



LS101 Laser Transmitter Accessory Instruction



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System Description

The **LS101** Laser Transmitter is a Class III A laser for use with Beamhit targets. Included are three Multi-Caliber Rods for effective training with your own fire-arm indoors or outdoors. It is powered by three LR44 batteries.

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SPECIFICATIONS - LS101 LASER TRANSMITTER

Beam shape	Elliptical (7:4 major exit)
Wavelength	655 nm @ 25 °C (visible Red)
Class	IIIA
Power supply	Battery 3X L1154 1.5V
Maximum recommended shooting distance	80 ft (25 meters)
Dimensions (Length, Diameter)	2.6 inches 0.6 inches
Weight	~0.12 lb with batteries
Eye safety	Complies with eye-safety standards: 21 CFR chapter 1, subchapter J
Operational time with new batteries	>5 hours if it is left in constant ON mode, >15000 continues shots in training mode
Training Mode Activation	Vibration (~300g)
Recommended Operational Environment	Indoor (limited outdoor)
Recommended Operational Temperature	0°C to +40°C (+32°F to +104°F)
Recommended Storage Temperature	-20°C to +50°C (-4°F to +122°F)

WARNINGS AND PRECAUTIONS

Please ensure you carefully read and follow all warnings, safety precautions, and operating instructions listed within this system manual before using this laser and/or system.

LIABILITY LIMITATIONS: AFG Training Technology, LLC it's suppliers, vendors and agents shall not be liable for damages, regardless of their nature, caused by user's negligence or failure to comply with recognized firearms safety procedures.

FIREARMS SAFETY: Verify that your firearm is UNLOADED before using the system. Double check that no live rounds are in the chamber, magazine, or cylinder of your firearm. Remove all ammunition from your training area. Always point your firearm in a safe direction and make sure no one is in the line of fire. Remember FIREARMS SAFETY IS YOUR RESPONSIBILITY.

LASER LABELS AND SAFETY: The LS101 Laser meets all Class III A Laser requirements and complies with FDA requirements, 21 CFR chapter 1, subchapter j. AVOID DIRECT EYE EXPOSURE

PROPER USE: Do not leave the laser on for long periods of time as this may create corrosion across the battery contacts. Do not use tools or excessive force while installing the laser/rod into the firearm. Ensure that the rod is installed and removed in a straight direction to avoid contact with the crown of the barrel.

System Components

LS101 Laser Package



Laser: LS-101

QTY: 1ea

MCR-SM-L



(.22 to .32 Caliber Rifle)

QTY: 1ea

MCR-SM



(.22 to .32 Caliber)

QTY: 1ea

MCR-ML



(.357 to .45 Caliber)

QTY: 1ea



ALLEN WRENCH - 1.5mm

QTY: 1ea



BATTERY:LR44

QTY: 3 per laser

ACCESSORY INSTRUCTION

QTY: 1ea

SAFETY PRECAUTIONS

Your system includes a Laser Transmitter compliant with FDA Safety Standards for Laser Products under 21 CFR chapter 1, subchapter j.

Before using this system, please read these operating instructions carefully. Follow all safety precautions and warnings.

Never use the Laser Marksmanship Training System (LMTS) with live ammunition!

Clear your firearm before using the LMTS. Always store ammunition separately.

Never look directly at the laser beam.



↑
AVOID EXPOSURE
LASER RADIATION IS EMITTED
FROM THIS APERTURE

DANGER

LASER RADIATION
AVOID DIRECT EYE EXPOSURE

Class IIIA Laser Product
650nm \pm 10, < 2 mW

THIS PRODUCT COMPLIES WITH 21 CFR
CHAPTER 1, SUBCHAPTER J

Made in China by Sean & Stephen Corp.

BEAMHIT **LS101**
P/N: MD2003

S/N: **8888888**

www.beamhit.com



CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure

Laser Controls



- 1- Battery Access**
- 2- Mode Selection Toggle Switch**
- 3- Mode Display LED**
- 4- Zeroing Adjustment (2 axis, 4 screws—UP/DOWN/LEFT/RIGHT)**
- 5- Laser Output**
- 6- Label**
- 7- Transmitter Rod Attachment**

Basic Functional Description

- Compatible with all BEAMHIT LMTS targets.
- External Laser with zeroing adjustment - Emits visible Red Laser for zeroing the laser to the firearm sights easier.
- Adaptable to most common pistols and rifles with proper Laser Transmitter Rods included with the system.
- The LS101 laser is activated by sensing the vibration caused by the trigger fall of the firearm. The laser will emit a pulse at each subsequent pull of the trigger allowing a real-time simulation of a bullet being fired.
- The LS101 Laser is for indoor training or limited outdoor training.

NOTE: Minimal use of the “**zero**” or constant on mode will maximize battery life.

Setup

Modes of Operation

The mode of operation of the LS101 laser can be selected by using the mode selection toggle switch. The laser toggles between modes; OFF -> Train -> Zero -> Back to OFF and so on.



OFF: Mode selection display LED is OFF. No laser output. This is not a storage mode. It is recommended to take the batteries out before storage.



Train: Mode selection display LED is Red (may not be easily visible under high environment light, such as outdoors). The LS101 emits a single laser pulse per vibration generated by the firearm trigger fall. This is the training mode.



Zero: Mode selection display LED is Green (may not be easily visible under high environment light). The LS101 emits constant laser output for zeroing the laser to the firearm sights using zeroing adjustment screws.



WARNING

Do not look directly into the laser light or aim at anyone in the zeroing mode.

Preparing the Laser for Use

1. Three (3) type LR-44 or equivalent batteries are used to power the LS101.

BATTERY PRECAUTIONS

- *Batteries must be inserted with correct polarity.*
- *Do not mix different types of batteries.*
- *Do not charge, short circuit, disassemble, heat or dispose of batteries in fire.*
- *Always replace all three batteries at the same time.*
- *Always remove batteries prior to storage to eliminate the possibility of corrosion due to damage from leaking batteries.*



2. Remove the battery cap by turning it Counter clockwise.

3. Check the battery springs on the cap and inside the laser for possible deformation from previous usage.

4. Insert the batteries (3) with the correct polarity as it is shown (negative goes in, positive on the cap).



Setup



5. Close the battery cap by turning it clockwise. The cap should turn smoothly. Hand tighten, ensuring not to cross-thread. Do not use a tool to tighten the battery cap.

6. Function test the Laser

- Toggle the mode selection switch and ensure the laser transmitter emits a constant beam when in the **Zero** mode.
- Toggle the mode selection switch to the **Train** mode and gently tap on the back of the laser. Ensure the laser emits a pulse when tapped.
- If you have any functional problems, try replacing the batteries and check for any deformation on internal battery springs. Call 1 888 BEAMTEC for further assistance.

7. Select the proper caliber rod for the firearm you will be attaching the laser.

Note: MCR-ML will be used as an example in this user manual to describe the firearm attachment process.



MCR-SM-L (.22 to .32 Caliber Rifle)



MCR-SM (.22 to .32 Caliber)



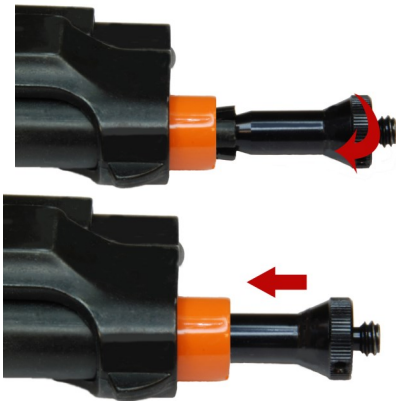
MCR-ML (.357 to .45 Caliber)



8. Expand the selected multi-caliber rod slightly larger than the firearm barrel diameter by turning the back piece clockwise.

Please use your fingers. Do not try to use tools.

NOTE: BEAMHIT Multi-Caliber rods are designed from soft aluminum and plastic to prevent any damage to the firearm barrel. Do not force, bend or expose the multi-caliber rods to high temperature. This will increase the life of the rod and prevent damage to firearm barrel.



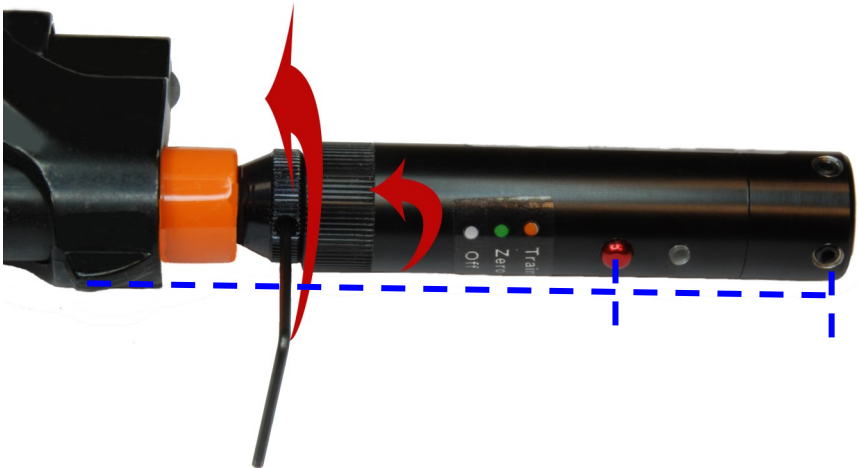
9. Place the rod to the tip of the barrel. While slightly pushing the rod into the barrel turn the rod in counter clockwise direction until the rod starts to move in to the barrel. Then, stop turning the rod but continue pushing.



10. When the rod is completely seated in the barrel, turn the rod in clockwise direction to expand the plastic extension and secure the rod in to the barrel. DO NOT OVER TIGHTEN!

Setup

11. Use the Allen wrench included with the system to keep the rod from turning while attaching the laser to the rod by turning in clockwise direction. When the laser is securely attached to the rod, turn the rod in clockwise direction using the Allen wrench until the top of the laser is aligned with the firearm front sight. Do not turn the rod more than 1 turn and overly tighten the rod to the barrel. This will prevent damaging the rod.



Zeroing the LS101 laser to the firearm sights :

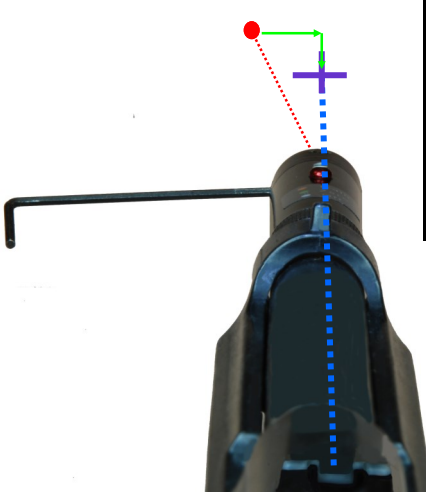
The zeroing process is required for each selected training distance. Because of the parallax, this process must be repeated with an alternate aiming point as the training distance changes.



There are 4 zeroing adjustment screws located at the front of the laser. The adjustment screws are also designed to hold the laser diode locked in place and keep the zero.

To be able to move the laser in any direction, all 4 zeroing adjustment screws need to be loosened using the Allen key included with the system. This will allow the internal laser diode to move angularly when any of the 4 adjustment screw is tightened. Be careful not to loosen the set screws excessively to avoid loss should they come out.

NOTE: The above example will be used to describe the zeroing process (The laser is pointing to the left and higher than the aiming point).



NOTE: After initial zeroing, minimal changes, if any will be need for future training sessions.



The goal is to move the laser spot to the aiming point. The picture on the left shows the properly zeroed laser to the sight picture or the aiming point.

Setup

1. Identify your training distance. Set the laser mode to Zeroing then aim the laser to the selected target at training distance (white background is preferable to be able to see the laser spot comfortably).
2. Look through firearm sights and identify which direction you need to move the laser spot. For our example we are assuming it needs to move right and down.
3. Loosen all 4 zeroing adjustment screws by turning them CCW direction for complete one turn.
4. While loosening the right adjustment screw, tighten the left screw until the laser spot roughly zeroed for the horizontal axis.

NOTE: During zeroing process the laser can turn off if the screws are loosened more than needed. Tighten the screw back, turn on the laser and continue.



5. Make sure that left and right screws are not very tight and the laser diode is free to move up and down.

6. While loosening the bottom adjustment screw, tighten the top adjustment screw until the laser spot is roughly zeroed for the vertical axis.

7. Fine adjustment: By loosening and tightening all four adjustment screws finalize the zeroing process. All four screws should be tight, locking the laser diode in place at the end of this process. Do not over tighten, instead firmly seat the locking screws.



8. Confirm your sight picture.

9. Set the laser to Training mode and confirm that the laser is generating a single laser pulse for every trigger pull.

The firearm is ready for Training !

LMTS products are manufactured to provide years of dependable use. If for some reason the product needs to be repaired and is still under warranty, please contact AFG Training Technology, LLC at the address shown on the cover of this manual for a return authorization (RMA) number. Remove the batteries and return the product securely packaged. In the event the product is not covered by warranty, you will be notified as to the nature and cost of the necessary repair.

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