following LED colors:

SAFE → White

SEMI → Blue

AUTO → Red

8) Exit Sensor check and reconnect the motor

Disconnect the battery, connect the motor, and then reconnect the battery. The replica is now ready for use.

⚠ *Always move the selector fully into its detent before firing. While the selector is between two positions, either neighboring firing mode may be detected. In some newer gearboxes, SAFE is electronic rather than mechanical. The trigger may still move and the Clicker may break normally while the selector is in SAFE; this is normal. The replica must not fire in SAFE.*

Unsuccessful calibration

If calibration is unsuccessful, check the following:

1) **Incorrect assembly or obstruction of the selector mechanism.** Ensure that the selector plate, spring-loaded selector part, and—when used—the supplied selector-plate adapter are correctly positioned and move freely.
2) **Excessive selector plate play.** Ensure that the selector plate does not have excessive play and consistently moves the selector part through its full range.
3) **No response from the selector sensors.** If the sensors do not react to selector movement in Sensor check (no white, blue, or red indication), contact Perun.
4) **Damaged selector components.** Replace any damaged selector plate, selector part, or selector-plate adapter before repeating calibration.

6. Features and programming

A video showing how to change settings in Perun for Arcturus V2 and other newer Perun products is available here:
https://youtu.be/a0bWR79-Foo
The video covers the basic programming procedure. Complete information about the available modes and settings for Perun for Arcturus V2 is provided in this manual.

To enter programming mode:
For SEMI: leave the selector in SEMI for a few seconds, then move it to AUTO and back twice in quick succession: SEMI → AUTO → SEMI → AUTO → SEMI.
Successful entry into SEMI programming mode is confirmed by one sound signal and a blue LED.
For AUTO: leave the selector in AUTO for a few seconds, then move it to SEMI and back twice in quick succession: AUTO → SEMI → AUTO → SEMI → AUTO.
Successful entry into AUTO programming mode is confirmed by three sound signals and a red LED.

Move the selector between AUTO and SEMI to navigate between functions. Pull the trigger to enable or disable a function or to change its level.

⚠ *Programming is available only for 5 minutes after the battery is connected or after the most recent activity in programming mode.*

Full feature description

All settings are configured independently for the SEMI and AUTO selector positions, except the Li-Po/Li-Ion alarm and Master reset, which apply to both positions.

Function and LED color	Description
Firing mode Green	Choose the firing mode for each selector position: SAFE, semi-automatic, burst, automatic, or binary. No sound signal and steady green LED – SAFE 1 short sound signal and LED flash – semi-automatic 3 short sound signals and LED flashes – burst 1 long sound signal and LED flash – automatic 2 long sound signals and LED flashes – binary (semi-automatic; one shot is fired when the trigger is pulled and another when it is released) ***Tip: In binary trigger mode, hold the trigger for 2 seconds to cancel the second shot.***
Burst count Green and white blinking alternately	Set the number of shots in a burst. 2–5 short sound signals and LED flashes – 2–5-round burst
AB Blue	Active brake (AB) stops the motor after a shot, preventing the spring from remaining compressed and eliminating double shots in semi-automatic mode caused by overspin in high-ROF replicas. Five braking levels are available, from 1 (weakest) to 5 (strongest), and braking can also be disabled. Unless stronger braking is necessary, disable AB or use the lowest effective level, because stronger braking increases motor-brush wear and heat. ***Tip: To release the spring, select SEMI, fire one shot, and continue holding the trigger. After 3 seconds, the unit fires a second shot using the strongest AB setting, ensuring that the spring is left uncompressed. Perform this procedure after shooting.*** ⚠ *In Perun for Arcturus V2, active brake is independent of precocking settings.* No sound signal while the LED glows blue means that active brake is disabled. One to five signals indicate braking levels from 1 (weakest) to 5 (strongest).

Function and LED color	Description
Precocking Yellow	In semi-automatic mode, precocking holds the piston in the rear position, ready for the next shot. This reduces the delay between pulling the trigger and firing, increases realism, and can provide an advantage in CQB. Select the correct precocking level individually for each replica and according to user preference. Precocking power is adjusted automatically to battery voltage and firing mode. ***Tip: To release the spring after using precocking, select SEMI, fire one shot, and continue holding the trigger. After 3 seconds, the unit fires a second shot using the strongest AB setting, ensuring that the spring is left uncompressed. Perform this procedure after shooting.*** ⚠ *In Perun for Arcturus V2, precocking is independent of active brake settings.* No sound signal while the LED glows yellow means that precocking is disabled. One to eight signals indicate precocking levels from 1 (weakest) to 8 (strongest).
Two-stage trigger Purple and green blinking alternately	The two-stage trigger fires one mode when the trigger is pulled slightly and another when it is pulled farther. The following combinations are available: semi-automatic → burst semi-automatic → automatic burst → automatic Burst count is set to 3 by default. If a 2-, 4-, or 5-round burst is selected under Burst count, the same burst length is used by the two-stage trigger. ⚠ *The two-stage trigger is not compatible with binary mode. Enabling the two-stage trigger automatically disables binary mode.* ⚠ *To use the two-stage trigger, completely disable the integrated Clicker's trigger break.* No sound signal while the LED alternately blinks purple and green means that the two-stage trigger is disabled. When it is enabled, the sound-signal pattern identifies the selected combination.
Trigger sensitivity Purple and yellow blinking alternately	This setting determines trigger sensitivity. Eight levels are available. A shot is fired after the lower tip of the trigger travels approximately: 1 – 6 mm 2 – 5 mm 3 – 4 mm 4 – 3 mm 5 – 2 mm 6 – 1 mm 7 – 0.5 mm 8 – 0.25 mm These values are approximate and may vary depending on the parts used and mechanical trigger adjustment. One to eight signals while the LED alternately blinks purple and yellow indicate sensitivity levels from 1 (lowest) to 8 (highest).

Function and LED color	Description
ROF reduction White	This function reduces the rate of automatic fire. Five reduction levels are available: 1 – 6% 2 – 12% 3 – 18% 4 – 24% 5 – 30% ⚠ *These values are approximate and may vary depending on the replica configuration.* ⚠ *Semi-automatic shots and the first shot in each burst are always fired without power reduction to preserve trigger response.* No sound signal while the LED glows white means that ROF reduction is disabled. One to five signals indicate reduction levels from 1 (smallest) to 5 (greatest).
DMR mode Purple	DMR mode permits only semi-automatic fire and limits shot frequency. It is intended primarily for high-power DMR-style replicas used at fields that require such limitations. Intervals of 0.25 s, 0.5 s, 1 s, 2 s, and 3 s are available. No sound signal while the LED glows purple means that DMR mode is disabled. One to five signals indicate interval levels from 1 (shortest) to 5 (longest).
Li-Po and Li-Ion alarm Teal	The Li-Po/Li-Ion alarm indicates that battery voltage has fallen below 3.7 V per cell. Stop using and recharge the battery. The unit automatically detects the number of cells and determines the safe voltage range. Short sound signals every 30 s indicate that the battery must be replaced or recharged. Disable this function when using other battery chemistries. No sound signal while the LED glows teal means that the alarm is disabled. One signal indicates that the alarm is enabled.
DSG Green and blue blinking alternately	Enable this function when using a dual sector gear (DSG) to improve cycle control. No sound signal while the LED alternately blinks green and blue means that DSG mode is disabled. One signal indicates that DSG mode is enabled.
Master reset Red	Master reset restores the unit's factory settings. To reset the unit, pull and hold the trigger for 2 seconds, or wait 10 seconds without pulling the trigger while the LED glows red. A long sound signal confirms that factory settings have been restored.

7. Factory settings

New units and units restored with Master reset use the following factory settings:

- Firing mode – semi-automatic in SEMI; automatic in AUTO
- Burst count – 3-round burst
- AB – level 3
- Precocking – disabled
- Two-stage trigger – disabled
- Trigger sensitivity – level 4
- DMR mode – disabled
- ROF reduction – disabled
- Li-Po and Li-Ion alarm – enabled
- DSG – disabled

8. Diagnostic system

Perun for Arcturus V2 includes a diagnostic system to help identify the source of a problem. After the battery is connected, the unit performs a start-up check to verify that the replica is ready to operate. Successful completion is indicated by a short green LED flash.

Problem and LED color	Description
Disconnected motor / Sensor check Yellow, blinking	This indicates that the motor is disconnected and activates Sensor check for the trigger, selector, and sector-gear sensors. With the motor disconnected, activating a sensor briefly lights the LED purple (trigger), white, blue, or red (selector), or green (sector gear). Use this mode for troubleshooting. Reconnect the motor to restore normal operation. Motor status is checked at start-up and when the unit attempts to fire. A disconnection while the replica is powered but idle is not indicated.
Fuse activation Red, continuous, or blinking	Fuse activation indicates either a short circuit (continuous red) or a gearbox jam (blinking red). In some cases, the unit may classify one condition as the other. The electronic fuse may also activate when a component combination draws excessive current, for example a high-speed motor and high-speed gears. After the battery is reconnected, the unit resumes normal operation unless a short circuit remains and is detected during the next start-up.
Gearbox cycle detection failure Yellow and green blinking alternately	The sector-gear sensor did not detect a gearbox cycle. If the replica fires an unintended burst in semi-automatic mode, check that the white cut-off lever is installed correctly, follows the sector gear's cut-off cam, returns freely under spring force, and presents its reflective surface to the sensor. If the replica does not fire, the motor may be faulty or worn, or an electrical connection may be unreliable.
Unit temperature is too high Yellow and white blinking alternately	The electronic board is too hot. The unit remains disabled until it cools down, after which normal operation resumes.
Battery with too low voltage is connected Yellow and teal blinking alternately	A battery below 7 V is connected. Replace it with a battery providing 7–17 V.
Battery with too high voltage is connected Red and teal blinking alternately	⚠ A battery above 17 V is connected. Disconnect it immediately, because it may permanently damage the unit. Replace it with a battery providing 7–17 V.

Problem and LED color	Description
An external magnetic field was detected  Red and purple blinking alternately	The trigger sensors detected an external magnetic field not generated by the trigger magnet. The unit remains blocked until the source of the magnetic field is removed.
Main transistor or driver damage  Red and yellow blinking alternately	The main transistor or driver is damaged. The unit must be sent back for repair.
Battery voltage sensing malfunction  Red and white blinking alternately	The battery detection system is malfunctioning. The unit must be sent back for repair.
Trigger sensor errors  White and green blinking alternately	If any of these errors appears, disconnect and reconnect the battery. If the error remains or returns intermittently, contact Perun at info@perunairsoft.pl.
Purple and green blinking alternately  Blue and green blinking alternately	

Other known problems:

Problem	Cause	Solution
Replica fires a 2-round burst in semi-automatic mode.	The motor and battery are too powerful for the main spring, causing overspin.	Enable AB or precocking.
	The precocking level is too high.	Set precocking to a lower level.
	The cut-off mechanism is not operating correctly.	Check that the white cut-off lever and its short return spring are installed correctly and move freely.
Replica does not fire; the unit emits no light or sound.	Incompatible T-Deans battery connector.	T-Deans plugs and sockets from different manufacturers may not make reliable contact. A plug may appear to fit while the conductive surfaces do not touch. Test with another battery, preferably one with a T-Deans socket from a different manufacturer.

The battery, motor, or both become very hot.	**The battery capacity (mAh) and/or “C” rating is too low.**	**Use a battery with a higher capacity and/or “C” rating.**
	The motor is too weak.	Use a stronger motor, possibly with neodymium magnets.
	Excessive friction increases motor load, for example due to: – incorrect shimming; – motor misalignment in the pistol grip.	Remove the cause of the friction.
	The motor/gear ratio/spring combination draws excessive current, for example a high-speed motor, high-speed gears, and an M120 spring.	Use a softer spring, higher-ratio gears (lower speed, higher torque), or a motor with a higher TPA or lower rotational speed.
When the trigger is pulled, the replica remains silent or vibrates briefly; then the LED turns green and one sound signal is emitted.	A gearbox jam or short circuit is present, but low battery power or a poor battery connection causes the unit to reset because of voltage drop before the electronic fuse can activate correctly.	Remove the cause of the gearbox jam or short circuit.
	The build draws more power than the battery can provide, causing the unit to reset because of voltage drop.	Use a battery capable of delivering more current.
An external magnetic field error appears even though no external magnet is near the replica.	The trigger was held during start-up.	Reconnect the battery without holding the trigger during start-up.
When ROF reduction is enabled, the electronic fuse activates or the replica does not fire.	ROF reduction is too high for the motor to cycle the gearbox.	Reduce the ROF reduction level or disable the function.
The motor emits sound signals periodically.	The Li-Po/Li-Ion alarm has activated.	Replace or recharge the battery. If the battery is not Li-Po or Li-Ion, disable the alarm.
SAFE mode does not work.	The receiver wall in front of the selector sensors is not sufficiently black.	Apply black tape or a black sticker, or paint the receiver wall directly in front of the sensors black, even if it already appears dark.
	The selector plate is too reflective.	Paint the relevant selector-plate edges black, apply black stickers, or replace the selector plate.

For technical assistance, contact us at info@perunairsoft.pl.

9. Sensor check

Sensor readings can be checked by disconnecting the motor. When Perun for Arcturus V2 is connected to the battery while the motor is disconnected, the LED blinks yellow. Activating a working sensor while the LED is blinking causes the LED to change color briefly. Sensor check remains active for 5 minutes, after which the unit shuts down. To restart the mode, reconnect the battery.

⚠ *To enter Sensor check, disconnect the motor before connecting the battery.*

LED color	Sensor
Disconnected motor / Sensor check  Yellow, blinking	None of the sensors detects any change at this moment.
Selector in AUTO  Red	The LED should turn red when the selector is moved to AUTO.
Selector in SEMI  Blue	The LED should turn blue when the selector is moved to SEMI.
Selector in SAFE  White	The LED should turn white when the selector is moved to SAFE.
Trigger  Purple	Trigger pull detected.
Sector gear  Green	Sector gear movement detected.

Check the trigger and selector sensors by pulling the trigger and moving the selector between SAFE, SEMI, and AUTO. The replica does not need to be disassembled for these checks.

To check the sector-gear sensor, open the gearbox and remove all components except Perun for Arcturus V2 and the sector gear. Keep the sector gear shimmed exactly as it is in the assembled gearbox, because shimming may affect sensor operation. Rotate the sector gear by hand and verify that the white cut-off lever follows the cut-off cam and that the LED turns green at the appropriate point in the cycle.

10. Warranty and liability limitations

Warranty

We offer a 24-month warranty on this electronic trigger unit from the date of retail purchase. This warranty covers defects in materials or workmanship under normal use conditions. The warranty does not cover:

- Damage caused by improper installation, misuse, or neglect.
- Any alterations, modifications, or repairs made by unauthorized persons or third-party services.
- Damage resulting from the use of third-party components or accessories not approved by the manufacturer.
- Wear and tear due to regular use or external factors such as extreme conditions.
- Any incidental, consequential, or punitive damages, including damage to the replica or to other components such as the gearbox, motor, or batteries, arising from improper use of the trigger unit.

Claims process

To submit a warranty claim, contact our customer service team at info@perunairsoft.pl with a detailed description of the defect. If your claim is approved, we will repair or replace the unit at our discretion. This warranty does not cover shipping costs for returning the product. This warranty gives you specific legal rights, and you may have other rights that vary by region.

Limitation of liability

The manufacturer and its affiliates are not liable for any personal injury, damage, or loss of property arising from:

- Improper installation or use of this product.
- Failure to follow the instructions provided in this manual.
- Use of the product in a manner not intended or recommended by the manufacturer.