

# Full Laser Pistol MMLP ALP160

(Laser pistol MMLP & Emitter ALE160)

## Instruction Manual

### Safety Precautions

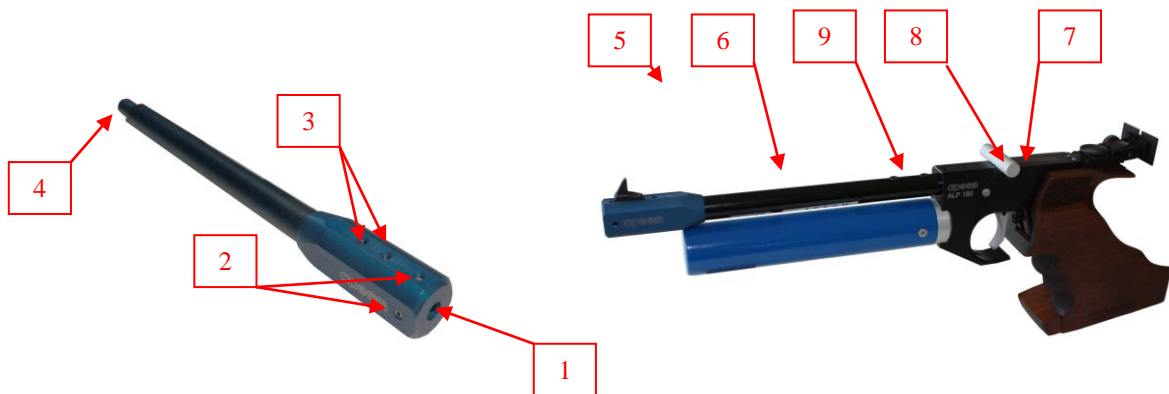
- Read this User Manual carefully before first use of the equipment.
- Use the equipment only as described in this manual.
- Do not use the equipment for other purposes than for which it is intended.
- Do not aim at people or animals or to an uncontrolled area.
- Observe general rules for weapon handling while operating the weapon.
- Use the equipment only in dedicated areas bounded for shooting.
- Observe general rules for behaviour and handling a weapon on a shooting-range.
- After finishing shooting check if the weapon was not left cocked.
- Do not look into the emitting opening of the emitter.
- It is forbidden to remove the emitter, laser diode and electronics from the body of the pistol.
- The emitter is an optoelectronic device; its disassembly is forbidden! – strong laser radiation may occur!



### Purpose

- Laser Emitter is designed for performing sport and training shooting at electronic targets.
- Laser Emitter is designed for imitation of a bullet by emitting an optical ray during the shot.
- Laser Emitter is designed for mounting to a body - frame of a gun.

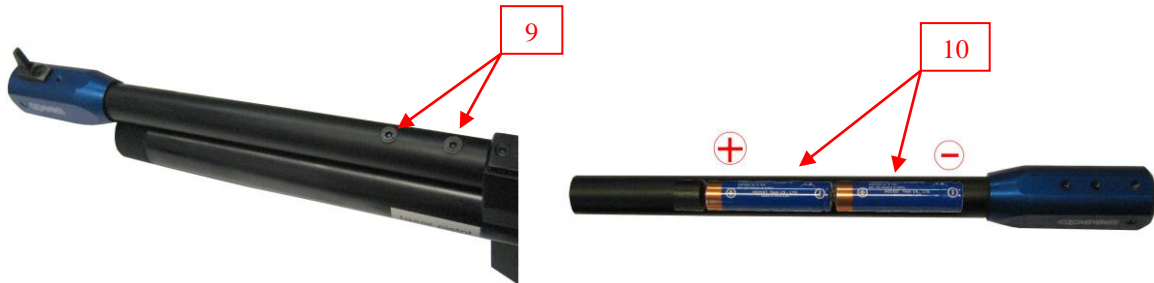
### Description



- 1) emitting aperture – opening
- 2) adjusting screws
- 3) openings for bolting of a foresight
- 4) work arbor

- 5) Laser pistol
- 6) Laser emitter
- 7) cocking lever
- 8) cocking lever handle

## Preparation for Operation



Unscrew the screws emitters / 9 / and you pull the emitter. Inside is space for two 1.5V AAA batteries / 10 /. The batteries insert into the emitter. Put the emitter on the work arbor and screw the screws / 9 /. When inserting the batteries, you must observe polarity.

## Rules of Operation

Moving the cocking lever up will load the pistol. After pressing the trigger to release the striking mechanism that triggers sending a laser beam.

Additional weights can be added into a container located under the emitter.

Never aim at persons, animals or to an uncontrolled area – it is necessary to observe general rules for weapon handling and general rules for behaviour on a shooting-range while using the equipment.

When using the device, the user is obliged to observe the rules of UIPM, in particular the section 5.9.4 vi.

In case that Laser Emitter will not be used for a long time (more than 1 month), remove batteries. Always insert new batteries to the emitter. Only use alkaline batteries of the following types: 1.5V AAA.

## Batteries

Do not charge the batteries. This would pose a risk of leaking electrolyte or explosion.

Use the batteries only in intended electronic devices. In case of using an unsuitable battery, the equipment may be damaged or destroyed.

Keep the batteries out of humid environment; this would pose a risk of leaking electrolyte due to corrosion of the case. The electrolyte is a strong caustic that causes alkali burn in contact with skin.

Do not use damaged batteries.

Keep the batteries out of children.

Observe correct polarity (+ -) of the batteries, do not short-circuit.

Do not throw batteries into fire, do not solder, do not disassemble.

Do not mix batteries of different type or age, the batteries discharge faster.

Store the batteries in a dry place under temperatures between 5 - 30 °C.

Take the batteries to a collection centre for hazardous waste or collection points.

## Maintenance

Keep the emitter clean by wiping dust with a dry cloth. Do not use any cleaning agents, solvents and chemicals. Do not push against the emitting opening optics with any objects. Store the emitter so that clogging of the emitting opening is prevented. Treat the barrel by wiping with a cloth gently moistened with oil. Use water-repellent oil such as WD40. Do not let the oil get to the lense!

After every shooting and before every shooting visually check intactness of the emitter and adapter, check batteries for corrosion. Remove the batteries if there are marks of corrosion on them. Let the emitter then dry up before storing the emitter to a weapon case. Also let the emitter to dry up in case that you used it in humid or rainy conditions.

## Laser rectification

When you want to rectificate laser beam without moving your sights on the pistol, you can do that just by moving the laser module. You do that by adjusting the /2/ screws. There are 4 screws around the end of the barrel.

**!! You first have to loosen the screw opposite the one you want to tighten !!**

For example: You want to move the laser to the right. You first loosen just a little bit the right side adjusting screw /2/, then you tighten the left adjusting screw /2/. Now you check if it helped – if the laser has moved enough to the right or not. If not, repeat this process.

## Adjustment of the trigger mechanism

### Striking adjustment:

The trigger mechanism is set by the factory for the two-stage weight. The engagement of the trigger lever can be adjusted by the screw /4/. When unscrewing the engagement of the trigger level will be increased. The first stage weight can be adjusted by the screw /1/. When screwing it in the first stage weight will be increased.

**!! We do not recommend changing the engagement of the trigger lever to other than factory setting (especially screw /4/) !!**

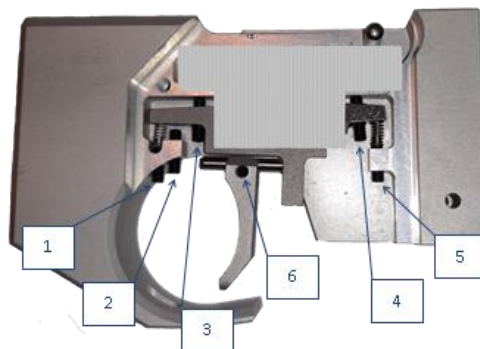
Any adjustments of the pistol should be done by the professional armourer or by a competent workshop.

### Trigger play, pull and position adjustment:

The trigger play can be adjusted by the screw /3/. When screwing it in the trigger play will be reduced. Screw /2/ is used to adjust the play of the trigger after firing (we do not recommend changing). When screwing it in the trigger play will be reduced.

**!! If the screw /2/ is screwed way too much in, it can prevent the pistol from firing !!**

The second stage trigger weight can be adjusted by the screw /5/. The Position of the trigger lever can be changed after loosening the screw /6/ on both sides.



## Potential Defects and Troubleshooting

The emitter does not send the laser ray while shooting.

Check whether the batteries are inserted, or replace the batteries, or check if the emitting opening is not clogged, or tighten the screws of the weapon frame that hold the adapter, or tighten the fixing screw.

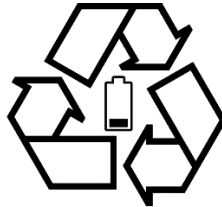
## CAUTION

Using different checking procedures, settings or operating procedures than the ones mentioned above may lead to dangerous radiation exposure.

**The emitter is an optoelectronic device; its disassembly is forbidden! – strong laser radiation may occur!**

## Environment Protection

Do not throw the batteries to a waste bin. Take the batteries to collection points to be properly recycled.



## Specifications

<i>Name of parameter</i>	<i>Value</i>
- Laser type	semi-conductor
- Laser module type	LME 160
- Laser class	CLASS 1 LASER PRODUKT (in accordance with EN 60825-1:2014)
- Wavelength ( $\lambda$ )	650 nm +/- 5%
- Diameter laser dot	< 6 mm
- Time between trigger release and the laser starts emitting the radiation	6 ms
- Lens output aperture diameter (according to the manufacturer)	3 mm
- Output (P)	$2,3 \leq P \leq 3,4$ mW
- Ingress protection	IP52
- UIPM code	UIPM signal 15.6
- Emission duration	15.6 ms
- Carrier frequency	40 kHz
<b>Laser Emitter ALE160</b>	
- Operating temperature	0°C to +50°C
- Number of shots per set batteries	min. 5 000 000 / at 20°C
- Weight – Emitter with batteries	0.186 kg
- Dimensions	200x20x18 mm
- Emitter power supply	3 VDC (2x1.5 V AAA)
- Upgrades of code / software	Yes, with special equipment by Apeom
<b>Laser Pistol mmlp</b>	
- Operating temperature	0°C to +50°C
- Weight – with emitter and standard weights	0,900 kg
- Dimensions with emitter	400x140x50 mm

## Special Provisions

The emitter is equipped with a warning-information plate, serial number plate and sealing stickers. Warranty for the equipment is void in case of damage to the plate or sealing stickers.

## Label

The warning-information label is located on the bottom side of the emitter body.

