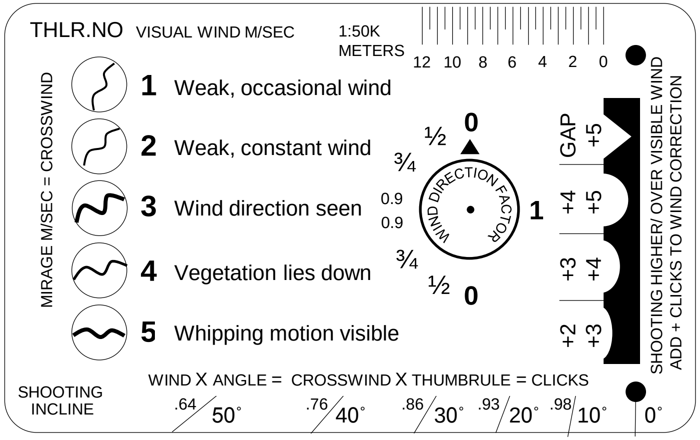
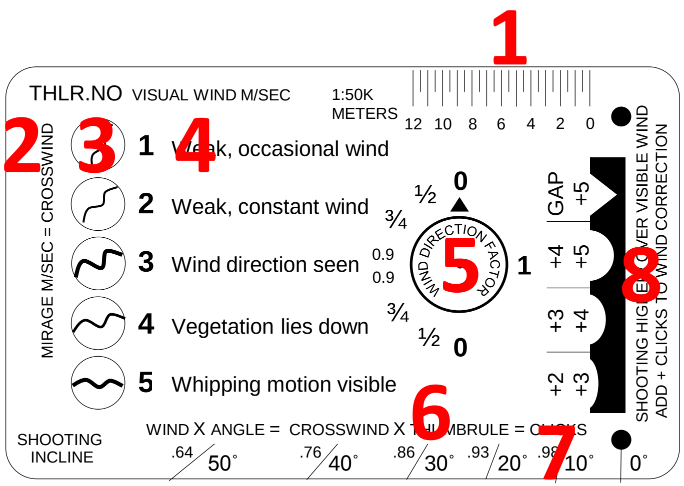
THLR WIND WIZ

Instruction pdf (ver 1)



THLR WIND WIZ

Main features



1. Map range ruler
2. Mirage reminder
3. Mirage angle/ wind velocity illustration
4. Description of how a wind velocity looks on the Elevation corrections for windage jump
5. Factors for crosswind component
6. Windage calculation reminder
7. Tool for measuring shooting angle
8. Windage corrections for shooting high over visible wind

THLR WIND WIZ

1. Map range ruler for scale 1:50000 maps

- It is presumed you know how to use a map
- Orient the map to the terrain.
- Align the Wind Wiz map range scale. Place 0 exactly on your Wind Wiz tool so that the range scale cuts through your target or your own location.
- Read off range in meters.

Example:
We are watching the building from the hill.
We place 0 at our location and rotate the Wind Wiz tool to cut through the building.

We read off range 1180-1185 meters line of sight.

THLR.NO

THLR WIND WIZ

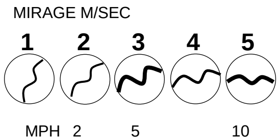
2. Mirage reminder

MIRAGE M/SEC = CROSSWIND

- A reminder that explicitly tells you that the mirage angle directly indicates the crosswind component. No further calculation is necessary. If you see the angle of mirage, you can use the interpreted value to directly read off the same value windspeed in your ballistic chart. No further calculations is needed.

THLR WIND WIZ

3. Mirage angle illustration



- Use this when you can see mirage through your optics
- Compare the angle you see in your optics with the angle on the Wind Wiz illustration.
- Read off the assosciated wind velocity.
- This wind is the crosswind component, it can be used directly for ballistic input.

Example:
You see that the mirage angle is slightly more than 45 degrees angle.
The closest match is this circle

Use value 3 m/sec to read off your ballistic table

Note:
Reading mirage can be very difficult. Look for the straightest lines in your field of view, that is often the easiest spot to determine the mirage angle.
Reading mirage is not nearly as exact as reading the wind. The values on the Snipertool is easy to use, but after 600 meters you will find that you are slightly overcompansating on the windage.
When the mirage runs level, the crosswind component is at least 5 m/sec and you have a huge chance of error. We recommend reading wind over mirage when it approaches horisontal angle.

THLR WIND WIZ

4. Description of visual effect of wind velocity

MIRAGE M/SEC = CROSSWIND

1 Weak, occasional wind

2 Weak, constant wind

3 Wind direction seen

4 Vegetation lies down

5 Whipping motion visible

- The numbers indicate wind velocity in m/sec
- The text explains what that wind velocity will look like on the vegetation.
- Work up from 0 until you cannot see the next effect.

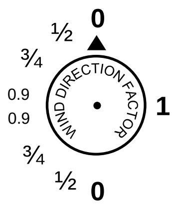
Example:
We look left to right. We see wind - not 0 m/sec. Shooter sees movement here and there through his scan – 1 m/sec. Shooter does not see movement contantly throughout his scan – not 2 s/sec. The wind velocity is 1 m/sec.

Note:
At 3 m/sec you can see the wind direction clearly in the vegetation. This is one of the most reliable visual indicators.
At velocities over 5 m/sec, too much is happening for an accurate gauge of wind velocity.

THLR.NO

THLR WIND WIZ

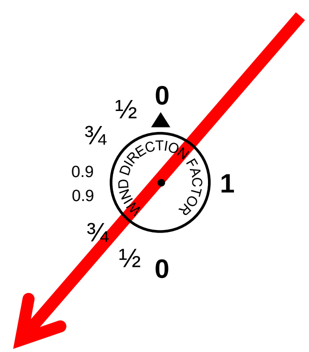
5. Factors for crosswind component



- Determine wind velocity
- Determine wind angle
- Multiply wind velocity with wind angle
- The result is crosswind component. Crosswind component is the effective wind that moves your bullet impact.

Example:
You determine wind to be 4 m/sec (you see the vegetation starts to lie down). Next determine the wind angle relative to your shooting direction (pyramid).

4 m/sec by approximately ¾ value is 3 m/sec. 3 m/sec is the value you use to read data from your rangecard.



Note:
We say «approximately» because wind direction have a normal variation that is invisible to the shooter. Therefore it is perfectly ok to round off values to easy numbers.

THLR.NO

THLR WIND WIZ

6. Windage calculation reminder

WIND X ANGLE = CROSSWIND X THUMBRULE = CLICKS

- A reminder that explicitly tells you how to calculate your scope windage setting.
- Find wind velocity (see 3 or 4) and multiply with wind direction (see 5). The result is the crosswind component, the effective wind that will move your bullet impact.
- Use the crosswind component to read off your ballistic table OR multiply with your unique thumbruke to find the exact scope windage setting.

Note:
To find your unique thumrule, use a ballistic program. Set the wind to velocity 1 m/sec from 3 or 9 o'clock, turn off spindrift and calculate a trajectory table. If you look at every 100 range, you will see that the windage correction usually forms a pattern. Form a thumbrule sentence to remember these numbers.

For example a 308 can look like 400m/ 4 clicks, 500m/ 5 clicks, 600m/ 6 clicks, 700m/ 7 clicks. The thumbrule will then be «the hundreds» meaning 7x hundred meters will give 7x clicks per 1 m/sec.
A better bullet can look like 400m/ 3 clicks, 500m/ 4 clicks, 600m/ 5 clicks, 700m/ 6 clicks. The thumbrule will then be «the hundreds minus one» meaning 7x hundred meters will give 7x clicks minus 1 = 6 clicks scope setting per 1 m/sec.

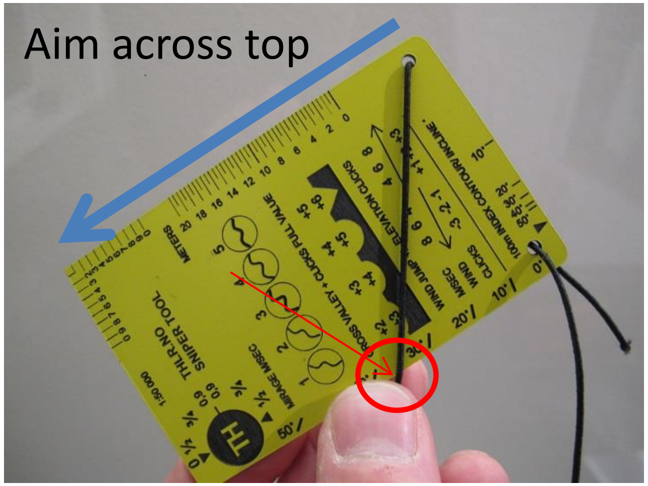
It is a really simple way for shooters to find a very accurate windage setting.

THLR.NO

THLR WIND WIZ

7. Shooting incline scale

- This scale is for measuring your angle when shooting uphill or downhill.
- Aim at your target across the top of the card.
- Gravity will pull the carry string down across the scale.
- Read off degrees if you use a pre-calculated ballistic table.
- Read off consine if you calculate via Riflemans Rule or similar.



Example:
We aim at the target across the top of the card.
Picture shows downhill. Aim opposite direction if uphill.
Gravity pulls the carry string down.

Read off the scale. In this example just shy of 35°.

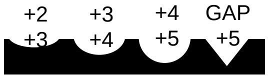
(The illustration shows the THLR Snipertool. The function is identical on THLR Wind Wiz tool.)

THLR.NO

THLR WIND WIZ

5. Windage corrections for shooting high over visible wind

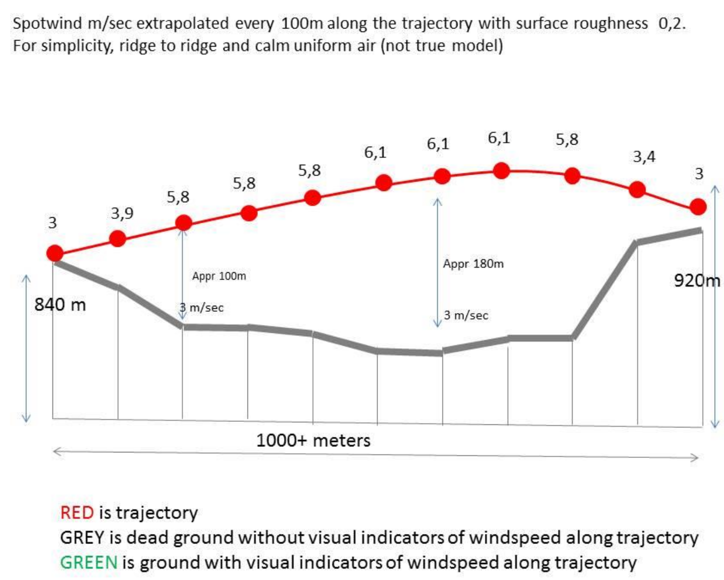
SHOOTING HIGHER/ OVER VISIBLE WIND
ADD + CLICKS TO WIND CORRECTION



- These numbers just acknowledge that wind velocity increase with elevation above ground. These numbers are <u>not</u> a ballistic calculation, just a <u>simplified indicator to help build your own experience</u>.
- Base your windcall on visual indicators and adjust your scope windage for that.
- In cases where you are shooting the bullet far over the visual indicators you used for the windcall, add some clicks on the scope.
- Where you can see the wind along the bullets trajectory DO NOT add these clicks.
- Use the first column (+2/+3) when you shoot the bullet approximately 10 meters above your visual indicator for the windcall. The last column when your «very far» above your visual indicator.
- «GAP» is used when you have a gap that will compress and blow a very strong wind across your bullet trajectory. It is a wild guess and basically says «good luck with that shot!»

Note:
The illustration shows a grossly simplified model where we extrapolated the wind velocity along a bullet trajectory shot across a valley.
These numbers are calculated from elevation alone and does NOT represent the true spotwind, they merely illustrate a principle.
If the shooter can see the wind only at his location (3 m/sec), it is fairly evident that he will undercompensate on his windage.

In the illustrated example the bullet travels «very far» above the visual indicators and the shooter adds +4/+5 clicks to at least pull the bullet in the right direction.
If the shooter sees visual indicators along the bullet trajectory, no such corrections is added regardsless of how far above ground the bullet travels.



THLR WIND WIZ

Our preferred carry method

THLR.NO