

# S LITE

MAG  
LASER

Patented



## INSTRUCTIONS

***FOR MAG LASER BORESIGHTING SYSTEMS:  
SL-100, SL-150, SL-500***

**(IMPORTANT - READ ALL INSTRUCTIONS PRIOR TO USE)**

**WARNING! UNLOAD FIREARM BEFORE PROCEEDING!**

**Physically Check Firearm  
Do Not Assume it is Unloaded**

The SL-100/150/500 Laser boresighters project a laser beam onto a calibrated target for superior boresighting accuracy. The SiteLite boresighters are ideal for use with conventional & red dot scopes as well as open sights. The boresighters fit most calibers (Rifles, Pistols & .50 Cal. Muzzleloaders). A 20Ga. and 12Ga. Shotgun Adapter is also included.

The SL-100/150/500 are delicate, precision instruments and must be handled with care.

# **WARNING!** **UNLOAD FIREARM BEFORE PROCEEDING!**



This is an Actual Photo of a Customer Who Forgot to Unload Their Rifle. This Can Happen to You, if You Do Not Heed This Warning!

## **Physically Check Firearm** **Do Not Assume it is Unloaded**

1

## **LASER SAFETY PRECAUTIONS**

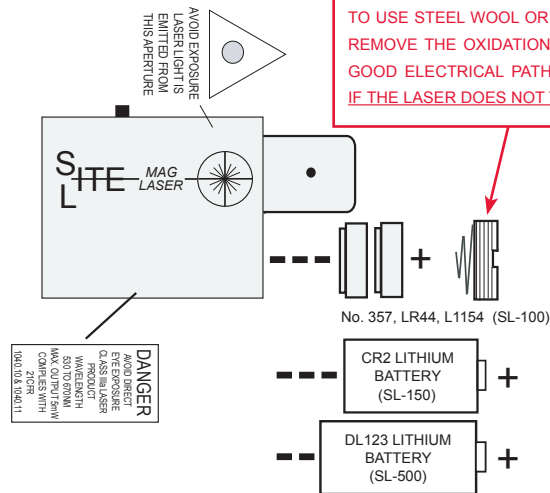
The SL-100/150/500 Laser Boresighters use a Class IIIa laser with a 530-670 +/- 10NM wavelength and a maximum output of 5.0mW. It is safe to use in normal operation as described in these instructions.

The SL-100/150/500 have warning labels in compliance with applicable regulations, as shown.

**AVOID DIRECT EYE EXPOSURE - DO NOT LOOK DIRECTLY INTO THE LASER**

### **IMPORTANT!**

NOTE: THE BATTERY CAP THREADS & HOUSING MAY DEVELOP AN INVISIBLE OXIDATION OVER TIME, THEREFORE, THE THREADS MAY NEED TO BE BUFFED (VERY LIGHTLY) TO REMOVE THE ALUMINUM OXIDATION. IT IS RECOMMENDED TO USE STEEL WOOL OR A PENCIL ERASER TO REMOVE THE OXIDATION. THIS WILL INSURE A GOOD ELECTRICAL PATH. CHECK THIS FIRST, IF THE LASER DOES NOT TURN ON PROPERLY.



2

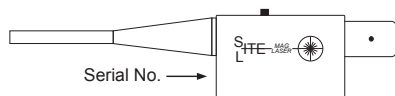
## **PREFERRED BORESIGHTING METHOD**

The **Ballistic Targeting System (BTS)** Software Program will create a custom laser boresighting target for your specific rifle and ammo. It is the most accurate boresighting method available.

### **BTS Software Program Download Instructions**

To download the program, go to [www.sitelite-lasers.com](http://www.sitelite-lasers.com) and click on the "Ballistic Targeting System" button on the left side of the page. Then, scroll down to and click on "Ballistic Targeting System - Download"

Locate the Serial No. on your boresighter:



Enter only the six numbers of the Serial No. and press OK.

Save program to your Desktop. Then click on "sitelitesetup" to install the program and save the "Sitelite Sight-in Program" to your Desktop. To initiate the program, click on the "Sitelite Sight-in Program" icon.

IMPORTANT: When the program first opens,

Scroll Down to Read ALL Instructions BEFORE Proceeding

Note: If data is not available for your specific firearm, use a caliber that has similar ballistics and put in your bullet weight, sight height, FPS, etc. Data is not available for muzzleloaders except from specific manufacturers. However, you can use the Remington 44 Mag Rifle data and put in the bullet weight, sight height, FPS, etc. for your muzzleloader and that will get you very close.

## **BTS Program - Basic Steps**

1. Select Rifle, Pistol or Shotgun.
2. Select the caliber/cartridge for the rifle you are using (.222, .270, .30-06, .300 WSM, etc.)
3. Enter the scope height. Determine height by measuring the distance from the center-line of the rifle bore to the center-line of the scope (Fig. 1)
4. Select the bullet weight.
5. Select the bullet shape (round nose, pointed, hollow-point, etc.)
6. Enter the Muzzle Velocity (FPS) (If unknown, the system will enter the average FPS)
7. Enter the B.C. (If unknown, the system will enter the average B.C.)
8. Select Zeroed Range (75 to 300 yards in 25 yard increments)
9. Once you enter the "zeroed" range the program will calculate the boresighting target range that you should use to align the center of your crosshair with the laser spot (Fig. 2) This range will be closer than the "zeroed" range because it is the point where the bullet crosses over the line of sight and is the same point that the bullet will impact at the selected range (Fig. 3)



Fig. 1

Fig. 2



Note: Boresighting with this system, at the zeroed range, will usually require it to be done in dim light or use the reflective dot on the SAVS Target (Ref. Page 14)

Fig. 4



You may also select a closer range (Minimum 8 yards) for use indoors. The system will move the laser target position below the crosshair position, to compensate for the range difference (Fig. 4)

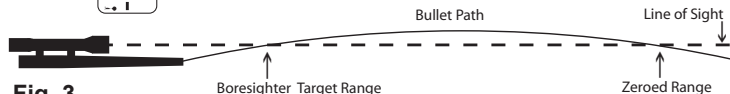


Fig. 3

**WARNING! UNLOAD FIREARM BEFORE PROCEEDING!**  
**Physically Check Firearm Do Not Assume it is Unloaded**

**ALTERNATE BORESIGHTING METHOD**

1. Place the target on a wall 25 feet from the muzzle.
2. The firearm must be secured and clamped into position with the muzzle located at 25 feet from the target. The barrel should be level in relation to the target.
3. Install the proper o-ring and screw on the Muzzle Adapter, as required (see Muzzle Adapter Instructions). Insert the boresighter all the way into the muzzle, with the arrow aligned with the top center of the barrel.

**Lubricate the o-ring with Vaseline or silicone grease before inserting. Do not use gun oil. Some oils will swell and deteriorate the o-ring. (O-rings will tear without lubrication)**

4. Set the scope at low power and switch on the boresighter. Adjust the position of the firearm to center the laser within the "Laser Target" located below the dotted line crosshair on the target (See Fig. 1.)

**Note:** The laser spot, projected on the target, will normally range in size from 1/2" to 3/4" in diameter. This provides for easier alignment on the target.

5. Insure that the firearm does not move and that the laser remain centered in the target while making adjustments. Adjust the scope crosshairs or other type sights to align as shown in Fig. 1 & 2

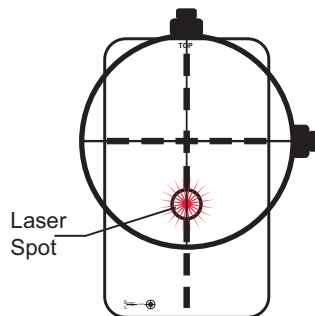


Fig. 1

Properly boresighted scope with laser spot on "Laser Target" and scope crosshairs on dotted lines above the laser spot

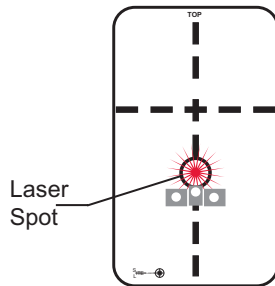






Fig. 2

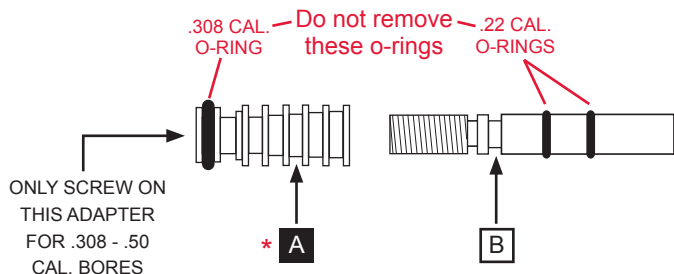
Properly boresighted iron sights with laser spot on "Laser Target"

6. Complete sighting in the firearm at the range, taking the first shots at no more than 50 yards to make your initial adjustments.

## O-RING TO CALIBER

			
.243 CAL. <b>B</b>	.25 TO .270 CAL. <b>B</b>	.284(7MM) – <b>B</b> .323 (8MM) TO .338 – <b>A</b>	.35 CAL. & 9MM <b>A</b>






**MATCH O-RING TO CHART (ACTUAL SIZE)**



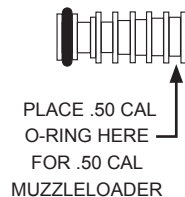
- \* The lubricated O-ring should insert with a light drag. Due to the varying tolerances in different bores & calibers, the O-ring can be put in the other grooves for a better fit. Start with position "A". If the O-ring in position "A" is too loose in the bore, then move the O-ring to the next groove to the right. This will enlarge the O-ring slightly for a tighter fit. If it is too tight in the bore on position "A", then move the O-ring to the left. **Remember to always lubricate the O-ring with silicone grease or vaseline before inserting into the bore.**

**NOTE: A spare .22 cal. O-ring is provided in the O-ring box.**

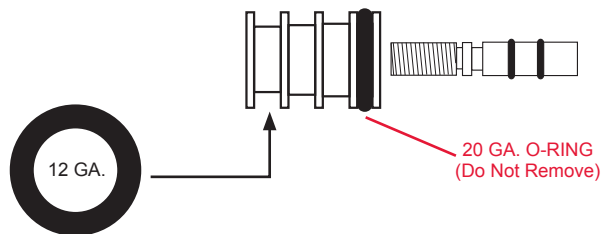
## SELECTION CHART

				
.375 CAL. <b>A</b>	.40 CAL. <b>A</b>	.44 CAL. <b>A</b>	.45 CAL. <b>A</b>	.50 CAL. <b>A</b>

**MATCH O-RING TO CHART (ACTUAL SIZE)**



## SHOTGUN ADAPTER



## **MUZZLE ADAPTER INSTRUCTIONS**

The Muzzle Adapters use various size O-rings to align the boresighter within the center of different caliber bores. Refer to the O-ring to Caliber Selection Chart (pages 7-8) for the proper O-ring. The proper O-ring should enter the bore with light to moderate drag when lubricated. The adapter (without the screw on extension) is used for all calibers from .22 to 7mm (.284 cal.) O-rings are put in position "B" as referenced on the chart. The screw on adapter is used for all calibers from .308 to .50 caliber. O-rings are put in position "A" as referenced by the chart. The screw on adapter has additional O-ring grooves that are not referenced on the chart. These grooves are graduated in size and are provided to compensate for varying tolerance bores & calibers (see pages 7-8). Use these grooves, as required, to insure that the O-ring enters the bore with the proper drag. Always lubricate the O-ring with silicone grease or vaseline before inserting into the bore.

**Also, be sure to check the bore to make sure that it is clear of any O-rings after boresighting.**

**NOTE:** The adapters were conveniently designed so that the .308 and .22 caliber O-rings never have to be removed, since these are the most popular calibers. The .308 O-ring is used for .30-30, .30-06, .300 Win Mag, .300 WSM, .300 savage, .308 Win. and 7.62mm bores, etc. The .22 caliber O-ring is used for .22, .222, .223, .22-250, and 5.56mm bores, etc.

The Shotgun Adapter (MA-3) fits 20 GA. and 12 GA. shotgun bores. The 20 GA. O-ring does not have to be removed. The 12 GA. O-ring is put in position "C". The other grooves are used to compensate for varying tolerance bores.

## **SRL- 100 SCOPE RETICLE LEVELER**

The SRL-100 converts the SL-100/150/500 Laser Boresighters into an extremely accurate scope reticle leveler. It is designed to precisely level your scope crosshair prior to boresighting. The adapter uses a high quality glass lens and simply slips over the laser module housing to change the laser spot into a precise laser line.

**ALWAYS MAKE SURE THAT THE FIREARM IS UNLOADED PRIOR TO USING ANY BORESIGHTER!**

1. Secure the rifle in a gun vise and adjust the butt of the stock so that it is vertical. (Vertical alignment is a preliminary adjustment at this time and does not require precise accuracy)
2. Loosen the scope rings only until you can start to turn the scope.
3. Insert the boresighter into the muzzle, using the correct O-ring. (See Muzzle Adapter Instructions)
4. Slip on the SRL-100 Adapter and rotate, slightly, until it just contacts the boresighter's housing. Do not use any force after contacting the housing.
5. Place the SRL-100 target on a wall between 15 and 25 feet from the muzzle and level the target with the built-in bubble level.

(Continued on next page)

6. Turn on the laser. Hold the boresighter housing and turn the adapter until the laser line is vertical and aligned with the crosshairs on the target. Note: You may have to dim the room lights to see the laser line, clearly.
7. Rotate the scope & adjust the windage to align the crosshair with the laser line. (Fig. 1)

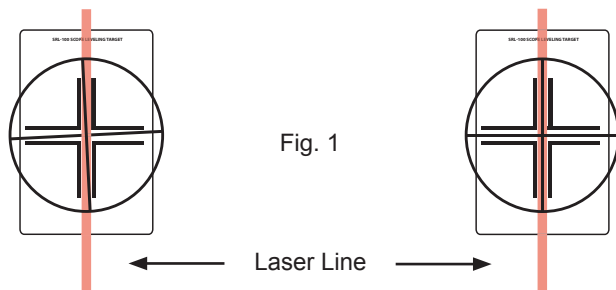


Fig. 1

8. Pick up the rifle and aim it, using your normal shooting stance. Note the position of the crosshairs in relation to the laser line. If necessary, readjust the crosshairs to insure that they are vertical & level in your shooting position. Every shooter holds his firearm in a slightly different position, so it is important to make this check.
9. Tighten the scope rings, insuring that the scope does not move from the level position.
10. Proceed with boresighting the firearm.

## **BORESIGHTING TIPS**

The target provided for the alternate method is calibrated for a normal scope height of 1.5" above the barrel (center to center of scope to bore). For high mounted scopes, you must mark a new elevation line above the horizontal dotted line on the target to compensate for the difference. If your scope is 2.5" center to center, you would mark a line 1.0" above the dotted line and adjust your scope elevation to it. Handguns with red dot scopes or lasers, to be sighted-in at close ranges of 25 to 75 feet can be boresighted by placing the boresighter laser dot on any object between 25 to 75 feet and aligning the red dot scope or laser sight with the boresighter laser dot.

NOTE: Short barreled handguns are not usually compatible with laser boresighters. Laser sights on short barrel handguns can be easily aligned by simply aiming at a light surface, 25 feet away, and adjusting the laser spot to align with the top of the front sight. This method is very accurate and does not require the use of any boresighter. You can also use this method for red dot sights for up to 75 feet.

We unconditionally guarantee that our boresighters are more accurate than any other boresighters. It is important to take your first shots at 25 yards because of many factors affecting boresighting accuracy such as parallax, bullet spin, variable ballistics, etc. You should always sight in your firearm at a range after boresighting to compensate for these factors, regardless of any boresighter you use.

## SAVS

### SCOPE ALIGNMENT VERIFICATION SYSTEM

The Scope Alignment Verification System (SAVS) Target accurately verifies the alignment of your zeroed-in rifle scope after traveling, rough handling or a fall. Your rifle must be zeroed in at a range before using the SAVS.

1. Place the target 25 feet from the muzzle & align the laser spot within the circle on the target.
3. Locate the position of the center of the crosshairs on the grid and mark that position with a marker. You now have an accurate reference to check alignment in the field.

Rifle Mfg. \_\_\_\_\_ Serial No. \_\_\_\_\_

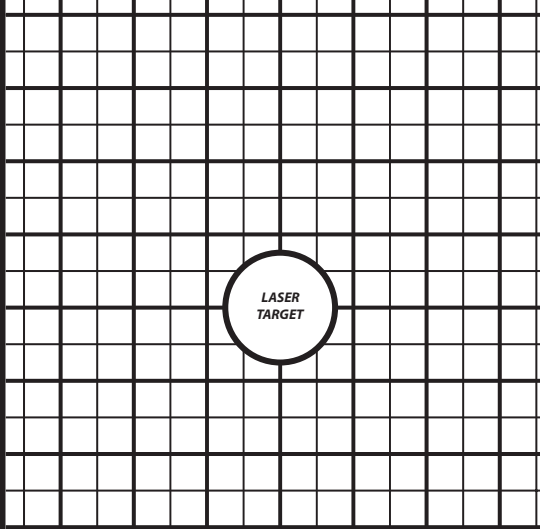
Caliber \_\_\_\_\_ Zero Distance \_\_\_\_\_

Bullet Type \_\_\_\_\_ Wt. (Gr.) \_\_\_\_\_

Powder Mfg. \_\_\_\_\_ Wt. (Gr.) \_\_\_\_\_

Velocity (FPS) \_\_\_\_\_

You can make a copy of the **SAVS** Target for each rifle and keep it with the rifle in your gun case.

Scope Alignment Verification System															
SITE LASER				SAVS											
															
The Scope Alignment Verification System (SAVS) accurately verifies the alignment of your zeroed-in rifle & scope after traveling, rough handling or a fall. Your rifle must be zeroed in at a range before using the SAVS.															
1. Place the target 25 feet from the muzzle & align the laser spot within the circle on the target.															
3. Locate the position of the center of the crosshairs on the grid and mark that position with a marker. You now have an accurate reference to check alignment in the field.															
Rifle Mfg. _____ Serial No. _____ Caliber _____															
Zero Distance _____ Bullet Type _____ Wt. (Gr.) _____															
Powder Mfg. _____ Wt. (Gr.) _____ Velocity (FPS) _____															
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## **IMPORTANT** **WARRANTY AND SERVICE INFORMATION**

The SL-100/150/500 Mag Laser Boresighters  
have a Lifetime Warranty.

**Note: Warranty is only valid for the original owner. Please register your boresighter at [www.sitelite-lasers.com](http://www.sitelite-lasers.com) to activate your warranty.**

For parts, service, or any other technical issues  
please contact us.



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