

ASTER

QUICKSTART GUIDE

ASTER

Tremendous transformation of your AEG is about to begin. You are entering the era of computerized control over your airsoft gun. This quickstart will guide you through the first stage of this journey – installation and configuration of your ASTER. So go get your new device mounted, your AEG set up, and immerse yourself completely in a whole new airsoft experience.

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Firmware Editions

ASTER is delivered in BASIC firmware edition. You can upgrade your firmware to ADVANCED or EXPERT.

BASIC

The best for those who prefer simplicity but require highest quality. Economic version with limited number of functions.

ADVANCED

The best for those who like complex solutions. Advanced version with wide variety of functions. It gives access to the Statistics and ASTER World Rankings.

EXPERT

The best for experienced airsofters. Vast diversity of settings and options combined with maximum configuration capabilities allow you to prepare for the most demanding mission.



Notice

In order to upgrade your ASTER firmware, you need to purchase an upgrade. To do so, follow the steps on our website: gatee.eu/upgrade



Notice

You need to purchase USB-Link or Blu-Link to connect ASTER with GATE Control Station. To connect ASTER with GCS iOS, you must use Blu-Link.

Function	Options configurable via trigger ¹	Configurable via GATE Control Station		
		BASIC edition	ADVANCED edition	EXPERT edition
Firmware edition	All	BASIC edition	ADVANCED edition	EXPERT edition
Box version	All	Module	Upgrade needed	Upgrade needed
Trigger sensitivity adjustment	✘	✓	✓	✓
Fire selector modes	<p>Safe - Semi - Auto Safe - Semi - Semi Safe - Binary - Auto Safe - Semi - Burst GCS setting*</p> <p>For AK47 fire selector type:</p> <p>Safe - Auto - Semi Safe - Auto - Binary Safe - Semi - Semi Safe - Burst - Semi GCS setting*</p>	<p>Safe - Semi - Auto Safe - Semi - Semi Safe - Binary - Auto Safe - Semi - Burst</p> <p>For AK47 fire selector type:</p> <p>Safe - Auto - Semi Safe - Auto - Binary Safe - Semi - Semi Safe - Burst - Semi GCS setting*</p> <p>For AUG fire selector type (2-stage trigger):</p> <p>1st stage – Semi 2nd stage – Auto (by default) / Burst</p>	<p>216 modes. All variations of: Safe Semi Binary Burst Burst / Auto Auto</p> <p>For AUG fire selector type (2-stage trigger):</p> <p>1st stage – Semi / Burst 2nd stage – Auto (by default) / Burst or Burst / Auto</p>	<p>343 modes. All variations of:</p> <p>Safe Semi Binary Burst Burst / Auto Auto Semi Ramping</p> <p>For AUG fire selector type (2-stage trigger):</p> <p>1st stage – Semi / Burst 2nd stage – Auto (by default) / Burst or Burst / Auto</p>

Function	Options configurable via trigger ¹	Configurable via GATE Control Station		
		BASIC edition	ADVANCED edition	EXPERT edition
Burst	3 rd / 5 rd / GCS setting	3 rd / 5 rd	2 rd / 3 rd / 4 rd / 5 rd / 8 rd / 10 rd	2–99 rd
Burst mode	Full / Interruptible	Full / Interruptible	Full / Interruptible	Full / Interruptible
Pre-cocking boost	Needs to be preset via GCS	Manual: Off / 1–250 ms	Manual: Off / 1–250 ms	Manual: Off / 1–250 ms
Pre-cocking mode¹	Off / On	Off / On	Off / On	Off / On
Magazine capacity	✘	Off / 30 BBs	Off / 30 BBs / 45 BBs / 115 BBs / 145 BBs / 185 BBs	Off / 1–250 BBs
Reload time	✘	3 s	0.5 s / 1 s / 1.5 s / 2 s / 2.5 s / 3 s	0–10 s
Low ammo warning	✘	✘	Off / 10 BBs	Off / 1–250 BBs
Series safety limit	✘	Off / 30 BBs	Off / 30 BBs / 60 BBs	Off / 1–250 BBs
Sniper delay	✘	✘	0.2 s / 0.5 s / 1 s / 2 s / 3 s	0.01–5 s

Function	Options configurable via trigger ¹	Configurable via GATE Control Station		
		BASIC edition	ADVANCED edition	EXPERT edition
ROF control	✘	<ul style="list-style-type: none"> • Off • Power: 100% / 90% / 80% / 70% / 50% 	<ul style="list-style-type: none"> • Off • Power: 100% / 90% / 80% / 70% / 60% / 50% • Delay: 25 ms / 30 ms / 40 ms / 50 ms / 60 ms / 70 ms • Delay + Power 	<ul style="list-style-type: none"> • Off • Power: 100% / 99% / 98% / ...1% • Delay: 5 ms / 10 ms / 15 ms / ...1000 ms • Delay + Power • Adaptive: 1 RPS / 2 RPS / 3 RPS / ...100 RPS
Battery protection	Off / LiPo / LiFe	Off / LiPo / LiFe	Off / LiPo / LiFe	Off / LiPo / LiFe / Manual 3–12.75 V
Low battery warning	Off / 3.2 V / GCS setting	<ul style="list-style-type: none"> • LiPo: Off / 3.2 V / 3.4 V • LiFe: Off / 2.7 V / 2.9 V 	<ul style="list-style-type: none"> • LiPo: Off / 3.1 V / 3.2 V / 3.3 V / 3.4 V • LiFe: Off / 2.6 V / 2.7 V / 2.8 V / 2.9 V 	<ul style="list-style-type: none"> • LiPo: Off / 3.1 V / 3.2 V / 3.3 V / 3.4 V / Manual 3–12.75 V • LiFe: Off / 2.6 V / 2.7 V / 2.8 V / 2.9 V / Manual 3–12.75 V
Active brake	Adaptive / Off / GCS setting	Adaptive / 0% / 20% / 40% / 60% / 80% / 100%	Adaptive / 0% / 20% / 40% / 60% / 80% / 100%	Adaptive / 0–100%
Equalizer	✘	✘	Off / 2 LVL / 1 LVL	Off / 2 LVL / 1 LVL / Manual 1–100%
2-stage trigger	✘	✓	✓	✓

Function	Options configurable via trigger ¹	Configurable via GATE Control Station		
		BASIC edition	ADVANCED edition	EXPERT edition
BB counter	N/A	LAST / BB1 / BB2 / FACTORY	LAST / BB1 / BB2 / FACTORY	LAST / BB1 / BB2 / FACTORY
Measurements	N/A	✘	Rate of fire, Trigger response, MOSFET temperature, Voltage	Rate of fire, Trigger response, MOSFET temperature, Voltage, ROF achieved on Semi
Diagnostics	Vibrations and LED	✓	✓	✓
Cycle detection	✘ (set to On by default)	On / Off	On / Off	On / Off / Manual
Custom vibrations	✘	✘	✘	✓
Alerts	✘	✓	✓	✓
Profiles of settings	N/A	✘	✘	✓
Settings packages	N/A	✓	✓	✓
Firmware update	N/A	✓	✓	✓
Firmware upgrade	N/A	One-time payment	One-time payment	N/A
ASTER application	As firmware edition	Up to mid-tuned	Up to mid-tuned	Up to high-tuned

Information in the table may be subject to change.

- * GCS setting is a setting previously defined in GCS app, which value is not available for selection in this programming mode. Once you change such setting to a different option during programming via trigger and then exit this programming mode, it is no longer possible to set that setting from this level! (it can be still specified via GCS).

Safety Summary

For your safety, we recommend this product to be installed by an experienced airsoft service. Read the below safety information carefully before installing the device.



Warning

Situations that may cause injury to yourself and others.



Caution

Situations that may cause damage to your device or other equipment.



Notice

Notes, usage tips or additional information.



Warning

Before starting the installation process, make sure that your AEG is empty and there are no BBs inside.



Warning

Do not store or carry any flammable liquids, gases or explosive materials in the same compartment as the device, its parts or accessories.



Warning

Stay careful to prevent short-circuiting the battery as the consequences may be very dangerous.



Warning

Too high trigger sensitivity may cause accidental shooting.



Warning

When an airsoft gun is not in use, its battery must be disconnected and hop-up chamber must be empty.



Warning

While handling AEG with connected battery, all people within the range of the replica must wear eye protection and masks.



Warning

When not in Safe mode, avoid using the device around strong electromagnetic fields, like PMR transmitters exceeding European standards, or when electrostatic discharges, such as lightening, occur in the atmosphere, which may cause malfunction of the device and accidental shot.



Caution

Do not remove the device protective foil or heat shrink tubes.
Removing it will void the warranty.



Caution

GATE does not guarantee the compatibility of mosfets and ETUs such as ASTER with brushless motors. Connection of a brushless motor can cause immediate damage to the device, motor and battery, that is not covered by the warranty.



Notice

You should use an additional fuse between the battery and the device.



Notice

The product Warranty Form is available on our website: www.gatee.eu/warranty



Installation



Notice

Regardless of your previous experience, check all the cautions to avoid ASTER damage.



Notice

ASTER installation requires deep technical knowledge of gearbox internals. To avoid ASTER damage, we recommend it to be installed by an experienced airsoft service.



Notice

Do not attempt to mount the device before watching the installation video and checking the full-length PDF manual: my.gatee.eu/aster





Notice

In case you have any difficulties while installing or using this product:

- a. email us at *support@gatee.eu*
- b. contact us via Facebook: *www.facebook.com/gatee*
- c. call (+48) 122-100-523



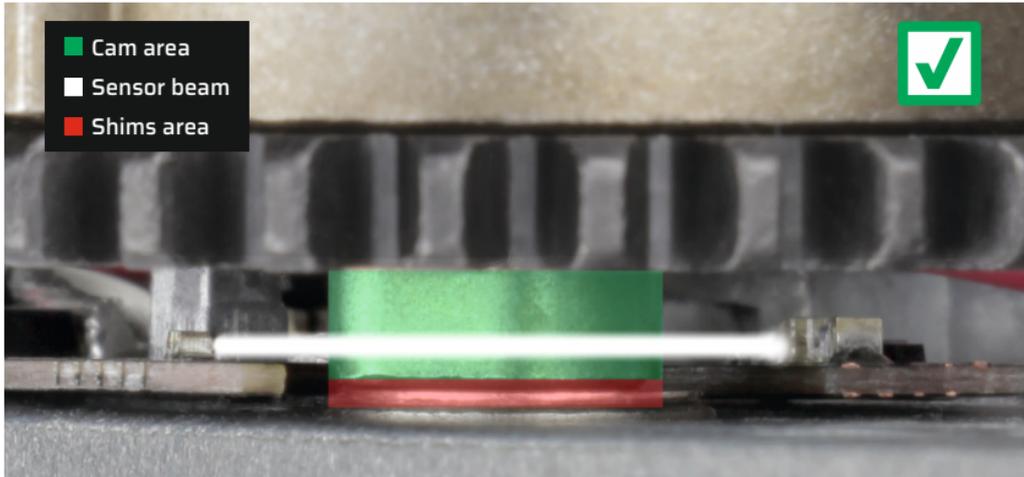
Caution

Incorrect installation may result in sensors' damage, which is not covered by the warranty.



Notice

Too high sector gear shimming may cause improper cycle detection. The gear cam must interrupt the sensor beam.

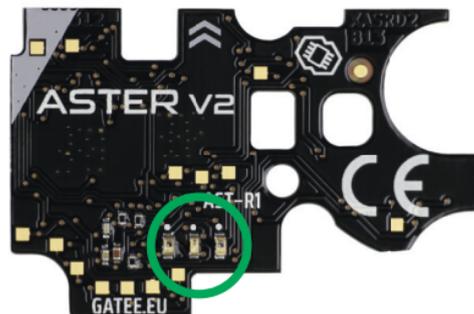
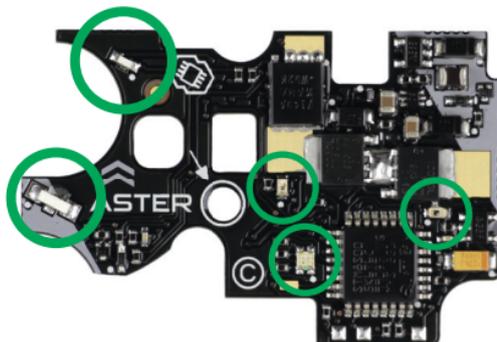
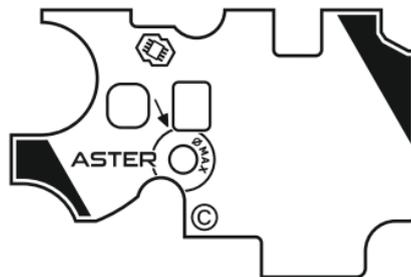


ASTER V2



Caution

ASTER optoelectronic components marked in the photo below are very sensitive to harm. Stay careful to avoid their damage.





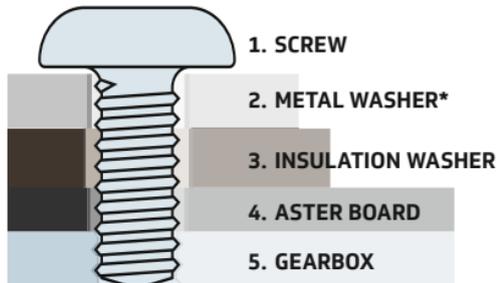
Caution

Do not remove the device protective foil.

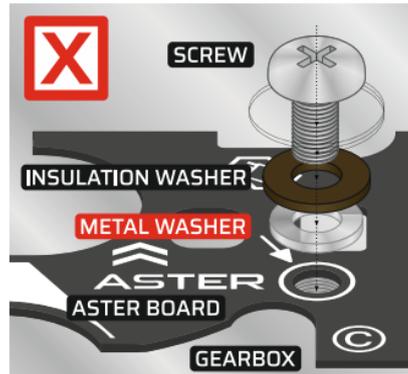


Caution

Insulation washer is required. Placing washers in the wrong order may cause a short circuit and permanent damage to ASTER, which is not covered by the warranty.



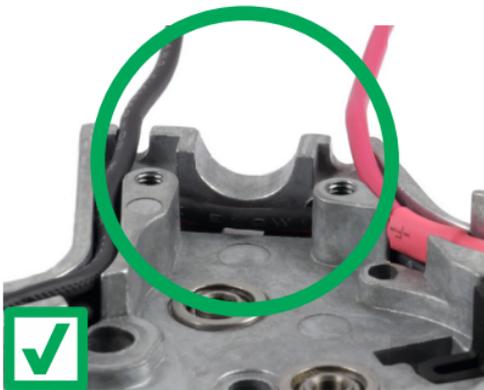
* Metal washer is optional.





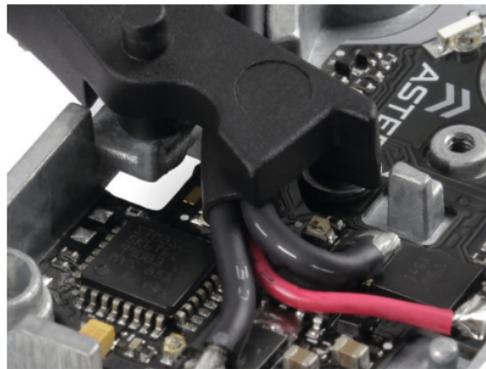
Caution

Improper placement of wiring under the motor gear may cause insulation damage and a short circuit, which is not covered by the warranty.



Caution

Do not pull the trigger when gearbox is open. This may result in trigger sensor damage.





Notice

Fire selector sensor does not detect the black surface. If your fire selector does not have a metal connector, you must use an appropriate sticker from the kit.

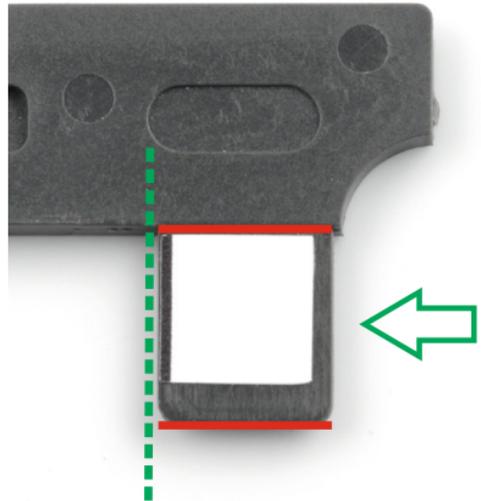




Notice

Position of the sticker is very important. Pay attention to place it **very close to the left edge** and the top red line.

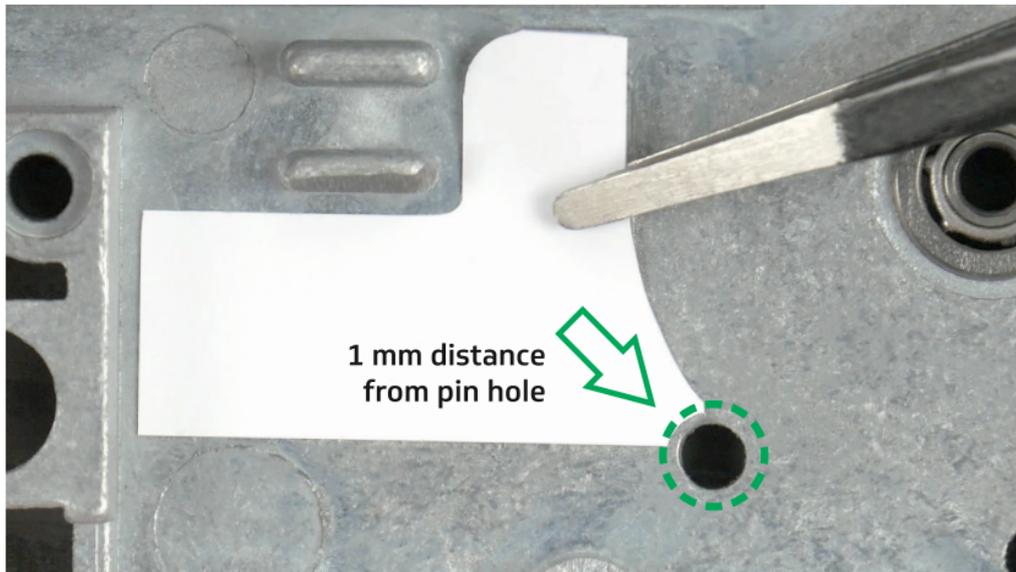
The set contains 3 different types of stickers. At first, use the sticker with the narrower black line. If you are not able to calibrate the selector well, you should try other sticker types.



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Notice

While using standard trigger, place gearbox sticker as in the photo below. It allows ASTER to detect trigger movement. If you want to use Quantum Trigger, gearbox sticker should not be attached.





Caution

In ASTER V2 connectors should be bent according to the photo below. Bending connectors in the opposite direction may cause them to break. If this happens, use the spare terminals included in the installation kit.



Quantum Trigger



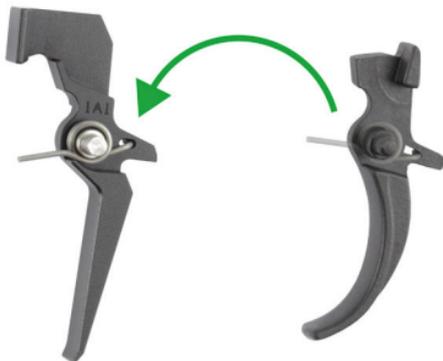
Notice

Quantum Trigger is compatible only with ASTER V2.



Notice

While replacing your old trigger with Quantum Trigger, use the same trigger spring.





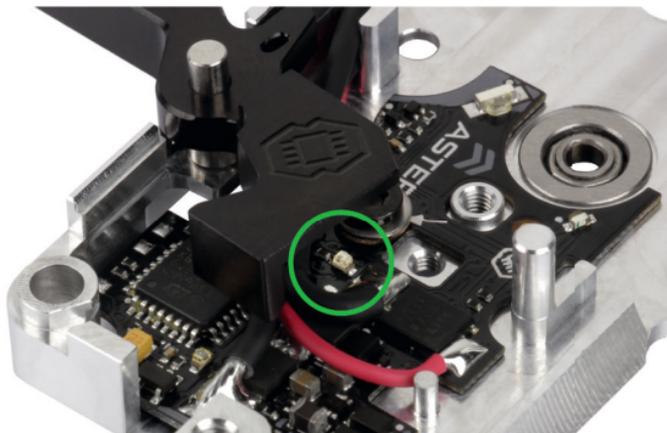
Caution

Do not remove the white sticker from Quantum Trigger.



Caution

Do not pull the trigger when the gearbox is open. This may result in trigger sensor damage.





Caution

While mounting Quantum Trigger, do not place gearbox sticker inside. If you had an ASTER installed before, remove gearbox sticker.



Notice

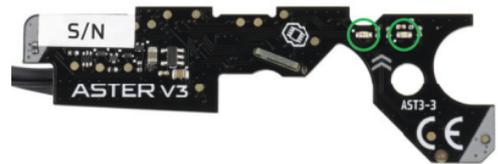
Finish assembling your replica and calibrate your ASTER following all steps included in Calibration paragraph of this Quickstart guide.

ASTER V3



Caution

ASTER optoelectronic components marked in the photo below are very sensitive to harm. Stay careful to avoid their damage.





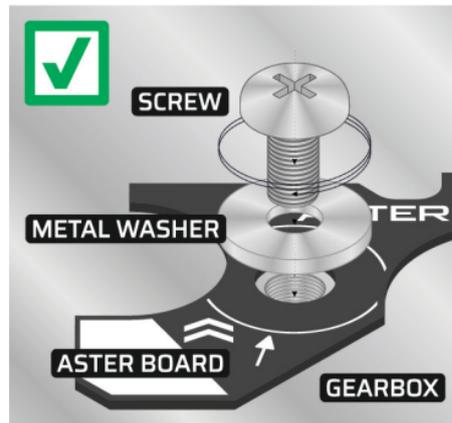
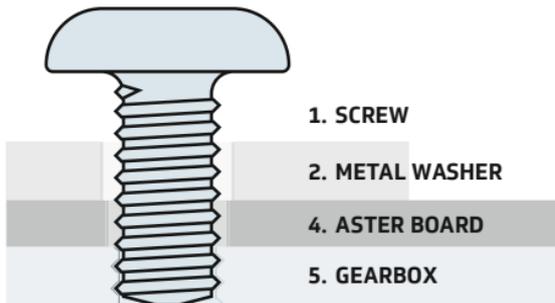
Caution

Do not remove the device protective foil.



Caution

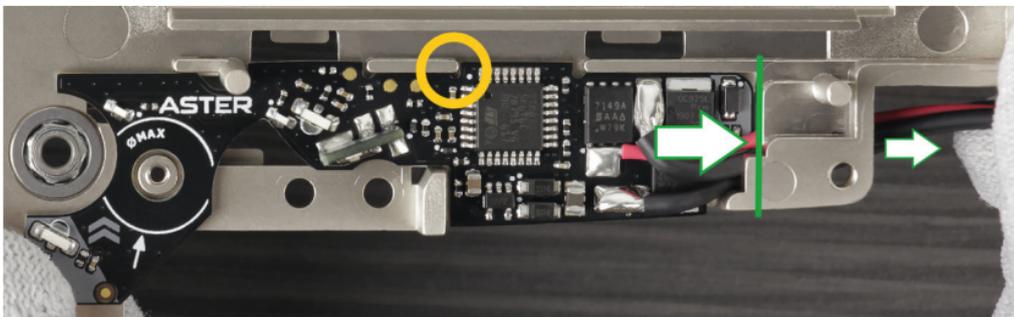
Use metal washer with max. 8 mm [0.31 in] diameter to avoid ASTER damage.



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Notice

ASTER V3 fits CNC gearboxes with very small backlash. While fitting the ASTER, pull the cables and at the same time push the board into the right place. Pay attention to the area marked in yellow to fit the board correctly.





Notice

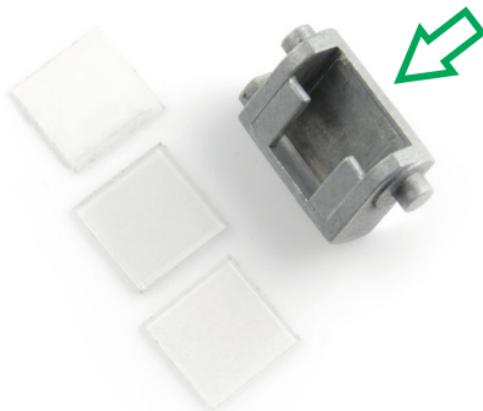
Use the trigger sticker to make it visible for the trigger sensor.





Notice

ASTER detects trigger position very precisely. In order to use it, you need to eliminate trigger backlash. The set contains 3 anti-backlash trigger stickers of different thickness. Try each of them and choose the most proper one.





Notice

In AEGs of AK type, eliminate as much backlash in fire selector mechanism as possible. Tighten all screws and make sure that you eliminate micro moves shown by arrows. You can do it using additional stickers included in the installation kit.



Notice

For AK and G36 selector types, it may be required to sand the inner edge of the selector plate. The distance between the edges must be 15 mm [0.59 in].





Notice

The selector plate requires modification. Place the selector sticker according to the photos below. Its position is very important.





Caution

In ASTER V3 the connectors should be straight according to the photo below. Bending and straightening the connectors back may cause them to break. If this happens, spare terminals are included in the installation kit.



Calibration



Notice

During calibration, remember to pull the trigger down completely each time (until you feel resistance).



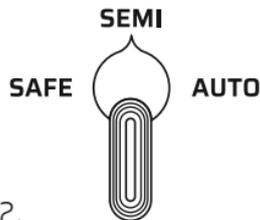
Notice

AEGs of AUG type can only be calibrated in the GCS app.

Once ASTER is installed in a given AEG, its trigger and selector sensors must be calibrated according to the steps below:

ASTER V2

1. If your ASTER is brand new, go to step 2. If not, restore factory settings as described in the corresponding chapter (page 60) and then go to step 2.

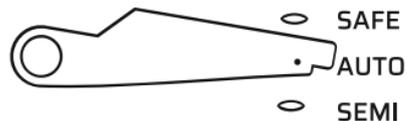


2. To calibrate ASTER, plug in the battery. You will hear 3 low vibrations notifying lack of calibration error.
3. Switch fire selector to AUTO.
4. Pull the trigger twice and wait for a confirming vibration.
5. Switch fire selector to SEMI.
6. Pull the trigger once and wait for the confirming vibration.
7. Switch fire selector to SAFE.
8. Wait for the confirming vibration. Now ASTER is fully calibrated and ready to use.*

ASTER V3

AK selector type

1. If your ASTER is brand new, go to step 2.
If not, restore factory settings as described



* If there is a problem during calibration, a short high and mid vibration occurs. Then, calibrate the selector again.

- in the corresponding chapter (page 60) and then go to step 2.
2. To calibrate ASTER, plug in the battery. You will hear 3 low vibrations notifying lack of calibration error.
 3. Switch fire selector to AUTO.
 4. Pull the trigger once and wait for a confirming vibration.
 5. Switch fire selector to SEMI.
 6. Pull the trigger once and wait for the confirming vibration.
 7. Switch fire selector to AUTO again.
 8. Pull the trigger once and wait for the confirming vibration.
 9. Switch fire selector to SAFE.
 10. Wait for the confirming vibration. Now ASTER is fully calibrated and ready to use.*

*** If there is a problem during calibration, a short high and mid vibration occurs. Then, calibrate the selector again.**

G36 selector type

1. If your ASTER is brand new, go to step 2. If not, restore factory settings as described in the corresponding chapter (page 60) and then go to step 2.
2. To calibrate ASTER, plug the battery. You will hear 3 low vibrations notifying lack of calibration error.
3. Switch fire selector to SEMI.
4. Pull the trigger twice and wait for a confirming vibration.
5. Switch fire selector to AUTO.
6. Pull the trigger once and wait for the confirming vibration.
7. Switch fire selector to SEMI again.
8. Pull the trigger once and wait for the confirming vibration.
9. Switch fire selector to SAFE.



10. Wait for the confirming vibration. Now ASTER is fully calibrated and ready to use.*



Notice

You do not have to calibrate your unit each time, only restoring the factory settings will require re-calibration.

* If there is a problem during calibration, a short high and mid vibration occurs. Then, calibrate the selector again.

Quick Access Menu

AR/G26



Fire a shot or burst.



Hold the trigger
and wait specific time.



Switch selector right
number of times to choose
option of a function.

AK



Fire a shot or burst.



Hold the trigger
and wait specific time.



Switch selector right
number of times to choose
option of a function.

You can set Pre-cocking mode, Profile of settings or go to programming via trigger mode by using a shortcut. After taking a shot, burst or while in Safe mode* (if safety lever is removed), hold the trigger and switch fire selector

* You can enter programming via trigger mode only when fire selector is in SEMI position and Auto mode is not assigned to that position

in appropriate time (see table). To change options of given function, switch fire selector. Each switch means going to a next option. Options are indicated by relevant vibrations.

Function	Pre-cocking mode		Profiles of settings		Programming via trigger
To enter the function, hold the trigger	and switch fire selector in < 2 s		and switch fire selector within 2–7 s		for > 7 s
Available options	Option	Low vibrations	Option	High vibrations	See description on (43)
	Off	1	P1	1	
	On	2	P2	2	
			P3	3	

By releasing the trigger, you exit the function and now your device operates according to the selected Pre-cocking mode or profile.

Selecting Pre-cocking mode

Turn on 'Switch mode via fire selector' parameter for Pre-cocking in GCS to be able to use this function.

1. Take a shot, burst or pull the trigger while in Safe mode*.
2. Keep the trigger held.
3. Switch fire selector within 2 s. You should hear 1 low vibration.
4. Now each fire selector switch means the next option:
 - a. 1 low vibration – Pre-cocking off,
 - b. 2 low vibrations – Pre-cocking on.
5. Release the trigger to save selected mode.

* If safety lever is removed.

Selecting Profiles of settings

Profiles are sets of particular settings of configurable ASTER functions*.

There are 3 profiles possible to select at a time and one of them is set as currently active. Turn on 'Allow profile change via selector' in GCS to be able to use this function. If you want to change the active Profile of settings:

1. Take a shot, burst or pull the trigger while in Safe mode**.
2. Keep the trigger held.
3. Switch fire selector within 2–7 s. You should hear 1 high vibration.
4. Now each fire selector switch means the next option:
 - a. 1 high vibration – Profile 1,
 - b. 2 high vibrations – Profile 2,
 - c. 3 high vibrations – Profile 3.
5. Release the trigger to save selected profile.

* Profiles of settings are defined in GCS and are available only in EXPERT firmware edition.

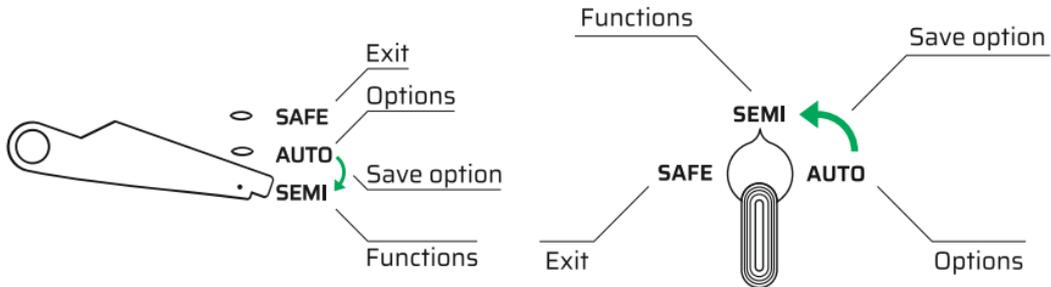
** If safety lever is removed.

Programming via Trigger

This programming mode allows you to set options of ASTER basic functions. You can easily change menu level by switching fire selector. You navigate given menu very quickly by pulling the trigger. Each time you pull the trigger, LED color changes as well as number of accompanying vibrations. The table presents functions and their options programmable via trigger as well as how they are indicated by LED and vibrations.



watch the video



SEMI POSITION	FUNCTION WITH CORRESPONDING NUMBER OF VIBRATIONS AND LED COLOR																							
	1	2	3	4	5																			
	Fire mode	Burst mode	Battery protection	Active brake	Advanced*																			
AUTO POSITION	OPTION WITH CORRESPONDING NUMBER OF VIBRATIONS AND LED COLOR																							
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4						
G36	SAFE-SEMI-AUTO	SAFE-AUTO-SEMI	SAFE-BINARY-AUTO	SAFE-AUTO-BINARY	SAFE-SEMI-SEMI	SAFE-SEMI-BURST	SAFE-BURST-SEMI	GCS setting**	3 x Full	3 x Interruptible	5 x Full	5 x Interruptible	GCS setting**	Off	LiPo	LiPo 3.2 V warning	GCS setting**	Adaptive	Off	GCS setting**	DTC	Clear DTC	Restore default settings	Restore factory settings
AK																								
G36																								
AK																								
ALL																								

* To evoke options of Advanced function, hold the trigger down for more than 3 seconds.

** GCS setting is a setting previously defined in GCS app, which value is not available for selection in this programming mode. Once you change such setting to a different option during programming via trigger and then exit this programming mode, it is no longer possible to set that setting from this level (it can be still specified via GCS).



Notice

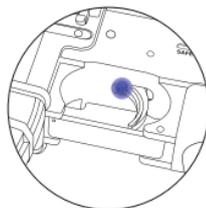
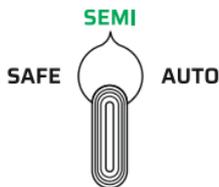
Particular options in the programming via trigger mode may be different in custom/OEM versions of ASTER.



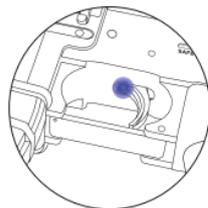
Notice

To run programming via trigger and fire selector, your AEG must have a physical 3-stage fire selector.

Turning on the programming mode*



* Not possible if Auto mode is assigned to SEMI position.



1. Switch fire selector position to SEMI.
2. Take a shot or burst.
3. Keep the trigger pulled for 7 seconds – until you hear a vibration and see dark blue light in the trigger hole.

4. Turning on the programming mode

– the second ‘backup’ method

1. Disconnect the battery.
2. Switch fire selector position to SEMI.
3. Pull the trigger.

4. While the trigger is pulled, connect the battery (ignore warning vibrations).
5. Hold the trigger for 3 seconds – until you hear a vibration and see dark blue light in the trigger hole.

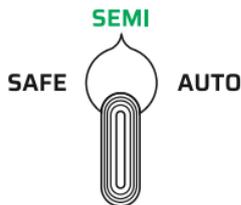


Notice

If you hold the trigger for 10 seconds, factory settings are restored, which is notified by 2 vibrations.

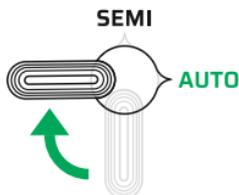
Selecting a function

1. Switch fire selector to SEMI.
2. To get to a given function, pull the trigger right number of times (according to the table on page 44).



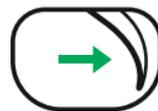
Selecting option of a function

1. Switch fire selector to AUTO.
2. To get to a given option of a selected function, pull the trigger right number of times (according to the table on page 44).



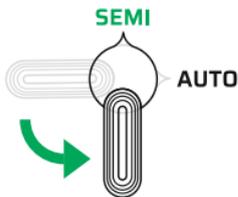
Evoking options of Advanced function

1. Select a given option of Advanced function.
2. Pull and hold the trigger for more than 3 seconds.



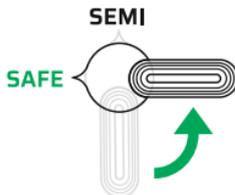
Saving option and returning to functions menu

1. Switch fire selector to SEMI.
2. The setting is saved, and you are back in the functions menu.
3. If you want to, set options for other basic functions in the same way.



Saving option and exiting the programming mode

1. Switch fire selector to SAFE.
2. Enjoy ASTER functions you've just set.



Activating Safe mode if not assigned

If Safe mode is not assigned in the GCS app, it is possible to activate it via selector*:

1. Switch selector **fast** in sequence: SAFE → SEMI → SAFE (SAFE → AUTO → SAFE for AK selector type).
2. Now Safe mode is activated – switch to SEMI or AUTO to deactivate it.
3. Switching to SAFE again evokes fire mode assigned to SAFE position in GCS app.



watch the video

* Safe mode also applies when selector is on SAFE while connecting the battery - switching to SEMI or AUTO deactivates it.



Notice

Number of vibrations and LED color reflect position of given option or function in the menu, for example: if option 5x Full is selected for function Burst mode, there will be 3 vibrations accompanied by LED glowing green.



Notice

ASTER remembers your settings, so you always know which option is presently set. Therefore, if you already defined ASTER functions, their programming starts from option currently specified for a given function.

Programming via GCS



Notice

You need to purchase USB-Link or Blu-Link to connect ASTER with GATE Control Station. To connect ASTER with GCS iOS, you must use Blu-Link.



Notice

You can learn how to program your device using Blu-Link from the manual included in the Blu-Link kit.

Programming via USB-Link



Caution

Prevent the USB-Link and the ends of USB cable from contact with conductive materials, such as dust, liquid or metal powder.



Caution

Do not remove the device protective foil.

1. Download and install GATE Control Station:

www.gatee.eu/gcs

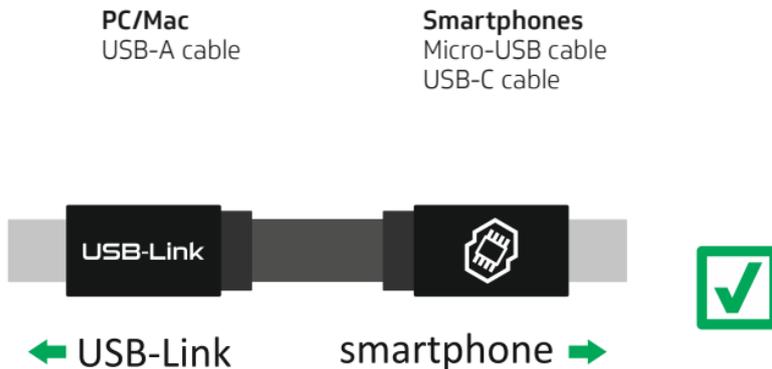




Notice

Your Android device must support OTG technology to run GATE Control Station app.

2. Connect the USB-Link via its Micro-USB plug to PC, Mac or smartphone using one of the dedicated USB cables:





Notice

Micro-USB cable has the same connectors on both sides. However, it is very important to connect the USB-Link and smartphone to appropriate ends of the cable. Otherwise, it will not work.



Notice

If your USB-Link cannot be detected, follow the instructions displayed on GATE Control Station screen.

3. Connect ASTER to the USB-Link.



Notice

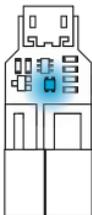
If your USB-Link cannot detect ASTER, check if the same happens with another PC, Mac or smartphone. If the problem still occurs:

- a. email us at support@gatee.eu

- b. contact us via Facebook: www.facebook.com/gatee
 - c. call (+48) 122-100-523
4. Now you can control ASTER via GATE Control Station.

USB-Link Troubleshooting

USB-Link has a 4-color LED indicator.



BLUE (glowing)

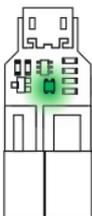
The USB-Link is connected to PC, Mac or smartphone. ASTER is not connected or PC/Mac driver is not installed. You can download the driver here:

www.gatee.eu/drivers



BLUE (blinking)

The USB-Link does not have firmware installed. Please install the firmware.

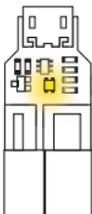


GREEN (glowing)

The USB-Link is connected to ASTER and PC, Mac or smartphone.

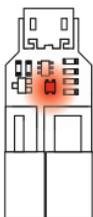
GREEN (blinking)

The USB-Link is connected to ASTER and PC, Mac or smartphone, but ASTER does not have firmware installed. Please install the ASTER firmware.



YELLOW (glowing)

The USB-Link is transmitting data.



RED (glowing)

Communication with ASTER was interrupted while saving settings. ASTER settings may have been transmitted incorrectly. Please check the connection between the USB-Link and ASTER.

Restoring Factory Settings



Notice

Restoring the factory settings results in resetting the default settings, erasing adaptations and statistical data.



Notice

Restoring the factory settings requires ASTER re-calibration (see page 34).

You can restore the factory settings in 3 ways:

1. While in programming mode
 - a. Turn on the programming mode as described in chapter Programming via Trigger,
 - b. Switch fire selector to SEMI,

- c. Pull the trigger 4 times to select function Advanced (5 vibrations, LED glowing orange),
 - d. Switch fire selector to AUTO,
 - e. Pull the trigger to get to option 'Restore factory settings' (4 vibrations, LED glowing pink),
 - f. Evoke 'Restore factory settings' option by pulling the trigger for more than 3 seconds,
 - g. Once LED glows orange, disconnect the battery,
 - h. Connect the battery again and re-calibrate ASTER (page 34).
2. Through GATE Control Station app.
- a. Go to settings,
 - b. Open menu in the upper right corner and select option 'Restore factory settings',
 - c. Confirm your selection.

3. While connecting the battery.
 - a. Disconnect the battery,
 - b. Switch selector to SEMI mode,
 - c. Pull the trigger,
 - d. While the trigger is pulled, connect the battery (ignore warning vibrations),
 - e. Hold the trigger for 10 seconds until you hear 2 vibrations confirming the reset,
 - f. Once LED glows orange, disconnect the battery,
 - g. Connect the battery again and re-calibrate ASTER (page 34).



Notice

The trigger must be held down throughout entire operation – from plugging the battery until you hear the vibrations.

Troubleshooting

Self-test

Right after connecting the battery, ASTER's self-test is performed.

LED	WHAT HAPPENED	WHAT TO DO
 1 s ON START	Self-test completed without error	Enjoy using ASTER
 BLINKING	Self-test failed	a) Check DTC in GCS b) Contact us at support@gatee.eu

Low battery warnings

When activated, you are warned 5 times before the battery is discharged. Each warning is communicated by 3 vibrations: **High – Mid – High**.

Vibrations after connecting the battery

ETU can detect the number of battery cells automatically. If you activate this function, the vibrations will start after connecting the battery. Remember to always verify if the ETU detected the correct number of battery cells.

Vibrations after connecting the battery	Explanation
1 short high frequency 	Cell detection error.
2 short high frequency 	Two cells detected.
3 short high frequency 	Three cells detected.
4 short high, 1 long low frequency 	Four cells detected. The voltage is too high.
3 short low frequency 	Lack of trigger or selector calibration (page 34).
4 short low frequency 	The trigger error. After connecting the battery ETU detected the trigger position in which a shot may be fired.

Diagnostic Trouble Codes

Diagnostic Trouble Codes (DTC) enable detecting basic malfunctions and problems with your AEG or ASTER. You are notified of the main errors with LED glowing in the trigger hole and motor vibrations. These light-and-sound sequences are activated once given malfunction takes place. DTC can be later read and cleared in DTC menu in GCS app as well as in the programming mode from the level of Advanced function settings. In the latter case, LED blinks the same number of times as the motor vibrates, so you can check DTC even without the motor.

If DTC are read while in the programming mode:

1. LED in the trigger hole glows in the color reflecting problem type.
 - a. Yellow means warning,
 - b. Red means problem,
 - c. Red-Blue blinking alternately means that device failed on self-test,

- d. Red-Yellow blinking alternately means another error.
2. Vibration type indicates problem type.
 - a. High vibrations mean warning,
 - b. Low vibrations mean problem,
 - c. Low-High vibrations mean that the device failed on self-test,
 - d. High-Low vibrations mean other error.
 3. Number of vibrations determines what exactly the problem is (for reference, read DTC explanations presented later in this guide).



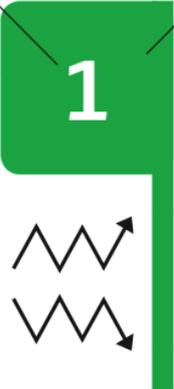
Notice

It is a good practice to clear the DTC in GCS before each skirmish.

How to read DTC explanations

Number of blinks and vibrations

LED indicator color



High frequency vibration

Low frequency vibration

1

No errors

No errors detected. Everything is fine. Enjoy airsofting.

1

Under Voltage Protection 1 (UVP1)

Protection against over-discharge of the battery.

Battery protection was activated.

What happened:

The battery is discharged.

What to do:

Charge the battery.

2

Under Voltage Protection 2 (UVP2)

The voltage dropped below 1.9 V which is critical for ASTER to work properly.

What happened:

1. The battery is discharged.

2. The battery is worn out and has too high internal resistance.
3. Inadequate battery type for given AEG configuration.
4. Too much electrical resistance between ASTER and the battery.
5. Motor too strong for the connected battery.
6. Motor connections short circuit.
7. Motor is jammed.
8. Motor is damaged.

What to do:

1. Charge the battery.
2. Replace the battery.
3. Use a battery with more capacity or higher voltage.
4. Do not use any adapters.
5. Use standard or high-torque motors instead of high-speed.
6. Check and fix the motor wires insulation.
7. Unjam the motor.
8. Replace the motor.

3

Under Voltage Protection 3 (UVP3)

Protection against over-discharge of the battery. Battery protection was activated immediately after connecting the battery.

What happened:

1. Number of cells is different than their number set in GCS.
2. The battery is discharged.

What to do:

1. Set the same number of cells in GCS as in the battery.
2. Charge the battery.

4

Motor Disc (MOTOR DISC)

ASTER did not detect the motor.

What happened:

1. Motor is not connected.
2. Brushes are worn out.
3. Motor is damaged.



What to do:

1. Check wiring and motor connectors. Connect the motor.
2. Replace brushes.
3. Replace the motor.



1

Gear Not Detected (GND)

ASTER did not detect the sector gear.



What happened:

1. Too high sector gear shimming.
2. Sector gear sensor is dirty.
3. Sector gear sensor is damaged.
4. Sector gear is jammed.
5. Motor is damaged.

What to do:

1. Remove shims under the sector gear.
2. Clean sector gear sensor.
3. Contact support@gatee.eu

4. Inspect the sensors using GCS.
5. Replace the motor.
6. In case of dirty or damaged gear sensor, you may set Cycle detection to Off.

2

Overload (OVL)

Too high load. The load limit was exceeded.

What happened:

ASTER with BASIC and ADVANCED firmware edition is dedicated for up to mid-tuned guns.

What to do:

1. Use high-torque motor and gears.
2. Upgrade firmware to EXPERT.

3

Over Current Protection (OCP)

ASTER detected too high current. Over current protection was activated.

What happened:

1. Motor is damaged.
2. Motor or gearbox is jammed.
3. Motor connections short circuit.

What to do:

1. Replace the motor.
2. Unjam the motor or gearbox.
3. Check and fix the motor wires insulation.

4

Short Circuit Protection (SCP)

ASTER detected current over 220 A. Short circuit protection was activated.

What happened:

1. Motor is damaged.
2. Motor or gearbox is jammed.
3. Motor connections short circuit.



What to do:

1. Replace the motor.
2. Unjam the motor or gearbox.
3. Check and fix the motor wires insulation.

5

Over Temperature Protection (OTP)

ASTER temperature is too high. Over temperature protection was activated.

What happened:

1. Outside temperature is too high in correlation with the demanding AEG.
2. Frequent short circuits and ASTER electrical overloads.

What to do:

Wait until the temperature drops.



2

Self-test Failure (STF)

The device failed on self-test.



What happened:

Internal error of the device.

What to do:

Contact support@gatee.eu



2

Other error

What to do:

Connect ASTER with GCS and check DTC.



Legal Notice

Please read this Legal Notice before operating your device and keep it for future reference.

This document contains important terms and conditions with respect to your device. By using this device, you accept those terms and conditions.

EXCLUSION OF LIABILITY

GATE Enterprise sp. z o.o. sp. k. is not liable for any damages, injuries or accidents of any kind resulting from the use of this product or airsoft gun with the product installed, including (but not limited to) incidental or intentional damages to airsoft gun, airsoft gun parts, batteries and gearbox internals.

DISCLAIMER

GATE Enterprise sp. z o.o. sp. k. takes no responsibility regarding compliance of the product with the requirements of any law, rule or airsoft restrictions pertaining thereto.

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GATE LIMITED WARRANTY POLICY

GATE Enterprise sp. z o.o. sp. k. warrants that its product is free from manufacturing and material defects at the date of purchase and for a nonextendable period of two (2) years from the date of purchase. This Limited Warranty is conditioned upon proper use of the product by Purchaser.

1. This Limited Warranty is valid provided that the owner provides a proof of purchase and a properly completed warranty form.
2. This Limited Warranty does not cover: (a) defects or damage (e.g., mechanical, thermal or chemical) resulting from accident, misuse (misinterpretation of the instructions), abuse, neglect, unusual physical, electrical or electromechanical stress, water immersion, repairs or structural modification of any part of the product (e.g., removing the heat shrink tube), or (b) the product that has its serial number removed or made illegible; (c) defects or damage from improper operation, maintenance or installation, (d) installation of the products.
3. Requests for warranty are processed as soon as possible, not exceeding seven (7) working days. The company's obligation under this Limited Warranty shall be limited to providing replacement of part(s) only.



PRODUCT DISPOSAL INSTRUCTIONS

The symbol shown here means that the product is classified as Electrical or Electronic Equipment and should not be disposed with other household and commercial waste at the end of its working life. The Waste of Electrical and Electronic Equipment (WEEE Directive 2012/19/EU) has been put in place to recycle products using best available recovery and recycling techniques to minimize the impact on the environment. Purchasers shall take any old electrical equipment to waste recycling public centers or points of sale.



CERTIFICATE OF CONFORMITY

GATE Enterprise sp. z o.o. sp. k. hereby declares under our sole responsibility that the products GATE ASTER V2 and ASTER V3 are in conformity with essential requirements of the following Directives: EC DIRECTIVE 2011/65/EU. The products are certified as RoHS Compliant.



GATE Enterprise sp. z o.o. sp. k.

Torowa 3H

PL-30435 KRAKÓW

Email: office@gatee.eu

Tel: (+48) 122-100-523

www.gatee.eu



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