



LEVIATHAN
BY JEFFTRON

INSTALLATION MANUAL

FOR GEARBOX V2 (OPTICAL)

Leviathan - V2 optical parameters

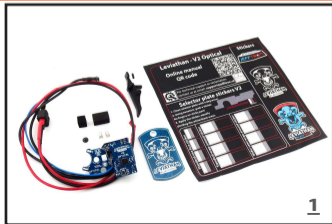
- It is a processor controlled mosfet with wireless communication.
- Device parameters are changed with a smartphone via application (Android and iOS).
- Device is fully integrated inside the gearbox instead of the original trigger contacts.
- Compatible with standard Version 2 Tokyo Marui style gearbox.
- Fully prewired with mini fuse and T-plug connector to fit front or rear wired.
- New shooting modes, control of RoF, pre-cocking, active braking, virtual magazine, input and output ports, electronic fuse, low battery indication, statistics, etc.
- Usable for battery with max. 17 volts (max. lipol 4S 14,8V).

Safety warning

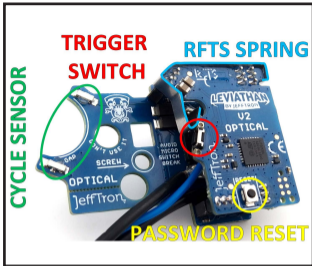
- Installation of this device into the gearbox requires advanced technician skills!
- Please read the manual before installing your device to prevent any damage.
- Short circuit or incorrectly connected battery will cause immediate damage to the device which is not covered by the warranty. It can lead to fire or even battery explosion.
- Disconnect battery, when the gun is not in use! Otherwise it will fully discharge the battery because the device drains small amount of current from the gun all the time.
- Don't connect battery when gun is pointing towards you, another person or an animal
- Do not modify, repair, put into any kind of liquids or thermal shock the Leviathan.

Package contents

- Leviathan - V2 optical drop-in module with complete wiring to stock or to front
- Screw to secure it in the gearbox
- Various CNC trigger with hair trigger feature
- Foams to keep device in the place
- 2pcs Wires holder
- Dog tag keychain
- Selector plate stickers + 3x Leviathan sticker
- + QR code to installation manual



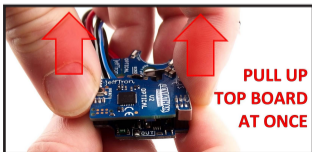
Device overview



- **Tactile trigger** micro switch is in the **red circle**, button travel is only 0.13mm.
- **RFTS = Real Feel Trigger System** was made by professional gunsmith for more realistic feel during the shooting. The spring simulates trigger resistance. You can bend its end to change the resistance.
- **Optical sensor** for the sector gear is in the **green circle**, it detects gear cam movement.
- **Yellow reset button** needs to be held for 2sec, after vibration from the motor = the password is reset to **1234** (settings are reset too).

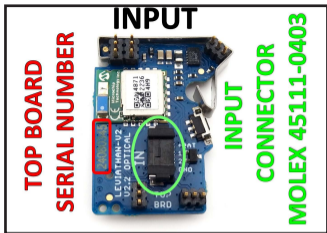


- **Optical sensor** is for detection SAFE, SEMI and AUTO position. It is shown in the **green circle**. For its function it is necessary to place the sticker on the selector plate.
- Keep in place a **transparent foil**, it prevents from short circuit through gearbox (**yellow**)
- Every board has a **unique serial number**.
- Remove **blue** to insert into the **Krytac GB**.



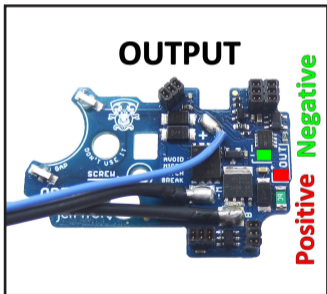
- Unplug top board from the bottom by holding top board on both ends - all jumpers have to be disconnected at the same time.
- For boards reassemble carefully plug the top board into the bottom at once. Watch the right position of the jumpers and a full connection, otherwise Leviathan could be damaged.

External ports



Input terminal

- Leviathan has 4 pin connector for connecting external button, virtual reload, sensor or external device with serial communication.
- Use **pin 2** and **pin GND** for connecting external buttons.
- You can buy connector in jefftron store or use **MOLEX 45111-0403** with 30cm wires.
- In the app use an interface „**External input**“ to activate a desired function.



Output terminal

- Leviathan has 2 pads on the board for powering hop-up LED illumination, flashlight, laser, magazine motor, etc.
- On the **Positive** pad is battery voltage (in the **red area**).
- **Negative** pad from the motor is in the **green area**, the power is fully driven throuht the Leviathan microprocessor.
- In the app use an interface „**External output**“ to activate a desired function.
- Some input functions activate the output terminal even on OFF status.

WARNING: Installation requires advanced soldering skills! Wires can't touch other pads and components on the board. Damage to the Leviathan will void the warranty! **3**

Preparation before installation the Leviathan-V2 optical

1. Remove and open the gearbox according to the normal gun disassembly procedure.
2. Take out all the internals from the gearbox and clean the grease and oil.
3. Check the gearbox for edges. Grind for smooth surface to prevent Leviathan damage.



4. Take out these parts out of the gearbox. They are not used with the Leviathan.



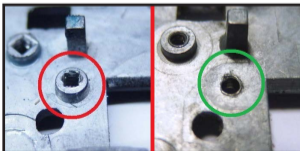
5. Remove other internals from the gearbox. The gearbox is prepared for installation.

Gearbox shell modification

- Gearbox modifications are necessary to fit the Leviathan without damaging it.
- Some modifications are only for specific gearbox manufacturer.
- Leviathan is not compatible with KWA gearboxes due to a different sector gear position.
- It is not compatible with proprietary gearboxes such as Ares, Arcturus, KWA, etc.



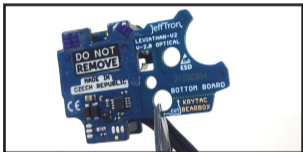
6. Grind these 3 pins to flat, it is necessary to fit wiring inside the gearbox.



7. If your gearbox has high screw mounting, cut it off to flat surface. **4**



8. In the ICS gearbox grind edge in red circle to not to interfere with contacts.

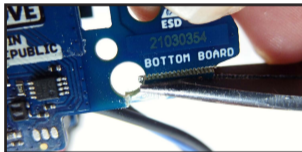


1. Use splitters to cut the thinnest board section under the bottom hole (arrow).

WARNING: do not cut the wiring!

Leviathan cut for the Krytac gearbox V2

- You do not have to modify the gearbox V2 from the Krytac company.
- Simply cut the Leviathan board on marked area shown in the pictures 1-4.
- Only Krytac dust cover will not hold in the back position - Leviathan board covers the hole in the top right corner.



2. Put pliers near the drilled line and move the board up and down until it breaks off from the rest of the Leviathan.

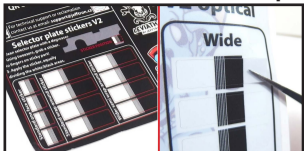


3. Separated board for installation into the Krytac gearbox V2.



4. Now Leviathan sits perfectly inside the Krytac gearbox V2.

Selector plate sticker installation



1. Wide sticker has a wider semi section. Take out one sticker by tweezers.
Do not touch the sticker by hand!



3. Bend the sticker around the plate.

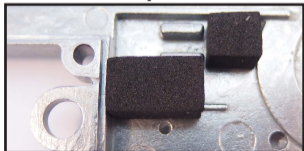


2. **Clean selector plate by a degreaser.** Apply the sticker, equally dividing the white/black areas.



4. Placed sticker on M4 selector plate.

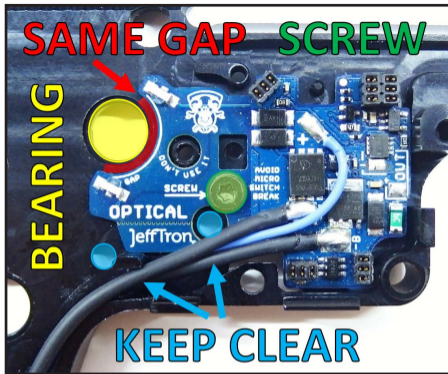
Insertion procedure of Leviathan - V2 optical into the gearbox



1. Stick foams to the right gearbox shell to double (included in the package).



2. If you want to use your trigger, grind the part of it, as shown in the pic. 6



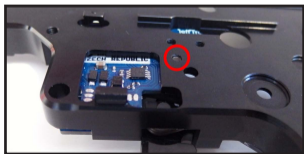
3. Insert the Leviathan - V2 optical instead of the original contacts:

- Check if it is laid flat on the gearbox and **blue areas** are **not covered** by board or wires.

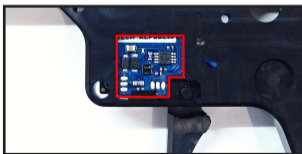
- Adjust the Leviathan position to the **same distance** from sector gear bearing (**red line**).

- Use a **screw** from package or original one and screw the device to gearbox (**green circle**).

- Do not place the screw in a place for the cut off lever, the gearbox stump is too high.



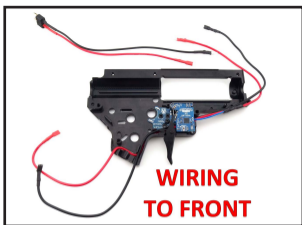
4. Make sure the screw doesn't stick outside of the gearbox. If it does, grind it.



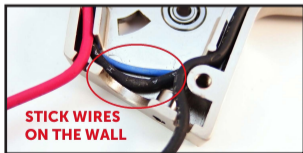
5. Check if there are any parts in contact with the gearbox around the red area.



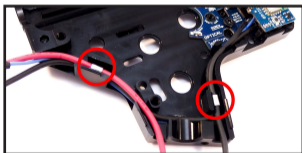
- 6.** Place wires in order from bottom:
blue
-battery
-motor



- 7.** Wires to front. Red motor leads to the left hole and to the battery leads to front, it could be disconnected in the middle.



- 8.** Wires under the motor have to stick to the wall. You can use a hot glue to fix them to their position in the gearbox.

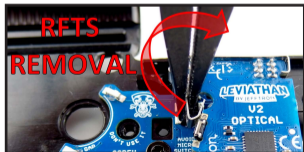




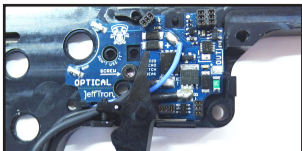
10. If you want a shorter trigger path, insert a screw into the trigger. After testing its position, secure it by a super glue.



12. Lube the top part of the trigger with a small amount of grease (for RFTS).

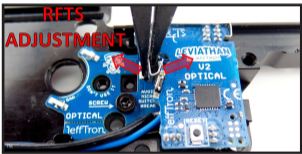


14. If you do not want two-stage trigger, remove RFTS spring up and right.

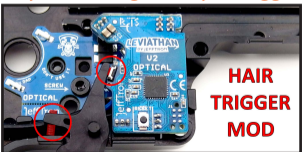


11. Insert the trigger into the gearbox, then carefully connect the top board.

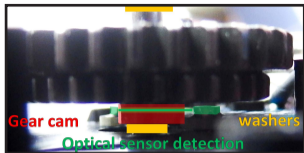
Watch for the RFTS spring!



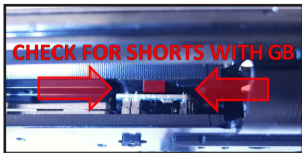
13. Test trigger interaction with RFTS. Gently bend spring by pliers to adjust it. **It may not work right with your trigger**



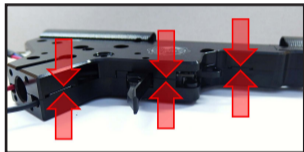
15. remove RFTS spring for hair trigger mod too.



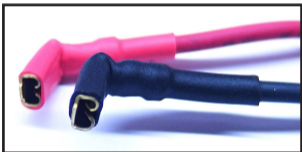
16. Check the sector gear height.
Gear cannot touch the optical sensor!



17. Check if the top board fits in the gearbox without any problems.



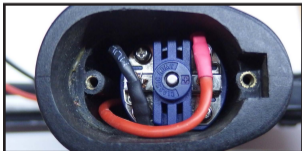
18. Insert the remaining parts into the gearbox. Put together the gearbox shell. Check if it fits perfectly together.



19. Bend both motor connectors exactly like in the picture.
Do not bend it to the other site!



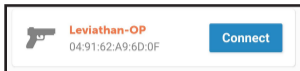
20. Black wire bends back at the bottom and leads both wires back.



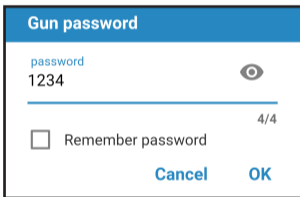
21. Connect the black wire first.
Keep in mind the right motor polarity!

Sensors configuration and testing

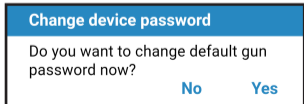
1. Install a „**Leviathan & Scylla by JeffTron**“ app from App store (iOS) or Google play (Android) into your smartphone.
Or use link <https://www.jefftron.net/application> (QR code).



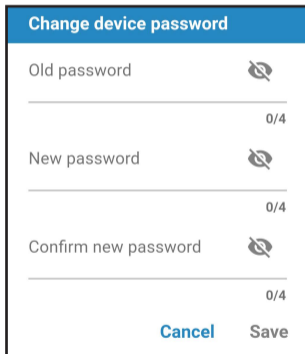
2. Connect the battery to the Leviathan and pair it with your smartphone.



3. Use a default password „1234“.
You can save it by checking the box “Remember password”.



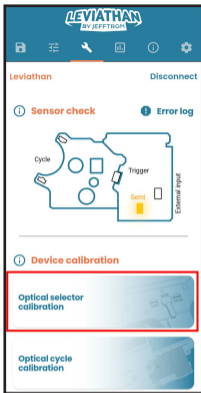
4. Change the password to your own 4 digit one.



5. Confirm new password and push Save.
Do not tell the password to anybody!

If you **forget your password**, restore it by holding RESET button for 2sec - see page 2. Battery has to be connected. **11**

Optical selector calibration

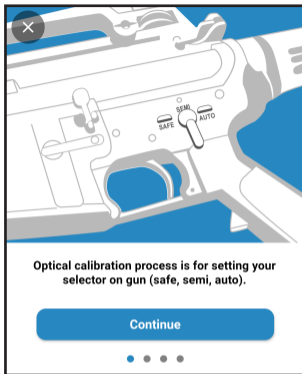


6. Tap on „Optical selector calibration“.

Move selector to Auto and press finish.

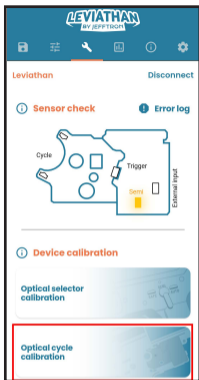
Selector on SAFE:	21%
Selector on SEMI:	61%
Selector on AUTO:	91%

8. At the end, every selector position has to be green. **If not, go to the page 14 to solve the problem.**



7. Follow instructions in the calibration. Move the selector plate to **Safe**, its value should be in range **6% - 30%** and press **continue**. Move the selector to **Semi**(range **40%-70%**) and press **continue**. Move selector to **Auto** (range **80%-99%**) and press **finish**. Try the right Semi and Auto responses in the „**Sensor check**“ function. **Blue** is **ON**. **SAFE** is when Semi and Auto are **inactive**.

Optical cycle calibration



9. Tap on „Optical cycle calibration“.

Optical calibration process is for setting your gun cycle detection. For that you have to make shot to spin cycle gear.

- 1 Unload and check your gun and point it to the safe area.
- 2 Pull the trigger to make shot to continue calibration process.

10. Follow instructions in the calibration. **Make sure no BBs are in the gun!**

Cycle detection point

Move cycle detection point outside orange area. It is better to stay in the left third part.



Cycle range: 11% - 91%

Automatic cycle calibration

Cycle detection

Check right cycle detection, it makes blue blink when detects cycle.

Light intensity

If the cycle detection area is off limits, adjust light intensity - you have to make shot to correct it.



Finish

11. After the shot, this page appears.

Cycle detection point determines when cycle is detected. Higher value = sooner.

Cycle range shows sensor reading when gear is spinning. Ideal range is **10% - 90%**. It **works perfectly** even with a range difference of **only 20%**.

Automatic cycle calibration sets cycle detection point when error 103 appears.

Cycle detection blinks when a sensor detects sector gear complete cycle.

Light intensity lowers the cycle range if it is too high. For update shoot again. **13**

Sensor troubleshooting



12. If the cycle range values are **too high**, move the sensor slightly **left** to be closer to the sector gear.

If cycle range values are **too low**, move the sensor slightly **right** to be further from the sector gear or clean the sensor. To do that, use the screw in **red circle**.

Move selector to Auto and press finish.

Selector on SAFE:	6%
Selector on SEMI:	58%
Selector on AUTO:	60%

13. If any selector position ends in **red**, its value is **too close** to another one, so the position will not be set right.

This could be caused by wrong sticker position or dirt on selector plate or sensor. It is also possible you didn't change selector position during calibration process.

First time shooting

1. Connect battery, after 1s you will feel a short vibration - power-up self-test is complete.
2. Put the gun into SAFE-nothing will happen on trigger pull
3. Put the gun into SEMI and it will fire once.
4. Put the gun into AUTO and pull the trigger shortly. Gun should fire a burst of 3 rounds. If you hold down the trigger longer, the gun will go on auto fire.
5. If everything works as described, congratulations for the correct installation the Leviathan. If not, check what is written in the error log and the **23-25 pages in this manual**
6. Pair your phone with Leviathan and update firmware to the newest version.

Keep your app and firmware always up to date!

WARNING: Disconnect the battery, when the gun is not in use! Leviathan drains a small amount of current from the battery at all time, so it will overdischarge the battery. **14**

Change parameters page 1/3

Orange stripe = not paired, **green stripe** = paired

Paired = loads parameters from Leviathan.

Change parameter -> shows „**writing...**„ in the green stripe. **Text dissappear** -> parameter is saved

Fire modes with **Selector on safe/semi/auto**:

- **SAFE**: No responding to the trigger pull.
- **Semi**: It fires a single shot per trigger pull.
- **Semi/BurstX**: A short trigger pull fires a single shot, a long trigger pull fires a burst.
- **Binary trigger**: Fire semi when a trigger is pulled and semi again when it is released in less than 3s.
- **BurstX**: Gun shoot a burst per trigger pull.
- **BurstX+BurstY**: A short trigger pull fire burstX, a long trigger pull fire burstX plus burstY bullets.
- **BurstX/Full**: A short trigger pull fires burstX, a long trigger pull makes an auto fire.
- **Full**: Gun makes auto fire until trigger is released.
- **Virtual reload**: Pull trigger to reload virtual mag.
- **Activate output**: Pull trig. to turn ON Ext. output

Burst functions:

It enables you to shoot a set number of BBs on one trigger pull. It will always complete the burst. Every selector has its own burst settings.

Rate of fire:

It is useful for solving problems when RoF is too high. This function makes breaks between shots to reduce the RoF. It gives you fast trigger response even with a very low RoF, just like a real gun.

The screenshot shows the Leviathan app interface. At the top, there is a blue header with the logo "LEVIATHAN BY JEFFTRON" and several icons: a document, a list, a key, a grid, an information icon, and a settings icon. Below the header, the app name "Leviathan" is displayed in orange, and a "Disconnect" button is in the top right. A green banner below the header reads "Using profile 'No Profile'. Automatically sent to the gun." The main content area lists several parameters, each with an information icon on the left and a dropdown arrow on the right. The parameters are: "Selector on SAFE" (Safe), "Selector on SEMI" (Semi), "Selector on AUTO" (Burst3 / Full), "Bullets in Burst1" (3), "Bullets in Burst2" (3), and "Rate of fire" (100%). Each parameter has a horizontal slider below it, with a blue dot indicating the current value. The "Rate of fire" parameter has a circular icon with a minus sign and a plus sign next to the percentage value.

Change parameters page 2/3

Active Brake:

It uses the excess energy from the motor to stop it. Spring is fully released, parts in gearbox aren't under strain. Higher braking is for weapons with high RoF. Braking effect is more powerful with torque motor.

Note: Lower braking intensity spares the motor coils.

Pre-cocking:

The piston is partly compressed after SEMI fire. There isn't almost any delay between trigger pull and shot. Recommended compression is about 65%. Holding the trigger for 3 seconds, gun shots again with decocked piston - use it for storing the gun after game.

WARNING: it increases wear and tear on the gearbox.

Delay between shots:

It is for simulation the delay from gun reload or recoil. During delay gun can't shoot. After delay gun vibrates shortly to notify the gun is ready for shooting.

Electronic fuse:

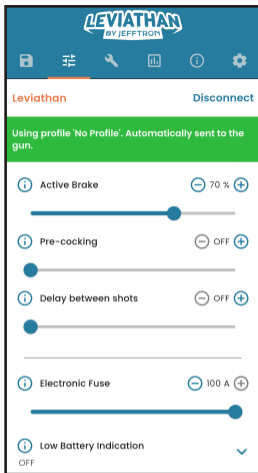
Set sensitivity for high current detection to avoid any damage if something goes wrong. We recommend to set 10A above average auto current reading from the statistics.

Low Battery Indication:

It is used for only Li-xx batteries. Choose right battery type or it will not work properly. When is the low battery voltage detected, gun vibrates after each shot. Now it is good time to replace the battery at the nearest opportunity.

When the battery is discharged the gun vibrates instead of firing for battery protection.

WARNING: Leviathan drains small amount of current from the battery all the time! **16**



Change parameters page 3/3

External input - see manual at page 3:

- **OFF:** Every signal to Input terminal is ignored.
- **Activate output:** Ext. output is ON when input is ON.
- **Toggle output:** Input act like a switch to Ext. output.
- **External trigger:** Gun trigger is disabled and replaced by micro switch connected to Input (SIG and GND)
- **Burst-3 trigger:** Switch on SIG and GND makes 3 burst fire when it is pressed. Gun trigger is functional.
- **AUG trigger:** Selector plate detection is disabled. Gun trigger is set to selector on semi. Micro switch connected to Input (SIG, GND) is set to selector on auto.
- **Empty mag (NO):** Micro switch activates empty magazine detection, when is connected SIG with GND.
- **Empty mag (NC):** Inverted function Empty mag (NO)
- **Virtual reload:** Micro switch activates virtual magazine reload, when is connected SIG with GND.

External output - see manual at page 3:

- **OFF:** It works only if the Input terminal activates it.
- **Motor:** It is ON with gun motor + with IN activation.
- **Motor + Xs:** It is ON with gun motor with time delay.
- **Always on:** The output is constantly activated.

Virtual magazine:

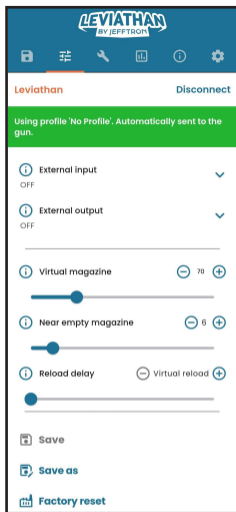
Value sets number of shots (70bb here). Gun will stop shooting when virtual mag. reach 0.

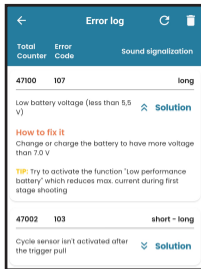
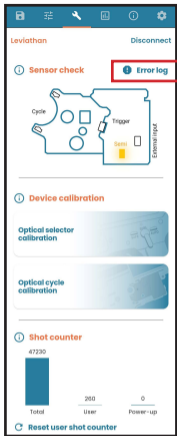
Near empty magazine - makes 2 short beeps after each shot before virtual mag. is empty.

Reload delay - is time when gun can't shoot after empty mag. or it is triggered by „Virtual reload“ (through *input port* - set as fire mode or *change selector position* - there and back)

Save or Save as: You can save these parameters under custom name into your app.

FACTORY RESET: It restores parameters to factory state (password is unchanged). **17**





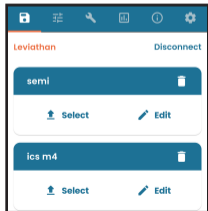
Error log: shows the errors made during the device life. A total shot counter value is saved when an error happens. Error expansion shows a possible solution. **Bin** at the top corner will **reset all errors**.

Sensor check:

Shows how the sensors respond. **White** colour is **OFF**, **yellow** is **ON**. Sensors are displayed on page 2. With selector on **Safe** it is detected as **OFF**.

Shot counter:

records full gear spin.
 Total - counts every shot during a lifetime
 User - can be reset by user anytime
 Power-up - battery connection reset it.



Profiles: You can save a profile here. „Select“ will upload settings to a device.

Statistics

Rate of fire (sec): Gun rate of fire per second.

Rate of fire (min): Gun rate of fire per minute.

Last trigger pull shots: The number of BBs fired at the last trigger pull.

Pre-cocking time: Time to move piston to compressed position (it will reduce a Semi cycle time).

Semi cycle time: Time between motor start and a piston release.

Auto cycle time: Time between shots in a burst where the RoF has already reached its max. value.

Motor start current: Peak current when the motor starts spinning.

Average semi current: Current during the first shot

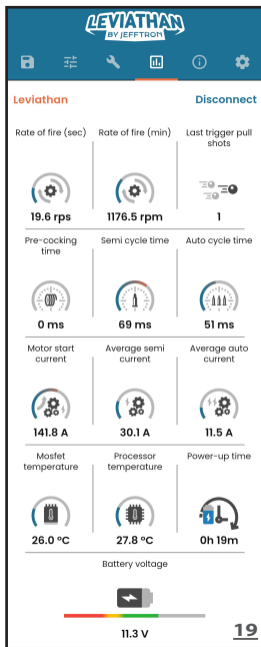
Average auto current: Current during burst fire.

Mosfet temperature: Actual mosfet temperature, the cut-off temperature is 75 °C.

Processor temperature: Actual processor temperature, the cut-off temperature is 75 °C.

Power up time: how long is the battery connected.

Battery voltage: It shows actual voltage value. **Red color** line indicates when gun won't shoot. In **yellow** it will shoot with warning vibration. In **green** is everything OK and **grey** is discharge from 100% charge.



Informations

External sound system: Play custom sound when you pull the trigger, change fire mode, etc. through the phone speaker. More info about this system is on the next page.

Change device name: Its visible on the devices list (max. length is 12 characters). Leviathan disconnects from the application after the name is saved.

Change device password: Write to the first row old password and to the other two new passwords (4 digits) and tap the SAVE button.

Vibration intensity: increases motor vibration feedback in 5 levels - use with low voltage battery.

Information: Information about app and firmware version. Bootloader and hardware versions are constant.

Select a firmware version: If the newest firmware version doesn't work right, you can downgrade it to the previous version any time.

Check for updates: If your phone lost connection, use this function to see the actual firmware version.

Device update: Fixes bugs and adds new features. It takes approximately 30 sec to finish. After that will pop up a successful message + vibration.

Change log: list of changes in Leviathan firmwares.

Installation manual: Link to the latest manual in .pdf.

JeffTron website: Link to the eshop www.jefftron.net

Support: If you have any questions or problems, please contact us via email: support@jefftron.cz.

The screenshot shows the Leviathan app interface. At the top, there's a blue header with the 'LEVIATHAN BY JEFFTRON' logo and navigation icons. Below the header, the main content area is titled 'Leviathan' and has a 'Disconnect' button in the top right. The interface is organized into several sections: 1. 'External sound system' with a speaker icon and a horizontal slider. 2. 'Device' section containing 'Change device name' (with a document icon) and 'Change device password' (with a key icon). 3. 'Vibration intensity' section with a circular progress indicator and minus/plus buttons. 4. 'Information' section displaying a table of versions: Firmware version (2.18), Bootloader version (Unrestricted), Hardware version (V2 Optical), and Application version (4.0.11). 5. 'Firmware update' section with a dropdown menu currently showing '2.18' and a 'Select a firmware version' label. Below this is a note: 'The recommended firmware version is 2.18. If you have problems with this version, you can install older versions.' 6. A list of actions: 'Check for updates' (with a download icon), 'Device update' (with a refresh icon), and 'Change log' (with a list icon). 7. 'Help' section with links for 'Installation manual' (with a PDF icon), 'JeffTron website' (with a globe icon), and 'Support' (with an envelope icon). In the bottom right corner, the number '20' is displayed in a stylized font.

External sound system

Play custom sound when you pull the trigger, change fire mode, etc. through the phone speaker. Phone has to be paired with a Leviathan to use this function.

It also plays sounds through an external speaker which is connected to the phone (through jag or bluetooth).

Enable External sound system: enables or disables every sound on this screen.

Shot fire sound: It makes a sound every time the trigger is pulled.


It plays sounds even if gun is not shooting (fire mode = SAFE), with selector on AUTO it plays sound in a loop.

You can choose to play different sounds on trigger pull for selector on SAFE, SEMI and AUTO.

Selector switch sound: It makes sound everytime selector changes it's position. You can choose to play different sounds for selector on SAFE, SEMI and AUTO.

External input sound: It plays sound when the external input is pressed.

Empty magazine sound: It plays sound when virtual magazine reach 0 bb in the counter.



External sound system

Play custom sound when you pull the trigger, change fire mode, etc. through the phone speaker. Phone has to be paired with a Leviathan to use this function.

Enable external sound system

Shot fire sound


Trigger pulled on SAFE	Laser shot	▼
Trigger pulled on SEMI	Air horn	▼
Trigger pulled on AUTO	Machine gun	▼

Selector switch sound

Selector on SAFE	Fart	▼
Selector on SEMI	Custom sound	▼
Selector on AUTO	OFF	▼

External input sound OFF ▼

Empty magazine sound OFF



Settings

Language: Text translation in the app to different languages. Tacticool language is made up for fun.

Dark theme: Choose white or black app interface.

Temperature: Set mosfet and processor temperature unit from °C to °F.

Remember password: Sets automatic login to the Leviathan by Jefftron app.

Turn off connection by fire selector: If it is ON, then wireless connection will be turned OFF/ON by **fast change selector from Safe to Auto and back**. It is good for gun security.

Overspin detection (Error 100): It will turn off error 100 - cycle detection after stopping the motor.

Selector movement (Error 101): It deactivates warning when selector plate changes fire selector position during firing.

Sound signalization: Allow/deny sounds for empty magazine, delay between shots and virtual reload.

Full auto limit: It cuts off power after 100 bb continuous burst - for safety reasons if the trigger is stuck

Brushless motor: The active brake is disabled all time to safely use a brushless motor. You can use the rate of fire and decocking function now.

Low performance battery: Reduce motor start current for a battery which can't handle high current spikes for running the gun. **It will increase Semi cycle time (worse trigger response).**

The screenshot shows the settings interface for the Leviathan app. At the top, there is a blue header with the 'LEVIATHAN BY JEFFTRON' logo and a navigation bar containing icons for home, settings, search, data, info, and a gear icon. Below the header, the main content area is titled 'Leviathan' and 'Disconnect'. The settings are organized into three sections: 'Application Settings', 'Device settings', and 'Functional settings'. Each setting has an information icon (i) and a toggle switch. The 'Application Settings' section includes Language (English), Theme (Light), Temperature unit (°C), and Remember password (checked). The 'Device settings' section includes Turn off connection by fire selector (unchecked), Overspin detection (Error 100) (unchecked), Selector movement (Error 101) (checked), Sound signalization (checked), and Full auto limit (checked). The 'Functional settings' section includes Brushless motor (unchecked) and Low performance battery (checked).

Leviathan Disconnect

Application Settings

Language English

Theme Light

Temperature unit: °C

Remember password

Device settings

Turn off connection by fire selector

Overspin detection (Error 100)

Selector movement (Error 101)

Sound signalization

Full auto limit

Functional settings

Brushless motor

Low performance battery

Startup codes

After connecting the battery the Leviathan does a power up self check, which lasts a 1s. It results in the motor vibration or error beeps with the error log record:

1 Short vibration - All systems are OK. This vibration is about half a second long.

1 Short beep - A trigger is pressed during battery connection (102)

2 Short beeps - High current flow in the mosfet (106)

3 Short beeps - High temperature of the mosfet (104)

1 Long beep - Battery voltage is less than 5.5 volts (107)

2 Long beeps - Battery voltage is more than 17.0 volts (105)

3 Long beeps - High processor temperature (108)

Short-long-short beep - Motor is disconnected (109)

Long-short-long beep - Nonfunctional application (200)

Post firing codes

If any problem occur during firing, it will be signaled by beeps with the error log record:

1 Short beep - Sector gear sensor is pressed after motor stop -> piston over traveling(100)

Short-long beep - Sector gear sensor isn't pressed after a trigger pull (103)

2 Short and long beep - Selector plate has moved during shooting (101)

2 Short beeps - High current flow in the mosfet (106)

3 Short beeps - High temperature of the mosfet (104)

1 Long beep - Battery voltage is less than 5.5 volts (107)

3 Long beeps - High processor temperature (108)

1 Vibration after shot - Battery voltage is low. If the battery drops much further, the gun will vibrate instead firing. Now it is a good time to change your battery for new one.

1 Vibration instead of fire - Battery is discharged. The gun vibrates on every trigger pull. change your battery for new one. **WARNING: the battery is still slowly discharging.**

1 Vibration after some time - When is „delay between shot“ activated, it vibrates after the time ends. It is a notification the gun is ready for shooting (sound signalization disables it)

Decreasing melody = Wireless conn. OFF, **Increasing melody** = Wireless conn. ON **23**

Troubleshooting

ISSUE: Weapon doesn't react at all after battery connection.

SOLUTION: Check if the battery is properly connected and charged. Also check motor contacts and motor functionality. Check if the safety fuse hasn't been blown.

ISSUE: Weapon doesn't make shots after trigger pull (start-up vibration was made).

SOLUTION: Damaged or misplaced micro switch for trigger, check it's proper function.

ISSUE: Selector is set to semi but act like on SAFE or AUTO (or any other combination).

SOLUTION: Check the right sticker position on the selector plate or clear dirt on this sensor, check its proper function through „Sensor check“ in the app and use „Optical selector calibration“ to set it again.

ISSUE: Sector gear sensor is pressed after motor stop -> piston over traveling (Error 100).

SOLUTION: Gun have too high rate of fire and piston make over spinning. Solve it by increasing active brake or reducing pre-cocking (if used) or reducing rate of fire or use battery with lower voltage or change gear ratio or use low speed high torque motor.

ISSUE: Selector plate has moved during shooting (Error 101).

SOLUTION: You have changed by mistake fire selector during shooting or it was changed by vibrations from shooting. Check and change if necessary the right sticker position on the selector plate, and use „Optical selector calibration“ to set it again.

ISSUE: Trigger is pressed during battery connection (Error 102).

SOLUTION: Release the trigger and try again. Check for right trigger microswitch function.

ISSUE: The gun always shoots BURST with short-long beep after fire (Error 103).

SOLUTION: Cycle sensor doesn't detect sector gear motion. Clean the sensor from dirt. check its right position in the gearbox to detect the gear cam and use „Optical cycle calibration“ to set it again.

ISSUE: High temperature on the mosfet (Error 104).

SOLUTION: Wait until temperature will be dropped down. If it repeats, mosfet is overloaded by too high Amps. Change gearbox internals to drain less amperage.

Troubleshooting

ISSUE: Battery voltage is too high (Error 105).

SOLUTION: Change battery with less voltage than 17.0 volts.

ISSUE: High current flow the mosfet (Error 106).

SOLUTION: Check if motor or gears is damaged or jammed. Check wires to motor for short circuits or exposed connections. Could be problem of unballanced gun upgrade.

ISSUE: Battery voltage is too low (Error 107).

SOLUTION: Change or charge battery to have more voltage than 5.5 volts.

ISSUE: High temperature on the processor (Error 108).

SOLUTION: check for short circuits on leviathan through the gearbox or damaged parts.

ISSUE: Motor is disconnected (Error 109).

SOLUTION: Check motor and contacts for it, if they aren't damaged or disconnected.

ISSUE: Nonfunctional application (Error 200).

SOLUTION: Program error in the Leviathan. Make update firmware to the newest version.

ISSUE: Gun suddenly stopped firing.

SOLUTION: Protection could be activated - check error log. Check battery charge. Check motor contacts and motor functionality. Check if the safety fuse hasn't been blown.

ISSUE: The Leviathan is not visible in the device list in the application.

SOLUTION: Click to refresh button in the app. Check if battery is charged and connected into the Leviathan. Enable wireless and location in your phone. Restart mobile app.

ISSUE: You programmed the Leviathan, now it doesn't do what you wanted.

SOLUTION: Best way is to do **FACTORY RESET** and start again.

ISSUE: The gun does something strange or nothing.

SOLUTION: STOP! Release trigger, disconnect battery and search for the problem before-something will be irreversibly damaged! Contact us at email support@jefftron.cz. **25**

MANUFACTURER

Ing. Filip Němec

Zahradní 599, 538 03 Heřmanův Městec

ID: 87936062, TAX ID: CZ8503013475

Made in Czech Republic



VERSION 9.24

www.JeffTron.net



Warranty does not cover: water immersion, defects or damage from accident, misuse, opposite battery polarity, abuse, damaged wires, wrong installation, bad handling, any modification by user, unusual physical, electrical or electromechanical stress.

Exclusion of liability: Manufacturer Ing. Filip Němec is not liable for any damages, injuries or accidents of any kind resulting from the use of this product in the airsoft gun.



For technical support or reclamation use email:
support@jefftron.cz

