

SIGHT MARK[®]

USER MANUAL



Wolverine FSR and
CSR Series

SM26020

SM26020DE

SM26020-LQD

SM26021

SM26021DE

SM26021-LQD

ABOUT SIGHTMARK®

Sightmark offers a wide range of products that include red dot scopes, reflex sights, rangefinders, riflescopes, laser sights, night vision and award-winning flashlights and boresights. Sightmark products are inspired by military and law enforcement applications. All products are designed to be the most effective weapon accessories possible.

Sightmark - MAKE YOUR MARK®



WOLVERINE

FSR Wolverine

Designed for quick-target acquisition in short-range engagements, the Wolverine FSR red dot sight delivers unlimited eye relief on an AR platform. Compact and lightweight, yet exceptionally durable with a battery life far more advanced than comparable models, this red dot sight is built for a lifetime of use.

CSR Wolverine

Designed for quick-target acquisition on shotguns and short-barreled rifles, the Wolverine CSR red dot sight delivers unlimited eye relief and first-class battery life using a single AA battery. Its variable brightness and night vision modes enable the ability to co-witness with a night vision sight.

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS	FSR (SM26020/LQD/DE)	CSR (SM26021/LQD/DE)
Reticle type	2 MOA	4 MOA
Reticle color	Red	Red
Reticle brightness settings	Off, NV1, NV2, 3-10	Off, NV1, NV2, 3-10
Magnification (x)	1	1
Objective lens diameter (mm)	28	23
Eye relief (mm)	Unlimited	Unlimited
Windage maximum adjustment range (MOA)	120	120
Elevation maximum adjustment range (MOA)	120	120
MOA adjustment (one click)	1/2	1
Battery type	1x AA	1x AA
Battery life (hours)	900 - 1,000,000	900 - 1,000,000
IP Standard (water rating)	IP67 - Submersible to 1m	IP67 - Submersible to 1m
Body material	Aluminum - 6061 / rubber	Aluminum - 6061 / rubber
Lens coatings	Fully Multicoated AR red	Fully Multicoated AR red
Mount type	Picatinny	Picatinny
Operating temperature (°F)	-22 to 122	-22 to 122
Length (in/mm)	4.4 / 113.5	3.4 / 87.5
Width (in/mm)	2.9 / 75.1	2.8 / 71.6
Height (in/mm)	2.6 / 65.3	2.4 / 61.1
Weight (oz)	12.3 / 13.2	10.3 / 11

INCLUDED:

- Rubber lens cover
- Picatinny mount
- Riser for absolute co-witness

FEATURES
Powered by a single AA battery
Very low power consumption
Digital switch brightness controls
Scratch resistant, anti-reflective lens coating
28mm objective lens for quicker acquisition*
Compact and lightweight design**
Locking quick detach mount***
Protected adjustment caps
Rubber armored, single piece 6061-T6 aluminum housing
Adjustable mount height
IP67 waterproof rating - submersible to 1m/3ft

*FSR (SM26020)

** CSR (SM26021)

*** FSR (SM26020-LQD) and CSR (SM26021-LQD)

DIAGRAM

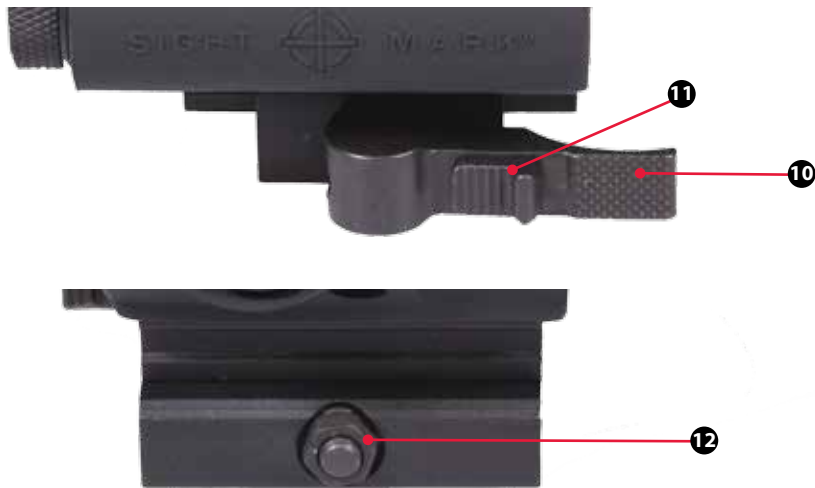
1. Objective lens
2. Elevation adjustment
3. Windage adjustment
4. Eyepiece

5. Battery compartment
6. Battery cap
7. Brightness controls
8. Mounting hex nut

9. Co-witness riser
10. Quick detach lever
11. Locking tab
12. Tension nut



DIAGRAM



WARNING: Always follow your firearm's instruction manual and warnings. Follow safe firearm practices.

INSTALLING THE BATTERY

The Sightmark Wolverine FSR and CSR are powered by a single AA battery. Should the reticle illumination grow dim or fail to illuminate, the battery needs to be replaced.

To install a new battery:

1. Unscrew the battery cap (6) counterclockwise with a coin or flathead screwdriver.
2. Insert the new battery into the battery compartment (5) with the positive (+) side inserted first.
3. Screw the battery cap on clockwise until firmly secure. Do not over tighten.



ON/OFF ACTIVATION

To turn the unit on:

1. Press and release the up arrow on the brightness controls.

To turn the unit off:

1. Press and hold the up arrow for five seconds.
Note: The unit will automatically shut off after 12 hours to save battery life.

BRIGHTNESS CONTROLS

The Wolverine FSR and CSR offer 10 brightness settings; 8 daytime and 2 night vision modes. Settings 1 and 2 can be used with generation 1, 2, and 3 night vision devices. Settings 3 and 4 are best for low light, indoor environments while 5 - 10 are best for outdoor environments.

To adjust the brightness:

1. Press the appropriate up or down arrow to adjust the brightness of the dot.
2. To increase brightness press the up arrow.
3. To decrease brightness press the down arrow.

Note: The last brightness setting used prior to deactivation will be the same setting next time the unit is activated.

MOUNT HEIGHTS

The Sightmark Wolverine FSR and CSR include a picatinny mount and riser (9) for absolute co-witness. If mounting on a bolt action hunting rifle or shotgun, a low profile mount height is desired and it is recommended the co-witness riser not be used. If mounting on flat top AR-15 rifles, it is recommended the riser be installed for an absolute co-witness with iron sights.

To remove the base:

1. Use the included hex key to loosen and unscrew the four screws attaching the mount to the Wolverine.
2. Select the desired mounting setup. If the low profile mount height is desired, the four smaller screws must be used to attach the base to the Wolverine. If the co-witness mount height is desired, the riser spacer is installed between the mount and the body of the Wolverine. Also, the four longer screws must be used to attach the base and riser to the Wolverine.
3. For a semi-permanent fixture, a small amount of blue Loctite® may be applied to the threading of the four screws. Tighten and secure the four screws by applying 20 inch pounds of torque. Do not overtighten.

Low Profile Mount



Co-Witness Mount



MOUNTING

The Wolverine FSR and CSR are designed to mount to picatinny rails. For safety it is best to have at least three to four inches of eye relief.

To mount:

1. Loosen the mounting hex nut (8) on the mount. Attach the Wolverine to the firearm's rail with the objective lens facing toward the muzzle and the eyepiece toward the user.
2. Make sure the recoil bolt is positioned in the groove of the rail and the unit is fully seated on the rail.
3. Tighten the hex nut to 35 to 45 in/lbs of torque using the included hex wrench. Do not overtighten.

MOUNTING SM26020-LQD and SM26021-LQD

The Sightmark Wolverine LQD models include a picatinny mount (5). This mount can be detached by removing the two flatheads on the bottom of the mount. The dovetail base is compatible with aftermarket Aimpoint® mounts. If attaching an aftermarket mount, generally the four screws included with the Wolverine provide the mount a secured fit. To mount the Wolverine to a firearm, position the sight so the eyepiece (1) faces the shooter.

1. To loosen the mount, press back on the locking tab (9) located on the quick detach lever (8). Once the tab is pressed back, open the lever.



2. Attach the Wolverine to the firearm's rail. Make sure the recoil bolt is positioned in the groove of the rail.
3. Make sure the Wolverine is properly engaged with the firearm's base and close the lever. Press down until the lever is engaged in the locked position. A click sound will be heard once locked in position.
4. Check that the weapon sight is tightly secured in position and is not shifting forward or backward. If the mount is too loose the sight will not hold zero. To prevent this, the mount must be tightened.
5. To adjust tension on the mount, remove the sight from the firearm. Leave the levers in the open position and the mount loose.
6. On the opposite side of the levers is tension nuts (10). To tighten or loosen the mount, rotate the nut. Clockwise rotation of the tension nut will increase tension in the mount and counterclockwise rotation will decrease tension. Mount the sight to the rail again to confirm the sight is securely mounted.

OPERATING THE WINDAGE AND ELEVATION ADJUSTMENTS

The Sightmark Wolverine FSR and CRS have built-in windage and elevation adjustments (2, 3) with audible clicks. The Wolverine FSR has ½ MOA clicks meaning each click moves the point of impact ½" at 100 yards. The Wolverine CSR has MOA clicks so each click moves the point of impact 1" at 100 yards, ½" at 50 yards, and ¼" at 25 yards.

In order to make windage and elevation adjustments:

1. Unscrew the dial covers.
2. Use a coin or flathead screwdriver to make adjustments or "clicks".
3. Turn the adjustments in the appropriate direction needed to change the point-of-impact as indicated by the "UP" and "R" (left) arrows marked on the adjustments.
4. For elevation adjustment, turn the adjustment counter-clockwise to adjust the bullet's point of impact up. Turn the adjustment clockwise to adjust the bullet's point of impact down. For windage adjustments, turn the adjustment counter-clockwise to adjust the bullet's point of impact right. Turn the adjustment clockwise to adjust the bullet's point of impact left.

BORESIGHTING and SIGHTING IN

Boresighting and test firing should be performed safely on a firing range. Laser boresights are a quick and accurate method for sighting in. Below is listed the traditional method of boresighting and works best when the unit is mounted on a rest.

1. When mounting the sight on a bolt action rifle, remove the bolt; or when mounting to a semi-automatic rifle, disassemble the rifle until there is a straight line of sight through the bore.
2. Use a target at least twenty yards to fifty yards away when sighting in the optic. Look through the bore of the weapon and locate the bull's-eye of the target.
3. Sight in the target through the bore and then make windage and elevation adjustments (see "Operating Windage and Elevation Adjustments" for instructions) to the red dot until the reticle is centered on the bull's-eye.

To verify the red dot is accurately sighted in, always fire a three-shot test group at 50 or 100 yards preferably using the same ammo manufacturer, grain, and lot number.

4. After firing a group use the center of this grouping and make the necessary amount of adjustments to the elevation and windage adjustments to move your firearm's grouping to the center of the target.
5. Again fire a three-shot test group to confirm the adjustments. Use the center of the new group to determine final adjustments.

MAINTENANCE

Proper maintenance of the Sightmark Wolverine is recommended to ensure longevity. It is recommended that when the sight becomes dirty that it is wiped down with a dry or slightly damp cloth. Blow dirt and debris off all optics and then clean lenses with a lens cleaning cloth. To remove oils or dried water spots, apply a small amount of denatured alcohol to a lens cloth or cotton swab. Clean the surface of the lens and let dry. Finally use your breath to clean the lens once more. No further maintenance is required. Do not attempt to disassemble any components of the sight.

STORAGE

Make sure that your Sightmark Wolverine red dot sight is securely attached to your rifle before storing, and be sure that the reticle illumination is turned off. Cover with the included lens covers. Remove the batteries if the unit will be stored for an extended period of time.

WARNING

Before handling the Sightmark Wolverine red dot sight read and understand the contents of your firearm's manual, and the Sightmark manual. Follow all standard safety precautions and procedures during firearm operation, even when the red dot sight is not in use.

- Avoid hitting or dropping the unit
- ALWAYS check that the chamber of your weapon is clear before mounting or dismounting the reflex sight.
- The reticle illumination should be tested during periods of non-use to make sure it is still operating properly. Failure to follow standard firearm safety precautions and procedures, as well as the above warnings, is dangerous and may result in serious injury, damage to property, or death.

TROUBLE SHOOTING

Proper authorization is required before shipping any product back to Sightmark. Failure to obtain authorization could result in your product being returned to the wrong address, lost, or damaged. Sightmark is not liable for products returned without authorization.

If the Wolverine does not hold zero:

1. Verify the sight is mounted securely to the rifle. If the sight can be shifted in any direction, re-tighten the mounting hex nut according to the mounting instructions but do not over tighten. The sight will need to be re-zeroed afterwards.
2. Be sure to use factory-loaded ammunition of the same bullet type, weight, and, preferably lot number when sighting in.

The reticle does not illuminate:

1. Check that the battery is in working order and that the polarity of the battery is correct.
2. Check that there is no residue, film, or corrosion on the battery contacts that may be preventing the reticle from illuminating.
3. Make sure the unit is not set on a night vision mode.

The reticle is blurry and not in focus:

1. Decrease the brightness level of the reticle. The halo or fuzzy appearance is caused by excess illumination than is required for the current environment the sight is being used in.
2. Make sure the eyepiece lens is clean and does not have any film, fingerprints, or debris covering the surface. Blow off any debris or dirt covering the lens. Use a lens cloth or q-tip dipped in alcohol to remove any film or fingerprints.
3. If you are testing the product at a close range, 5 yards or less, to verify its on/off operation the eye will accommodate and focus either on the sight's reticle or the target you are observing not both. Test the product beyond 5 yards and focus your eye on the target, then the reticle and target should be in focus.

The reticle illumination turns off while firing:

1. Tighten the battery cap with a coin or flathead screw driver so the cap is fully seated.

SIGHTMARK® WARRANTY

Please visit www.sightmark.com for warranty details and information.

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