

KESTREL[®]V3

Instruction Manual v1.2

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Specification



Voltage Range	3.75V—17V
Current	17mA
Dimensions (L/W/H)	78 x 25 x 13.5(mm)
Product Weight	27.6g
Temperature Range	-15°C—50°C
Humidity	≤80%

Product Features

- Kestrel V3 is a ETU module with wireless Bluetooth connectivity.
- With Kestrel V3, you can adjust your AEG's parameters from the mobile app, ESHOOTER (Android and iOS)
- Kestrel V3 is compatible with standard Tokyo Marui V3 gearbox.
- This is totally prewired with T-plug connector and mini fuse.
- New shooting experience: ROF, pre-cocking, active braking, etc.
- The highest battery voltage limit is 17v (LiPo/LiFe, 4 cells, 14.8v).

Cautions

1. Relevant technical skill is required for the installation of Kestrel V3 into your AEG.
2. In order to avoid any damage, please read through this instruction manual before installation.
3. Your AEG might be damaged by short circuit or battery misconnection which is not under the warranty. This might even cause fire or battery explosion
4. Kestrel V3 will go to sleep mode if your AEG is idle for an hour. Battery connection is required to reset to restart.
5. Please disconnect the battery after using your AEG, as Kestrel V3 maintains a small power consumption even this is not operated.
6. Do not connect the battery when your AEG points at yourself, others, or any creatures.
7. Do not modify or repair Kestrel V3 by yourself. Avoid immersing in any kind of liquid and keep away from any thermal shock equipment.

Toolkit Checklist



0.2mm :
(DIAM 6mm/ID 3.2mm
/THK 0.2mm)*2Pcs



0.3mm :
(DIAM 6mm/ID 3.2mm
/THK 0.3mm)*8Pcs



0.5mm :
(DIAM 6mm/ID 3.2mm
/THK 0.5mm)*8Pcs



Plum blossom
metal gasket*2Pcs



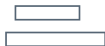
M2x4screw*2Pcs



30A Fuse*1



Deans-T*1



Heat shrink tube*2

3M

Double-sided Tape



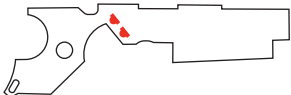
Metal Plate



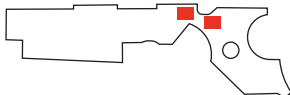
Selector plate sticker*1

Product Overview

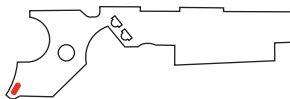
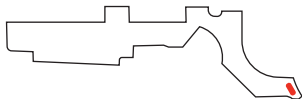
Trigger Detection: High precision control is achieved by 2 sets of infrared unit to detect the trigger's movement.



Mode Detection: Longer service life and higher accuracy are achieved by using two sets of light touch switches to determine the mode's switching function.

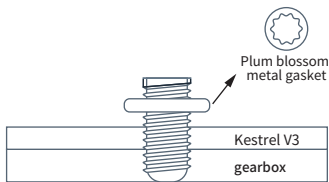
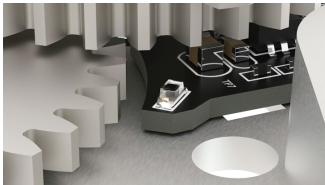


Gear Detection: Precise monitoring of gear movement is achieved by 2 sets of infrared units to detect the gear teeth and gear condition.

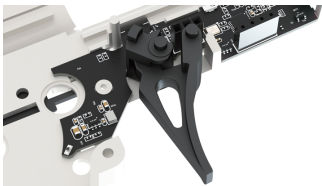


Preparation for Installation

1. Please follow all the safety precautions procedure in order to avoid any damage of your AEG, no matter how experienced you are.
2. Installation of Kestrel V3 is required a good technical knowledge of the gearbox mechanism. This is strongly recommended the installation should be done by the relevant technical persons. Any damage caused by mis-use or incorrect installation is not covered by the warranty.
3. Kestrel V3 does not support the infinite torque-up gear.
4. Apply a thin layer of grease only, excessive grease application might cover the gap between the sensors and teeth which can be resulted in the cycle detection problem. Please use appropriate viscosity and density of grease.
5. Please remember to configure the gear type in the ESHOOTER App (if your gears are out of stock) and perform first-time sensor calibration .
6. Please be careful that sector gear might damage the sensor during the installation.

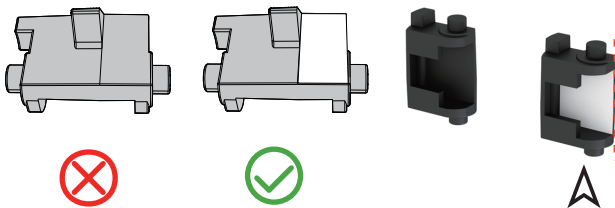
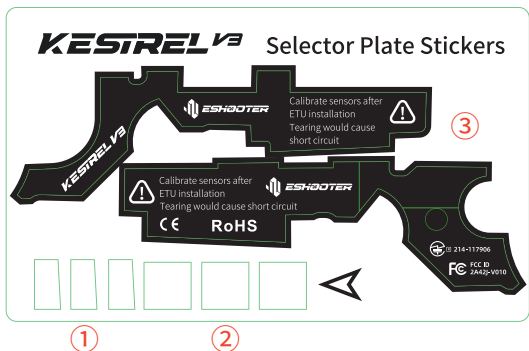


7. Please place the washers and gasket in the correct sequence by the diagram indicated, incorrect placement might cause the damage of KESTREL V3 which is not covered by the warranty.
8. Do not pull the trigger when the gearbox is opened which may cause the damage of trigger sensor.



9. In some cases , the first trigger sensor may be covered even the trigger is not pulled that may cause shooting. Please check the installation properly, or check the “Sensor” in the ESHOOTER App.

10. Please use the appropriate stickers from the installation kit.



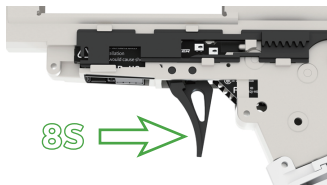
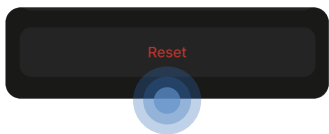
11. The position of sticker is very important. Please make sure it is fully aligned with the dotted line. There are 3 different stickers in the kit. ① Trigger unit outside stickers ② Trigger unit damping stickers (Can be used according to actual needs) ③ Kestrel V3 board stickers.

12. Find the single-sided EVA stickers in the installation kit, in accordance with the location shown below to align the dotted line glued to the KESTREL top board.



13. Restore factory setting will cause Kestrel V3 resets to default setting, all users' setting and records will be erased.

14. Restore factory setting can be done by ESHOOTER App. Please open the App, connect your AEG and switch to the Dashboard, click 'Reset' at the bottom of Dashboard.



Installation Instruction

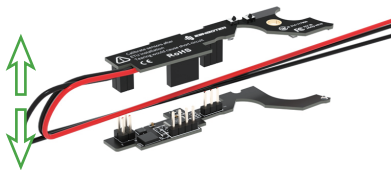
You will need:

**Philips screwdriver/Flat Head screwdriver/Metal file or milling machine/
Solvent/Grease/An Android phone or an iPhone/iPad**
Follow the following steps:

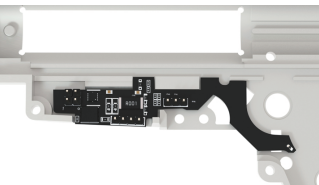
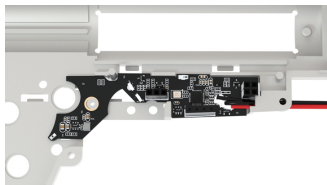
1. Remove the gearbox from the AEG body.
2. Disassemble the gearbox and remove all the internals.
3. Clean the gearbox case with proper solvent.
4. Pay attention to the marked area. If you find it is not smooth, use the metal file to prepare the surface. The gearbox surface should be smooth, sharp edges may damage Kestrel V3.

Installation Notes

1. Detach the drop-in module carefully.

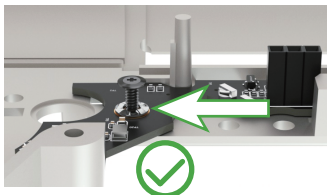


2. Place the bottom board in the bottom part of the gearbox and don't use a screw. Check if the bottom board is laid flat in the gearbox.



3. Check if the top board fits the gearbox without any problems.

4. Take the plum blossom metal gasket in the kit and place on the screw hole, secure the bottom part to the gearbox case by original screw or the one from the kit.



Note: If there is a protrusion of the screw holes in the bottom board corresponding to the gear box, you need to grind it to the proper height to better fit the Kestrel V3 installation.

Note: The position of the sector gear sensor is very important!



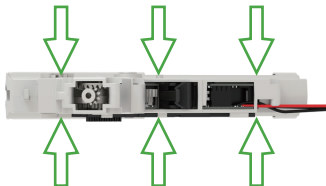
5. Install the trigger unit.



6. Close the gearbox.



7. Check if the two parts of the gearbox fit together perfectly.



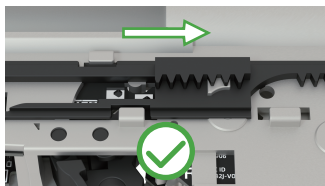
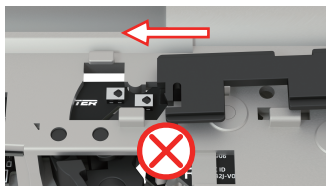
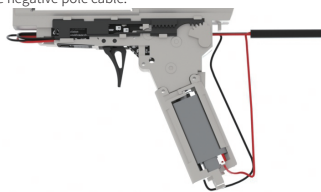
8. Install the trigger without the spring, insert the Kestrel V3 top board and close the gearbox. Check carefully the trigger should move smoothly without touching any KESTREL components.



9. Install the motor



10. After installing the selector plate, install the motor cable, red cable is the positive pole cable ;black cable is the negative pole cable.



Note:

When the selector plate cannot fully cover the two switches of Kestrel V3 after toggling to the limit gear, please use the extended metal plate and double-sided adhesive at the appropriate position of the selector so that the selector plate can fully cover the two switches.



11. Connect the Kestrel V3 to your mobile device and start the App.

12. Check gear and teeth

Switch to the "Sensor" interface of ESHOOTER App, click the "Test Mode" to enter the test mode. Slowly turn the gear and check that if sensor detects the teeth.

App Instruction

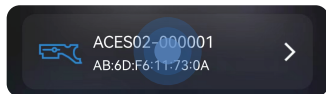
1. Download and install the App

By searching "ESHOOTER" at the App Store or google Play, you also could scan the QR code we provide



2. Connect with your device

Make sure your device is charged and open the App, then click "KESTEREL V3" and come to its interface, click the device

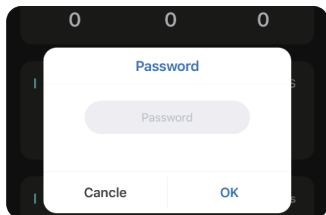


3. Password Setting:

3.1 Default password: The initial password is "888888" , when you first log in the App.

3.2 Change the password: Click "Setting" , you will see a change password button at the bottom of the page, then change your password as the following guide.

3.3 Reset the password: If you forget the password, you can reset it by setting your gun. Just pull the selector of your AEG to SAFE and long pull the trigger for 8 seconds , the password is settled successfully till the gun body is slightly shaking.



4. Dash Board:

You can switch to the data display interface by clicking the “Dash board” button

4.1 BB Counter: Current shows the shots number which connect the App one time; Total is all the historical shots number.

4.2 Rate of Fire: There are minimum rate of fire, average rate of fire and maximum rate of fire to display.

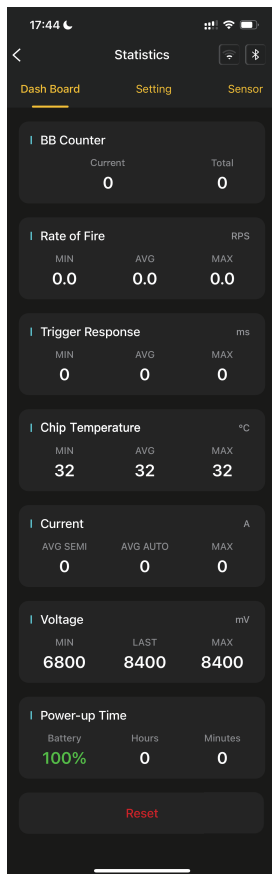
4.3 Trigger Response: There are minimum response time, average response time, and maximum response time to display.

4.4 Temperature: There are minimum temperature, average temperature and maximum temperature to display.

4.5 Current: There are average single shooting current, average continuous current and the maximum current to current.

4.6 Voltage: There are minimum voltage, current voltage and maximum voltage to display.

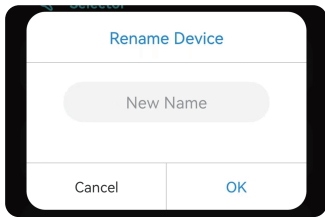
4.7 Power-up Time: There are battery left percentage, Connection hours and minutes to display.



5.Setting

5.1 Device Name Setting :

Click the Device Name column, you can change the user name in the pop-up window.



5.2 Selector Setting :



SAFE (default) includes: SAFE

SEMI (default) includes: SAFE, SEMI, AUTO, BURST, AUG, BINARY, and SNIPER

AUTO (default) includes: SAFE, SEMI, AUTO, BURST, AUG, BINARY, SNIPER

5.2.1 AUG Mode Setting :

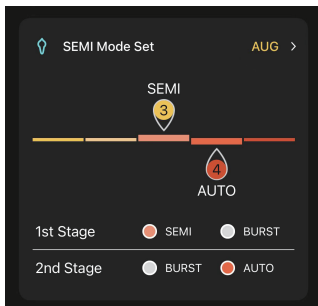
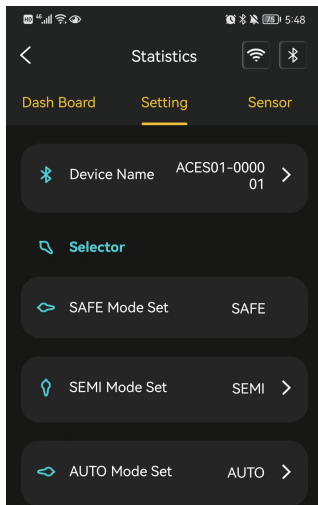
There are 1st and 2nd stage grades and corresponding modes in AUG mode . The slide is divided into 5 grades to simulate the trigger stroke.

Upper Indicator:

Slide to adjust the 1st stage sensitivity; It will be digital displayed current sensitivity level; the 1st stage adjustable range is 1-4 grades.

lower Indicator:

Slide to adjust the 2nd stage sensitivity; It will be digital displayed current sensitivity level; the 1st stage adjustable range is 2-5 grades. There are SEMI and BURST mode at 1st stage setting; And there are BURST and AUTO mode at 2nd stage.



5.3 Burst Function Setting :

Clicking the Burst bar, select single burst number in the pop-up window. The number range is from 3 to 10.

5.4 Trigger Sensitivity Setting :

There are 5 different trigger sensitivities can be selected. 1 gear means the highest sensitivity and 5 gear means the lowest sensitivity.

5.5 Gear Setting:

There are 6 following functions included: Pre-cocking Mode, Pre-cocking Boost, ROF Control, Sniper Delay Model, and Gear Ratio.

Pre-cocking Mode: You can choose ON/OFF.

Pre-cocking Boost: Can be selected low, middle and high, total 3 levels.

ROF control: In AUTO cases, the rate of fire can be controlled by selecting the percentage. You can select 0%, 50%, 60%, 70%, 80%, 90%, 100% under the continuous shooting mode. 0% means the ROF control function is turned off.

Sniper delay setting: Sniper can set the trigger time after pulling the trigger.

Gear Ratio: You can choose standard speed, high-speed teeth, DSG.

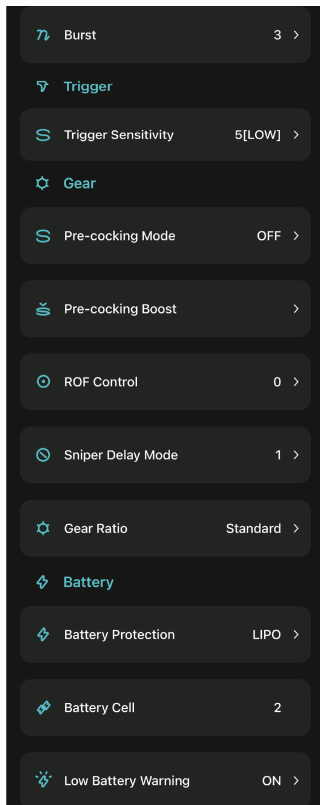
Attention: make sure to select the right gear to avoid affecting the life time of gearbox.

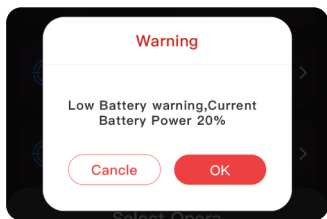
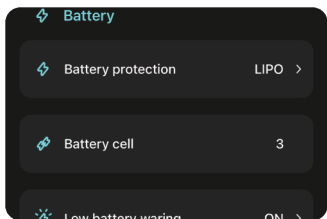
5.6 Battery Setting :

There are 2 Battery types: LIPO and LIFE, the correct battery type will provide better battery protection.

When the battery is connected, the number of the battery will be displayed.

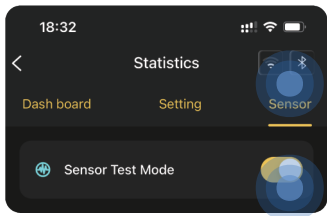
When turn on the low battery notification, you will get the notification from App when the battery power is low.





6. Commissioning Function:

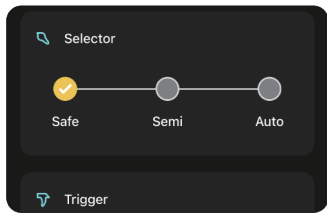
After clicking the "Sensor", you can enter the sensor interface, which can test and calibrate the sensor. Turn on the "Sensor Test Mode" you can recognize whether the sensor works or not .



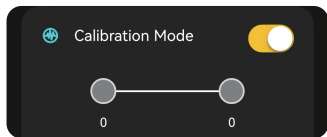
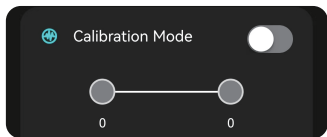
6.1 Sensor Test Mode: Please click the button on the right to test whether the sensor is OK by observing the display below.

6.2 Trigger: Pull the trigger gently and observe if the Trigger bar in the App will illuminate the corresponding position.

6.3 Gear: It shows the position for tooth or break.

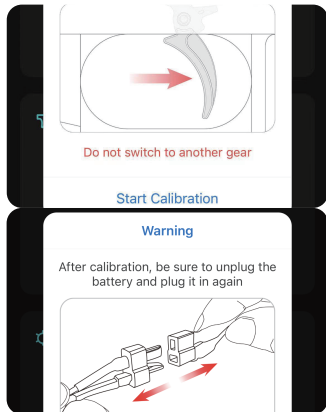


7. Calibration Mode: By clicking the button on the right to turn on calibration operation.



Trigger need operate as pop -up window's reminder, after clicking "Start Calibration "button , battery needs to be reconnected and the calibration result will come out, then the calibration is finished.

Note: Please make sure the battery is unplugged and plugged in again for work normally!



8.The iOS Shortcut Command

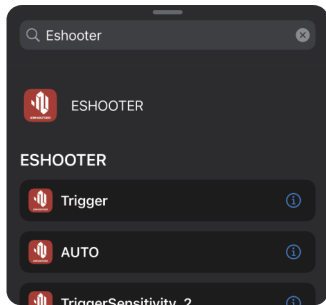


The ESHOOTER App provide shortcut command function under the iOS system which could control the equipment quickly.

The setting steps are:

Turn on your Shortcut App on the phone, click the "+" button at the top right corner . Searching the "ESHOOTER" at the search window, the shortcut list of ESHOOTER will appear.

Selecting a command and click the start button at the bottom right corner, then you can back to ESHOOTER App to operate.



9.OTA Update:

9.1 Click the "Setting" button at the App homepage , enter the setting interface, and click the "OTA UPDATE" to enter the device search interface.

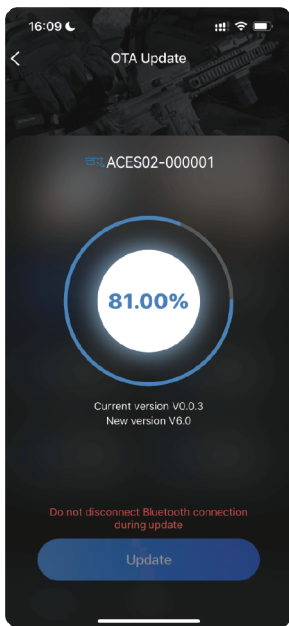
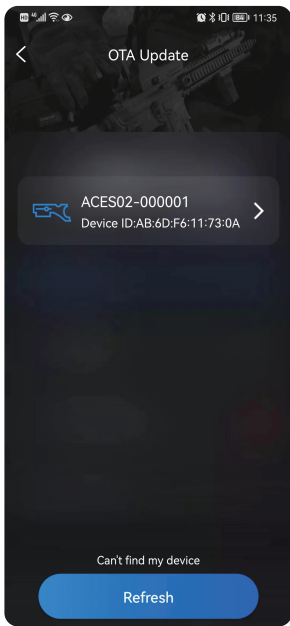
9.2 Click the device in the device list, and the software version will be verified after connecting the device. You will be noticed to upgrade when there is a new version, click the "upgrade" to get a new version.

9.3 Upgrade to the newest version for the better hardware experience.

9.4 When using the OTA function, please put the device close to your equipment to avoid the upgrade failure due to Bluetooth signal weakness.

9.5 When the upgrade is finished, your equipment will slightly shake, and the ESHOOTER App need be reconnected.

Note: Please make sure to recalibrate after successful upgrade.



Warranty Card

Name: _____

Phone Number: _____

Email: _____

Address: _____

Item Model: **Kestrel V3** _____

Inspector: _____

Date of Production: _____

After Sale Policy

Please kindly provide Warranty Card, Purchase Invoice and packaged the product well before you send back for repairing or replacement

1. We provide 6 months warranty time for Kestrel V3 when you purchase.
2. We provide replacement service within 30 purchasing days if the product has a quality problem (non-artificial damage) and without disassembly marks.
3. The free maintenance service only be provided during our warranty period, and the product problem will be assessed and confirmed by our engineer whether it is be normal used. Shipping fee and door to door maintenance service are not included in our after sale policy.
4. For the following situation, we will not provide free maintenance .
 - 4.1 Users don't follow the requirement and installation steps from the product instruction and cause product damage and failure.
 - 4.2 Damage caused by the irresistible factors.
 - 4.3 The disassembly damage or failure caused by people who are not authorized by E-Shooter company.
 - 4.4 Without purchase proof or warranty card.
 - 4.5 The Warranty time is expired.
5. We refuse to provide maintenance service if the warranty card is not the original version, warranty record is not correct or be altered , as well as the card content is difficult to recognize.

Warning



Measures for the Administration of Low-Power Radio-Wave Radiating Motors

Article 12

For low-power RF motors that have passed the type certification, without permission, companies, trade names or use are not allowed to change the frequency, increase the power or change the characteristics and functions of the original design.

Article 14

The use of low-power radio frequency motors shall not affect flight safety and interfere with legal communications. When interference is found, it should be improved until there is no interference and can continue to be used.

The legal communication in the preceding paragraph refers to the wireless communication that operates under the Telecommunications Law. Low-power radio frequency motors must endure interference from legal communications or electrical equipment that radiates radio waves for industrial, scientific, and medical use.



Pb-Free



R 214-117906



FCC ID
2A42J-V010

RoHS

More

Scan the QR code for more details



ESHOOTER App



App Instruction




Watch the Video



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