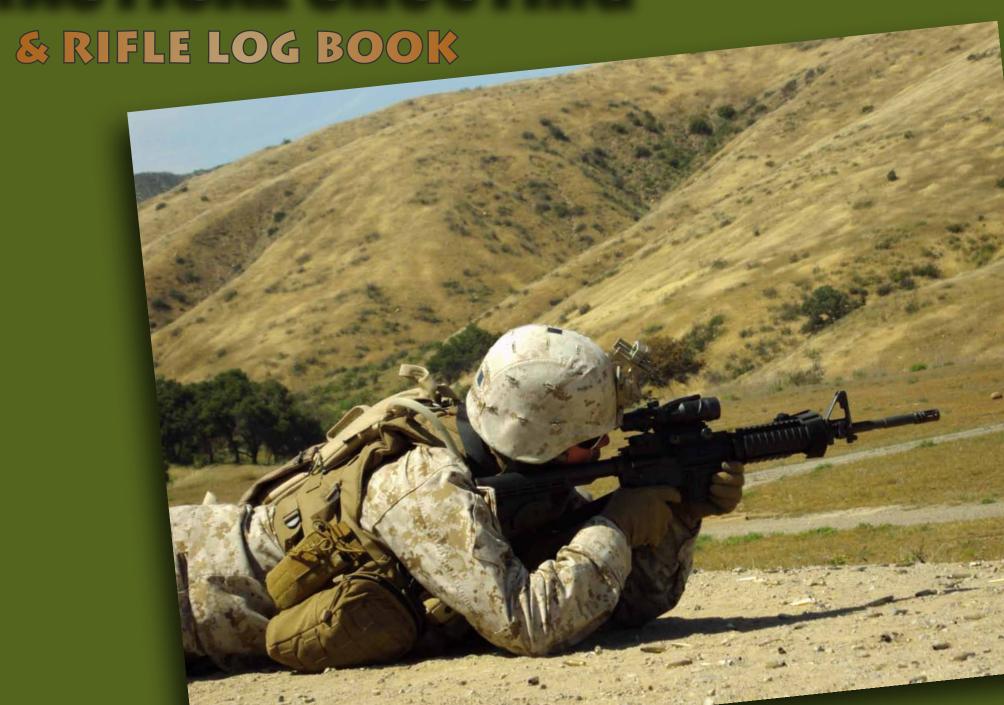
# TACTICAL SHOOTING



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# RIFLE LOG BOOK & PRECISION MARKSMANSHIP GUIDE

This rifle data book download contains a collection of data cards along with several pages of helpful instruction. The data cards will allow you to record the history of each shot you take. It will show you the hits, the close misses, and the environment that you, your rifle, and your optic work best in. Our goal was to produce a basic and introductory rifle log book that will help you record, log, and learn from each trip you take to the range. You will be able to refer to the information later to continue to study, learn from, and understand long range precision marksmanship.

To be successful in engaging targets at longer distances, the shooter must master basic fundamentals which include familiarization with the weapon and components, knowing what shooting positions work best in any given situation, breath and trigger control, and correct aiming procedures. After a shooter has created a solid foundation, it is likely to see them build upon the practiced fundamentals and move toward more advanced marksmanship techniques. Examples of more advanced techniques include the study of ballistics, weather conditions, engaging moving targets, slope firing, reading the mirage coming off the ground, and proper hold over techniques.

Our rifle log book, we feel, will help you learn from each shot. You will be able to compare bullet impacts taken during different weather and wind conditions. You will be able to learn how humidity and temperature affect your accuracy and adjustments. We feel that by using this basic log book, you will be able to compare your optic settings and data from previous engagements (DOPE) and always know what your true zero is going to have to be for an accurate first-shot cold bore impact. You will be able to compare what ammo works best in what rifle and compare your best groups and determine what ammo recipe works best for a successful, dependable and precise shot.

Because this is a download, you never have to buy or purchase refills. You have the data, just turn on your computer, print, and work with and use your favorite range cards provided in our rifle log book. Are there better, more professional log books out there, of course. This is a "home-grown" rifle log book. It is not made by a company, it is made by a shooter. I have 25 years experience and I love to shoot. From the farm that I grew up on, to the two combat deployments to Iraq with the United States Marine Corps, to the streets I patrol as a Police Officer, this rifle log book is set up how I like to shoot, and how I feel one can learn to go from a basic rifleman, to an experienced and precise long range shooter.

Remember a few key elements when shooting. Be safe and ethical. Have fun and try to introduce someone new into the world of shooting sports. We feel that shooting is an art mated with science. By teaching someone how to safely and accurate put rounds on target, you are teaching them one of the finest motor skills one has ever tried to master.

Enjoy your time on the range: Regards - TacticalGearSuperStore.Com

#### **USMC RIFLEMANS CREED**

#### By Major General W.H. Rupertus, USMC

This is my rifle. There are many like it, but this one is mine. My rifle is my best friend. It is my life. I must master it, as I must master my own life.

My rifle, without me, is useless. Without my rifle, I am useless. I must fire my rifle true. I must shoot him, before he shoots me...I will.

My rifle and myself know that what counts in this war is not the rounds that we fire, the noise of our burst, nor the smoke that we make. We know that it is the hits that count. We will hit.

My rifle is human, even as I, because it is my life. Thus, I will learn it as a brother. I will learn it's weakness, it's strength, it's parts, it's accessories, it's sights, and it's barrel.

I will ever guard it against the ravages of weather and damage. I will keep my rifle clean and ready, even as I am clean and ready. We will become a part of each other.

Before God, I swear this Creed. My rifle and myself are the defenders of my Country. We are the masters of our enemy. We are the saviors of my life. So be it. Until victory is America's and there is no enemy, but peace!

# **RULES OF FIREARM SAFETY**

- 1. Treat every weapon as if it were loaded.
- 2. Never point a weapon at anything you do not intend to destroy.
- 3. Keep your finger straight and off of the trigger until you are ready to fire.
- 4. Keep the weapon on safe until you are ready to fire.
- 5. Know your target and what is located behind it.

# **ELEMENTS OF SHOOTING**

# • Bone Support

Bone support is the foundation of the firing position. Bones help provide support and stabilization of the weapon. The body's skeletal structure provides a stable foundation to support your weapons weight, keep it aligned with the target, and allow follow up shots. A weak shooting position will not withstand the repeated recoil of the weapon during a string of continuous fire. To attain a correct shooting position, the bones of the body must align and support as much of the weapon as possible. Bone on bone creates an unstable platform. Ensure to use the theory that hard bones need a soft surface for the best performance.

#### Muscle Relaxation

Helps to steady and increase the accuracy of aiming. When your muscles are relaxed, you decrease the amount of movement that could be caused by trembling muscles that are hungry for oxygen. All tension must be released in the body. If there is tension, let it be in the finger that squeezes the trigger.

# • Natural Point Of Aim

Natural point of aim is the point where the weapon sights settle on the target when at your natural respiratory pause when in a solid shooting position. The point at which the rifle naturally rest in relation to the aiming point is called natural point of aim. You must ensure you have proper bones support and your muscles are relaxed if you are going to achieve a natural point of aim.

# • Steady Firing Position

Be sure you are using any and all support for both your body and the rifle. The only part of the rifle that should not be touching anything, is the barrel. There are many different types of shooting positions. A few examples are the: Prone (with support), Prone (without support), Kneeling (with support), Kneeling (without support), Standing, and Bench Rest (sitting/prone).

# Types Of Rests

The market is saturated with different types of rests that shooters can use. There are sand socks, bean bags, tripods, bipods, rubber shooting block, backpack, and unipods. The more you explore, the more chances you will find your favourite.

I used some old camis and cut a 6 inch by 6 inch square in them. I sewed about 34 of the 36 square inches, and left an open hole. I then filled the hole with rice. I then sewed up the hole...will it rot when it gets wet, most likely. But I like shooting off rice. I like the way it settles, and I like the support that it gives to the stock of the rifle.

# **AIMING FUNDAMENTALS**

**Natural Respiratory Cycle** A respiratory cycle is simple. It is inhaling and exhaling air, and last about 4 to 5 seconds in total. Between respiratory cycles there is a natural pause of 2 to 3 seconds. This is called the natural pause in respiration, and is when your body should be relaxed, your muscles calm, and where your sights should be resting on your target, which coincides with your natural point of aim. The shot should be fired at this point.

**Slow Precision Fire** Stop breathing at your natural respiratory pause and make your final adjustments to your natural point of aim. Breath in naturally, until your sight picture begins to settle. Take a slightly deeper breath. Exhale, and stop breathing at the natural pause in respiration. Fire the shot during the natural respiratory pause.

**Natural Point Of Aim** As mentioned above, the point at which the rifle naturally rest in relation to the aiming point is called natural point of aim. To achieve NPA, here is the method I use.

Get in a good shooting position. Relax and catch your breath. Aim in on your target, and close your eyes. Take a deep breath, practicing your NATURAL RESPIRATORY CYCLE. Open your eyes after your last exhale. Where is your target in relation to your reticle? The crosshairs should be dead center...if not, reposition, take a few breaths, and try again. Literally (well theoretically) you should be able to take this shot with your eyes closed.

Eye Relief This is the distance from the shooter's dominant eye to the rear of the scope tube. Stock weld is critical in proper and consistent eye relief. To gain optimal stock weld, place the cheek in the same place on the stock every time you fire the rifle. It is critical that you see the full field of view without crescents or blacked out shadows obstructing your FOV (field of view).

**Sight Alignment** Simply put, sight alignment is the relationship between the reticle and the full field of view as seen by the shooter. The more shadows in your sight alignment, the more your will have inaccurate shots.

**Sight Picture** The relationship from the shooter's eye, to the first piece of glass in the optic, to the full field of view offered by the objective lens, to the target. Sight picture is the complete and total alignment of all of these listed above.

Rifle Log Book 3

**Trigger Control** Trigger control causes the rifle to fire when the sight alignment, sight picture, and eye relief is at its best. Trigger squeeze is even and increases with pressure straight to the rear until the rifle fires and the round is sent into the desired target.

Follow Through The act of continuing to apply all of the marksmanship fundamentals after the weapon fires, by keeping the head in firm contact with the stock, keeping the finger on the trigger pulling all the way to the rear even after the rifle has fired, continuing to look through the scope keeping sight alignment and sight pi cture, staying relaxed, and allowing the rifle to recoil naturally.

# TRIGGER CONTROL

Trigger Control The skillful and calculated manipulation of the trigger mechanism that causes the rifle to fire without disturbing your sight alignment and sight picture. Trigger control causes the rifle to fire ONLY when the sight alignment, sight picture, and eye relief is at its best. Trigger squeeze is even and increases with pressure straight to the rear until the rifle fires and the round is sent into the desired target.

**Uninterrupted Trigger Control** After the initial slack of the trigger mechanism is taken out, the trigger is pulled with a single, smooth motion, straight to the rear without interruption.

**Interrupted Trigger Control** After the initial slack of the trigger mechanism is taken out, the trigger is moved to the rear unless an error is detected your sight alignment and sight picture. When this error is seen, the backward pull on the trigger is stopped until correct and desired sight alignment and sight picture is attained. Then and only then, does the rearward motion of the trigger mechanism continue until you have fired your shot.

# **SHOOTING POSITIONS**

- Standing
- Strong-Hand
- Kneeling Prone
- Slung

• Sitting-Supported/Unsupported

- Weak-Hand
- Unslung

- Bipod
- Bench Rest
- Tripod
- Bean Bag/Shooter Sock

**NOTES:** 

# **ENVIRONMENTAL FACTORS**

# • Temperature

If the temperature is up, you may need to move your sights down. If the ammo is hot, it will fly faster and further in most cases and has been known to raise the arch of the bullet at its maximum trajectory while in flight.

# • Light

The more clear the target can be seen, the closer it will appear to the naked eye. If it is rainy or there is a lot of cloud cover, the target will appear further away. If the sun is behind the target, it will appear further away. Objects with a regular outline will appear closer and targets that form a large contrast with it's background will appear closer as well.

#### • Terrain

If you are viewing the target and there is a depression in the land in between you and the target, objects will appear closer. If you are viewing the target and there is a valley in between you and the object you are shooting at, it will appear farther away. Looking uphill towards the target, the object will look farther away, and looking downhill, the object will appear closer. Looking down straight clear roads, targets will appear closer that those along winding up and down roads.

#### • Altitude / Barometric Pressure

Air pressure is less at higher altitudes. The air is less dense. Therefore, the bullet is more efficient and flies with less drag and impacts higher due to the lower drag while in flight. Bullet impact will be the point of aim at sea level.

# • Humidity

Humidity varies along with the altitude and temperature across the country. Problems can occur if extreme humidity changes exist in the area of operations and you have a different level of humidity when you last zeroed your rifle. When humidity goes up, bullet impact goes down. When humidity goes down, impact goes up. Since impact is affected by humidity, a 20 percent change in humidity equals about one minute of angle in most cases.

NOTES:		

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# MISCELLANEOUS CONVERSIONS

**STANDARD MEASUREMENTS TO METRIC MEASUREMENTS**					
TO CONVERT	MULTIPLY BY				
Yards To Meters	.914				
Feet To Meters	.3048				
Feet To Centimeters	30.48				
Inches To Meters	.0254				
Inches To Centimeters	2.54				
Inches To Millimeters	25.4				
Feet Per Second To Miles Per Hour	.6815				
Feet Per Second To Meters Per Second	.305				
Ounces To Grams	28				
Pounds To Kilograms	.45				

**METRIC MEASUREMENTS TO STANDARD MEASUREMENTS**					
TO CONVERT	DIVIDE BY				
Kilometers To Miles	1.609				
Meters To Miles	1609.3				
Miles To Yards	1760				
Meters To Yards	.914				
Meters To Feet	.3048				
Centimeters To Feet	30.48				
Meters To Inches	.0254				
Centimeters To Inches	2.54				
Millimeters To Inches	25.4				
Grams To Ounces	28				
Kilograms To Pounds	.45				

# \*\*MISC INFORMATION & CONVERSIONS\*\*

1 Mil = 3.5 Moa

1 Mil = 3.375 Us army standards

1 Mil = 3.438 Us marine corps standards

1 Mil = .0652 Degrees

1 Degree = 17.8 Mils

1 Degree = 60 moa

6400 Mils = 1 circle us army standards

6283 Mils = 1 circle us marine corps standards

21600 Moa = 1 circle

1.047 Inches = 1 moa at 100 yards

1 Inch = 1 moa in field

1 Moa = 3 cm at 100 meters

1 Moa = 1 inch at 100 yards

1 Inch = 2.54 Cm

# MILS & MOA

MIL stands for MILLIRADIAN and MOA stands for MINUTE OF ANGLE.

- 1 MOA equals about 3.45 MOA. 1 MIL equals about 1 meter at 1000 meters.
- MOA OPTIC: 1 click = ¼ MOA which is .25 inch @ 100 YARDS
- MIL OPTIC: 1 click = 1/10 MIL which is .36 inch @ 100 yards

For the most part, inside of your scope/optic will have some form of measurement (Cross Hair, MIL-DOT, Tactical Mil Reticle, by Leupold, or a Christmas Tree found inside of a Trijicon ACOG). These will ensure you will have consistency and accuracy with each shot. The measurements inside of your scope or optic will for the most part be measured in MILS, however, the turrets and adjustments will be measured in small units or fractions of MOA (Your scope will probably even say: 1 Click = ¼ MOA at 100 yards...so this tells you if you move the elevation or windage 4 clicks, it will move the impact of the bullet 1 inch for every 4 of those clicks).

In using a MIL-DOT reticle, the first steps is to accurately measure the size of the target using the MIL-DOT Crosshair inside of the scope. Once the target's size is known in MILS, a calculation is used to estimate the range to the target. The easiest was is to estimate the target size in inches. We have provided a chart that shows some common items and their measurement in inches.

There are several tools available on the market to calculate the range using the measurement in mils, and we have provided a more-or-less standard chart that helps the shooter with these quick and easy calculations. We have a chart for measurements in YARDS, and we have a chart for measurement in METERS.

#### RANGE ESTIMATION TABLE INSTRUCTIONS

With our **RANGE ESTIMATION TABLES**, you will need to measure the target using your MILDOT Reticle. The # of mils (How many MILS you think the target takes up on your MIL-DOT Reticle) are seen at the left edge of the TABLE. At the top of the TABLE, find the appropriate size of the target you feel the target is in inches. Follow the MEASUREMENT (#) IN MILS right and follow the **SIZE OF THE TARGET** down until they meet, the number that they intersect will give you a very close estimation of the range/distance to the target. Please note, there is a full table from .2 MILS to 10 MILS for YARDS, and there is a full table from .2 MILS to 10 MILS for METERS.

Another example you can draw into your NOTES section: An average buck deer's chest is about 18 inches tall (from the bottom of his stomach to the bucks spine).

- At 100 yards, the buck's chest will measure about 5 MILDOTs.
- At 200 yards, the buck's chest will measure about 2.5 MILDOTs.
- At 300 yards, the buck's chest will measure about 1.5 MILDOTs.
- At 400 yards, the buck's chest will measure about 1.2 MILDOTs.

# WIND/WIND VELOCITY AND VALUES

Before adjusting the sight to compensate for wind, the shooter must determine wind direction and velocity. You may use certain indicators to accomplish this. These are range flags, smoke, trees, grass, rain, and the sense of feel. In most cases, wind direction can be determined simply by observing the indicators.

The wind will effect the velocity of the bullet, and as well the wind will have a direct impact of where the bullet strikes, no matter the range. The four type of winds are the tail-wind, the head-wind, the cross-wind, and the quarter-wind.

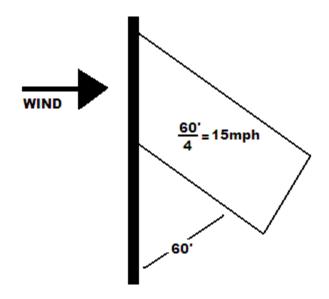
If the bullet you shoot has a tail-wind behind it, it will drop less, lose less velocity, have a decreased time of flight, and will move through the air with less drag.

If the bullet you shoot has a head-wind hitting it head-on as it travels from your muzzle to the target, the bullet will drop more, loss more velocity, have an increased time of flight, and will move through the air with more drag.

What effects the bullet the most during it's travel is the cross-wind. The cross-wind has less to do with drop and more to due with moving the bullet left and right or horizontal movement. If the cross-winds are more or less at right angles, then the shooter should use a FULL VALUE wind in the shooting equation. If the cross-winds are more or less from the back or front AND the side, a HALF VALUE wind determination would be used in the shooting equation.

A common method of estimating the velocity of the wind during training is to watch the range flag. The shooter determines the angle between the flag and pole (in degrees), then divides by the constant number of four (4). The result gives the approximate velocity in miles per hour.

- 0-3 mph (A breeze can barely be felt on your face, Smoke will drift slowly in the air)
- 3-5 mph (The weeds and grass blades will slightly move in a wave-like motion)
- 5-7 mph (Leaves on tree limbs constantly flutter and will stay in motion)
- 7-12 mph (Dust will be lifted off of ground, Trash will blow off ground)
- 12-15 mph (Small trees and bushes will sway and will stay in motion)
- 15-20 mph (Large trees will sway and stay in motion)



# RIFLE OPTIC VERIFIED COME UP CHART

There are two ways to compensate for BULLET DROP: **COME UPs** and **HOLDOVER**. Here is how to achieve a good solid COME UP CHART→

Zero your rifle at 100 meters or 100 yards...whichever works for you. Now after you have a good solid 100 m/y true zero, record the marks on the turret and enter this data onto your COME UP CHART. You will return to your 100 m/y true zero after you have completed your day at the range.

Step back 25 m/y, and now figure out how many clicks up it takes to get a perfect 125 m/y bullseye. Look on the ELEVATION TURRET, and record the number onto your COME UP CHART.

Although it may take some time to get all the way up to 1075 m/y, take your time and do it right. It may take several trips to the range, but in the end, you will know what the turret reading is to hit 675 m/y on a cold bore shot. Or how many clicks down on the turret to go from a 675 m/y engagement to a 200 m/y target...just look at your come ups that you have recorded, get a good solid estimation of range, adjust the turret and fire.

This exercise will also give you an outstanding idea ballistically what your bullet is doing, and how much drop from 100 meters to 1000 meters there really is.

# RIFLE OPTIC VERIFIED MILDOT HOLDOVER CHART

#### **BULLET DROP/ HOLDOVER CHART**

Holdover simply means changing the point of aim to somewhere inside the reticle, other than the center of the cross hairs of the optic. You are not adjusting the "clicks", you are raising the cross hairs up or down in reference to the target to adjust for the bullet rise or drop.

Some optics even offer a BULLET DROP COMPENSATOR type reticle, where the cross hairs inside the reticle are ballistically matched to the ammo you are firing.

Remember, while using the HOLDOVER method, that 1 MIL is about 3.45 MOA. This means 1 MIL at 100 yards = 3.5 inches. At 200 yards, the same MIL is going to be 7 inchs. At 300 yards, 1 MIL is about 12 inches, and at 400 yards, 1 MIL equals about 14 inches.

On the **HOLDOVER CHART** we provide, here is how you use it. For the most part, unless you have a 500 meter + zero on your rifle and optic, you will need to use the MILDOTS and lines BELOW the cross hairs. Because some like to shoot the .50 BMG, that is why we put the line ABOVE the cross hairs.

Zero your rifle at 100 meters or yards.

Now, move back 50 meters at a time. Where is the impact of your bullet? How far does it drop? Match up your data that you record, into the line of one of our HOLDOVER RETICLE CHARTS.

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YARDS	MIDDLE GROUND ESTIMATE	METERS
IANDS	MIDDLE GROUND ESTIMATE	MEIENS
27	25	23
55	50	46
82	75	69
109	100	91
164	150	137
219	200	183
273	250	228
328	300	274
383	350	320
437	400	365
492	450	411
546	500	457
602	550	503
656	600	549
711	650	594
766	700	640
820	750	686
875	800	731
929	850	777
984	900	823
1039	950	869
1094	1000	914

# COMMON ITEMS THAT HELP DETERMINE TARGET DIMENSIONS

HUMAN HEAD LENGTH AND WIDTH = 6 INCH BASKETBALL = 10 INCH ACROSS LICENSE PLATE =12 INCH ACROSS

STANDARD SOLDIER WALKING LATERALLY= 12 TO 16 INCH STANDARD SOLDIER SHOULDER TO SHOULDER= 20 INCH

STOP SIGN = 30 INCH ACROSS

DOOR WAY = 36 INCH

STANDARD SOLDIER WAIST TO TOP OF HEAD = 40 INCH

STANDARD SOLDIER FROM FEET TO HEAD = 65 INCH

4X4 TRUCK FROM GROUND TO ROOF = 72 INCH

BASKETBALL RIM FROM GROUND TO RIM =120 INCH

ESTIMATED TIME OF FLIGHT OF THE BULLET						
50 METERS05 SECONDS	600 METERS89 SECONDS					
100 METERS – .1 SECONDS	700 METERS - 1.0 SECONDS					
200 METERS2 SECONDS	800 METERS – 1.3 SECONDS					
300 METERS4 SECONDS	900 METERS – 1.5 SECONDS					
400 METERS5 SECONDS	1000 METERS – 1.7 SECONDS					
500 METERS75 SECONDS	1100 METERS – 2.0 SECONDS					

# WHAT IS MOA?

Minute of Angle: 1 inch at 100 yards. 2 inches at 200 yards. 3 inches at 300 yards.

1/4th MOA is a quarter inch at 100 yards, or 1/2 inch at 200 yards, and so on. Most scopes use 1/4th MOA. This also means that if you are aiming at something 100 yards away on a 1/4th MOA scope, if you move a "click" on the elevation or windage, you will move your cross hairs a quarter of an inch to the right, left, up, or down depending on what and how you adjusted your turrets.

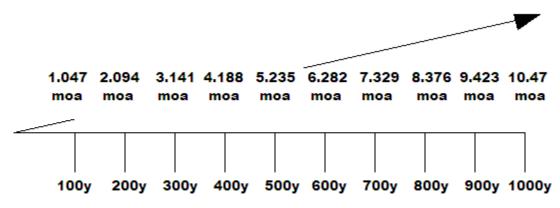
# WHAT IS MIL?

The MIL in mil dot is a shortening of the term milliradian.

One mil of angle is approximately 3.6 inches long at 100 yards.

If your bullseye is 3.5 inches in diameter and 100 yards away, it will touch the centers of any two dots next to each other. If it appears only half that size through the scope (from the center of one dot to half the distance to the next center) your target must be about 200 yards away. If the same bullseye spans the distance between the centers of three dots (two with an extra dot between them), your target is about 50 yards away.

A six-foot tall man is also 72 inches tall. At 100 yards, he would appear to be just over 20 mils tall. At 1000 yards, he would be close to 2 mils tall.



1 moa covers 1.047 inches at 100 yards and extends 1.047 for every 100 yards

NOTES:			

#### RANGE ESTIMATION FORMULAS WITH \*MOA\* BASED RETICLES

RANGE IN YARDS =  $\frac{\text{TARGET SIZE IN INCHES} \times 95.5}{\text{% BY MOA OF TARGET}}$ 

RANGE IN METERS =  $\frac{\text{TARGET SIZE IN INCHES} \times 87.3}{\text{% BY MOA OF TARGET}}$ 

RANGE IN METERS =  $\frac{\text{TARGET SIZE IN METERS} \times 34.4}{\text{% BY MOA OF THE TARGET}}$ 

RANGE IN METERS =  $\frac{\text{TARGET SIZE IN CM} \times 34.4}{\text{% BY MOA OF THE TARGET}}$ 

# **RANGE ESTIMATION FORMULAS WITH \*MIL\* BASED RETICLES**

RANGE IN METERS =  $\frac{\text{TARGET SIZE IN INCHES X 25.4}}{\text{% BY SIZE IN MILS}}$ 

RANGE IN METERS =  $\frac{\text{TARGET SIZE IN YARDS X 1000}}{\text{% BYTARGET SIZE IN MILS}}$ 

RANGE IN YARDS =  $\frac{\text{TARGET SIZE IN INCHES X 27.77}}{\text{% BY TARGET SIZE IN MILS}}$ 

RANGE IN YARDS =  $\frac{\text{TARGET SIZE IN YARDS X 1000}}{\text{% BY TARGET SIZE IN MILS}}$ 

# **BALLISTIC BASICS**

There are two (2) main types of ballistics in terms of shooting.

#### • Internal Ballistics

The study and science of everything that occurs within the rifle before the bullet exits the muzzle. This includes the primer, gun powder, chamber pressures, barrel twist rate, length of the barrel, recoil, operation system (piston / blow-back / gas), type of action, buffer system, and round casing dimensions. The key element of long range accuracy is precision and repeatability. The more EVERYTHING in terms of internal ballistics can be repeated, the more repeatable and precise the rifle will be.

#### External Ballistics

The study and science of everything that occurs after the bullet exits the muzzle and is in flight toward the target. This includes the actual ballistics of the individual round and bullet, the environment, the wind, the humidity, the air pressure, the density of the air, gravity, and even the spin of the earth.

The two most influential factors that have an effect on a bullet flying through the air are **gravity** and the **density of the air**.

**Gravity** is a constant force that pulls all objects downward at a rate of 32 feet per second (squared). Gravity pulls bullets out of the air, and toward the ground as soon as the bullet leaves the muzzle, no matter the velocity. The longer the bullet is in the air, the longer the bullet travels, the more the bullet is affected by gravity. Bullet drop is defined as the vertical distance that a bullet drops as soon as it leaves the muzzle and starts it line of flight (bullet trajectory).

**Density** of the air refers to the amount of resistance placed on the bullet by the air and type of air that surrounds it, as it is in flight. If the density of the air (barometric pressure) is high, then there will be a large amount of drag placed on the bullet. If the density of the air is low, then there will be a small amount of drag placed on the bullet.

Remember that air density decreases the more than altitude increases. The more the elevation gain, the less air and thus the less drag. How will this affect your bullet impact? Your bullet has less resistance hitting it, and the impact on the target will be higher. Adjust accordingly.

As air density increases, the closer you are to the ground. The less elevation gain, the more air is available to surround the bullet, and thus the more drag on the bullet. You bullet has more resistance hitting it as it is in the air, and the impact on the target will be lower. Adjust accordingly.

As temperature and altitude increase, the density of the air decreases, and your bullet will travel faster and harder through the thin air...thus elevating the impact of your round.

As barometric pressure increases, so does the density of the air, and your bullet impact will be lower, because the bullet has more air to push through, and will lose more velocity in doing so...thus lowering the impact of your round.

# RECOMMENDATIONS

As stated in the introduction, this rifle log book is meant to be a basic introduction to precision marksmanship.

This is an interactive book, and allows the shooter (you) to become involved in each of your rifles. As stated in the USMC Rifleman's Creed, you must understand and know each of your rifles.

This download, allows you to print a master copy. After the mater copy is in hand, you can then make copies of your favorite pages of the log book. No need to purchase refills, just make the desired number of copies of all of the pages you like, and feel that are useful, and customize your shooting log book. More than likely, you will have several books...each one for a specific rifle you intend to use at the range.

Rifle Log Book 13

# WEAPON INFORMATION AND SET UP / RANGE GEAR CHECKLIST

RANGE CHECKLIST
AMMO
TARGETS / STAPLER
TOOL KIT
CASES / BAGS
MAGAZINES
SHOOTING RESTS
EARS / EYES PRO
SHOOTING MAT
RANGEFINDER
SPOTTING SCOPE
RANGE TAG
RIFLE LOG BOOK
PASTIES / MARKER
RULER / MICROMETER
CAMERA
MISC

# LOAD DEVELOPMENT AND RELOADING RECIPE CHART

DATE/TIME	ТЕМР	LOCATION	DISTANCE	ALTITUDE	HUMIDITY	BARO	MIRAGE

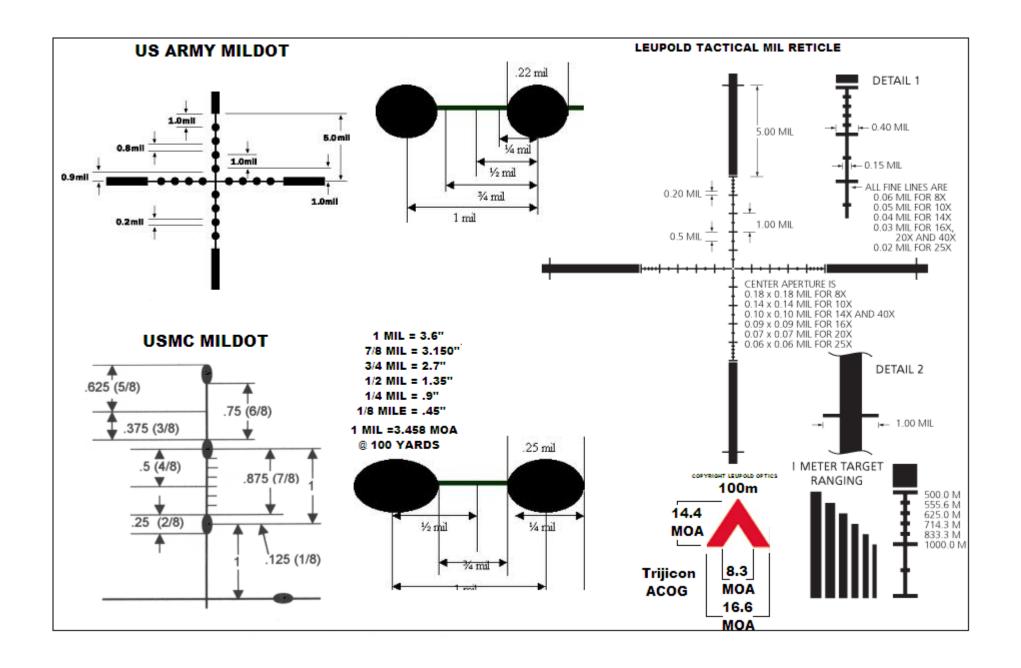
LOA	LOAD DEVELOPMENT / RECIPE / RELOADING DATA SECTION								
LOAD NAME		LOAD NAME							
CASING MANUFACTURE		CASING MANUFACTURE							
CASING COL		CASING COL							
CASING TRIM LENGTH		CASING TRIM LENGTH							
BULLET MANUFACTURE		BULLET MANUFACTURE							
BULLET SEATING DEPTH		BULLET SEATING DEPTH							
BULLET GRAINS		BULLET GRAINS							
POWDER MANUFACTURE		POWDER MANUFACTURE							
POWDER GRAINS		POWDER GRAINS							
PRIMER		PRIMER							
ROUND COL		ROUND COL							
VELOCITY/CHRONOGRAPH		VELOCITY/CHRONOGRAPH							
GROUP SIZE		GROUP SIZE							
STOPPAGES		STOPPAGES							
NOTES		NOTES							

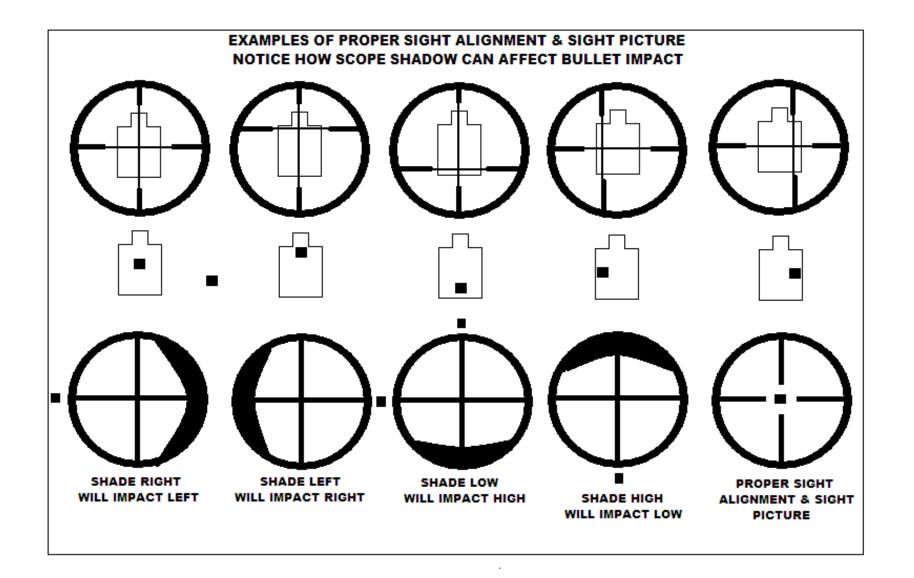
DATE/TIME	_   1	ГЕМР	LOCA	ATION	DISTANCE	ALTITUDE	Н	UMIDITY	В	ARO M	IRAGE
				R	IFLE BARRE	L LOG CHAI	RT				
VEAPON I	DATE	АММО	USED		DS TOTAL	WEAPON		АММО	USED	#ROUNDS	TOTAL
NOTES						NOTES					

# **BULLET DROP CHART**

DATE/TIME	TEMP	LOCATION	DISTANCE	ALTITUDE	HUMIDITY	BARO	MIRAGE
WHILE AI	MING AT	THIS RANGE	THE IMPAC	T OF THE B	ULLET DROP	S ТНІЅ М.	ANY INCHES
	100						
	150						
	200						
	250						
	300						
	350						
	400						
	450						
	500						
	550						
	600						
	650						
	700						
	750						
	800						
	850						
	900						
	950						
	1000						

Rifle Log Book 17





# **ESTIMATED WIND VALUE CHART MEASURED BY MOA & INCES**

RANGE	WIND	3 M	IPH	5 N	IPH	7 N	IPH	10 F	ЛРН	12 I	ИРН	15 I	ИРН	18 I	ИРН	20 N	<b>IPH</b>
		MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH
$\forall$	$\forall$																
200M	HALF	0.0	0.4	0.5	0.6	0.5	0.5	0.5	1.2	0.5	1.3	1.0	1.6	1.0	2.2	1.0	2.4
	FULL	0.5	8.0	0.5	1.2	0.5	1.7	1.0	1.7	1.5	2.9	1.5	3.6	2.0	4.3	2.0	4.8
					1												
300M	HALF	0.5	0.9	0.5	1.3	0.5	1.9	1.0	2.7	1.0	3.3	1.0	4.0	1.5	4.9	1.5	5.4
	FULL	0.5	1.7	1.0	2.7	1.0	3.8	1.5	5.4	2.0	5.5	2.5	8.0	3.0	9.8	3.5	10.9
		0.5		0.5		4.0		4.0	4.0	4.5	F 0	4.5	7.0	0.0			
400M		0.5	1.4	0.5	2.4	1.0	3.3	1.0	4.8	1.5	5.8	1.5	7.2	2.0	8.8	2.0	9.6
	FULL	0.5	2.9	1.0	4.8	1.5	5.7	2.0	9.6	2.5	11.5	3.5	14.4	4.0	17.3	4.5	19.2
500**		0.5						4.5	7.5	4.5			44.0	0.5	40.5	0.5	45.0
500M	HALF	0.5	2.3	0.5	3.8	1.0	5.3	1.5	7.5	1.5	9.0	2.0	11.3	2.5	13.5	2.5	15.0
	FULL	1.0	4.5	1.5	7.5	2.0	10.5	2.5	15.0	3.5	18.0	4.0	22.6	5.0	27.0	5.5	30.0
		0.5		4.0				4.5	44.0	4.5	40.0		40.0		40.0		00.0
600M		0.5	3.0	1.0	5.0	1.0	8.0	1.5	11.0	1.5	13.0	2.5	16.0	3.0	19.0	3.5	22.0
	FULL	1.0	7.0	1.5	11.0	2.5	15.0	3.5	21.0	4.0	26.0	5.0	32.0	6.0	38.0	6.5	43.0
700M	HALF	0.5	4.0	1.0	7.0	1.5	10.0	2.0	15.0	2.5	18.0	3.0	22.0	3.5	26.0	4.0	29.0
	FULL	1.0	9.0	2.0	15.0	2.5	21.0	4.0	28.0	4.5	35.0	6.0	44.0	7.0	53.0	7.5	59.0
					40.0		40.0		40.0		22.2		20.0		25.2		
800M	HALF	0.5	5.0	1.0	10.0	1.5	13.0	2.0	19.0	2.5	23.0	3.5	29.0	4.0	35.0	4.5	38.0
	FULL	1.5	11.0	2.0	19.0	2.5	27.0	4.5	38.0	5.5	46.0	6.5	57.0	8.0	70.0	9.0	77.0
900M	HALF	0.5	7.0	1.0	12.0	1.5	17.0	2.5	24.0	3.0	29.0	4.0	36.0	4.5	44.0	5.0	49.0
	FULL	3.5	15.0	2.5	24.0	3.5	34.0	5.0	48.0	6.0	56.0	7.5	73.0	9.0	97.0	10.0	97.0
4000		4.0			45.0					0.5	00.0		45.0		540		
1000M			9.0	1.5	15.0	2.0	21.0	2.5	30.0	3.5	36.0	4.5	45.0	5.0	54.0	5.5	80.0
	FULL	1.5	18.0	2.5	30.0	4.0	42.0	5.5	80.0	6.5	72.0	8.0	90.0	10.0	103	11.5	120

	6	10	12	16	20	24	26	30	36	40	60	65	70	72	]
# of MILS	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	X	Х	Х	Х	
0.2	762	1275	1525	2030	2540	3048	3300	3800	4572	5075	7620	8255	8890	9145	1—
0.4	381	635	762	1016	1270	1524	1650	1905	2286	2540	4191	4127	4445	4572	]
0.6	254	423	510	675	847	1016	1100	1270	1524	1693	2794	2751	2963	3050	]
0.8	191	318	380	508	635	762	825	953	1143	1270	2096	2063	2225	2285	1
1.0	152	255	305	405	508	609	660	762	914	1016	1676	1651	1778	1830	1
1.2	127	210	254	340	423	508	550	635	762	847	1397	1375	1481	1525	1
1.4	109	180	218	290	363	435	472	544	653	726	1197	1179	1270	1305	1
1.6	95	160	191	255	318	381	413	476	572	635	1048	1031	1111	1145	]
1.8	84	140	169	226	282	338	367	423	508	564	931	917	987	1016	]
2.0	76	125	152	203	254	304	330	381	457	508	838	825	889	915	EST RANGE
2.2	69	115	139	185	231	277	300	346	416	462	762	750	808	830	IN METERS
2.4	64	105	127	169	212	254	275	318	381	423	699	687	740	762	TO TARGET
2.6	59	98	117	156	195	234	254	293	352	391	645	635	683	700	]
2.8	54	90	109	145	180	217	236	272	327	363	599	589	635	653	]
3.0	51	85	102	135	169	203	220	254	305	339	559	550	592	610	]
3.2	48	80	95	125	159	190	206	238	286	318	524	515	555	572	]
3.4	45	75	90	120	149	179	194	224	269	299	493	485	522	538	]
3.6	41	70	85	113	141	169	183	212	254	282	466	458	493	508	]
3.8	40	68	80	107	134	160	174	201	241	267	441	434	467	480	]
4.0	38	65	76	102	127	152	165	191	229	254	419	412	444	457	]
4.2	36	60	73	97	121	145	157	181	218	242	399	393	423	435	]
4.4	35	58	69	92	115	138	150	173	208	231	381	375	404	416	]
4.6	33	55	66	88	110	132	144	166	199	221	364	358	386	398	]
4.8	32	53	64	85	106	127	138	159	191	212	349	343	370	381	]
5.0	30	51	61	81	102	121	132	152	183	203	335	330	355	366	] —

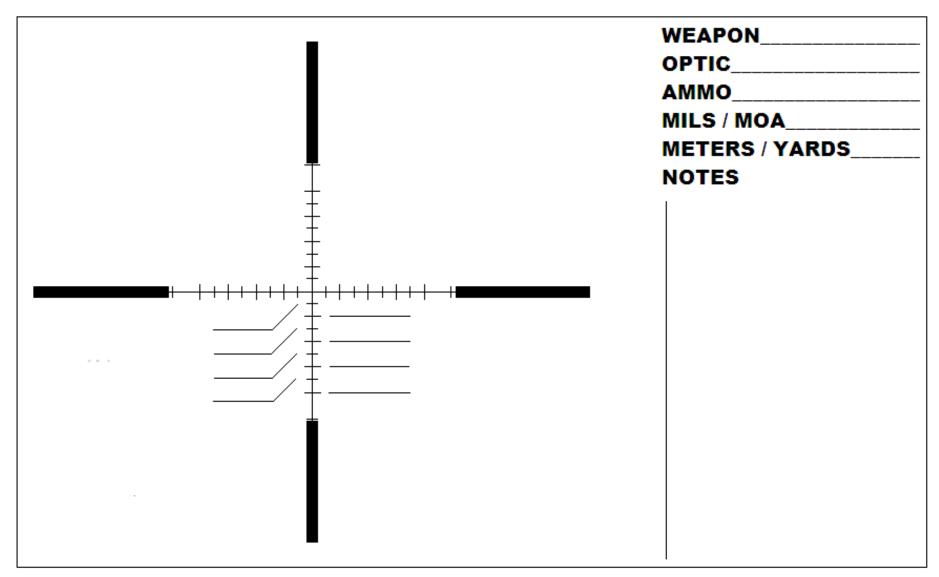
	6	10	12	16	20	24	26	30	36	40	60	65	70	72
# of MILS	Х	X	Х	Х	Х	Х	Х	Х	Х	X	X	Χ	Х	Х
5.2	29	49	59	78	98	117	127	147	176	195	293	317	341	352
5.4	28	47	56	75	94	112	122	141	169	188	282	305	329	339
5.6	27	45	54	73	91	108	118	136	163	181	272	294	317	327
5.8	26	44	53	70	88	105	114	131	159	175	263	284	306	315
6.0	25	42	51	68	85	101	110	127	152	169	254	275	296	305
6.2	25	41	49	66	82	98	107	123	147	164	246	266	287	295
6.4	24	40	48	64	79	95	103	119	143	159	238	257	277	286
6.6	23	38	46	62	77	92	100	115	139	154	231	250	269	277
6.8	22	37	45	60	75	89	97	112	134	149	224	242	261	269
7.0	22	36	44	58	73	87	94	109	131	144	218	235	254	261
7.2	21	35	42	56	71	84	92	106	127	141	212	229	246	254
7.4	21	34	41	55	69	82	89	103	124	137	206	223	240	247
7.6	20	33	40	53	67	80	87	100	120	134	201	217	233	241
7.8	20	33	39	52	65	78	85	98	117	130	195	211	227	234
8.0	19	32	38	51	64	76	83	95	114	127	191	206	222	229
8.2	19	31	37	50	62	74	81	93	112	124	186	201	216	223
8.4	18	30	36	48	60	72	79	91	109	121	181	196	211	218
8.6	18	30	35	47	59	70	77	89	106	118	177	191	206	213
8.8	17	29	35	46	58	69	75	87	104	115	173	187	202	208
9.0	17	28	34	45	56	67	73	85	102	113	169	183	197	203
9.2	17	28	33	44	55	66	72	83	99	110	166	179	193	199
9.4	16	27	32	43	54	64	70	81	97	108	162	175	189	195
9.6	16	26	32	42	53	63	69	79	95	106	159	173	185	191
9.8	16	26	31	41	52	62	67	78	93	104	156	169	181	187
10.0	15	25	30	41	51	60	66	76	91	102	152	165	177	183

EST RANGE IN METERS TO TARGET

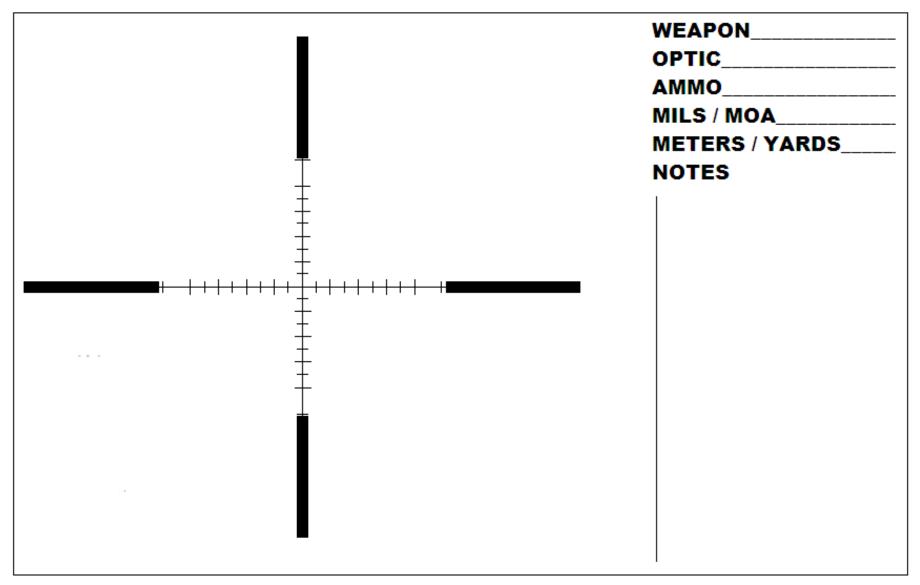
	6	10	12	16	20	24	26	30	36	40	60	65	70	72	
# of MILS	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	
0.2	833	1389	1666	2222	2777	3333	3611	4166	4999	5554	8331	9027	9722	10K	
0.4	416	695	833	1111	1389	1666	1805	2083	2499	2777	4166	4513	4861	5K	
0.6	277	462	555	740	925	1111	1200	1390	1666	1850	2777	3009	3240	3330	
0.8	208	347	416	555	695	833	902	1041	1250	1389	2085	2256	2430	2500	
1.0	167	277	333	443	554	666	722	833	1000	1111	1666	1805	1944	2000	
1.2	139	231	277	370	462	555	602	695	833	925	1389	1504	1620	1666	
1.4	119	197	238	316	396	476	515	595	715	792	1190	1289	1388	1428	
1.6	104	174	207	278	347	416	450	521	625	695	1041	1128	1215	1250	
1.8	93	153	185	246	308	370	401	463	555	615	925	1003	1080	1111	
2.0	83	138	166	222	278	333	360	417	500	555	833	902	972	1000	EST RANGE
2.2	76	126	151	201	252	303	328	379	454	505	757	820	883	910	IN YARDS
2.4	69	115	138	185	230	277	300	347	415	462	695	752	810	833	TO TARGET
2.6	64	107	126	128	215	256	278	320	385	427	641	694	747	770	
2.8	60	99	118	118	198	238	258	299	355	395	595	644	694	715	
3.0	56	92	111	111	185	222	241	278	333	370	555	601	648	666	
3.2	52	86	104	140	174	208	226	260	312	347	521	564	607	625	
3.4	49	82	98	132	163	196	212	245	294	327	490	528	571	588	
3.6	45	77	94	123	154	185	200	231	278	309	463	501	540	555	
3.8	44	73	88	117	146	175	190	219	263	292	438	475	511	526	
4.0	42	69	83	110	139	166	181	208	250	278	417	451	486	500	
4.2	40	65	79	105	132	158	172	198	238	264	397	429	462	476	
4.4	38	63	76	101	126	151	164	189	227	252	379	410	441	455	
4.6	36	60	72	97	121	144	157	181	217	241	362	400	422	435	
4.8	35	58	68	93	116	138	150	174	208	231	347	376	405	417	
5.0	33	56	66	89	111	133	144	166	200	222	333	361	388	400	

	6	10	12	16	20	24	26	30	36	40	60	65	70	72	]
# of MILS	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	]
5.2	32	53	64	85	107	128	139	160	192	214	320	347	373	385	1—
5.4	31	51	62	82	103	123	134	154	185	206	309	334	360	370	1
5.6	30	50	60	79	99	119	129	149	179	198	298	322	347	357	1
5.8	29	48	57	77	96	114	124	144	172	192	287	311	335	345	1
6.0	28	46	56	74	93	111	120	139	167	185	278	300	324	333	1
6.2	27	45	54	72	90	107	116	134	161	179	269	291	313	320	1
6.4	26	43	52	69	87	104	113	130	156	174	260	282	303	312	1
6.6	25	42	50	67	84	101	109	126	151	168	252	273	294	303	1
6.8	25	41	49	65	82	98	106	123	147	163	245	265	285	294	EST RANGE
7.0	24	40	48	63	79	95	103	119	143	159	238	257	277	286	IN YARDS
7.2	23	39	46	62	77	92	100	115	139	154	231	250	270	278	TO TARGET
7.4	23	38	45	60	75	90	98	113	135	150	225	243	262	270	]
7.6	22	37	44	58	73	87	95	110	132	146	219	237	255	263	]
7.8	21	36	43	57	71	85	93	107	128	142	214	231	249	256	]
8.0	21	35	42	56	69	83	90	104	125	139	208	225	243	250	]
8.2	20	34	41	54	68	81	88	102	122	135	203	220	237	244	]
8.4	20	33	40	53	66	79	86	99	119	132	198	214	231	238	]
8.6	19	32	39	52	63	77	84	97	116	129	194	209	226	232	]
8.8	19	32	38	50	62	75	82	95	114	126	189	205	220	227	]
9.0	19	31	37	49	60	74	80	93	111	123	185	200	216	222	]
9.2	18	30	36	48	59	72	78	91	109	121	181	196	211	217	]
9.4	18	30	35	47	58	70	77	89	106	118	177	192	206	213	]
9.6	17	29	35	46	57	69	75	87	104	116	174	188	202	208	]
9.8	17	28	34	45	56	68	74	85	102	113	170	184	198	204	]
10.0	17	28	33	44	55	66	72	83	100	111	167	180	194	200	]

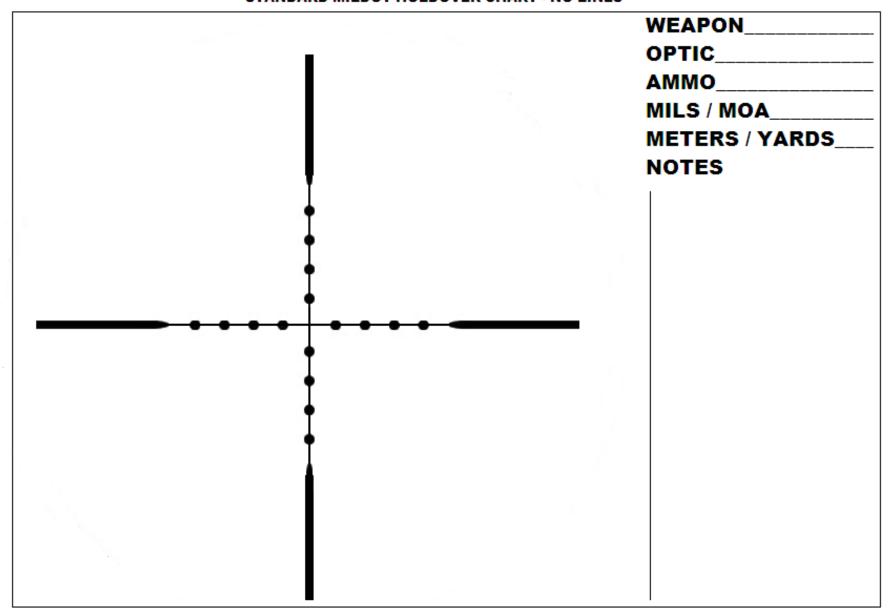
#### LEUPOLD TMR HOLDOVER LOG CHART



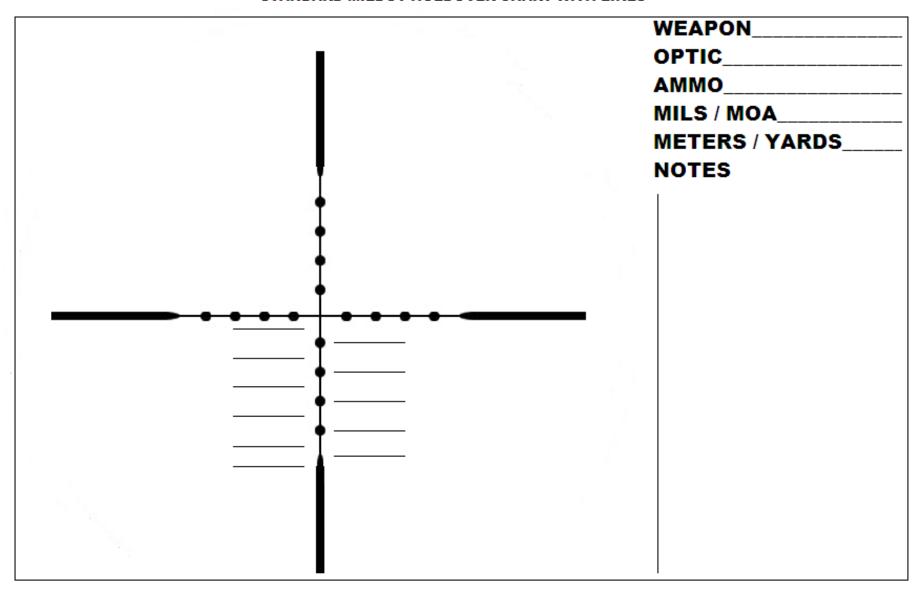
#### **LEUPOLD TMR HOLDOVER CHART - NO LINES**



#### STANDARD MILDOT HOLDOVER CHART - NO LINES



#### STANDARD MILDOT HOLDOVER CHART WITH LINES



# **BLANK RANGE CARD**

DATE/TIME	TEMP	LOCATION	DISTANCE	ALTITU	DE	HUMID	ITY	BARO	MIRAGE
MMUNITION	LOAD		RIFLE & OPTIC		_	N LIGHT	LIG	VALUE & DIF HT (3-5MPH)	12
					_	ERCAST IN / SNOW	_	D (5-9MPH) AVY (9+MPH)	9 3

# SHOT CALL AND SHOT IMPACT BLANK TARGET POINTS

DATE/TI	ME 1	ЕМР	LO	CATIO	N	DISTAN	CE	AL.	TITU	DE	HUMID	ITY	BAR	O M	IRAGE
AMMUN	ITION LO	AD			RIF	LE & OPTIO	C .			OVE	T I LIGHT ERCAST IN / SNOW	LIG	VALUE HT (3-5M D (5-9MP AVY (9+1	н) (я	12
TARGET RANGE										•					
DOPE	PE INITIAL CORRECT					CORRECT	INIT	IAL	COR	RECT	INITIAL	СО	RRECT	INITIAL	CORRECT
ELEV	/										1				
WIND															
CALL	ND														
IMPACT					***			-							

# SHOT CALL AND SHOT IMPACT WITH SILHOUETTE TARGET POINTS

DATE/TII	ME	TEMP	LO	CATIO	ON	DISTAN	CE	AL	TITU	IDE	HUMIE	ITY	BAR	O M	IRAGE
AMMUN	ITION L	OAD	<u> </u>		RIF	LE & OPTIO	C			ov	IT N LIGHT ERCAST IN / SNOW	LIG	VALUE HT (3-5N D (5-9MF AVY (9+1	) (s	12
TARGET													,		
RANGE															
DOPE	INITIA	L COR	RECT	INITI	AL	CORRECT	INIT	IAL	COF	RECT	INITIAL	со	RRECT	INITIAL	CORRECT
ELEV															
WIND															
CALL									_						
IMPACT				<i>3</i>		]									

# KNOWN DISTANCE RANGE CARD - FREEHAND TARGET SKETCH

DATE/TI	ME	TE	MP	LO	CATIO	ON	DIS	TANCE	<u> </u>	ALTIT	UDE	HUMIDI	TY	BARO	MIRAGE
AMMUN	ITION	I LOAI	D			RIF	LE & C	PTIC			ov	IT N LIGHT ERCAST IIN / SNOW	LIG	VALUE & DII HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	RECTION 12 9 3
SHOT #	1	2	3	4	5	6	7	8	9	10	TARG	SET DESCR	RIPTIC	ON	
ELEV											MILS	/ MOA MEA	ASURI	EMENT	
WIND												FRE	EHAN	D TARGET SK	ЕТСН
CALL															
NOTES															
														LGEARSUPE	

#### KNOWN DISTANCE RANGE CARD

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANCE		ALTIT	UDE	HUMID	ITY	BARO	MIRAGE
AMMUN	ITION	N LOAI	D			RIF	LE & C	PTIC			OV RA	N LIGHT ERCAST IN / SNOW	LIG ME HE	VALUE & DIF HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	RECTION 12 9 3
SHOT #	HOT# 1 2 3 4 5 6 7 8 9										TARC	BET DESCR	RIPTIC	ON	
ELEV											MILS	/ MOA ME	ASURI	EMENT	
WIND													TA	RGET POINT	r
CALL															
NOTES				HOLE	OOVER	<b>?</b>		<del></del>	Library (I)	_		www.tac	TICAL	LGEARSUPE	RSTORE.COM

# KNOWN DISTANCE RANGE CARD WITH FULL GRID TARGET PLOTTING BLOCK

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANC		ALTIT	UDE	нимі	DITY	BARC	•	MIF	RAGE	
AMMUN	ITIOI	N LOA	D			RIF	LE & C	PTIC			0\	HT IN LIGHT /ERCAST AIN / SNOV	LIC	D VALUE & GHT (3-5MF ED (5-9MPF EAVY (9+M	PH) H)	RECTIO	ON 12 3	)
<b>SHOT</b> #	1	2	3	4	5	6	7	8	9	10	<del></del>	GET DES			-11,			
ELEV											MILS	6 / MOA M	EASUR	EMENT				
WIND																		
CALL																		
NOTES				HOLE	OOVER	<b>₹</b>		<del>       </del>	Lis d	-								

# KNOWN DISTANCE RANGE CARD WITH BULLSEYE

DATE/TI	IME	TE	MP	LO	CATIO	ON	DIS	TANCE		ALTIT	UDE	HUMIDI	ITY	BARO	MIRAGE
AMMUN	IITIOI	N LOA	D			RIF	LE & C	PTIC			ov	HT N LIGHT ERCAST	LIG	VALUE & DII HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	12 9 3 6
SHOT #	1	2	3	4	5	6	7	8	9	10	TAR	GET DESCR			
ELEV											MILS	/ MOA ME	ASURI	EMENT	
WIND											Г				
CALL															
NOTES				HOLD	OOVEF	- 1 1		<del></del>	sola III	_		WWW.TAC	TICAL	GEARSUPE	RSTORE.COM

# **BOXED SILHOUETTE AND HOLDOVER RETICLE**

DATE/TI	ME	TE	MP	LO	CATIO	ON	DIS	TANCE		ALTITU	JDE	HUMID	ITY	BARO	MIRAGE
AMMUN	ITION	LOA	D			RIF	LE & C	PTIC			ov	HT IN LIGHT /ERCAST AIN / SNOW	LIG	VALUE & DI HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	RECTION 12 9 3
SHOT #	1	2	3	4	5	6	7	8	9	10		GET DESCI			
ELEV											MILS	/ MOA ME	ASURI	EMENT	
WIND															
NOTES				HOLD	OOVER	<u> </u>						Γ			
				2											
				-	9	<b>-</b>	++++			-					
							Ī								
												WWW.TAC	CTICAL	LGEARSUPE	RSTORE.COM

# KNOWN DISTANCE RANGE CARD WITH 4-SQUARE TARGET SECTOR

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANCE	•	ALTIT	UDE	HUMID	ITY	BARO	MIRAGE
AMMUN							LE & C				OV RA	IT N LIGHT ERCAST IN / SNOW BET DESCI	LIG ME HE	VALUE & DI HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	9 3)
SHOT #	1	2	3	4	5	6	7	8	9	10		/ MOA ME			
ELEV											MILS	/ MOA ME	AJUNI	-IMEINI	
WIND													TA	RGET POIN	Т
CALL															
NOTES				HOLE	OOVER	<b>t</b>		<del>         </del>	Section 1	_		www.tag	CTICAL	GEARSUPE	ERSTORE.COM

# **TRIJICON RETICLE - HUMAN SILHOUETTE**

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANCE		ALTIT	UDE	HUMID	ITY	BARO	MIRAGE
AMMUN	ITION	I LOA	D			RIF	LE & C	PTIC			ov	HT N LIGHT ERCAST IIN / SNOW	LIG	VALUE & DI HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	RECTION 12 9 3
SHOT#	1	2	3	4	5	6	7	8	9	10	<del></del>	SET DESCR			
ELEV											MILS	/ MOA ME	ASURI	EMENT	
WIND														$\overline{\mathbb{Q}}$	
CALL											-		5		
NOTES				HOLD	OOVEF		1	4 6							
							Τ					TACTIO	ALGE	ARSUPERST	ORE.COM

# **HUMAN FIGURE TARGET POINT WITH HOLDOVER RETICLE**

DATE/TI	ME	TE	MP	LO	CATIO	ON	DIS	TANC	E	ALTITU	JDE	HUMID	ITY	BARO	MIRAGE
AMMUN	ITION	LOA	D			RIFI	E & C	PTIC			ov	IT N LIGHT ERCAST IN / SNOW	LIG	VALUE & DI HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	RECTION 12 9 3
SHOT #	1	2	3	4	5	6	7	8	9	10		SET DESCR			
ELEV											MILS	/ MOA ME	ASURI	EMENT	
WIND														Ω	
CALL													5		
NOTES				HOLD	OVEF	₹	ļ								
				-	\$	<b>■</b>	† † † †	<del></del>	100 J	<b>-</b>					
												TACTIO	ALGE	ARSUPERS	TORE.COM

# TRIJICON RANGECARD - GRID TARGET POINT

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANC	<b>=</b>	ALTIT	UDE		HUMIC	ITY	В	ARO		MIRA	3E	
AMMUN	ITIOI	N LOA	D			RIF	LE & C	PTIC			o	JN LI VERO	GHT CAST SNOW	LIC	D VALI SHT (3 ED (5-9	-5MPH)	<b>1</b> )	CTION 12 9 6	3)	
SHOT #	1	2	3	4	5	6	7	8	9	10			DESC				,			
ELEV											MILS	5 / M	OA ME	ASUR	EMEN	NT				
WIND																				
CALL														+		+				
NOTES				HOLD	OVEF		^	4 6		,										
							1													

# TRIJICON RETICLE RANGE CARD

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANCE	<u> </u>	ALTIT	UDE	HUMIDI	ITY	BARO	MIRAGE
AMMUN	ITIO	N LOA	D			RIF	LE & C	PTIC			ov	IT N LIGHT ERCAST IIN / SNOW	LIG	VALUE & DI HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	RECTION 12 9 3
SHOT #	1	2	3	4	5	6	7	8	9	10	TARC	SET DESCR	RIPTIO	ON	
ELEV											MILS	/ MOA ME/	ASURI	EMENT	
WIND														$\overline{}$	
CALL														J L	
NOTES														4 6	
												www.TAC	TICAL	LGEARSUPE	RSTORE.COM

### KNOWN DISTANCE RANGE CARD WITH 4-SQUARE SECTOR & GRID PLOTTING

DATE/TI	ME	TE	MP	LO	CATIO	ON	DIS	TANCE		ALTIT	UDE	HUMID	ITY	BARO	MIRAGE
AMMUN	ITION	I LOAI	D			RIFI	LE & C	PTIC			ov	HT N LIGHT ERCAST IIN / SNOW	LIG	VALUE & DI HT (3-5MPH) D (5-9MPH) AVY (9+MPH)	9 3)
<b>SHOT</b> #	1	2	3	4	5	6	7	8	9	10	TARG	SET DESCR	RIPTIO	N	
ELEV											MILS	/ MOA ME	ASURI	EMENT	
WIND													TA	RGET POIN	т
CALL															$\Box$
IMPACT															
NOTES															
												WWW.TAC	TICAL	LGEARSUPE	RSTORE.COM

# KNOWN DISTANCE RANGE CARD WITH FULL GRID TARGET PLOTTING - NO HOLDOVER

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANCE		ALTIT	UDE	н	JMIDI	TY	В	ARO	М	IRAG	E	
AMMUN	ITION	I LOA	D			RIF	LE & C	PTIC			0\	HT JN LIGH VERCA AIN / S	IT ST	LIC	HT (3-	-5MPH	(9	12	3)	
SHOT #	1	2	3	4	5	6	7	8	9	10	TAR	GET D	ESCR				•			
ELEV											MILS	6 / MO	A MEA	SUR	EMEN	IT				
WIND																				_
CALL																_			_	
NOTES					•		'			•										
																	+			

# KNOWN DISTANCE RANGE CARD WITH OUTLINED GRID PLOTTING BLOCK

DATE/TI	ME	TE	MP	LO	CATIO	N	DIS	TANCE	<u> </u>	ALTITU	UDE	HUMIE	ITY	BARG	<u> </u>	MIRA	GE
AMMUN	ITION	I LOA	D			RIF	LE & C	PTIC			ov	IT N LIGHT ERCAST IN / SNOW	LIG	VALUE ( HT (3-5MI D (5-9MPI AVY (9+M	PH) H)	9	N 2 3 6
SHOT #	1	2	3	4	5	6	7	8	9	10	TARG	ET DESC					
ELEV											MILS	/ MOA ME	ASUR	EMENT			
WIND																	
CALL																	
IOTES																	

# MILITARY RANGE CARD - TARGET POINTS 1 - 6

DATE/TIME	TEMP	LOCATION	DISTANCE	ALTITUDE	HUMIDIT	Y BARO	MIRAGE
AMMUNITION	LOAD		RIFLE & OPTIC	LIG	HT \	WIND VALUE & D	IRECTION
				0\	N LIGHT /ERCAST AIN / SNOW	LIGHT (3-5MPH) MED (5-9MPH) HEAVY (9+MPH)	(s 3)
ALPHA	RAVO					CHARLIE	N
							DELTA
TP1 RANGE	TP2 R	ANGE	TD2 DANCE	TP4 RANGE	TDE	RANGE	TP6 RANGE
TP1 AZMTH	TP2 A		TP3 RANGE TP3 AZMTH	TP4 AZMTH			TP6 AZMTH
TP1 POS ID	TP2 P	DS ID	TP3 POS ID	TP4 POS ID	TP5	POS ID	TP 6 POS ID
RANGECARD N	IOTE SECTI	ON					

# TARGET POINT DESCRIPTION, RANGE, AND LOCATION

DATE/TIME	TEMP	LOCATIO	N DISTANC	E ALTIT	UDE HUN	IIDITY	BARO	MIRAGE
AMMUNITIO	N LOAD		RIFLE & OPTIO	;	LIGHT SUN LIGHT OVERCAST RAIN / SNO	LIC	D VALUE & DIF GHT (3-5MPH) ED (5-9MPH) EAVY (9+MPH)	RECTION 12 9 3
TARGET #	RANGE	MILS/MO	A HEIGHT	WIDTH	DESCRIP		AZIMUTH	SECTOR
								+
				10 4				
		-						

# **ESTIMATED WIND VALUE CHART MEASURED BY MOA & INCES**

RANGE	ANGE WIND		3 MPH		5 MPH		7 MPH		10 MPH		12 MPH		15 MPH		18 MPH		20 MPH	
		MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	MOA	INCH	
*	★_		1				0.5						4.0					
200M	HALF	0.0	0.4	0.5	0.6	0.5	0.5	0.5	1.2	0.5	1.3	1.0	1.6	1.0	2.2	1.0	2.4	
	FULL	0.5	8.0	0.5	1.2	0.5	1.7	1.0	1.7	1.5	2.9	1.5	3.6	2.0	4.3	2.0	4.8	
			1															
300M	HALF		0.9	0.5	1.3	0.5	1.9	1.0	2.7	1.0	3.3	1.0	4.0	1.5	4.9	1.5	5.4	
	FULL	0.5	1.7	1.0	2.7	1.0	3.8	1.5	5.4	2.0	5.5	2.5	8.0	3.0	9.8	3.5	10.9	
					1													
400M	HALF	0.5	1.4	0.5	2.4	1.0	3.3	1.0	4.8	1.5	5.8	1.5	7.2	2.0	8.8	2.0	9.6	
	FULL	0.5	2.9	1.0	4.8	1.5	5.7	2.0	9.6	2.5	11.5	3.5	14.4	4.0	17.3	4.5	19.2	
500M	HALF	_	2.3	0.5	3.8	1.0		1.5	7.5	1.5	9.0	2.0	11.3	2.5	13.5	2.5	15.0	
	FULL	1.0	4.5	1.5	7.5	2.0	10.5	2.5	15.0	3.5	18.0	4.0	22.6	5.0	27.0	5.5	30.0	
600M	HALF	0.5	3.0	1.0	5.0	1.0	8.0	1.5	11.0	1.5	13.0	2.5	16.0	3.0	19.0	3.5	22.0	
	FULL	1.0	7.0	1.5	11.0	2.5	15.0	3.5	21.0	4.0	26.0	5.0	32.0	6.0	38.0	6.5	43.0	
700M	HALF	0.5	4.0	1.0	7.0	1.5	10.0	2.0	15.0	2.5	18.0	3.0	22.0	3.5	26.0	4.0	29.0	
	FULL	1.0	9.0	2.0	15.0	2.5	21.0	4.0	28.0	4.5	35.0	6.0	44.0	7.0	53.0	7.5	59.0	
800M	HALF	0.5	5.0	1.0	10.0	1.5	13.0	2.0	19.0	2.5	23.0	3.5	29.0	4.0	35.0	4.5	38.0	
	FULL	1.5	11.0	2.0	19.0	2.5	27.0	4.5	38.0	5.5	46.0	6.5	57.0	8.0	70.0	9.0	77.0	
900M	HALF	0.5	7.0	1.0	12.0	1.5	17.0	2.5	24.0	3.0	29.0	4.0	36.0	4.5	44.0	5.0	49.0	
	FULL	3.5	15.0	2.5	24.0	3.5	34.0	5.0	48.0	6.0	56.0	7.5	73.0	9.0	97.0	10.0	97.0	
1000M			9.0	1.5	15.0	2.0	21.0	2.5	30.0	3.5	36.0	4.5	45.0	5.0	54.0	5.5	80.0	
	FULL	1.5	18.0	2.5	30.0	4.0	42.0	5.5	80.0	6.5	72.0	8.0	90.0	10.0	103	11.5	120	

