



LEUPOLD®



**Ballistics
Reticle
Supplement**

The Leupold Ballistics Aiming System™ — Boone and Crockett™ Big Game Reticle

The goal of every hunter is a successful hunt with a clean harvest. It was with this in mind that Leupold® created the Leupold Ballistics Aiming System™. Because we so strongly agree with the Boone and Crockett Club's® legacy of wildlife conservation and ethical fair chase hunting, we have designated one of the system's reticles as the Boone and Crockett™ Big Game reticle, while the other is designated as the Varmint Hunter's reticle.

Together, the Boone and Crockett Big Game reticle and the Varmint Hunter's reticle give the hunter two very useful tools intended to bring about successful hunts with clean and efficient harvests. Through the use of these straightforward and easy-to-follow instructions, it is sincerely hoped that all hunters will find their skills improved and their hunts more successful.

An Overview of the Leupold Ballistics Aiming System

Leupold Ballistics Aiming System provides a series of aiming points to improve your ability to shoot accurately at longer ranges. The first aiming point (the intersection of the Duplex® reticle) is designed to be used at 200 yards (183 meters) with most common cartridges or at 300 yards (274 meters) in several flatter shooting cartridges designed for longer range use.

The Leupold Ballistics Aiming System provides you with two different power selector positions, indicated by large and small triangles located within the magnification level indicators (VX®-7 users: see "Another Way to Sight In" on page 8). These are provided to allow you to select the hold points best suited to the cartridge you are using. In some cases, the smaller triangle setting can be used to accommodate your slower, heavier bullet load, while the larger triangle can be used to accommodate a faster, lighter bullet load in the same rifle. The reticle assumes bullets of similar spitzer shape will be used throughout.

As an example, a 30-06 with a 180 gr (11.7 gram) spitzer bullet and 2700 fps (823 mps) muzzle velocity would require the use of the

smaller triangle mark. A 30-06 with a 150 gr (9.7 gram) spitzer bullet at 3000 fps (914 mps) muzzle velocity would use the larger triangle mark. We have designated three sets of cartridges to be used in conjunction with the large and small triangles and sight-in distances of either 200 or 300 yards (183 or 274 meters), described as Group A, Group B, and Group C:

- Group A cartridges will use the large triangle and a 200 yard (183 meter) zero
- Group B cartridges will use the small triangle and a 200 yard (183 meter) zero
- Group C cartridges will use the large triangle and a 300 yard (274 meter) zero

Be sure to verify the aiming points by practicing at the actual distances at which the points are intended to work. Ballistics performance of your rifle and cartridge can vary somewhat from ammunition manufacturer data due to rifle barrel length, actual ammunition performance, and various atmospheric conditions.

Boone and Crockett™ Big Game Reticle Cartridge List

| GROUP A (LARGE TRIANGLE, 200 YARD/183 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .223 Remington | 40/2.6 | 3800 fps/1158 mps |
| .22-.250 Remington | 55/3.6 | 3650 fps/1113 mps |
| .243 Winchester | 100/6.5 | 2900 fps/884 mps |
| .25-06 Remington | 100/6.5 | 3200 fps/975 mps |
| .25-06 Remington | 120/7.8 | 3000 fps/914 mps |
| .270 Winchester | 130/8.4 | 3050 fps/930 mps |
| .270 WSM | 150/9.7 | 3120 fps/951 mps |
| .280 Remington | 140/9.1 | 3000 fps/914 mps |
| 7mm Remington Mag | 150/9.7 | 3050 fps/930 mps |
| .30-06 Springfield | 150/9.7 | 3000 fps/914 mps |
| .300 WBY Mag | 180/11.7 | 3100 fps/945 mps |
| .300 Winchester Mag | 180/11.7 | 2950 fps/899 mps |
| .300 WSM | 180/11.7 | 2950 fps/899 mps |
| .338 Winchester Mag | 200/13.0 | 2950 fps/899 mps |
| .338 RUM | 250/16.2 | 2900 fps/884 mps |

(35-45 inches/89-114 centimeters for drop at 500 yards/457 meters)

| GROUP B (SMALL TRIANGLE, 200 YARD/183 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .260 Remington | 120/7.8 | 2850 fps/869 mps |
| 6.5x55 Swedish | 129/8.4 | 2750 fps/838 mps |
| .30-06 Springfield | 180 | 2700 fps |
| .308 Winchester | 150 | 2850 fps |
| .308 Winchester | 165 | 2700 fps/823 mps |
| .303 British | 150/9.7 | 2700 fps/823 mps |
| .270 Winchester | 150/9.7 | 2850 fps |
| .375 H&H | 270/17.5 | 2700 fps/823 mps |
| .338 Winchester Mag | 225/14.6 | 2800 fps/853 mps |
| .338 Winchester Mag | 250/16.2 | 2700 fps/823 mps |
| .375 H&H | 300/19.4 | 2600 fps/792 mps |

(48-58 inches/122-147 centimeters of drop at 500 yards/457 meters)

| GROUP C (LARGE TRIANGLE, 300 YARD/274 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .270 WSM | 130/8.4 | 3275 fps/998 mps |
| .300 WSM | 150/9.7 | 3300 fps/1006 mps |
| .300 Winchester Mag | 150/9.7 | 3300 fps/1006 mps |
| 7mm WSM | 140/9.1 | 3225 fps/983 mps |
| 7mm STW | 140/9.1 | 3325 fps/1013 mps |
| 7mm RUM | 140/9.1 | 3450 fps/1052 mps |
| 7mm RUM | 160/10.4 | 3250 fps/991 mps |
| .30-.378 WBY | 180/11.7 | 3400 fps/1036 mps |
| .300 RUM | 180/11.7 | 3400 fps/1036 mps |
| .270 Weatherby | 130/8.4 | 3200 fps/975 mps |
| 7mm Remington Mag | 150/9.7 | 3100 fps/945 mps |
| .300 WBY Mag | 150/9.7 | 3375 fps/1029 mps |

(Less than 35 inches/89 centimeters for drop at 500 yards/457 meters)

General Instructions For the Use of the Leupold Ballistics Aiming System

SIGHTING-IN

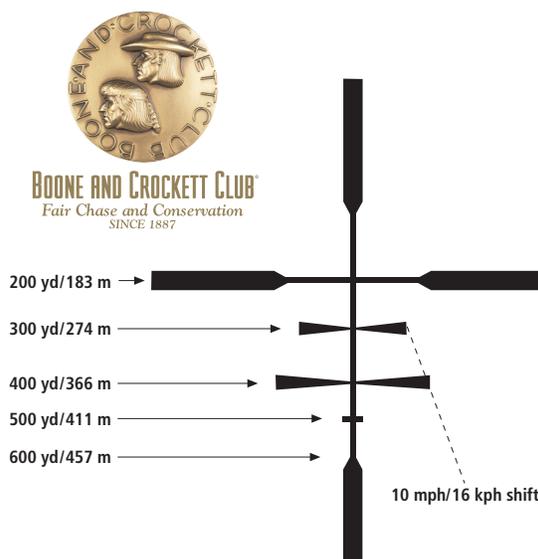
The Boone and Crockett™ Big Game reticle is sighted-in by zeroing the rifle at the intersection of the Duplex® reticle at either 200 yards (183 meters) [Group A and B], or 300 yards (274 meters) [Group C]. For Group C cartridges sighted-in at 300 yards (274 meters), the lower aiming marks will be correct at 400, 500, 550, and 600 yards (366, 457, 503, and 549 meters). The scope must then be set to the appropriate triangle to properly use the ballistics compensation

features. Be sure to verify the aiming points by practicing at the actual distances at which the points are intended to work. Ballistics performance of your rifle and cartridge can vary somewhat from ammunition manufacturer data due to rifle barrel length, actual ammunition performance, and various atmospheric conditions. See the Owner's Manual for detailed sighting-in instructions.

Specific Instructions for the Use of the Boone and Crockett™ Big Game Reticle

The Boone and Crockett Big Game reticle offers:

- a Duplex central aiming point (sighted-in at 200 or 300 yards (183 or 274 meters) as well as CPC-style hold points calibrated to 300 and 400 yards (274 and 366 meters), and additional aiming features for targets at 450 and 500 yards (411 and 457 meters) for Group A and Group B cartridges [add 100 yards (91 meters) for Group C cartridges]
- a 10 mph (16 kph) windage hold point at both the left and right ends of the 300 and 400 yard (274 and 366 meter) CPC-style hold points
- the traditional VX®-III range estimating feature between the Duplex central aiming point and the top vertical heavy post (consult the Leupold Rifle Scope Owner's Handbook)



| Range | Power Selector Values | | 10 MPH Drift |
|---------------|-----------------------|---------------------|--------------|
| | Large ▼ Bullet Drop | Small ▼ Bullet Drop | |
| 200 yd MOA | — | — | — |
| 200 yd inches | — | — | — |
| 300 yd MOA | 2.19 | 2.74 | 2.16 |
| 300 yd inches | 6.88 | 8.61 | 6.79 |
| 400 yd MOA | 4.80 | 6.00 | 3.03 |
| 400 yd inches | 20.11 | 25.13 | 12.69 |
| 450 yd MOA | 6.26 | 7.83 | — |
| 450 yd inches | 29.50 | 36.87 | — |
| 500 yd MOA | 7.82 | 9.78 | — |
| 500 yd inches | 40.95 | 51.18 | — |

NOTE: When using a cartridge in Group C and sighting-in at 300 yards, add 100 yards to all of the above yardage indicators.

| Range | Power Selector Values | | 16 KPH Drift |
|-----------|-----------------------|---------------------|--------------|
| | Large ▼ Bullet Drop | Small ▼ Bullet Drop | |
| 183 m MOA | — | — | — |
| 183 m cm | — | — | — |
| 274 m MOA | 2.19 | 2.74 | 2.16 |
| 274 m cm | 17.48 | 21.87 | 17.25 |
| 366 m MOA | 4.80 | 6.00 | 3.03 |
| 366 m cm | 51.08 | 63.83 | 32.23 |
| 411 m MOA | 6.26 | 7.83 | — |
| 411 m cm | 74.93 | 93.65 | — |
| 457 m MOA | 7.82 | 9.78 | — |
| 457 m cm | 104.01 | 130.00 | — |

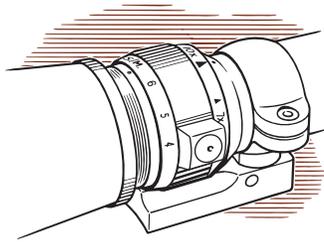
NOTE: When using a cartridge in Group C and sighting-in at 274 meters, add 91 meters to all of the above yardage indicators.

Using the Boone and Crockett™ Big Game Reticle

In order to use the Boone and Crockett™ Big Game reticle, you must determine which of the three groups (Group A, Group B, or Group C) your cartridge and load fits into.

DETERMINE POWER SELECTOR SETTING

First, determine which of the triangles on the power selector is the correct one to use with your particular rifle caliber, bullet weight, and muzzle velocity. Refer to the tables of Group A, Group B, and Group C cartridges on page 1.



Once you have determined which triangle is the correct one for your rifle caliber, bullet weight, and muzzle velocity, always remember that is the position to which you must set the power selector when using any of the hold points on the Boone and Crockett Big Game reticle.

DETERMINE THE RANGE TO THE TARGET

Determine the range to your target using a laser rangefinder such as a Leupold RB800C, or RX™ or RXB Series digital laser rangefinder, or utilize the traditional VX-III range estimating feature using the

space between the Duplex central aiming point and the top vertical heavy post. For more information about how to use this feature, consult your Leupold Riflescope Owner's Handbook.

AIMING

The Boone and Crockett Big Game reticle is a hold point reticle. For targets judged to be 300 yards (274 meters) away, hold directly on the 300 yard (274 meter) hold point. For 350 yard (320 meter) targets, hold directly between the 300 and 400 yard (274 and 366 meter) hold points. For your convenience, a 450 yard (411 meter) hold point has been included between the 400 and 500 yard (366 and 457 meter) hold points.

WIND COMPENSATION

The left and right edges of the 300 and 400 yard (274 and 366 meter) hold points may be used as 10 mph (16 kph) wind compensators. To correct for a wind speed of 10 mph (16 kph), place the edge of the hold point for the appropriate distance directly on the target when aiming.

CONCLUSION

- Choose the appropriate ballistics group
- Sight-in at the distance required by that group (this may be done at any magnification setting)
- Adjust the magnification to the appropriate triangle before using any of the long range hold or windage points

The Leupold Ballistics Aiming System — Varmint Hunter's Reticle

The goal of every hunter is a successful hunt with a cleanly made harvest. Whether a hunter is pursuing big game or varmints, it is imperative that he or she strive to make a quick, humane kill. It is with this in mind that Leupold has introduced the Varmint Hunter's reticle, a tool intended to allow shooters to make solid hits and clean kills at longer ranges on varmints.

Together, the Boone and Crockett Big Game reticle and the Varmint Hunter's reticle give the hunter two very useful tools intended to bring about successful hunts with clean and efficient harvests. Through the use of these straightforward and easy-to-follow instructions, it is sincerely hoped that all hunters will find their skills improved and their hunts more successful.

An Overview of the Leupold Ballistics Aiming System

The Leupold Ballistics Aiming System provides a series of aiming points to improve your ability to shoot accurately at longer ranges. The first aiming point (the intersection of the German #4 reticle) is designed to be used at 200 yards (183 meters) with most common varmint cartridges or at 300 yards (274 meters) in several flatter shooting cartridges designed for longer range use. See the cartridge group tables below.

The Leupold Ballistics Aiming System provides you with two different power selector positions, indicated by large and small triangles located within the magnification level indicators (VX-7 users: see "Another Way to Sight In" on page 8). These are provided to allow you to select the hold points best suited to the cartridge you are using. In some cases, the smaller triangle setting can be used to accommodate your slower, heavier bullet load, while the larger triangle can be used to accommodate a faster, lighter bullet load in the same rifle. The reticle assumes bullets of similar spitzer shape will be used throughout.

As an example, a .223 Remington with a 40 gr (2.6 gram) V-max® bullet and 3800 fps (1158 mps) muzzle velocity would require the use of the larger triangle mark. A .223 Remington with a 55 gr (3.6 gram) V-max bullet at 3240 fps (988 mps) muzzle velocity would use the smaller triangle mark. We have designated three sets of cartridges to be used in conjunction with the large and small triangles and sight-in distances of 200 yards (183 meters), described as Group A, Group B, and Group C.

- Group A cartridges will use the large triangle and a 200 yard (183 meter) zero
- Group B cartridges will use the small triangle and a 200 yard (183 meter) zero
- Group C cartridges will use the large triangle and a 300 yard (274 meter) zero

Varmint Hunter's Reticle Cartridge List

GROUP A (LARGE TRIANGLE, 200 YARD/183 METER ZERO)

| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
|---------------------|-------------------------|--------------------|
| .17 Remington | 25/1.6 | 4000 fps/1219 mps |
| .223 Remington | 40/2.6 | 3800 fps/1158 mps |
| .222 Remington | 40/2.6 | 3600 fps/1097 mps |
| .22-250 Remington | 50/3.2 | 3800 fps/1158 mps |
| .22-250 Remington | 55/3.6 | 3680 fps/1122 mps |
| .220 Swift | 50/3.2 | 3850 fps/1173 mps |
| .220 Swift | 50/3.2 | 3750 fps/1143 mps |
| .220 Swift | 55/3.6 | 3680 fps/1122 mps |
| .223 WSSM | 55/3.6 | 3850 fps/1173 mps |
| .243 Winchester | 58/3.8 | 3750 fps/1143 mps |
| .25-06 Remington | 100/6.5 | 3200 fps/975 mps |
| .25-06 Remington | 120/7.8 | 3000 fps/914 mps |
| .270 Winchester | 130/8.4 | 3050 fps/930 mps |
| .270 WSM | 130/8.4 | 3200 fps/975 mps |
| .270 Weatherby | 130/8.4 | 3200 fps/975 mps |
| 7mm Remington Mag | 150/9.7 | 3100 fps/945 mps |
| .300 Winchester Mag | 180/11.7 | 3100 fps/945 mps |

(30-40 inches/76-102 centimeters of drop at 500 yards/457 meters)

GROUP B (SMALL TRIANGLE, 200 YARD/183 METER ZERO)

| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
|--------------------|-------------------------|--------------------|
| .222 Remington | 50/3.2 | 3150 fps/960 mps |
| .223 Remington | 53/3.4 | 3300 fps/1006 mps |
| .222 Remington Mag | 55/3.6 | 3250 fps/991 mps |
| .223 Remington | 55/3.6 | 3250 fps/991 mps |
| .243 Winchester | 75/4.9 | 3400 fps/1036 mps |
| .243 Winchester | 100/6.5 | 2900 fps/884 mps |
| 6mm Remington | 75/4.9 | 3400 fps/1036 mps |
| .257 Roberts | 117/7.6 | 2900 fps/884 mps |
| .270 Winchester | 150/9.7 | 2850 fps/869 mps |
| 7mm Remington Mag | 175/11.3 | 2850 fps/869 mps |

(45-55 inches/114-140 centimeters of drop at 500 yards/457 meters)

GROUP C (LARGE TRIANGLE, 300 YARD/274 METER ZERO)

| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
|-------------------|-------------------------|--------------------|
| .17 Remington | 20/1.3 | 4250 fps/1295 mps |
| .204 Ruger | 32/2.1 | 4225 fps/1288 mps |
| .204 Ruger | 40/2.6 | 3900 fps/1189 mps |
| .220 Swift | 40/2.6 | 4200 fps/1280 mps |
| .22-250 Remington | 40/2.6 | 4150 fps/1265 mps |
| .243 Winchester | 55/3.6 | 3900 fps/1189 mps |
| .243 WSSM | 55/3.6 | 4050 fps/1234 mps |
| .7mm STW | 140/9.1 | 3325 fps/1013 mps |
| .7mm RUM | 140/9.1 | 3450 fps/1052 mps |
| .7mm RUM | 160/10.4 | 3250 fps/991 mps |
| .30-.378 WBY | 180/11.7 | 3400 fps/1036 mps |
| .300 RUM | 180/11.7 | 3400 fps/1036 mps |

(Less than 30 inches/76 centimeters for drop at 500 yards/457 meters)

General Instructions For the Use of the Leupold Ballistics Aiming System

SIGHTING-IN

The Varmint Hunter's reticle is sighted-in by zeroing the rifle at the intersection of the German #4 reticle at 200 yards (183 meters) for Group A and Group B cartridges. For Group C cartridges, sight-in at 300 yards (274 meters) and the lower aiming marks will be correct at 400, 500, and 600 yards (366, 457, and 549 meters). The scope must then be set to the appropriate triangle to properly

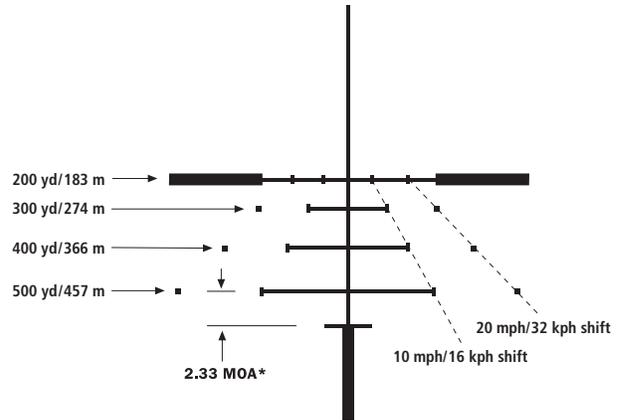
use the ballistics compensation features. Be sure to verify the aiming points by practicing at the actual distances at which the points are intended to work. Ballistics performance of your rifle and cartridge can vary somewhat from ammunition manufacturer data due to rifle barrel length, actual ammunition performance, and various atmospheric conditions.

Specific Instructions For the Use of the Varmint Hunter's Reticle

The Varmint Hunter's reticle offers:

- a fine-lined German #4-style central aiming point [sighted-in at 200 yards (183 meters) in most cases] as well as cross-wire hold points calibrated to 300, 400, and 500 yards (274, 366, and 457 meters) for most cartridges
- 10 and 20 mph (16 and 32 kph) windage hold points at both the left and right ends of the 300, 400, and 500 yard (274, 366, and 457 meter) cross-wire hold points
- 10, 20, and 30 mph (16, 32, and 48 kph) windage hold points along the German #4-style central aiming point line
- a prairie dog range estimator between the 500 yard (457 meter) and bottom vertical heavy post

Varmint Hunter's Reticle



| Range | Power Selector Values | | 10 MPH Drift | 20 MPH Drift | 30 MPH Drift |
|---------------|-----------------------|---------------------|--------------|--------------|--------------|
| | Large ▼ Bullet Drop | Small ▼ Bullet Drop | | | |
| 200 yd MOA | — | — | 1.77 | 3.54 | 5.31 |
| 200 yd inches | — | — | 3.71 | 7.41 | 11.12 |
| 300 yd MOA | 1.81 | 2.26 | 2.86 | 5.72 | — |
| 300 yd inches | 5.69 | 7.10 | 8.98 | 17.97 | — |
| 400 yd MOA | 4.13 | 5.16 | 4.09 | 8.17 | — |
| 400 yd inches | 17.30 | 21.61 | 17.13 | 34.22 | — |
| 500 yd MOA | 7.02 | 8.78 | 5.49 | 10.99 | — |
| 500 yd inches | 36.80 | 46.00 | 25.87 | 51.79 | — |

*Brackets a prairie dog at 300 yards. If the prairie dog is smaller than the bracket, then it is more than 300 yards away.

| Range | Power Selector Values | | 16 KPH Drift | 32 KPH Drift | 48 KPH Drift |
|-----------|-----------------------|---------------------|--------------|--------------|--------------|
| | Large ▼ Bullet Drop | Small ▼ Bullet Drop | | | |
| 183 m MOA | — | — | 1.77 | 3.54 | 5.31 |
| 183 m cm | — | — | 9.42 | 18.82 | 28.24 |
| 274 m MOA | 1.81 | 2.26 | 2.86 | 5.72 | — |
| 274 m cm | 14.45 | 18.00 | 22.81 | 45.64 | — |
| 366 m MOA | 4.13 | 5.16 | 4.09 | 8.17 | — |
| 366 m cm | 43.94 | 54.89 | 43.51 | 86.92 | — |
| 457 m MOA | 7.02 | 8.78 | 5.49 | 10.99 | — |
| 457 m cm | 93.47 | 116.84 | 65.71 | 131.55 | — |

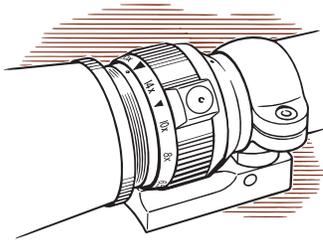
*Brackets a prairie dog at 274 meters. If the prairie dog is smaller than the bracket, then it is more than 274 meters away.

Using the Varmint Hunter's Reticle

In order to use the Varmint Hunter's reticle, you must determine which of the three groups (Group A, Group B, or Group C) your cartridge and load fits into.

DETERMINE POWER SELECTOR SETTING

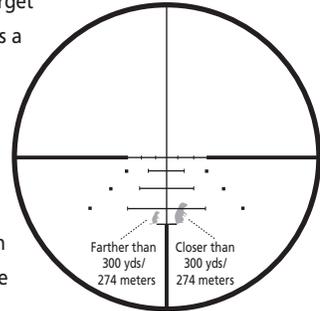
First, determine which of the triangles on the power selector is correct for your particular rifle caliber, bullet weight, and muzzle velocity. Refer to the tables of Group A, Group B, and Group C cartridges on page 4.



Once you have determined which triangle is the correct one for your rifle caliber, bullet weight, and muzzle velocity, always remember that is the position to which you must set the power selector when using any of the hold points on the Varmint Hunter's reticle.

DETERMINE THE RANGE TO THE TARGET

Determine the range to your target using a laser rangefinder such as a Leupold RB800C, or RX or RXB Series digital laser rangefinder. Or you may determine whether a prairie dog-sized target is 300 yards (274 meters) or closer by setting the power selector on the large triangle and fitting the target in the space between the top of the bottom post and the 500 yard (457 meter) aiming line. If the target is larger than this space, it is closer than 300 yards (274 meters). If it is smaller, then it is farther than 300 yards (274 meters).



NOTE: You must have your power selector ring positioned on the large triangle to make a proper determination of range.

AIMING

The Varmint Hunter's reticle is a hold point reticle. For targets judged to be 300 yards (274 meters) away, hold directly on the 300 yard (274 meter) hold point. For 350 yard (320 meter) targets, hold directly between the 300 and 400 yard (274 and 366 meter) hold points, for 450 yard (411 meter) targets hold directly between the 400 and 500 yard (366 and 457 meter) hold points.

WIND COMPENSATION

The left and right edges of the 300, 400, and 500 yard (274, 366, and 457 meter) hold points may be used as 10 mph (16 kph) wind compensators. To correct for a wind speed of 10 mph (16 kph), place the edge of the hold point for the distance of the target directly on the target when aiming. To correct for a 20 mph (32 kph) wind, place the small square to the right or left of the appropriate 10 mph (16 kph) hold point directly on the target when aiming.

CONCLUSION

- Choose the appropriate ballistics group
- Sight-in at the distance required by that group (this may be done at any magnification setting)
- Adjust the magnification to the appropriate triangle before using any of the long range hold or windage points

The Leupold Ballistics Aiming System – Long Range Duplex Reticle

To use the Long Range Duplex reticle, zero your rifle at either 200 yards (183 meters) for Group A cartridges or at 300 yards (274 meters) if your rifle is chambered for one of the Group C cartridges from the Long Range Duplex table below. If you are using a Group A cartridge, this will make the dots below the horizontal crosswire be zeroed for 300, 400, and 500 yards (274, 366, and 457 meters). If you are using a Group C cartridge, this will make the dots below the crosswire be zeroed for 400, 500, and 600 yards (366, 457, and 549 meters). The scope must then be set to its highest magnification setting to properly use the ballistics compensating features.

Long Range Duplex Reticle Cartridge List

| GROUP A (LARGE TRIANGLE, 200 YARD/183 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .223 Remington | 40/2.6 | 3800 fps/1158 mps |
| .22-.250 Remington | 55/3.6 | 3650 fps/1113 mps |
| .243 Winchester | 100/6.5 | 2900 fps/884 mps |
| .25-06 Remington | 100/6.5 | 3200 fps/975 mps |
| .25-06 Remington | 120/7.8 | 3000 fps/914 mps |
| .270 Winchester | 130/8.4 | 3050 fps/930 mps |
| .270 WSM | 150/9.7 | 3120 fps/951 mps |
| .280 Remington | 140/9.1 | 3000 fps/914 mps |
| 7mm Remington Mag | 150/9.7 | 3050 fps/930 mps |
| .30-06 Springfield | 150/9.7 | 3000 fps/914 mps |
| .300 WBY Mag | 180/11.7 | 3100 fps/945 mps |
| .300 Winchester Mag | 180/11.7 | 2950 fps/899 mps |
| .300 WSM | 180/11.7 | 2950 fps/899 mps |
| .338 Winchester Mag | 200/13.0 | 2950 fps/899 mps |
| .338 RUM | 250/16.2 | 2900 fps/884 mps |

(35-45 inches/89-114 centimeters of drop at 500 yards/457 meters)

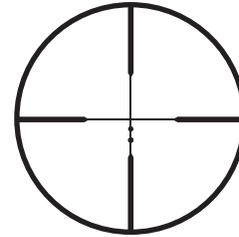
| GROUP C (LARGE TRIANGLE, 300 YARD/274 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .270 WSM | 130/8.4 | 3275 fps/998 mps |
| .300 WSM | 150/9.7 | 3300 fps/1006 mps |
| .300 Winchester Mag | 150/9.7 | 3300 fps/1006 mps |
| 7mm WSM | 140/9.1 | 3225 fps/983 mps |
| 7mm STW | 140/9.1 | 3325 fps/1013 mps |
| 7mm RUM | 140/9.1 | 3450 fps/1052 mps |
| 7mm RUM | 160/10.4 | 3250 fps/991 mps |
| .30-.378 WBY | 180/11.7 | 3400 fps/1036 mps |
| .300 RUM | 180/11.7 | 3400 fps/1036 mps |
| .270 Weatherby | 130/8.4 | 3200 fps/975 mps |
| 7mm Remington Mag | 150/9.7 | 3100 fps/945 mps |
| .300 WBY Mag | 150/9.7 | 3375 fps/1029 mps |

(Less than 35 inches/89 centimeters of drop at 500 yards/457 meters)

CONCLUSION

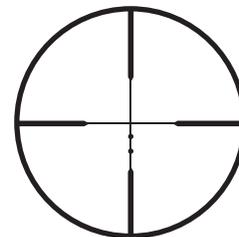
- Choose the appropriate ballistics group
- Sight-in at the distance required by that group (this may be done at any magnification setting)
- Adjust the magnification to the highest setting before using any of the long range hold points

Long Range Duplex Reticle 2-7x Models



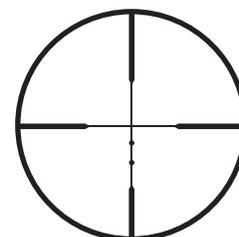
| Reticle Feature | MOA @ High X | MOA @ Low X |
|--|--------------|-------------|
| Fine Line Width (Line Width) | 0.41 | 1.08 |
| Heavy Line Width (Thick Section) | 1.26 | 3.32 |
| Picket to Picket Space (Thin Opening) | 19.77 | 52.13 |
| Dot Diameter | 1.24 | 3.27 |
| 300 Yard/274 Meter Dot (Distance from Center) | 2.19 | 5.77 |
| 400 Yard/366 Meter Dot (Distance from Center) | 4.80 | 12.66 |
| Center to Bottom Picket Tip Spacing (500 Yards/457 Meters) | 7.82 | 20.62 |

Long Range Duplex Reticle 3-9x Models



| Reticle Feature | MOA @ High X | MOA @ Low X |
|--|--------------|-------------|
| Fine Line Width (Line Width) | 0.32 | 0.84 |
| Heavy Line Width (Thick Section) | 0.97 | 2.56 |
| Picket to Picket Space (Thin Opening) | 15.24 | 40.19 |
| Dot Diameter | 0.95 | 2.51 |
| 300 Yard/274 Meter Dot (Distance from Center) | 2.19 | 5.77 |
| 400 Yard/366 Meter Dot (Distance from Center) | 4.80 | 12.66 |
| Center to Bottom Picket Tip Spacing (500 Yards/457 Meters) | 7.82 | 20.62 |

Long Range Duplex 4-12x Models

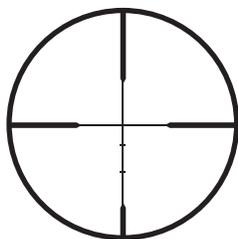


| Reticle Feature | MOA @ High X | MOA @ Low X |
|--|--------------|-------------|
| Fine Line Width (Line Width) | 0.24 | 0.63 |
| Heavy Line Width (Thick Section) | 0.72 | 1.90 |
| Picket to Picket Space (Thin Opening) | 11.32 | 29.85 |
| Dot Diameter | 0.71 | 1.87 |
| 300 Yard/274 Meter Dot (Distance from Center) | 2.19 | 5.77 |
| 400 Yard/366 Meter Dot (Distance from Center) | 4.80 | 12.66 |
| Center to Bottom Picket Tip Spacing (500 Yards/457 Meters) | 7.82 | 20.62 |

The Leupold Ballistics Aiming System — Long Range Varmint Reticle

To use the Long Range Varmint reticle, zero your rifle at either 200 yards (183 meters) [Group A cartridges from the Long Range Varmint table] or 300 yards (274 meters) [Group C cartridges from the Long Range Varmint table]. This will zero the dots below the horizontal crosswire at either 300, 400 and 500 yards (274, 366, and 457 meters) in the case of Group A cartridges, or 400, 500 and 600 yards (366, 457, and 549 meters) in the case of Group C cartridges. Similarly, as in the case of the Long Range Duplex, the scope must be set to its highest magnification level in order to properly use the ballistics compensating features.

Long Range Varmint Reticle 6-18x Models



| Reticle Feature | MOA @ High X | MOA @ Low X |
|--|--------------|-------------|
| Fine Line Width (Line Width) | 0.16 | 0.42 |
| Heavy Line Width (Thick Section) | 0.49 | 1.29 |
| Picket to Picket Space (Thin Opening) | 7.63 | 20.12 |
| 300 Yard/274 Meter Dot (Distance from Center) | 1.81 | 4.77 |
| 400 Yard/366 Meter Dot (Distance from Center) | 4.13 | 10.89 |
| Center to Bottom Picket Tip Spacing (500 Yards/457 Meters) | 7.02 | 18.51 |

Long Range Varmint Reticle Cartridge List

| GROUP A (LARGE TRIANGLE, 200 YARD/183 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .222 Remington | 50/3.2 | 3150 fps/960 mps |
| .223 Remington | 53/3.4 | 3300 fps/1006 mps |
| .222 Remington Mag | 55/3.6 | 3250 fps/991 mps |
| .223 Remington | 55/3.6 | 3250 fps/991 mps |
| .243 Winchester | 75/4.9 | 3400 fps/1036 mps |
| .243 Winchester | 100/6.5 | 2900 fps/884 mps |
| 6mm Remington | 75/4.9 | 3400 fps/1036 mps |
| .257 Roberts | 117/7.6 | 2900 fps/884 mps |
| .270 Winchester | 150/9.7 | 2850 fps/869 mps |
| 7mm Remington Mag | 175/11.3 | 2850 fps/869 mps |

(45-55 inches/114-140 centimeters of drop at 500 yards/457 meters)

| GROUP C (LARGE TRIANGLE, 300 YARD/274 METER ZERO) | | |
|---|-------------------------|--------------------|
| Caliber | Bullet Wt. (grain/gram) | Velocity (fps/mps) |
| .17 Remington | 20/1.3 | 4250 fps/1295 mps |
| .204 Ruger | 32/2.1 | 4225 fps/1288 mps |
| .204 Ruger | 40/2.6 | 3900 fps/1189 mps |
| .220 Swift | 40/2.6 | 4200 fps/1280 mps |
| .22-250 Remington | 40/2.6 | 4150 fps/1265 mps |
| .243 Winchester | 55/3.6 | 3900 fps/1189 mps |
| .243 WSSM | 55/3.6 | 4050 fps/1234 mps |
| .7mm STW | 140/9.1 | 3325 fps/1013 mps |
| .7mm RUM | 140/9.1 | 3450 fps/1052 mps |
| .7mm RUM | 160/10.4 | 3250 fps/991 mps |
| .30-.378 WBY | 180/11.7 | 3400 fps/1036 mps |
| .300 RUM | 180/11.7 | 3400 fps/1036 mps |

(Less than 30 inches/76 centimeters of drop at 500 yards/457 meters)

CONCLUSION

- Choose the appropriate ballistics group
- Sight-in at the distance required by that group (this may be done at any magnification setting)
- Adjust the magnification to the highest setting before using any of the long range hold points

Another Way to Sight-In

For use with the Boone & Crockett™ Big Game, Varmint Hunter's, Long Range Duplex, and Long Range Varmint reticles. If you are using a Long Range Duplex or Long Range Varmint reticle with a cartridge from the Group B cartridge chart, or if you have a cartridge that does not appear in one of the accompanying cartridge charts, the following method will provide you with a quick and easy way to sight-in. VX-7 users without large or small triangle reference marks should also use this method.

1. Initially, sight-in at 200 yards (183 meters). Your point of impact needs to match your point of aim exactly at the 200 yard (183 meter) intersection of the reticle.
2. Using a larger target, place the target at a 500 yard (457 meter) distance and shoot a group while aiming with the 200 yard (183 meter) intersection; your bullets will strike significantly [in some instances 60 inches (152 cm) or more] below the center.

3. Using a black marker, circle the group of bullet holes and fill in the circle. This will create a large black dot representing the bullet impact on the target that should be visible from the firing line.
4. While maintaining the same point of aim [hold in the center of the target with the 200 yard (183 meter) intersection] adjust the magnification setting until the 500 yard (457 meter) holdover points in the middle of the large black dot created with the black marker. This will create a situation where the scope is dead on at 200 yards (183 meters) and at 500 yards (457 meters). Any variances at 300, 400, and 450 yards (274, 366, and 411 meters) will be quite negligible.

In order to use any of the hold points accurately, the scope will need to be used on the exact magnification used to align the 500 yard (457 meter) mark with the center of the black dot. VX-7 users can align the notch in the ballistics indicator ring with the witness mark on the eyepiece to allow fast and accurate return to this setting in the field. For best results, check all aiming points at the actual distances for which they are intended.

Ballistics Aiming System Development Team

Leupold & Stevens, Inc., worked with a diverse, highly skilled group of hunters and shooters to develop the new Ballistics Aiming System, which includes the Boone and Crockett™ Big Game reticle, the Varmint Hunter's reticle, the Long Range Duplex reticle, and the Long Range Varmint reticle. Special thanks to: outdoor writer, ballistics consultant, and lifelong varmint hunter Steve Timm; the Boone and Crockett Club® staff; Tim Lesser, antelope, deer, elk and varmint guide, and Marketing Communication Specialist; and Laura Peter, who holds several silhouette shooting championships, including the 2002 British

Columbia Provincial High Power Championship, the 2002 Bronze Medal from the IMSSU World Championships, the 2002 Woman High Power Champion from the U.S. Nationals, the 2003 Alberta Provincial High Power Championship, the 2004 Gold Medal from the World High Power Silhouette Woman Championships, and the 2005 Canadian Silhouette High Power Rifle Championship. Tim and Laura are both valued employees of Leupold & Stevens, Inc. Again, thanks to each of you, and the entire Ballistics Aiming System development team, for your efforts. They have truly paid off.

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