

BATTLEFIELD SPORTS



9/1/2014

Gaming Gun Manual

Hints & Tips to Keep your Gaming Guns and Accessories in good working order.

Battlefield Sports

GAMING GUN MANUAL

GENERAL MAINTENANCE

Like all things Laser Skirmish / Battlefield LIVE gaming guns require some maintenance especially when used in a busy commercial operation.

You should have a weekly checklist in place that is gone through to ensure minimal downtime and maximum enjoyment by your gamers.

Further info is available in the Battlefield Sports University. To access the BFSU you would have been given a unique username/password when you purchases your equipment. Go the www.battlefieldsports.com home page and in the footer, click on "log in".

Weekly Checklist

Here is the recommended weekly checks on each gaming gun or accessory:

- Each sensor is shot at individually to make sure they are taking hits
- Each button is pushed to verify it is working. We also test the reload button and the semi auto button functionality.
- SHOOTING: The gaming gun is fired at a target at distance (around 30m/100ft) away to verify it is working – RF & IR.
- GETTING SHOT: We test that each unit is making hits by shooting at a sensor. We test each unit is taking hits.
- Check that that display is working.
- A visual inspection is made to ensure the muzzle flash is working
- The main lens is checked and cleaned if needed
- The scope is checked and cleaned if needed
- All gaming guns & accessories must be recharged.

Every so often the hat should be checked to see if any hats need retiring or if they need repairs. Frequent washing of hats means they will need to be replaced from time to time. Battlefield Sports supplied hats are the best we have found to date, at a reasonable price, to survive frequent washing.

Zeroing the Scopes

There is a useful video on how to zero the scopes:

<https://www.youtube.com/watch?v=kc7-h5N7M-g>

Using an IR Camera and a B/W TV we check and where needed zero all the scopes (see more on this below). Another method is to zero by shooting at a sensor making sure hits are made evenly up and down, left to right. An important element of zeroing the scopes is to take into account the height of the scope above the lens assembly. The scope should be zeroed so that the center is above the target to the same amount as the scope is above the lens assembly to ensure the two are parallel. However if you zero to say 50 meters+ the difference is minimal and you can safely zero the scope right onto the sensor.

There is basically two ways to zero the scopes. The easiest way is to use an infra-red camera attached to a black and white monitor so that you can see the beam on a wall. The much more time consuming method is to zero the scopes by aiming at another gun or target sensor at range usually at 30-40 meters (setting to realistic mode and 00 hit points is very useful for this purpose). The aim of zeroing is to get the scope (aiming device) to be in parallel with the beam. The important thing to realize is the scope is mounted above the barrel, sometimes by as much as 150mm on some models. To keep the scope parallel with the beam means the scope must be zeroed to be above the beam by the same distance the scope is above the barrel. The term barrel in this case means the main lens assembly from which the infra-red beam comes out rather than the fake barrel found on some models for the muzzle flash. To find the lens assembly look for a 25mm or 50mm tube that has an embedded glass lens inside.

Typically telescopic scopes are zeroed by using a flat head screw driver. On the scope there is two "knobs", take off the covers to reveal the adjustments. The top knob is the vertical adjustment and the side knob is the horizontal adjustment. Additional horizontal adjustment is possible if zero mounts have been used. Red Dots also have similarly placed knobs that can be adjusted using a small flat head screw driver.

Zeroing Scopes

All units shipped from the Battlefield Sports factory have had scopes zeroed before shipping, it is still recommended that the scopes are zeroed before first use. At the corporate owned battlefields, the scopes are re-aligned (zeroed) once per week because a well zeroed scope improves the players experience immensely. Scopes can move out of alignment with use so it is important to be diligent with this process each week. A unit with a poorly zeroed scope is going to perform badly on the battlefield, leading to unsatisfied customers.

METHOD 1 – INFRARED CAMERA

This is the fast method and for most fields with a lot of laser skirmish units in action, the only practical way to zero scopes regularly.

This needs to be done in a room with fairly low light. If the room is too bright, you will not be able to see the infrared beam generated by the laser skirmish unit against the wall.

The infrared camera needs to point towards a wall (or any vertical surface). The monitor needs to be point towards the firer. The firer then shoots at the same wall as the infra-red camera is pointing at from a range of 3-5 meters and then looks through the scope to see where the scope is pointing in relation to the beam.

The goal is to adjust the scope so that the red dot or cross hair is above the centre of the beam and the distance above the centre of the beam is the same as the distance between the centre of the barrel and the centre of the scope. Battlefield sports can provide a target sheet to print out that helps get the distance above right, although different scopes and mounts can modify the distances.

The trick with the adjustment is to turn the knob the opposite way to that indicated on the adjustment. For example if the beam is on the target centre and the cross hair is off to the right, you need to turn the adjustment screw to “L”.

METHOD 2 – TARGET SENSOR

At a range of at 30-40 meters, you can aim at a target sensor or a sensor attached to a laser skirmish gun. When the scope is properly zeroed, you should be still making hits an equal distance either side of the target on the horizontal plane. On the vertical plane you should be making hits further over the target than under the target. If either the horizontal or vertical are not as described, you then need to adjust the scope.

If you can't make hits at 40 meters but have verified the gun is working at close range, reduce the range to 30 meters. If that still does not work keep moving the target closer until you do. At the new shortened range, zero the best you can and then have the target move back another 10 meters etc. This process is done when the scope is so far out of alignment to start with that is impossible to make hits at long range.

Replacing a Curly Cable.

A repair that a Battlefield Operator may need to do from time to time is to replace a curly cable. Here is a useful video on how it is done.

<https://www.youtube.com/watch?v=ZrxxJQBI81>

Other Repairs

Occasionally a Battlefield Operator may need to undertake other repairs.

Sometimes the Cobra trigger can get sticky. Apply some “ezy-glide”. How this is done is described in the Battlefield Sports University.

Such as re-adjusting a loose handle on a Scorpion. Here is a useful video on how it done.

<https://www.youtube.com/watch?v=M3QAmeZBBk0>

If you have questions on other maintenance issues please email us at support@battlefieldsports.com