



*User Manual*

**Project P0058**

# **M16 Warning LED Display**

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## 1 **Safety instructions**

Observe the following basic safety rules for firearms before installing the device:

- Handle the weapon as if it were always loaded.
- Never aim at objects that are not intended targets.
- Keep your finger off the trigger until the target is in view and you are ready to fire.
- Be sure of the target and be sure that it is in front of you.

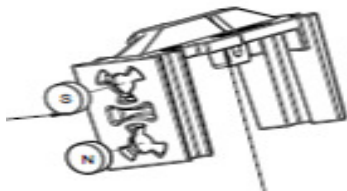
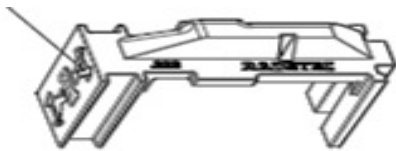
The “M16 Warning LED Display” is an accessory to be installed on the M16 rifle, and as such it must be handled with care.

The tool required for installation is a 2-mm Allen wrench (5/64”).

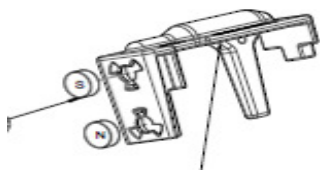
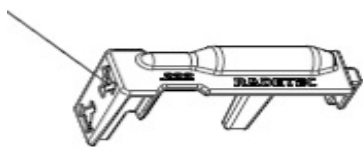
## 2 **Components of the “M16 Warning LED Display”.**

**Special follower with magnets:** This follower is required for the system to work. It is completely compatible with the original follower, and it includes embedded magnets. To cover the greatest possible number of magazines used in the M16, two special followers with magnets have been designed: one to be installed on the 30-round aluminum magazine manufactured by C-Products and another to be installed on the 30-round plastic magazine manufactured by Lancer.

Details of the follower manufactured by C-Products.



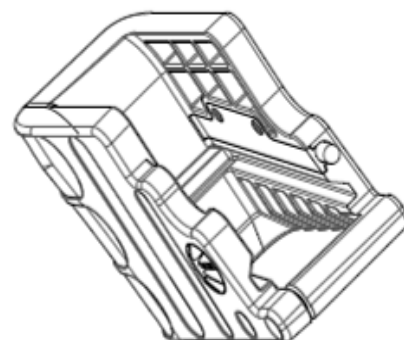
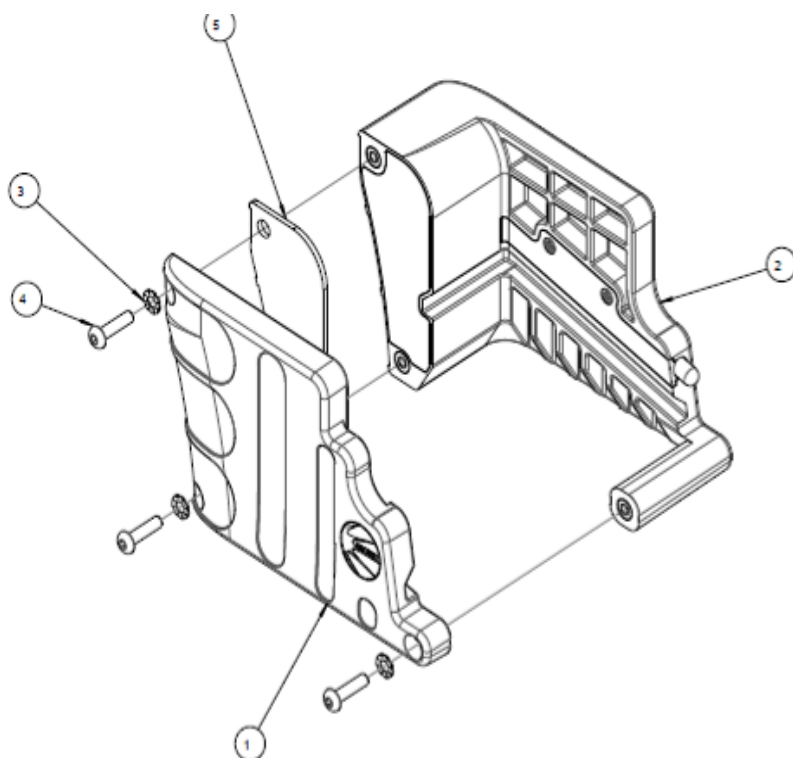
Details of the follower manufactured by Lancer



### Accessory installed around the weapon's magazine port

This element consists of two parts of injected polyamide fiber, which are joined by screws. It incorporates the push button. The Electronic Control Unit is also integrated in this component, which controls the operation of the device.

The central spacer sheet is not installed on all weapons. Depending on the weapon's manufacturer, the port has a different size, and the sheet is used to ensure that this accessory is fastened securely to the weapon's magazine port. A 2-mm (5/64") Allen wrench is used.



**LED Display Accessory**

This element is installed on a Picatinny rail located on the weapon's hand guard. The accessory is fastened using a commercial cylindrical clamp for a diameter of 1" (25.4 mm). The clamp has a width of less than 0.71" (18 mm) and is fastened to the Picatinny rail. This accessory has a small mark, which must be situated at the top so that the display is positioned correctly and can be read correctly.



### **3 Technical specifications**

**Operating temperature range:** -20° C to 60° C.

**Power supply:** 3V6, 1000 mAh lithium battery welded to the Electronic Control Unit; 3V, 750 mAh, replaceable lithium battery on the LED display accessory.

**Battery life:** Over 10 years for the battery installed on the Electronic Control Unit. Over 25,000 display operations with the two digits illuminated.

**FCC Certification :** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

**Protection against rain, dust, and sand:** meets IP67 specifications.

**Dimensions of the accessory on the weapon's magazine port:** 100 x 70 x 50 mm (L x W x H)

**Dimensions of the LED display accessory:** Diameter x height: 40 mm x 65 mm

**Approximate dimensions of the two followers:** 70 x 45 x 25 mm (L x W x H)

**Weight of the accessory for the weapon's magazine port:** 122 g.

**Weight of the LED display accessory:** 55 g.

**Weight of the two RADE followers:** 21 g.

## 4 **Installation**

Take the weapon and proceed to install the accessory on the magazine port.

For this operation, only a 2-mm Allen wrench is required for tightening the three fastening bolts.

Subsequently, a Picatinny rail and a round fastening clamp are required for installing the LED display accessory. The complete device mounted on an M16 rifle is shown below.



The yellow button visible on the side is pressed by the user to access the operating functions.

After performing the preceding operations and in order for the “LED Warning Display” to work correctly, a magazine that has a follower with embedded magnets must be inserted in the weapon.

Extreme care must be taken when disassembling and assembling the magazine so that no parts are damaged and so that assembly is correct.

## 5 **Operation**

Once the device is installed on the weapon, the user is provided with diverse information through the LED and Display. This information can be classified as follows:

- a) Query operating mode by pressing the button with a quick press: the display shows the number of rounds in the magazine, from 0 to 12. If there are more than 12 rounds in the magazine, no information is shown on the display.

- b) Operating mode by firing: if the device is operational, there are two cases:
- If there are more than three rounds in the magazine, the display shows the number of rounds in the magazine, up to a maximum of twelve.
  - If there are three rounds or fewer in the magazine, the red LED immediately illuminates according to the sequence in the following table:

Rapidly flashing red	0	Rounds in the magazine
Slow flashing red	1	Round in the magazine
Steady red	2 or 3	Rounds in the magazine

- c) In the query operating mode, by pressing and holding the button, the display will show the total number of shots fired by the weapon since the device was installed. Information is presented starting with a message that consists of a “-“ followed by the most significant digit, and then the remaining digits will be displayed automatically, up to the last digit, which will be the least significant and will be followed by a “-“.

**Very important:** The preceding information only refers to the number of rounds in the magazine when the weapon is locked, and it does not take into account the possible existence of a round in the chamber.

- d) The user also receives information about the charge status of the batteries of both the magazine port accessory and the LED display. Thus, when the battery of the magazine port accessory is close to being completely depleted (2V9 DC), the display shows “Lb”. When the battery of the LED display device is close to being completely depleted (2V4 DC), there will be three blue-colored flashes on the display.

## 6 Maintenance

Using the weapon’s “Instruction Manual” as a reference, it is recommended that whenever the weapon is cleaned, the condition of the device should also be checked. It is advisable to clean the area around the button on the magazine port accessory and clean the front of the viewer on the LED display.

Whenever the weapon has been used in a rainy environment or after having been subject to immersion, it is advisable to take off the device to clean and dry it, and then reinstall it. This will help to maintain the look and reliability of the product.

If the display does not illuminate when the button is pressed in query mode, the state of the battery in the LED display should be checked. To replace the battery, unscrew the circular cover, and the battery can be easily removed. If it is necessary to replace the battery, another one with similar specifications must be installed.