HANDBOOK OF
STANDARD RETICLE PATTERNS
BY MANUFACTURER, VERSION 10
D. ANDREW KOPAS
FOR EDUCATIONAL PURPOSES, NOT FOR COMMERCIAL SALE OR USE.
This Handbook is Dedicated to General Thera Lermu, late of the KNU/KNLA Peace Council Forces Army who was Killed in Action while protecting the Karen people of Burma (aka Myanmar) in January 2008.

It was my pleasure and honor to serve with him.

Col. D. Andrew Kopas
The purpose of this handbook is to aid military, law enforcement, and civilian precision shooters in the selection of the proper reticle pattern for their respective mission. Given the wide variety of different reticle patterns used by the various scope manufacturers represented herein, including most of them in a single document can help to simplify the selection process. The reader should verify the current status of the reticle with the manufacturer since some patterns may no longer be in production. In addition, some patterns may repeat in this document given their use by more than one rifle scope manufacturer.

Reticle patterns added in Version 10 are shown in the beginning of this catalogue. Special thanks to all of the rifle scope and reticle manufacturers listed at the end of this handbook for the reticle pattern schematics and subtension diagrams illustrated in this compilation.
New Reticle Patterns Added since Edition 9

Kahles MSR Ki
Kahles Mil4 k624i Reticle with Advanced Milling
Kahles AMR (Advanced Milling Reticle)
Kahles Mil4 k624 Reticle
Kahles SKMR
Kahles 4D Dot Reticle
Vortex Cross Fire II BDC Dead Hold Reticle 4-12x40

---[NOTES]---
Subtensions are measured in MOA and correspond to the highest magnification.
Reticle image shown for representation only. Reticle image varies between scope models depending on magnification and reticle plane.
Vortex Razor

RAZOR HD Gen II EBR-2C MRAD Reticle Subtensions for 4.5-27x56

[Diagram showing reticle subtensions]

[NOTES]
Subtensions are measured in MRAD and remain constant at all magnifications.
Reticle image shown for representation only. The overall reticle image will vary with changes in the magnification.
Vortex Viper HS-T VMR-1
MRAD 4-16x44 Reticle

----[NOTES]----
Subtensions are measured in MRAD and correspond to the highest magnification.
Reticle image shown for representation only. Reticle image varies between scope models depending on magnification and reticle plane.
Vortex Viper

VIPER HS LR XLR Reticle Subtensions for 6-24x50

---[NOTES]---
Subtensions are measured in MOA and remain constant at all magnifications.
ø=diameter
Reticle image shown for representation only. The overall reticle image will vary with changes in the magnification.
Vortex 2C EBR
Reticle
Vortex Razor HD
EBR-2 MRAD Reticle

.2 mrad subtension marks
Fine Crosshairs
subtend .06 mrads

.5 mrad subtension marks

Heavy Crosshairs
subtend .08 mrads

Numbers indicate mrads
Vortex Razor HD
EBR-2 MRAD Reticle Ranging Examples

\[
\frac{\text{Target Size (Meters) } \times 1000}{\text{mrads Read}} = \text{Range (Meters)}
\]

\[
\frac{\text{Target Size (Yards) } \times 1000}{\text{mrads Read}} = \text{Range (Yards)}
\]

\[
\frac{\text{Target Size (Inches) } \times 27.77}{\text{mrads Read}} = \text{Range (Yards)}
\]

Ranging a 6-foot figure (2 yards) at 4 mrads to get 500 yards.

\[
\frac{2 \times 1000}{4 \text{ mrads}} = 500 \text{ Yards}
\]
7.7 mrad reticle holdover correction for 800 yard shot using 7.62mm with 175 gr. SMK. No wind.
2.6 mrad reticle correction for 15 mph wind at 700 yards using 7.62mm with 175 gr. SMK. Elevation already dialed into turret.
4.2 mrad reticle windage correction for 20 mph wind at 800 yards with 7.62mm with 175 gr. SMK using 7.7 mrad reticle drop line.
2.74 mrad reticle correction for a figure walking 3 mph at a distance of 800 yards. 7.62mm with 175 gr. SMK. No wind. Total bullet time of flight from moment of trigger pull is 1.5 seconds during which the figure travels 6.6 feet. Elevation already dialed into turret.
Vortex Viper PST-1
4x24 Reticle
Vortex Razor HD
EBR-556 Close Quarters Reticle

Configuration shown for 1-4x24 Vortex Razor HD 30mm Scope
Steiner MSR Reticle
Henshholdt Fero Z24 Reticle
Hensholdt ZF 6-24x72 Reticle

Bar width: 4 mm/100 m
Hensholdt ZF 6-24x72 Reticle

Illustration 6  Detail of reticle pattern

1  Lead circles (mil-dots)
A  Distance of graduation marks
   10 cm/100 m
B  Distance of lead circles
   10 cm/100 m

C  Distance between lead circle and graduation mark 5 cm/100 m
D  Height of graduation marks
   1.5 cm/100 m
Bushnell G2 DMR GAP Reticle
Leupold
TREMOR2 Reticle
Y-TAC Reticle BDC for 5.56 NATO 62 Grain

Wings, instant ranging gauge on shoulders will result in a "hit" on upper body without moving weapon... (to 400)
Y-TAC Reticle BDC for 7.62 NATO M80 Ball

Note: Gauge match up with shoulder-width range, while ballistic in effect to hit to 400 yards immediately with no Mil-time for large enemy attacking force.
Schmidt and Bender Reticle Patterns

Reticle No. 1
Fixed power only

Reticle No. 1
Variable power only

Reticle No. 2

Reticle No. 3
Schmidt and Bender Reticle Patterns

Reticle No. 4

Reticle No. 6 fine (varmint)

Reticle No. 7

Reticle No. 8
Schmidt and Bender Reticle Patterns

Reticle No. 8 Dot (varmint)
Reticle No. 9
Reticle No. 7 FlashDot
Reticle No. 8 FlashDot
Schmidt and Bender Reticle Patterns - Illuminated

Reticle No. L1

Reticle No. L3

Reticle No. L7

Reticle No. L9
Schmidt and Bender Reticle Patterns – Police Marksman

P-1 (Bryant) reticle

P-3 Mil-dot illuminated

CQB Reticle
Schmidt and Bender Reticle Patterns – Police Marksman Illuminated MSR
US OPTICS Reticle Patterns

1x FOV

4x FOV

Ghost Ring w/Center dot
109-800 yard
323 M4 EDC
1/2" wide ranging bars

---

(LINES CONTINUE TO EDGE)
US OPTICS Reticle Patterns
US OPTICS Reticle Patterns

- 6.5' (70 MOA) FOV AT 20X
- 7.6' (60 MOA) FOV AT 17X
- 13' (150 MOA) FOV AT 10X
- 23.5' (35 MOA) FOV AT 6X
US OPTICS Reticle Patterns
US OPTICS Reticle Patterns

Measurements are in MOA (xx)
US OPTICS Reticle Patterns
GAP Mil-Scale

GAP Mil-Scale
Available for 17x and 22x

(.7 MOA)
4 PLACES

(.5 MIL)
26 PLACES

(.5 MIL)
16 PLACES

(.1 MOA)
42 PLACES

(.5 MIL)
21 PLACES

(.25 MIL)
34 PLACES

LETTERING 8 PLACES
HEIGHT (1.5 MOA)
STYLE SIMPLEX

(.1 MOA)
2 PLACES

(LINES CONTINUE TO EDGE)

(4.0 MIL)
3 PLACES

(9.0 MIL)
US OPTICS Reticle Patterns
RWF
US OPTICS Reticle Patterns

RWF 77

RWF-77 Reticle for US Optics SN3 1.6-10 (NON-LIT)

The Bullet Drop Compensator is for .223 caliber using the 77 gr SMK going at 2725 FPS for the carbine AR15 rifles. Here are the numbers in Real MOA for elevation and windage hold overs:

<table>
<thead>
<tr>
<th>Distance (Yards)</th>
<th>Elevation</th>
<th>10 MPH Wind</th>
<th>20 MPH Wind</th>
<th>Total Length of Hold Over Lines</th>
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<td>1.50 MOA</td>
<td>1.75 MOA</td>
<td>3.50 MOA</td>
<td>7.0 MOA</td>
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<td>2.25</td>
<td>4.50</td>
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<td>450</td>
<td>9.30</td>
<td>4.50</td>
<td>9.25</td>
<td>18.50</td>
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<tr>
<td>500</td>
<td>11.40</td>
<td>5.25</td>
<td>10.50</td>
<td>21.00</td>
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<td>600</td>
<td>16.00</td>
<td>6.75</td>
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<tr>
<td>700</td>
<td>21.50</td>
<td>8.25</td>
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<td>33.00</td>
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<tr>
<td>800</td>
<td>28.00</td>
<td>10.00</td>
<td>19.75</td>
<td>39.50</td>
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</table>
US OPTICS Reticle Patterns
Canadian Mil-Scale
US OPTICS Reticle Patterns
MPR
US OPTICS Reticle Patterns
JNG Mil & JNG MOA

6. VIEWING SURFACES SHALL NOT EXCEED 10/5 SCRATCH/DIG. NO VISIBLE DEFECTS PERMITTED IN COATING OR GLASS.
5. DIMENSIONS ARE IN INCHES (MILLIMETERS) (ANGLE).

CONFIDENTIAL INFORMATION, TO BE DISCLOSED TO OUTSIDE PARTIES ONLY WITH THE EXPRESS WRITTEN PERMISSION OF US OPTICS, INC.
6. Surface shall not exceed 10/5 scratch/dig. No visible defects permitted in coating or glass.

5. Dimensions are in inches [millimeters] (angle).
US OPTICS Reticle Patterns
RDP Mil 17

7. ANGULAR MEASUREMENTS TRUE MOA ("TMOA").
6. SURFACE SHALL NOT EXCEED 10/5 SCRATCH/DIG. NO VISIBLE DEFECTS PERMITTED IN COATING OR GLASS.
5. DIMENSIONS ARE IN INCHES [MILLIMETERS] (ANGLE).
US OPTICS Reticle Patterns
RDP MOA

7. ANGULAR MEASUREMENTS TRUE MOA ("TMOA").
6. SURFACE SHALL NOT EXCEED 10/5 SCRATCH/DIG. NO VISIBLE DEFECTS
   PERMITTED IN COATING OR GLASS.
5. DIMENSIONS ARE IN INCHES [MILLIMETERS] (ANGLE).
Horus H58 Reticle with Illumination
Horus H59 Improved Sniper Reticle with Illumination
Horus H59 Dual Plane Improved Sniper Reticle with Illumination
Horus H50 Close Quarters Reticle with Illumination
Horus TReMoR2 Reticle with Illumination
Horus H425 Hunting Half Grid Reticle
Horus H32 Observational Measurement Spotting Reticle
Horus H36 Observational Range Finder Spotting Reticle
Horus Vision Reticle Patterns

H2

H3

H4

H1

H19
Horus Vision Reticle Patterns

H35

H5

H12

H37

H27
NightForce Reticle Patterns
NP-RF1 Field Tactical Long Range

2 MOA elevation and windage spacing are ideal for precision long-range shooting and all-around use. 10, 20 and 30 MOA elevation points are clearly marked for quick reference in the field. Especially suitable for range finding.
NightForce Reticle Patterns
MD 2.0 Field Tactical

1 mil spacing between dots. See-through design does not obscure small targets at long ranges. Four posts allow centering the target quickly, especially in poor light.
The .5 and 1 mil divisions allow for multiple zeroes, holdover, holdunder and windage adjustments without touching elevation or windage knobs. Elevation points are numerically identified in 2, 4, 6 and 8 mil increments, windage points in 2 and 4 mil increments.
NightForce Reticle Patterns
General Velocity 1000

Precise shot placement to 1000 yards with accurate holdovers. Available in LV.5, MV.5, HV, HV.5, HVM, HVM.5, UHV and UHV.5 configurations.
NightForce Reticle Patterns
LV.5 General Long Range

Precise shot placement to 1000 yards with accurate holdovers when the distance to target is known. Extremely quick, requiring no calculation or adjustments. Designed for specific calibers and ballistic profiles.
With 1 MOA elevation and windage markings, more accurate range finding and hold-offs are possible on smaller targets at longer ranges. Combined with a floating center crosshair, this makes for a reticle extremely fast and easy to use in the field.
NightForce Reticle Patterns
NP-1RR

NP-1RR

A 9 inches
B 18 inches
C Distance in Yards
D 4 M.O.A.
E 4 M.O.A.
F 8 M.O.A.
G 15 M.O.A.
H 20 M.O.A.
I Step
J Baseline

<table>
<thead>
<tr>
<th>Reticle Model</th>
<th>Magnifying Power</th>
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<tbody>
<tr>
<td>3.5-11x NCS</td>
<td>10x</td>
</tr>
<tr>
<td>5.5-22x NCS</td>
<td>22x</td>
</tr>
<tr>
<td>6.3x NCS and Benchrest</td>
<td>22x</td>
</tr>
<tr>
<td>12.4x NCS and Benchrest</td>
<td>22x*</td>
</tr>
</tbody>
</table>

*Signified by an "T" on the Power Zoom Ring
NightForce Reticle Patterns

MIL-DOT

Suggested Use
Field tactical

<table>
<thead>
<tr>
<th>Scope Model</th>
<th>Ranging Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4x NXS</td>
<td>4x</td>
</tr>
<tr>
<td>2.5-10x KXS</td>
<td>10x</td>
</tr>
<tr>
<td>3.5-15x KXS</td>
<td>15x</td>
</tr>
<tr>
<td>5.5-22x KXS</td>
<td>22x</td>
</tr>
<tr>
<td>8-32x NXS and Benchet</td>
<td>22x*</td>
</tr>
<tr>
<td>12.4x2 KXS and Benchet</td>
<td>22x*</td>
</tr>
</tbody>
</table>

*Signified by an "*" on the Power Zoom Ring
NightForce Reticle Patterns
NP-R2

A 2 M.O.A.
B 5 M.O.A.
C 10 M.O.A.
D 2 M.O.A.
E 4 M.O.A.
F 60 M.O.A. @ 10x, 60 M.O.A. @ 15x, 40 M.O.A. @ 22x
G 40 M.O.A. @ 10x, 40 M.O.A. @ 15x, 30 M.O.A. @ 22x
H Line Thickness - .09 M.O.A. @ 10x, .06 M.O.A. @ 15x, .06 M.O.A. @ 22x

<table>
<thead>
<tr>
<th>Riflescope Model</th>
<th>Ranging Power</th>
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<tbody>
<tr>
<td>2.5-10x NXS</td>
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<tr>
<td>3.5-10x NXS</td>
<td>15x</td>
</tr>
<tr>
<td>5.5-20x NXS</td>
<td>22x</td>
</tr>
<tr>
<td>1-8x NXS and Bandwret</td>
<td>22x*</td>
</tr>
<tr>
<td>3-12x NXS and Bandwret</td>
<td>22x*</td>
</tr>
</tbody>
</table>

*Spitted by an *P on the Power Zoom Ring

Suggested Use
Field tactical, varmint, Long-range hunting
NightForce Reticle Patterns
NP-1

Measurements @ 22x
NightForce Reticle Patterns

NP-2DD

NP-2DD

<table>
<thead>
<tr>
<th>Riflescope Model</th>
<th>Ranging Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5-10x NXS</td>
<td>15x</td>
</tr>
<tr>
<td>5.5-22x NXS</td>
<td>22x</td>
</tr>
<tr>
<td>6-32x NXS and Benchrest</td>
<td>22x*</td>
</tr>
<tr>
<td>12-42x NXS and Benchrest</td>
<td>22x*</td>
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</tbody>
</table>

*Sgnified by an "*" on the Power Zoom Ring

Suggested Use
Varmint, 1000 yard benchrest
NightForce Reticle Patterns
CH-1 & CH-2

Measurements @ 22x

.036 M.O.A.

Measurements @ 22x

.036 M.O.A.

.200 M.O.A.
NightForce Reticle Patterns

CH-3

Measurements @ 22x
NightForce Reticle Patterns
MLR & FC-2

MLR

<table>
<thead>
<tr>
<th>Reticle Model</th>
<th>Ranging Power</th>
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</thead>
<tbody>
<tr>
<td>3.5-15x NXS</td>
<td>15x</td>
</tr>
<tr>
<td>5.5-22x NXS</td>
<td>22x</td>
</tr>
<tr>
<td>8-32x NXS</td>
<td>22x</td>
</tr>
<tr>
<td>12-42x NXS</td>
<td>22x*</td>
</tr>
</tbody>
</table>

*Signified by an "*" on the Power Zoom Ring

The triangular aiming point under the circle can be used as a 10 M.O.A. holdover point from the center dot, and as a ranging tool in combination with the circle and dot.

A 10 M.O.A.
B 2 M.O.A. for 1-4x, 1.5 M.O.A. for 2.5-10x
C 5 M.O.A.
D 5 M.O.A.
E 15 M.O.A.
F 40 M.O.A. for 1-4x, 30 M.O.A. for 2.5-10x
G Line Thickness = .50 M.O.A. @ 4x, .30 M.O.A. @ 10x

<table>
<thead>
<tr>
<th>Reticle Model</th>
<th>Ranging Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4x NXS</td>
<td>4x</td>
</tr>
<tr>
<td>2.5-10x NXS</td>
<td>10x</td>
</tr>
</tbody>
</table>

Suggested Use
CQB, hunting
NightForce Subtension Pattern
NP-R1

NP-R1

A 1 M.O.A.
B 2 M.O.A.
C 10 M.O.A.
D 5 M.O.A.
E 3.5-15x = 30 M.O.A.,
  5.5-22x = 20 M.O.A.
F 2 M.O.A.
G 4 M.O.A.
H 2 M.O.A.
I 2 M.O.A.
J 70 M.O.A. @ 15x, 50
  M.O.A. @ 22x
K 45 M.O.A. @ 15x, 35
  M.O.A. @ 22x
L Line Thickness - .062 M.O.A.
M 2 M.O.A.
N 1 M.O.A.
David Tubb/Brand Cole DTAC Reticle Pattern
(inc. Aiming Dots/Mil Stadia, Density Altitude Graph, Range Calculation Graph)
David Tubb/Brand Cole DTAC Reticle Pattern @ 16x
(inc. Aiming Dots/Mil Stadia, Density Altitude Graph, Range Calc Graph, Cos/Sin Graph, Density Correction Graph)

From actual TEMP go UP to ELEVATION line then LEFT to DENSITY

D-TAC
115 GR 6XC
4000' DENS ALT
Patent Pending
Rev. 3
Premier Reticle Patterns

#1 – German Post

#2 – Post & Crosshair

#3 – Dot & Crosshair

#4 – 3 Post & Crosshair

#5 – Duplex

#6 – Crosshair
Premier Reticle Patterns

- #7 – CPC Tapering
- #9 – Leupold Dot
- #10 – Std Mil Dot
- #10a – Modified Mil Dot
- Gen 2 Mil Dot
- Range Compensating
Premier Reticle Patterns
Premier Gen 2 Mil Dot

Gen 2 Mil-Dot
3-12x PMill
1st focal plane

not to scale
10/2007

<table>
<thead>
<tr>
<th>Units</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
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<tr>
<td>mrad</td>
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<td>0.06</td>
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<td>0.06</td>
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<td>5</td>
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<td>ln/100yd</td>
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<td>0.54</td>
<td>0.72</td>
<td>0.216</td>
<td>1.8</td>
<td>3.6</td>
<td>0.216</td>
<td>0.216</td>
<td>18</td>
<td>7.2</td>
<td>2.0</td>
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<tr>
<td>cm/100m</td>
<td>100</td>
<td>7.5</td>
<td>1.5</td>
<td>2</td>
<td>0.6</td>
<td>5</td>
<td>10</td>
<td>0.6</td>
<td>0.6</td>
<td>50</td>
<td>20</td>
<td>5.6</td>
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</table>
Premier Reticle Patterns
Premier Gen 2 Extreme Range

Gen 2 XR
1st focal plane

Units | A | B | C | D | E | F | G | H | J | K | L | M | N | P
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
rnd | 0.75 | 0.30 | 0.10 | 10 | 0.025 | 1.0 | 0.5 | 0.2 | 2.5 | 0.025 | 0.2 | 0.25 | 0.025 | 10
in/100yd | 2.7 | 1.06 | 0.36 | 36 | 0.075 | 3.6 | 1.8 | 0.72 | 1.8 | 0.075 | 0.72 | 0.75 | 0.075 | 36
cm/100m | 7.3 | 3.00 | 1.00 | 100 | 0.25 | 10 | 5 | 0.25 | 25 | 0.25 | 2 | 2.5 | 0.25 | 100

Premier Reticles Ltd.
175 Commonwealth Ct
Winchester, Va 22602
540-868-2044
IOR Valdada Reticle Patterns

HR5

MP-8 Dot

NATO

VRM Varmint
IOR Valdada Reticle Patterns

3x25

4A Dot

CQB-BDC

M Series CQB
# Zeiss Reticle Patterns

## Non-Illuminated Reticles

<table>
<thead>
<tr>
<th>Model</th>
<th>4</th>
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<th>20</th>
<th>43</th>
<th>RZ 500</th>
<th>RZ 600</th>
<th>RZ 1000</th>
<th>RZ Varmint</th>
<th>0</th>
<th>40</th>
<th>43</th>
<th>44</th>
<th>56</th>
<th>60</th>
<th>66</th>
<th>RZ 600</th>
<th>RZ 800</th>
<th>RZ 1000</th>
<th>RZ Varmint</th>
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<td>Victory Diarange with reticle in the 2nd image plane</td>
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<td>Diarange 3–12x56 T*</td>
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## Reticles With Illumination

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<td>Varpoint 2.5–10x42 T*</td>
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<td>Varpoint 3–12x56 T*</td>
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## Victory Diavari with reticle in the 1st image plane

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## Conquest

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* T* = Carl Zeiss T* multi-coating. FL = Fluoride Glass. ▲ Illuminated Reticles for Daytime and Twilight.
Zeiss Reticle Patterns

Reticle 0

Reticle 4

Reticle 8

Reticle 20 Z-Plex

Reticle 40

Reticle 43
Zeiss Reticle Patterns

Reticle 44

Reticle 56

Reticle 60

Reticle 66
Zeiss Rapid-Z Reticle Patterns

RAPID - Z® 600

RAPID - Z® 800
Zeiss Rapid-Z Reticle Patterns

RAPID - Z® 1000

RAPID - Z® 1200

RAPID – Z® VARMINTER
Hensoldt Reticle Patterns

Hensoldt Range Finding Mil Dot

Hensoldt SSG - P
Leupold Reticle Patterns

- Standard Duplex
- Fine Duplex
- Illuminated Duplex
- CPC
- Leupold Dot
- Target Dot
- Crosshair
- German #1
- German #4
- Illuminated German #4
- Post & Duplex
- Heavy Duplex

- Boone & Crockett
- Varmint Hunter’s
- Wide Duplex RE
- Illuminated Mil Dot

- VX-III Illuminated Circle Dot (when illuminated)
- Tactical Milling
- Special Purpose
- CQ/T Illuminated Circle Dot (when illuminated)
Leupold Reticle Pattern
Tactical Milling Reticle

TACTICAL MILLING RETICLE MEASUREMENTS

FULL FIELD

0.20 MIL
0.05 MIL

1.00 MIL
5.00 MIL

DETAIL 1

0.40 MIL
0.15 MIL

ALL FINE LINES ARE:
0.06 MIL FOR 8X
0.05 MIL FOR 10X
0.04 MIL FOR 14X
0.03 MIL FOR 16X
20X AND 40X
0.02 MIL FOR 25X

CENTER APERTURE IS:
0.18 x 0.18 MIL FOR 8X
0.14 x 0.14 MIL FOR 10X
0.10 x 0.10 MIL FOR 14X AND 40X
0.09 x 0.09 MIL FOR 16X
0.07 x 0.07 MIL FOR 20X
0.06 x 0.06 MIL FOR 25X

1 METER TARGET RANGING

500.0 METERS
555.6 METERS
625.0 METERS
714.3 METERS
833.3 METERS
1000.0 METERS

DETAIL 2

1.00 MIL

@100 Meters

5.0 mil = 18.000"
1.0 mil = 3.600"
0.5 mil = 1.800"
0.4 mil = 1.400"

0.20 mil = 0.720"
0.15 mil = 0.54"
0.10 mil = 0.360"
1.0 mil = 3.438 Minutes of Angle = 9.600"
Leupold Reticle Patterns
(Detail – Boone & Crockett Reticle)

<table>
<thead>
<tr>
<th>RANGE</th>
<th>LARGE ▼ BULLET DROP</th>
<th>SMALL ▼ BULLET DROP</th>
<th>10 MPH DRIFT</th>
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<tbody>
<tr>
<td>200 yd MOA</td>
<td>0.00</td>
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<tr>
<td>200 yd Inches</td>
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<td>0.00</td>
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<td>300 yd MOA</td>
<td>2.19</td>
<td>2.74</td>
<td>2.16</td>
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<td>300 yd Inches</td>
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<td>8.61</td>
<td>6.79</td>
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<td>4.80</td>
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<td>400 yd Inches</td>
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<td>450 yd MOA</td>
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<td>500 yd MOA</td>
<td>7.62</td>
<td>9.775</td>
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<tr>
<td>500 yd Inches</td>
<td>40.95</td>
<td>51.18</td>
<td>0.00</td>
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</table>
Leupold Reticle Patterns
Tactical Special Purpose Reticle (SPR)
Holdover Diagram

Approximate Hold Over Values:
Actual Values Will Vary By +/- 20 Meters
Leupold Reticle Patterns
Tactical Special Purpose Reticle (SPR)
Subtensions Diagram

CENTER DOT IS 0.30 MILS

2.5 MILS
5.0 MILS

DETAIL

ALL FINE LINES ARE 0.10 MILS
0.30 MILS
0.50 MILS

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Leupold Reticle Patterns
Tactical Special Purpose Reticle (SPR)
Range Estimating Methods
ART 21 MOA Reticle
Ranges in MOA or MILS
ART 24 MOA Reticle
Ranges in MOA or MILS
ART 24 MOA Bar-Dot Reticle
RANGES IN MOA OR MILS
ART 30 MOA Reticle
Ranges in MOA or MILS
ART ULTIMATE MIL Reticle
Ranges in MILS
Super Sniper CQB Tactical Reticles
Super Sniper Long Range Tactical Reticle
Swarovski Reticle Patterns

1. 4
2. 4A
3. 7A
4. 24
5. PLEX
6. TDS Plex
7. TDS 4
8. DOT
9. Cross Hair
10. Plex N (IR)
11. 4N
12. 4NK

HG Circle Dot
HG Dot

Bushnell Reticle Patterns

1. Holo Sight
2. 3-2-1 Low Light Reticle
3. Circle X
4. Mulit X
Kahles Reticle Patterns

4A
7A
Plex

Illuminated Reticle 4NK
Illuminated Reticle PlexN
TD Smith Reticle

C-Dot
D-Dot
P-Dot

CSX Illuminated Reticles

4-Dot
Nikon Reticle Patterns

Nikoplex (Duplex)

Fine Crosshair

Target Dot

German #4

Mildot

Turkey Pro
Misc. Reticle Patterns

S&B P4

I.O.R. MP-8

1/2 mil mark — 1 mil mark — 5 mil mark — 10 mil mark
Misc. Reticle Patterns

AI Mil Dot

ACCURACY INTERNATIONAL MilDot
Misc. Reticle Patterns
Meopta Meostar R1 Scope Reticle
Misc. Reticle Patterns
Brugger & Thomet TRS

B&T TRS Reticle Pattern.
Distance dot to dot = 100 mm/100m.

Range estimation scale for 1 m reference height at 800 m, 400 m, 600 m and 1200 m (from left to right).
Misc. Reticle Patterns
(Pride/Fowler Rapid Reticle)
Misc. Reticle Patterns
(Firefield Russian POSP Reticle)
Misc. Reticle Patterns
(Huskemaw Long Range Reticle)

Hunt Smart Reticle. MOA subtensions for 10X magnification. Halve values for 20X.
Misc. Reticle Patterns
(HK G36 Style & Optisan Momba .223 BDC)

HK G36

Lead mark for firing at targets moving from left to right at a speed of approximately 15 km/h at a range of 200 meters

Optisan Momba BDC
Misc. Reticle Patterns
(Burris & Mueller)

<table>
<thead>
<tr>
<th>Scope</th>
<th>Dot Size 100 Yds</th>
<th>Adj. Per Click</th>
<th>Brightness Settings</th>
<th>FOV 100 Yds</th>
<th>Wt. (oz)</th>
<th>Length (inch)</th>
<th>Eye Relief</th>
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<td>1 MOA</td>
<td>1/4&quot;</td>
<td>11</td>
<td>47-18&quot;</td>
<td>13.3</td>
<td>11.3</td>
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<td>1/8 MOA</td>
<td>1/8&quot;</td>
<td>11</td>
<td>39-13&quot;</td>
<td>14</td>
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<td>17.25&quot;</td>
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<td>1/8&quot;</td>
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<td>49.8-12.8&quot;</td>
<td>16.2</td>
<td>13.1</td>
<td>3.25&quot;</td>
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<td>4-16X50AO Red Dot</td>
<td>1/8 MOA</td>
<td>1/8&quot;</td>
<td>11</td>
<td>30.6-7.5&quot;</td>
<td>19.7</td>
<td>14.53</td>
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<tr>
<td>8.5-25X50mm AO Red Dot</td>
<td>1/16 MOA</td>
<td>1/8&quot;</td>
<td>11</td>
<td>18.8-6.3&quot;</td>
<td>20.8</td>
<td>15.53</td>
<td>3.00&quot;</td>
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</table>
Misc. Reticle Patterns
(Tasco, Hakko ElectroDot, Weaver)

30/30 Stadia 30/30 TV True MilDot Red Dot

Hakko Multi-Reticle (MR-02 pattern)

Weaver Dual-X Reticle
Weaver DOT Reticle
Weaver Varminter Reticle
Misc. Reticle Patterns
(Leatherwood Auto/Range Reticle)
MIL DOT RETICLE MEASUREMENTS

@ 100 YARDS

1 mil = 3.600"
0.9 mil = 3.240"
0.8 mil = 2.880"
0.5 mil = 1.800"
0.2 mil = 0.720"
1 mil = 3.438 Minutes of Angle = 3.600"

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MIL DOT RETICLE HOLDOVER CONCEPT

MIL DOT HOLDOVER VALUES

MK 262 MOD 0/1 AA53
5.56mm 77gr.

M118LR AA11
7.62mm 175gr.

200 METERS
300 METERS
400 METERS
500 METERS

APPROXIMATE HOLDOVER VALUES
ACTUAL VALUES WILL VARY BY +/- 25 METERS
THESE HOLDOVERS CAN BE APPLIED TO ANY CARTRIDGE
MIL DOT RETICLE HOLDOVER CONCEPT

APPROXIMATE HOLDOVER VALUES
ACTUAL VALUES WILL VARY BY +/- 25 METERS

300 Win mag, 190gr, 2900fps, A191

.338 Lapua, 250gr, 2750fps

200 METERS  300 METERS

300 METERS  400 METERS

400 METERS  500 METERS

500 METERS  600 METERS

600 METERS
First Focal Plane (FFP) vs. Second Focal Plane (SFP) Impacts your Sight Picture. The target does not change size with Magnification, but the Reticle does change size for FFP Scopes.
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- Schmidt and Bender
- US Optics
- David Tubb/Brand Cole
- Premier Reticles
- Horus Vision Systems
- Hakko
- Tasco
- Burris
- Zeiss Optics
- Hensoldt
- Mueller
- IOR Valdada
- Nikon
- Weaver
- Leupold
- Kahles
- NightForce
- Swarovski
- Leatherwood
- Pride Fowler
- Vortex Razor
- Darrell Holland’s ART Reticles
- Huskemaw Scopes
- Super Sniper Scopes
- Meopta
- Firefield
- Optisan
- BW Optic