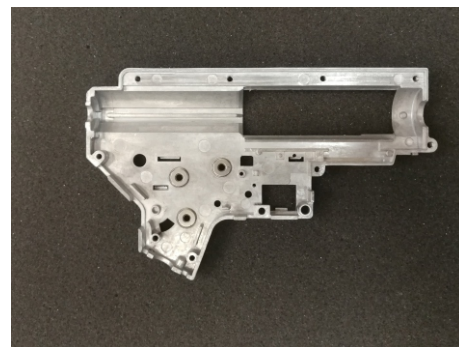


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# **Arm-V** **Desire** manual

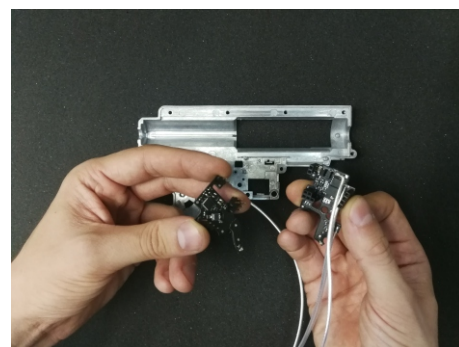
## Arm-V Desire installation

Desire is installed inside the gearbox version 2. Before installation, you will need to remove the gearbox from your gun, disassemble it, remove all internal parts and clean it.

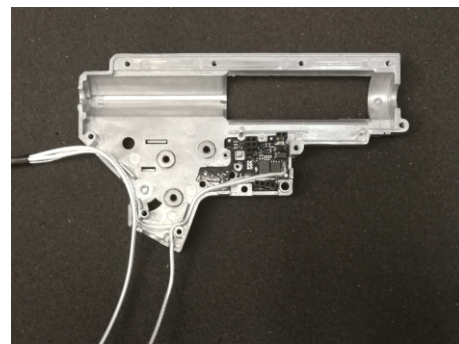


Remove the top Desire board by pulling on it.

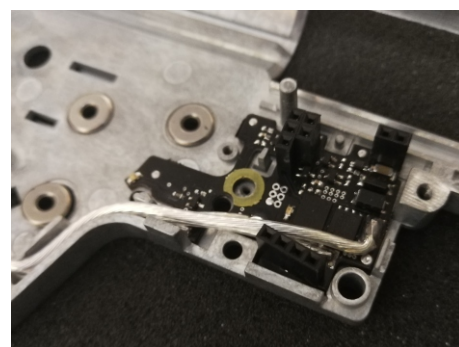
**ATTENTION:** Do not try to remove or install the top board with the battery connected! Do not connect the battery with the top board disconnected!



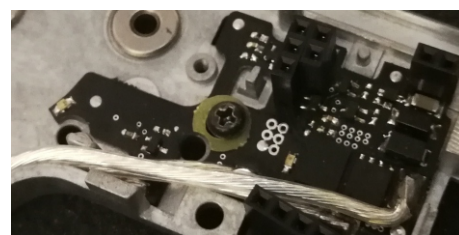
Install the Desire bottom board to which the wires fit. Make sure that it is adjacent to the wall of the gearbox and nothing prevents it. Route thin wires first, then wire from the battery to the board, and wires leading to the motor on top.



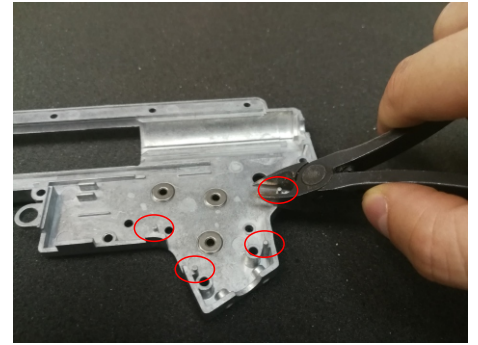
Install the supplied dielectric washer.



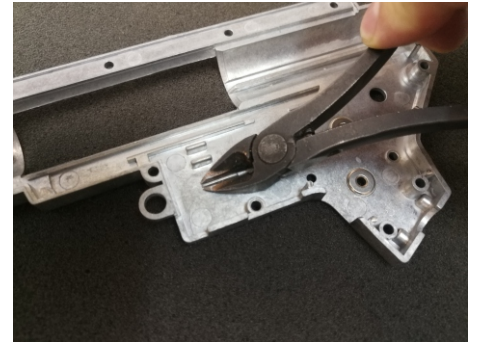
Secure the board with the screw for the contact group. Make sure that the screw does not stick out from the back and will not interfere with the movement of the selector bar.



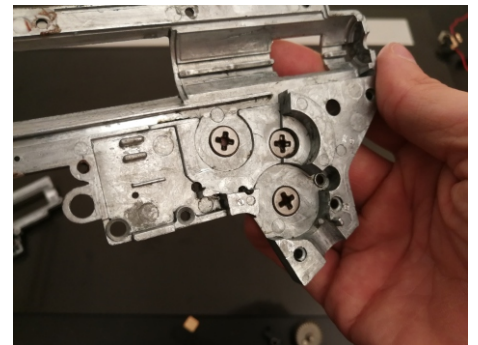
Some gearboxes require modification, check if you have pins marked on the photo on the second wall of the gearbox. If they are, they must be removed.



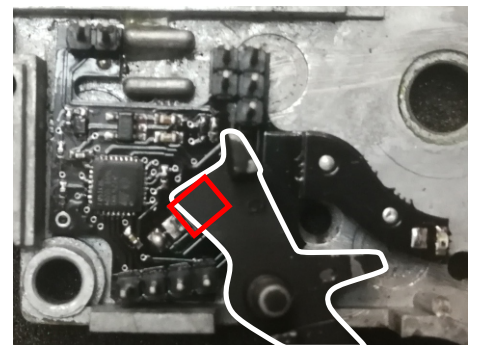
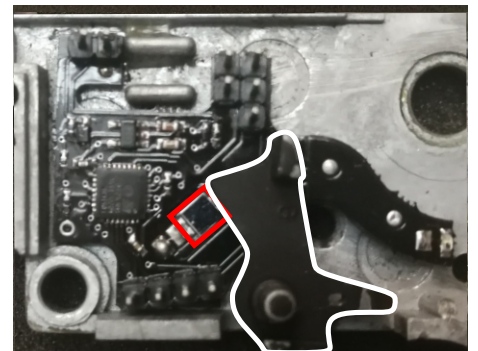
The height of the guide contact group in different gearboxes is different and can rest against the board. For a safe installation, reduce its height with a drill or remove it completely with wire cutters. Do not try to install Desire without removing this guide, it may damage it.



Some gearboxes have a step protruding 1 mm around the hole for the sector gear sleeve, it must be sharpened with a drill in the area of the board.



Attach the top Desire board to the right side of the gearbox. The big blue element on the board is the sensor responsible for the trigger position. Make sure that the trigger in the base position will be at the beginning of this sensor and when pressed will completely close it. On some models, usually milled, there may be a cutout on top of the trigger which, when pressed, will open the sensor. This cutout must be closed for the sensor to work properly.



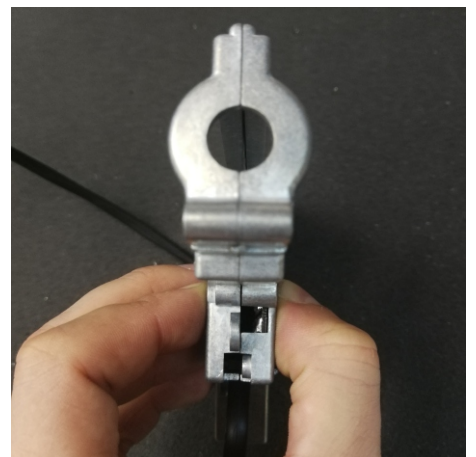
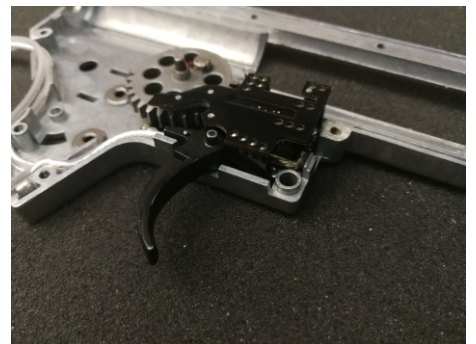
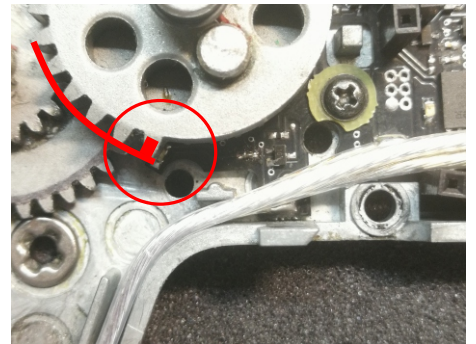
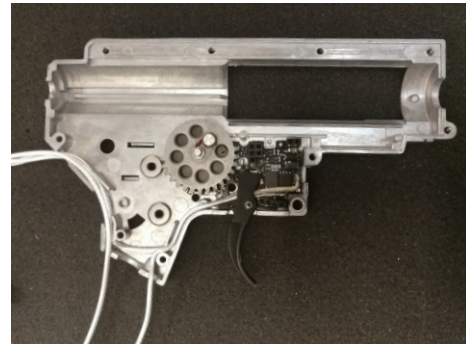
Install the trigger and sector gear with the right amount of washers.

ATTENTION: Desire is not compatible with 32:1 gears.

Make sure that the gear sensor is located near the outer radius of the teeth of the sector gear, and does not go under its main part (the inner radius of the teeth).

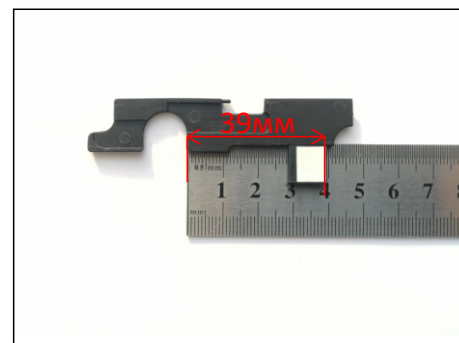
Install the top board.

Attach the second wall of the gearbox and make sure they fit tightly without any effort. After that, make sure that the sector gear rotates freely and the trigger is pressed freely, without clinging to the elements on the board.

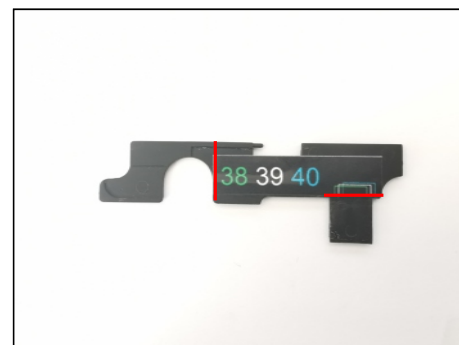




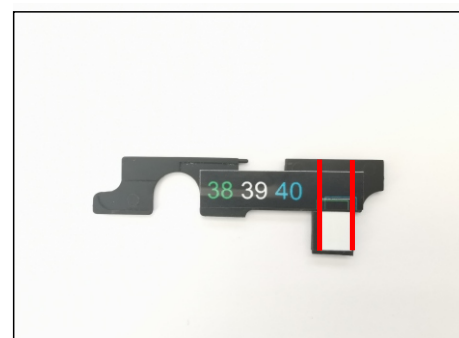
On the inside of the selector strip, stick a sticker with the number 8 from the kit so that the distance from the end of the cutout to the end of the white part of the sticker is exactly 39mm, this is an average value and can be adjusted later.



For convenience, first install the “ruler” sticker with the numbers “38 39 40” flush with the cutout on the selector bar and above the tab where the reflective sticker will be glued.



Place the sticker with number 8 according to the white marks on the “ruler” sticker, wrap the excess on the other side overlapping each other.



Install the gearbox into the body, fix it with pins and a pistol grip. Connect Desire to battery and Arm-V usb adapter connected to PC.

Run the Arm-V program on the PC, if the program does not find Desire, disconnect it from the adapter and reconnect it by inverting the connector (reversing the polarity).



In the program, go to the sensors tab and make sure that all the sensors are working correctly, for this: - manually make a full rotation sector of the gear and make sure that the sensor switching is displayed in the program. When the gearbox is assembled, the operation of the gear position sensor is displayed in color (green and red) on the diagnostic graph; - press the trigger and make sure that the sensor in the program responds correctly; - check all positions of the fire switch SAFE, SEMI and AUTO. (incorrect operation, described below)



If the SAFE mode does not turn on for you, and the SEMI and AUTO modes work, then you need to move the sticker, increasing the previously set distance of 39mm by 1 mm, i.e. make it 40mm, which corresponds to the blue marks on the "ruler" sticker.



If the AUTO mode is not turned on for you, and the SEMI and SAFE modes work, then you need to move the sticker, reducing the previously set distance of 39mm by 1 mm, i.e. make it 38mm, which corresponds to the green marks on the "ruler" sticker.



In rare cases:

If, when the sticker with the number 8 is installed at a distance of 38.39 or 40 in the SEMI mode, the program shows "not enough reflection", use the sticker with the number 9.

If, when the sticker with the number 8 is installed, at a distance of 38.39 or 40 in one of the extreme modes (SAFE or AUTO), it shows SEMI, and when the sticker is shifted by 1mm, it starts to show SEMI in the other extreme mode, use the sticker with the number 7.

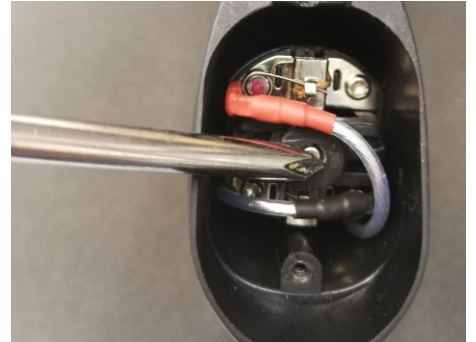
After you have made sure that all the sensors are working correctly, disconnect the Desire from the battery and start assembling the gearbox. The elements of the contact group, fuse and single fire cut-off are not installed, these functions will be performed by Desire.



Both wires must run along the rear wall of the pistol grip for proper motor positioning. To do this, after installing the pistol grip and before installing the motor, bend the wire with the black terminal as shown in the figure.



The polarity of the terminals on the motor is usually indicated by a marker on the underside. The motor is installed with a negative terminal to the rear wall of the pistol grip.





The color on the graph indicates the status of the gear sensor. A completely green graph means the gear position sensor is not working.

This can be if:

- the bottom board is rotated and the sensor is too close to the center of the sector gear.
- if the sensor was dirty during installation.

Disassemble the gearbox, check the position of the sensor, if necessary, gently wipe it with a cotton swab.

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Note: Due to the physical nature of the gearbox, the gear sensor switches a little earlier than the actual shot occurs. As a rule, the inertia of the motor is enough to tighten the shot to the end, but if on your own, after resetting the default settings and activating the active brake, the piston is always cocked after the shot to the extreme position (in the absence of anti-reverse, the shot will not occur at all, the piston will cocked and slowly go back) set the spring preload to 10-20%, make sure that the shot will continue to the end and the piston will stop in the initial position, then press the "function" button and then on the keyboard on the "F1" button. This correction will be written into memory, the pre-set settings will be turned off. To reset this correction, click the "restore default settings" button.

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**Attention! Arm-V Desire has its own power consumption. Disconnect your Arm-V Desire battery after playing. Long-term storage of the battery with the Arm-V Desire connected will result in complete discharge and damage.**

**Arm-V**

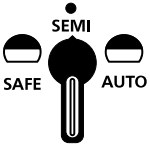


## Arm-V Desire function



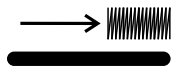
### ✓ TRIGGER SENSITIVITY SETTING

**Arm-V Desire** has an integrated optical sensor that accurately detects the current trigger position. You can configure the shot to occur when you lightly touch the trigger or when pressed deeply.



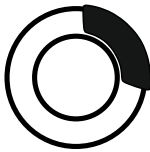
### ✓ ELECTRONIC FIRE MODE SWITCH

**Arm-V Desire** fully assumes the task of switching fire modes. The mechanics that were responsible for this are previously removed from the gearbox.



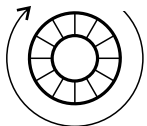
### ✓ SPRING PRE-DRAW

**Arm-V Desire** allows to adjust the spring pre-draw. This way you get an instant trigger reaction.



### ✓ ACTIVE BRAKE

The motor stops right after the contact group circuit. When firing in the single mode and auto mode if cycle control on, the piston won't go up by inertia, the spring will stay low, prolonging your gearbox service life.



### ✓ CYCLE CONTROL

**Arm-V Desire** analyzes the condition of the piston and stops the engine only after a shot is fired. With cycle control enabled, the spring in the auto mode will remain deflated.



### ✓ MAXIMUM ROUND LENGTH CONTROL

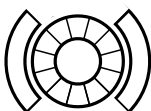
**Arm-V Desire** allows to limit the round with any number of shots and even turn



✓ **MULTIPLE SHOTS IN THE SINGLE FIRE MODE**

**Arm-V Desire** allows to set any number of shots in the single fire mode.

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✓ **MOTOR JAMMING PROTECTION**

In case of the motor jamming during the fire, **Arm-V Desire** prevention system will work, not allowing to damage the motor, battery and wiring.

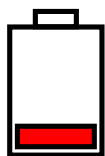
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✓ **SHORT CIRCUIT PROTECTION**

Reaction is so quick that the short circuit does not lead to damage of the electronic key and the battery irrespective of the time of emergence.

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✓ **BATTERY OVERDISCHARGE PROTECTION**

**Arm-V Desire** constantly controls the battery charge. When it's falling lower than 10%, you will hear the sound signal after the shot. Reaching the critical charge level, the controller will be turned off. The controller is compatible with LiPo, Li-Ion and NiCd batteries. It does not require any additional settings when you install the battery of the same type for

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✓ **CONNECTION TO EXTERNAL DEVICES**

Connection to external devices allows to perform more precise adjustment. It also activates some extra functions and allows to carry out diagnostics of your gun.

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## **Arm-V Desire** settings

Setting up all functions and diagnostics of the drive is possible only by connecting Arm-V Desire to the computer using the Arm-V usb adapter.