

Clicker V3

Installation manual



Clicker is an accessory designed for use with Perun drop-in devices for V3 gearboxes like Perun V3 Hybrid or Arcturus PE V3 dedicated Perun mosfets. It introduces a break to the trigger action, which needs to be overcome to fire a shot, somewhat similar to how the trigger works in a real firearm. Clicker is meant for realism enthusiasts, and everybody else who wants a tactile feel on the trigger.

Reading this manual will help you fully exploit this product's potential and in case of encountering any problems, you can look for solutions to them here.

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1. Compatibility

Clicker V3 works with Perun V3 Hybrid and PE V3 mosfet found in Arcturus PE series replicas.

Clicker was positively tested in following gearbox shell, compatible with Tokyo Marui V3 standard: Arcturus (TM compatible version, like in the PE models), D BOYI, CYMA, E&L, G&G, JG, LCT. When installed in APS or Bolt gearbox, modification to the Clicker might be required to let it fit inside the shell.

Clicker works with all standard V3 triggers, but some require modification. The details of this modification are discussed near the end of this manual.

In G36 and some other replicas, it might be necessary to modify the stock trigger lock part by grinding piece of it down. Details are shown in the installation section below.

We cannot guarantee, that all products from these manufacturers will always work properly with the Clicker, because of changes made to the parts over time. This list also does not mean, that Clicker will not work with gearbox shells and triggers made by other manufacturers. We just did not have the chance to test it.

With Clicker installed, the two-stage trigger functionality is no longer available!

2. How does it work?

Clicker V3 uses a magnet and a lever to simulate the “wall” or the “break”, a method which reduces possible wear on the parts. When the trigger is being pulled, it detaches a metal part from a magnet, which are in contact when at rest. Because the force of the magnetic field diminishes very fast with the distance, this results with a relatively crisp break. The force of the break is increased by use of a lever. Release of the trigger results with an audible reset, when the metal part gets very close to the magnet and instantly attaches to it.

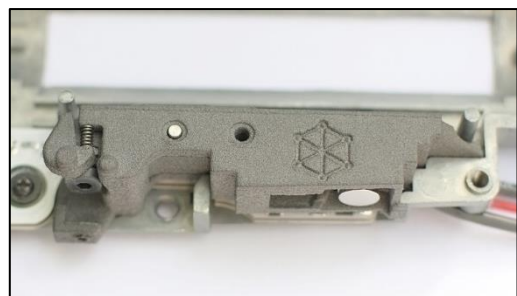
Clicker V3 already has a magnet needed by the mosfet to detect the trigger movement, so the original Hybrid magnet holder has to be removed.

Clicker V3's lever has a piece that is meant to engage with replica's mechanical trigger lock, increasing realism thanks to additional mechanical safety. However, in some replicas it might be possible to pull the trigger far enough to make the “click”, because of different tolerances of lock parts in different models and play that might exist because of that.

3. Installation and adjustment

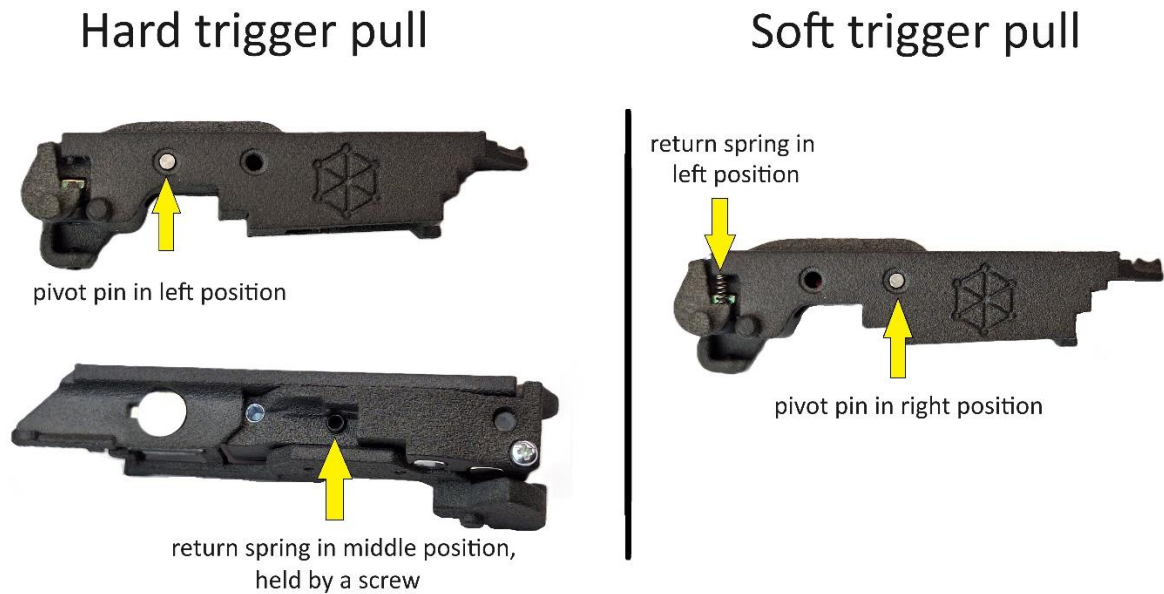
Installation

To install the Clicker, simply remove V3 Hybrid's magnet holder from the gearbox and insert the Clicker as shown on the photo. Then put the trigger in place. Installation of trigger spring is optional and depends on the user's preferences.



Break force

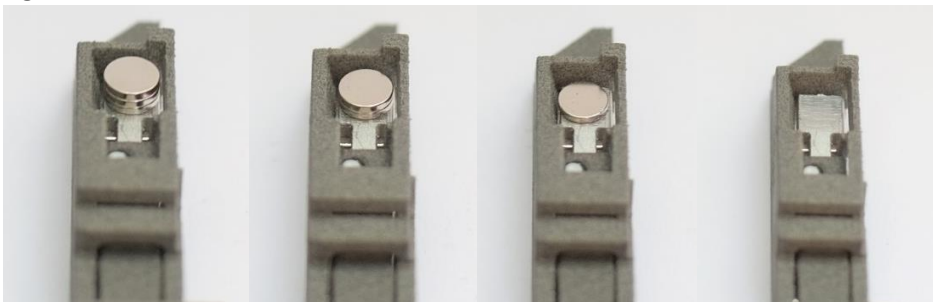
To adjust the trigger break force, choose one of the two pivot points for the Clicker's lever mechanism and changing the position of the return spring. The default setting is "hard", but you can change it to "light" by removing the pin and sliding it into the other pivot point, then removing the screw which holds the return spring in middle position and installing it in the holding fitting to the left.



Additional magnets for increased trigger hardness in replicas with plastic receiver

In replicas with plastic receiver, like G36 or some MP5k's, or replicas where the gearbox wall is not located directly under the gearbox, trigger hardness can be "boosted" by 6 x 1 mm disk magnets attached to the metal part. This helps to make up for the longer trigger in replicas like the G36, which would make the perceivable trigger break lighter. Clicker V3 is delivered with three such magnets. Magnets hold to the metal part by themselves and are not prone to falling off due to vibration. However, if the technician installing the Clicker chooses to do so, they can be additionally glued in place.

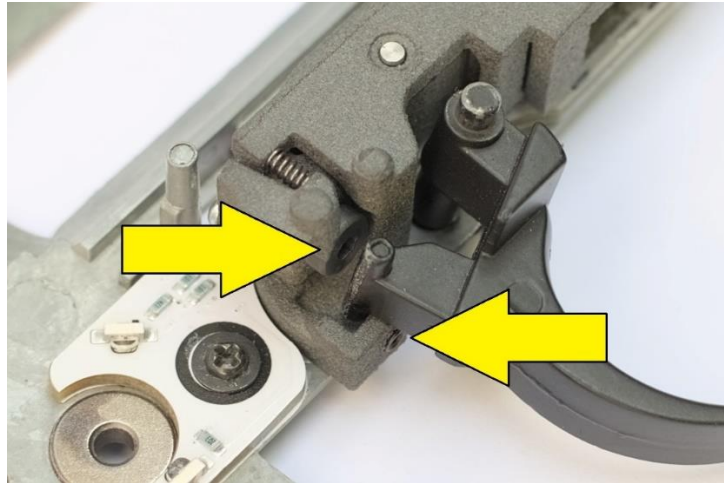
To make the trigger pull lighter, one, two or all the magnets can be removed from the metal part, as shown on the photos below. Configuration on the left provides the hardest trigger pull, while on the right – the softest.



⚠ Note, that using these magnets with steel AK receivers will cause Clicker to become locked! However, this can be worked around by gluing a piece of non-ferromagnetic material to the top magnet, so that it does not stick to the receiver. Keep in mind, that with such solution the overtravel will be additionally limited.

Pre-travel

Pre-travel is the low-resistance part of the trigger movement, before the wall is encountered. Pre-travel can be adjusted using two screws indicated below. This allows not only for the adjustment of pre-travel, but also of the trigger position when at rest, so that it is not positioned too far towards the front.



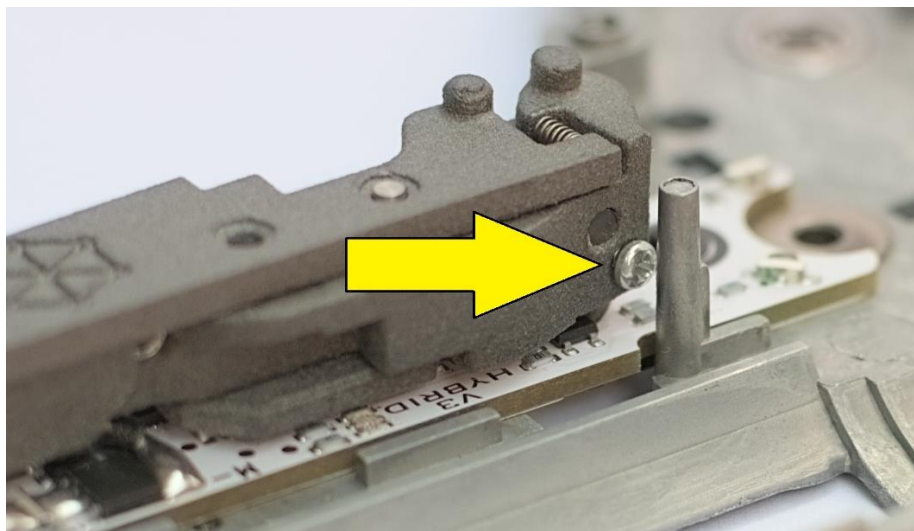
⚠ *If the trigger will be putting pressure on the Clicker when at rest, the break force will be weaker!*

Use of the trigger spring is optional with the Clicker, but if a lot of pre-travel is present, the spring is necessary to keep the trigger from hanging loose. When the break is adjusted to be lighter, the trigger feel will be much nicer, if the pre-travel will be reduced to zero and trigger spring will be removed.

Overtravel

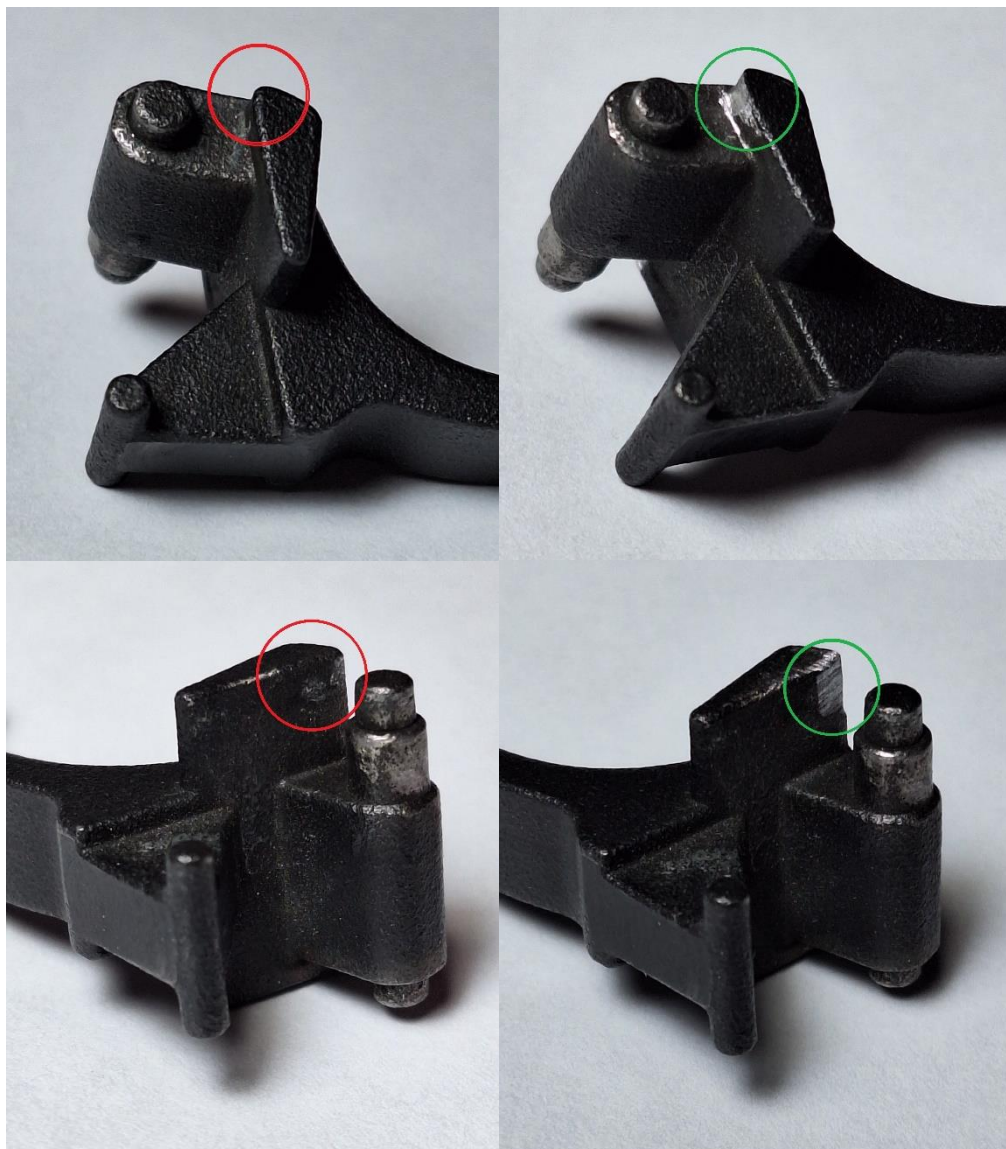
To limit how far the trigger can travel after the break, use screw shown on picture below. The overtravel screw can be removed completely, if situation requires that.

⚠ *Limiting the overtravel too much will cause the trigger not to reset properly, i. e. further shots will not be fired immediately after the trigger resets with an audible click. If the replica does not fire another shot unless the finger is taken completely off the trigger, increase the amount of overtravel.*



Tips for additional modification to increase realism

In some AK replicas it might be difficult to precisely recreate the trigger feel of a real AK, with its long pre-travel, because the range of trigger movement might not be wide enough. In such cases the technician installing the trigger should identify parts of the trigger piece that obstruct the movement and grind them down. Below an example is shown, with two pairs of “before (red) and after (green)” photos. These modifications, despite being very small, allowed the trigger to move forward far enough to give a good simulation of a real AK feeling and to move smoothly at the same time.



Perun V3 Hybrid's trigger sensitivity setting

Once the Clicker is installed in the gearbox, Perun's trigger sensitivity should be set to level 4 for both selector positions. In some cases it might be necessary to lower the sensitivity to level 3 to avoid shots before the trigger break, or to level 5 if very short overtravel is set up.

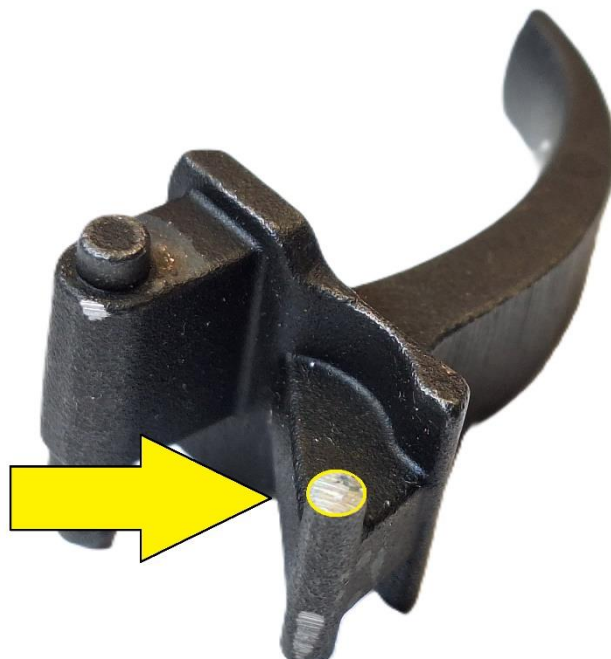
G36 trigger lock modification

In G36 and some other replicas with similar locking mechanism, the trigger lock part has to be modified in way shown below. The protruding part can be ground down, or even cut off with a pair of good cutting pliers.



Modification to the trigger required in some replicas

In some replicas, one of the surfaces near the “pushing” part of the trigger might require being ground down up to 0.5 mm, as shown on the picture below. If it is not needed, part of the Clicker that holds the smaller pre-travel adjustment screw, which the trigger part is scraping against, might be removed instead.



Testing before final assembly

We strongly recommend to take advantage of the benefit of the V3 gearbox, which is the possibility to test the gearbox without assembling the whole replica. Setting the Clicker up may in some cases require fine adjustments for it to function exactly as expected, including experimenting with various pre- and overtravel settings, and trigger sensitivity settings for Perun board. A lot of time can be saved by making sure everything works with only Perun board, Clicker, trigger and gears inside, and motor attached to the shell, yet without all the pneumatic parts and the main spring; before performing the main assembly. That's also the best and fastest way to experiment with the various settings.

The "Switch check" mode of the Perun board may not be enough to make sure, that trigger reacts as it should, because Switch check does not provide precise information about the reset of the board.

While performing these tests, if access to the programming mode is needed, simply put the selector plate in place and move it by hand, putting the selector plate insert before Perun board's selector sensors as needed to simulate SAFE, AUTO and SEMI positions.