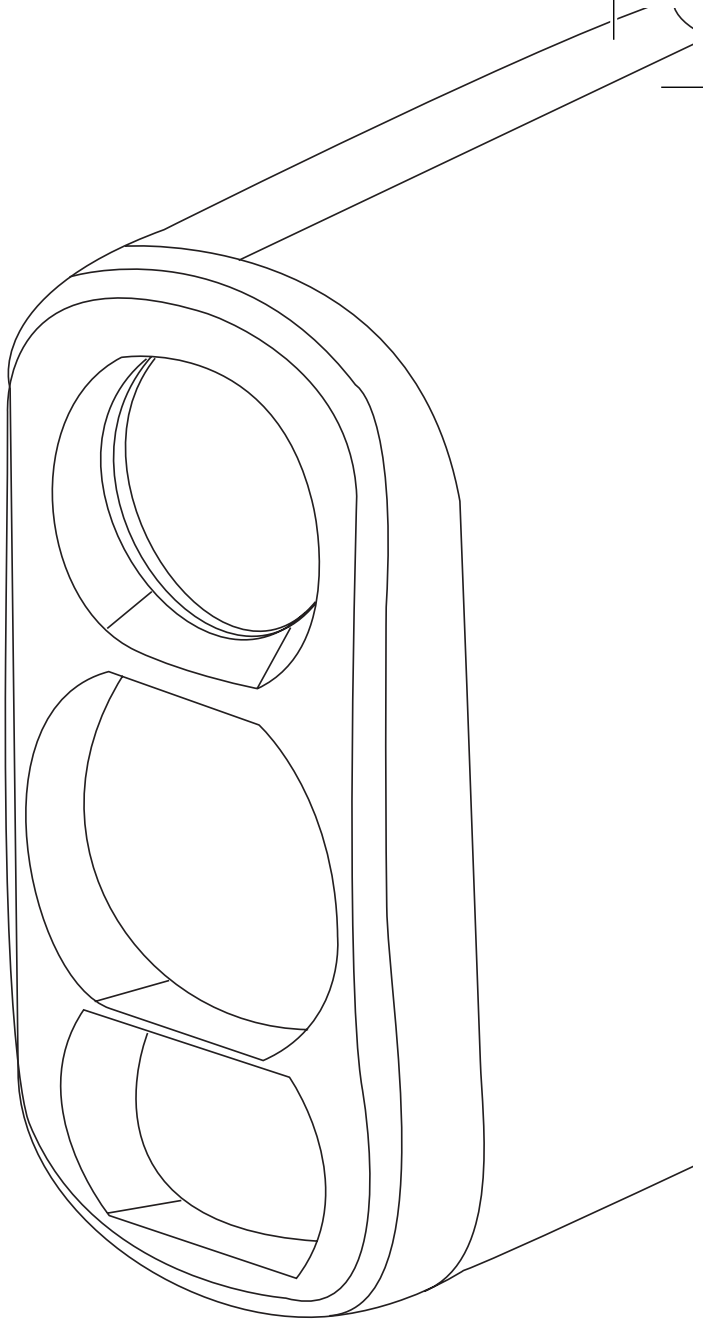
39 OPTICS

LASER RANGEFINDER
OPERATING INSTRUCTIONS

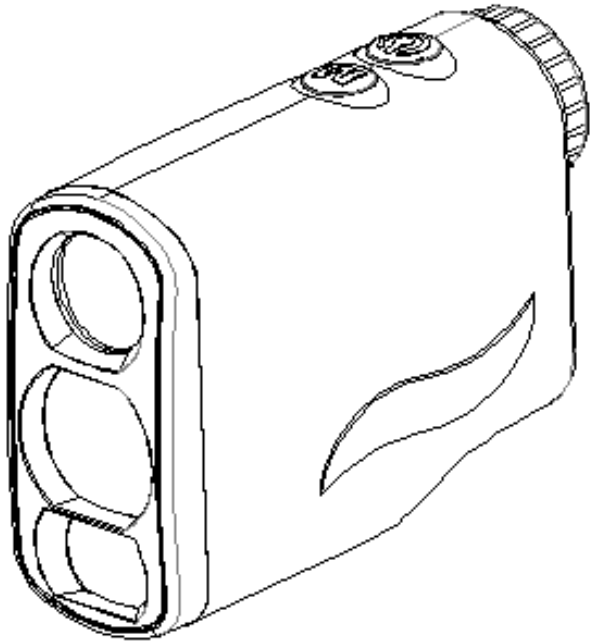
TELEMETRO LASER
MANUALE D’USO

LASER ENTFERNUNGSMESSER
BEDIENUNGSANLEITUNG



Laser rangefinder operating instructions
Telemetro laser - manuale d’uso
Laser Entfernungsmesser - Bedienungsanleitung

Laser rangefinder operating instructions

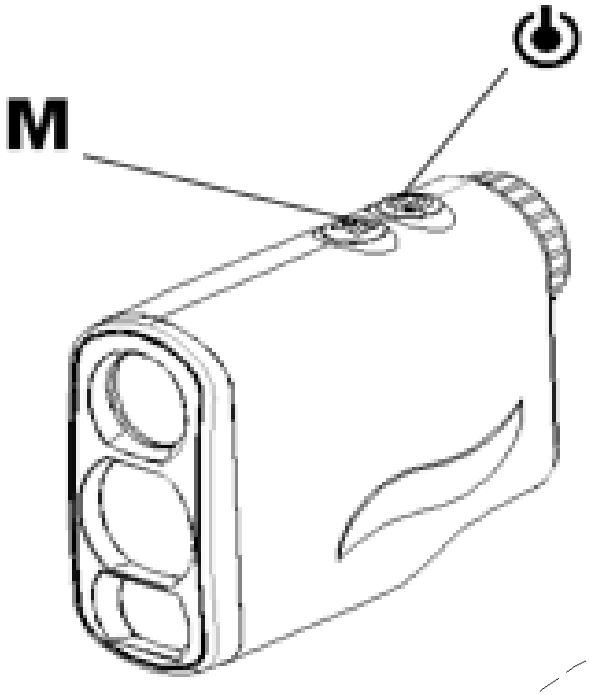


Feature:

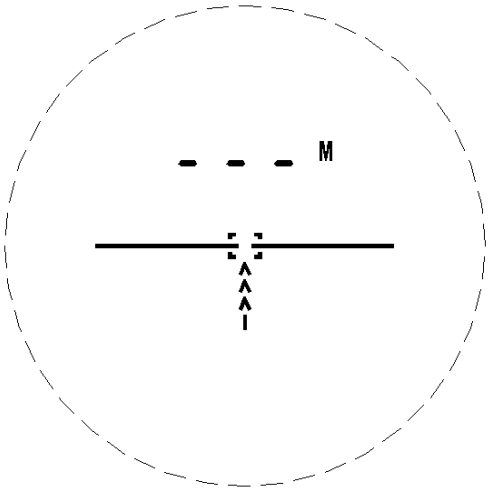
21mm Objective Lens
6x Magnification Power
7.2°View Angle
16mm Eye Relief
Precision To +/-1 M
Range : 4-600m
5-1000m
5-1500m
Speed range: 0-300KM/H
3V Battery (CR2)
Waterproof

Size:

L: 97mm (without eyepiece)
106mm (with eyepiece)
W: 35mm
H: 73mm (front)
68mm (rear)
Weight: 152g (battery included)

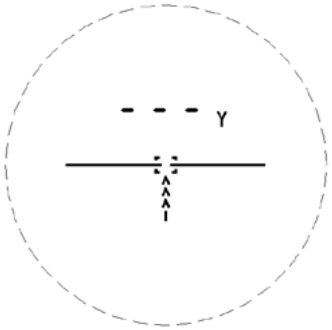


1. The main display



Press ⏻ key to switch on.
Display default mode is “ranging”.

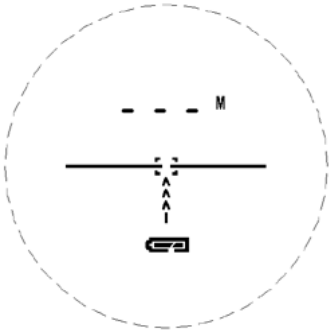
2. Unit conversion



Long press **M** button to switch the unit of measure, M and Y.

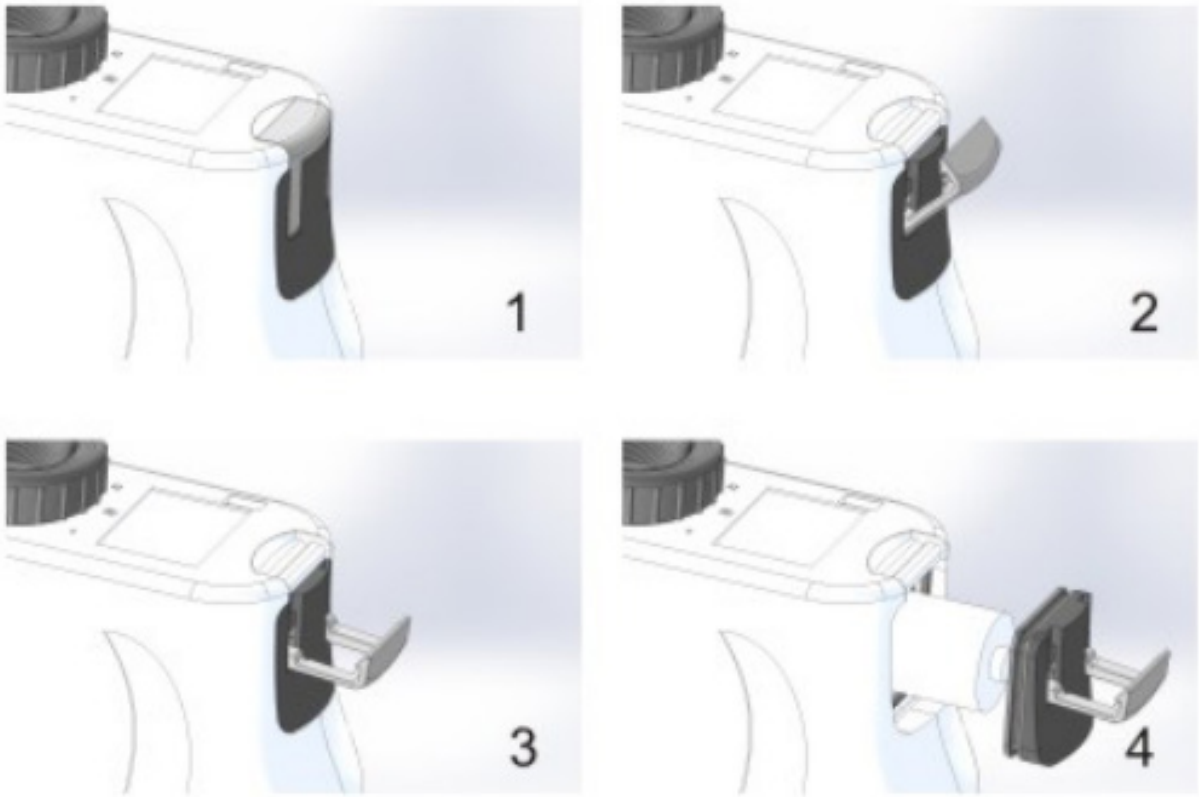
In “Ranging”, “Flagpole lock”, “Fog”, “Scan” modes, you can hold **M** button to switch M/Y unit, the unit switches will be used in four modes automatically.
In the **“Speed”** mode, the unit of the measure needs to be converted separately.

3. Low voltage alarm



When the the products battery voltage is too low, the low pattern will be shown to remind to replace the battery.

Battery replacement

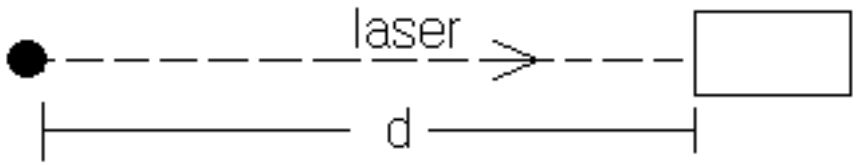


4. Mode Selection

Press **M** key to select between **“ranging”, “flagpole lock”, “fog”, “scan” and “speed”** modes.

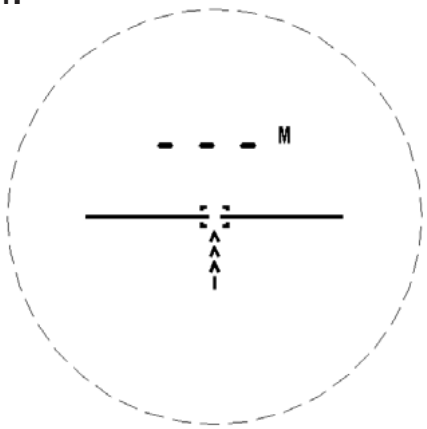
4.1 “Ranging” mode

Function principle:



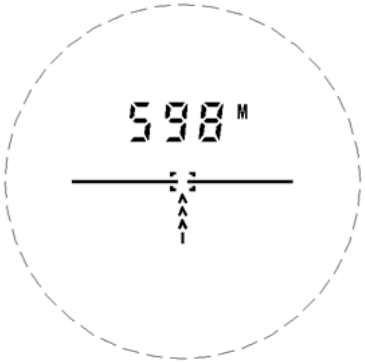
$$d=c/t$$

Function screen:

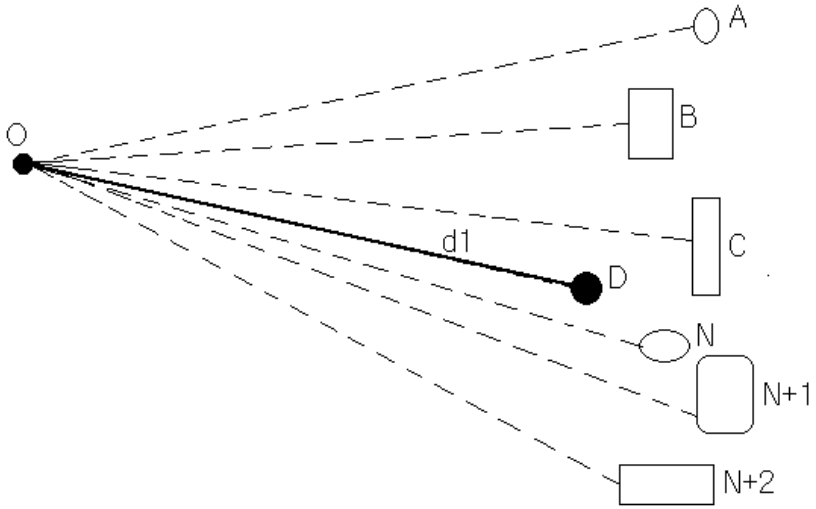


In “Ranging” mode, by pressing the main key a laser beam will hit the target and the display will show the distance.

“Ranging screen”

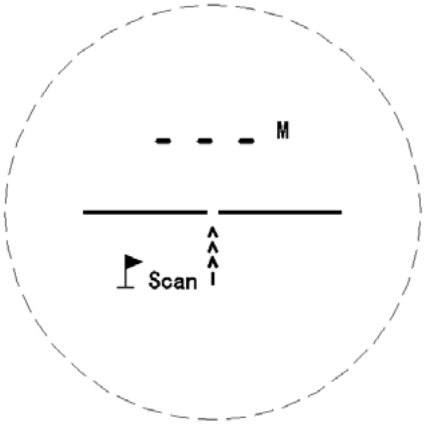


4.2 “Flagpole lock” mode



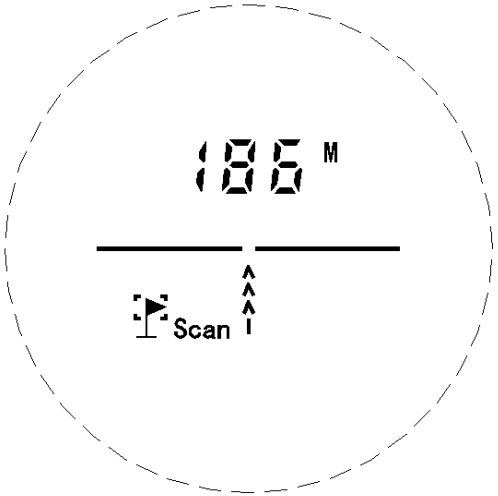
In the flagpole lock mode, the point D can be isolated from other targets in the background to keep only the distance d1. The other targets will be ignored.

Flagpole lock screen



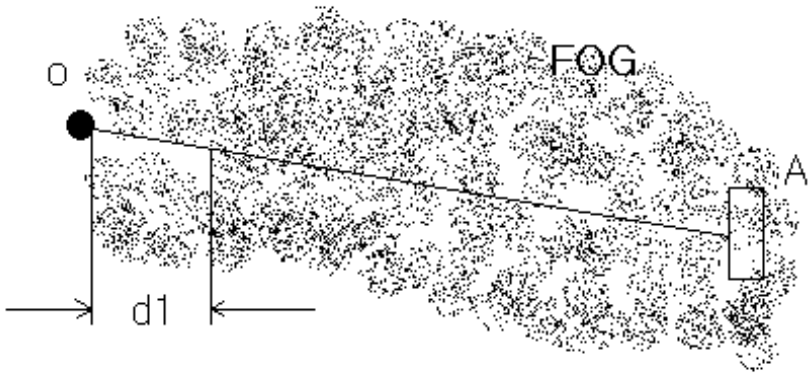
When the flagpole screen appears, press and hold key to start the flagpole scan function, the flag symbol in the screen box around the icon flashes.
Aim at the required target, then move left and right until the falg no longer flashes, which means that the flagpole data is locked.

“Flagpole lock” screen



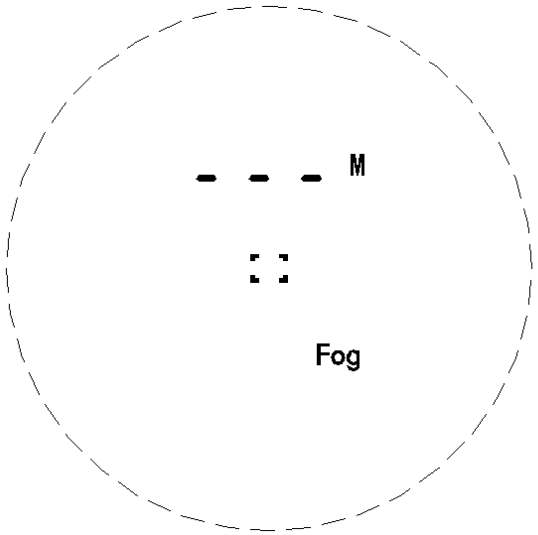
4.3 “Fog” mode

Function principle



Because the fog will reflect the laser generated by the device, it is more difficult to obtain distance data. By filtering out the Laser refection errors (d1=25m), this instrument willl allow long distance ranging even in foggy conditions.

Function screen

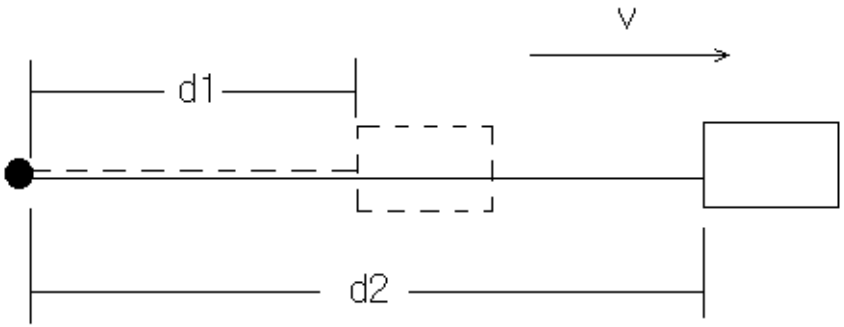


In this mode the reflections caused by fog can be filtered out.

“Fog” screen

4.4 “Speed” mode

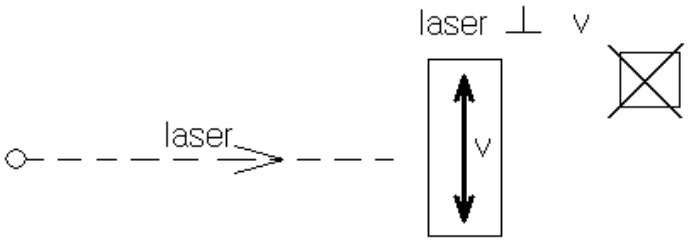
Function principle



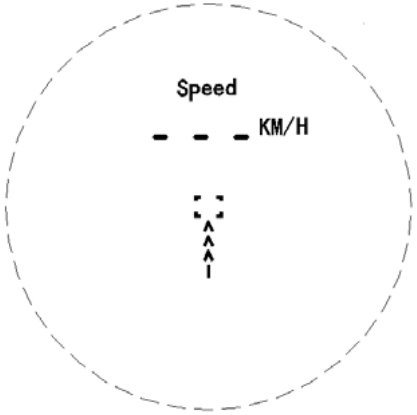
v=(d2-d1)/t

For moving objects, ranging twice. Trough distance difference, divided by the time interval, the speed of moving objects can be obtained.

Velocimetry Method



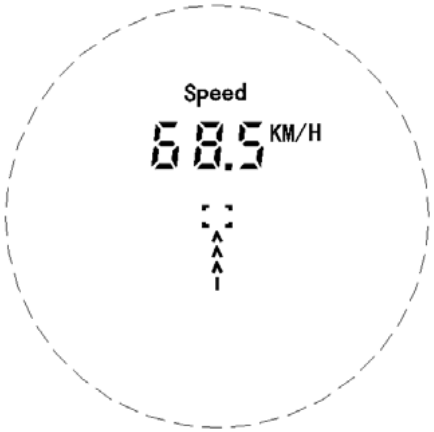
Function screen



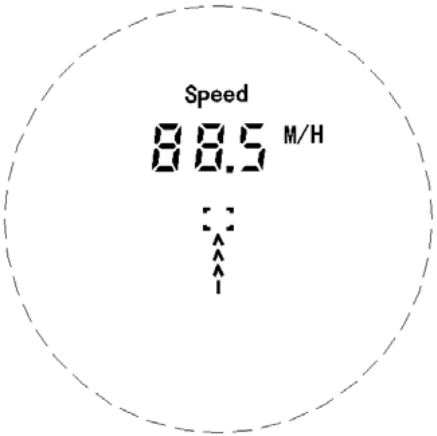
In the speed mode, long press **M** button to switch KM / H and M / H.

Press key to start the speed measurement.

Kilometers Unit screen: Kilometers / hour

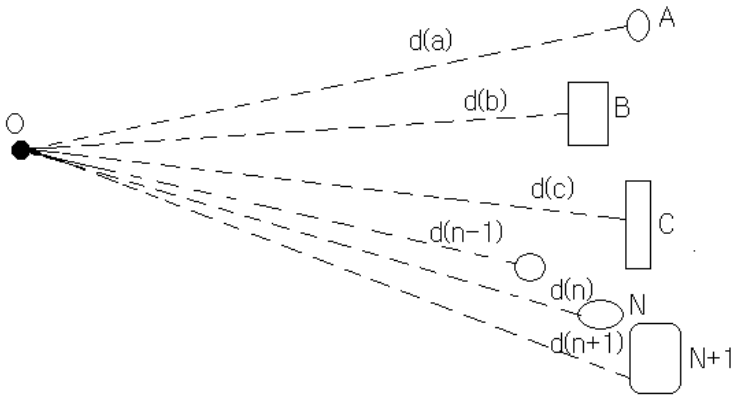


Miles unit screen: miles / hour



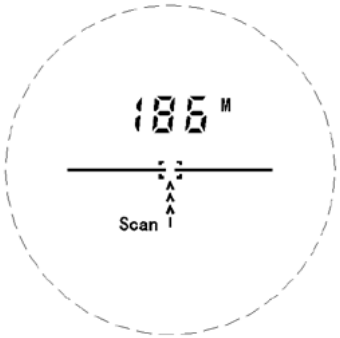
4.5 “Scan” mode

Function principle



In scan mode, the device will supply a continuous laser emission, each distance measured will be displayed one by one.

“Scan” screen



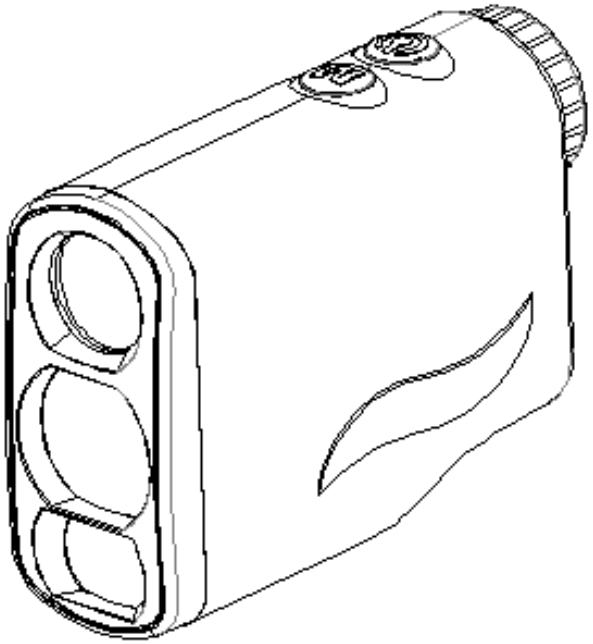
In “ranging ” mode, press and hold key to activate the Scan mode. Ranging 20 consecutive times, it will automatically exit.

Telemetro laser
Manuale d’uso

Caratteristiche

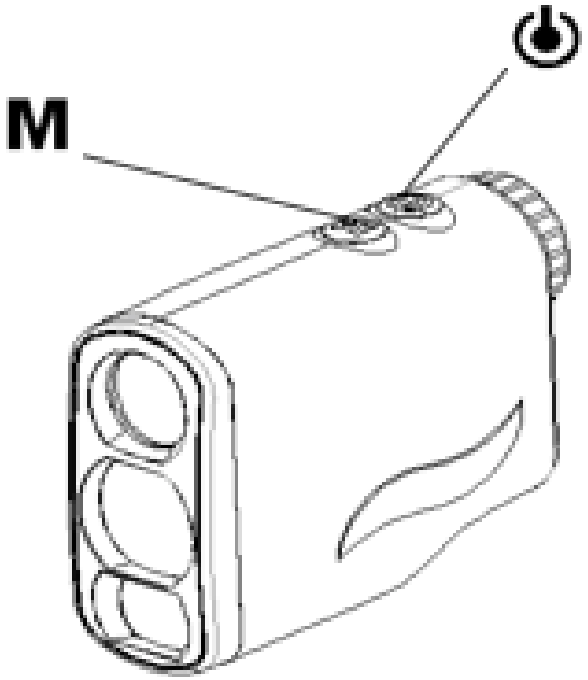
- Lente obiettivo di 21 mm
- 6 ingrandimenti
- Campo visivo di 7,2°
- Distanza pupillare 16 mm
- Precisione +/- 1 m
- Portata massima 600 m
- Distanza minima di rilevazione 4 m
- Rilevazione velocità da 0 a 300 km/h

Alimentazione con batteria
Cr2 da 3 volt
Impermeabile

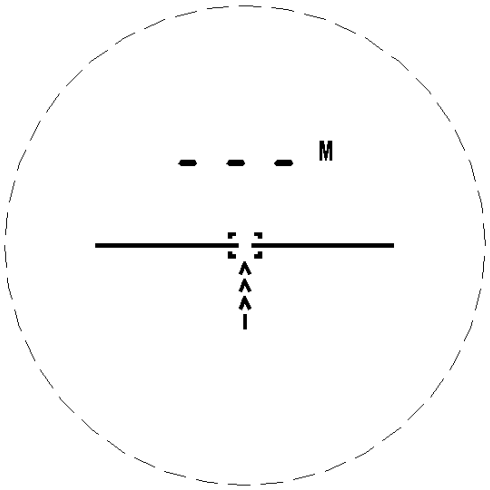


Dimensioni:

Larghezza: 97mm (senza oculare)
106mm (con oculare)
Spessore: 35mm
Altezza: 73mm (frontale)
68mm (posteriore)
Peso: 152g (inclusa batteria)

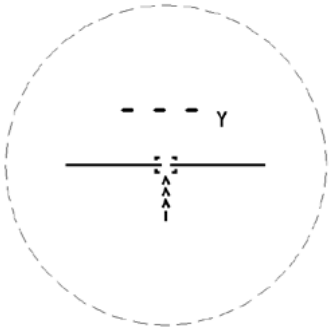


1. La schermata iniziale



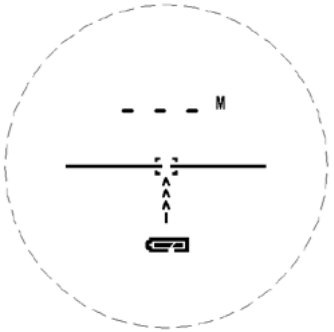
Premendo il pulsante più vicino all'oculare ⏻ si accende lo strumento, che sarà in modalità "**ranging**".

2. Conversione dell’unità di misura.



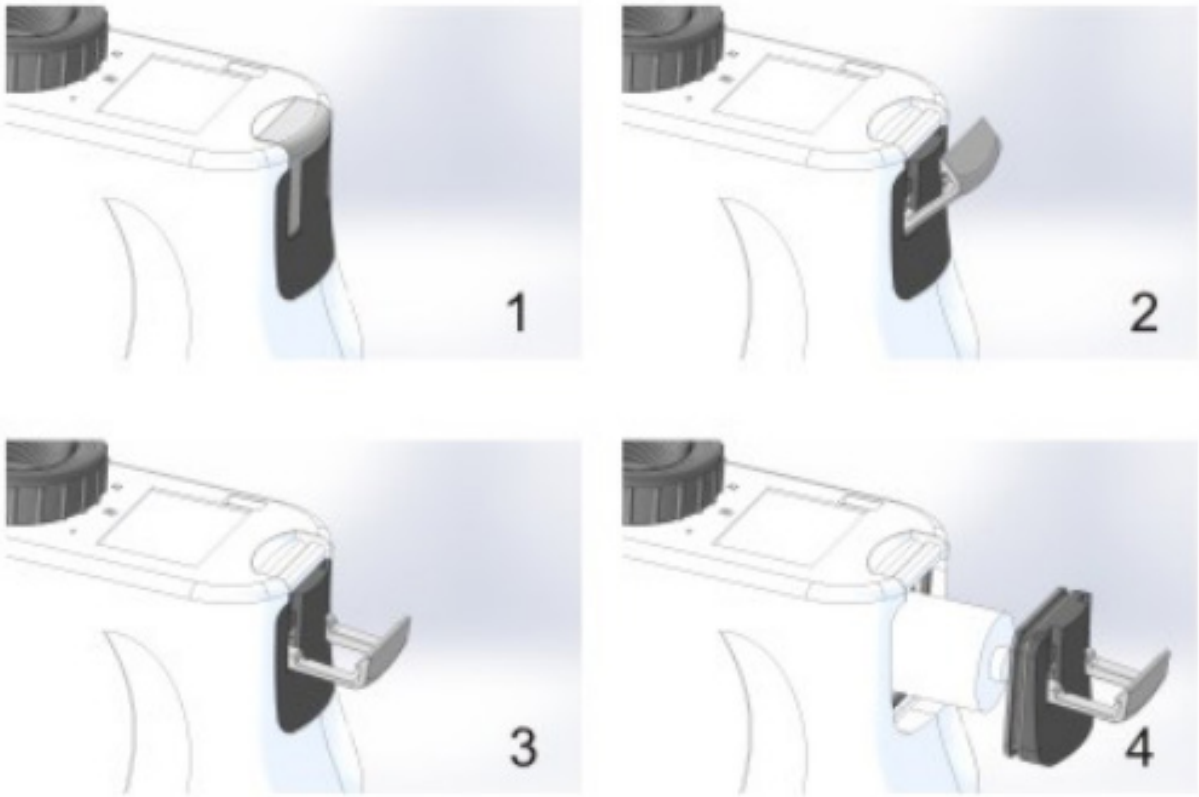
Premere a lungo il pulsante **M** per commutare la distanza tra metri e iarde. L’unità di misura, una volta selezionata, sarà applicata a tutte le modalità di funzionamento: “**ranging”, “scan”, “flagpole lock”, “fog”**.
Solo in modalità **“speed”** l’unità di misura dovrà essere convertita appositamente.

3.Indicatore di batteria in esaurimento



Quando il voltaggio è troppo basso, l’icona del livello batteria evidenzierà la necessità di sostituirla. Seguire le figure per la sostituzione.

Inserimento della batteria

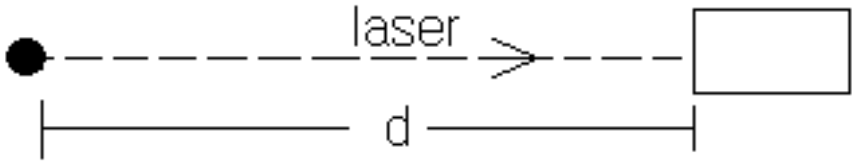


4. Selezione della modalità:

Premere **M** key per sceglire tra le diverse modalità **“ranging”, “flagpole lock”, “fog” “scan” e “speed”**.

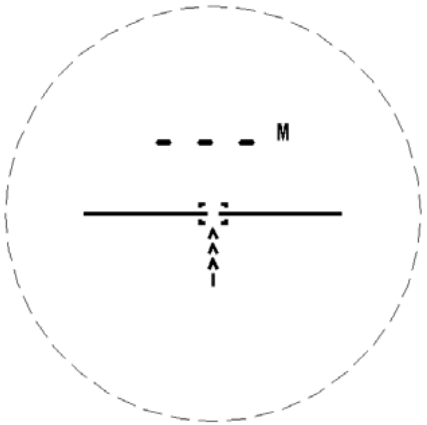
4.1 Modalità “ranging”

Principio di funzione:



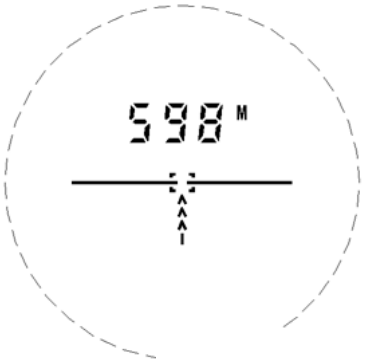
$$d=c/t$$

Schermata modalità:

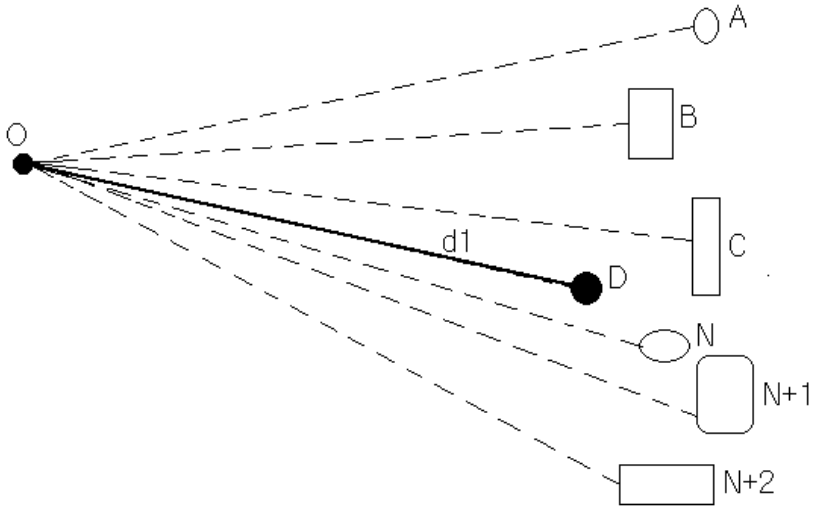


In modalità Ranging, con la pressione del pulsante principale si invia un fascio laser su uno specifico bersaglio, del quale sarà rilevata la distanza.

La lettura della distanza sarà come qui sotto.

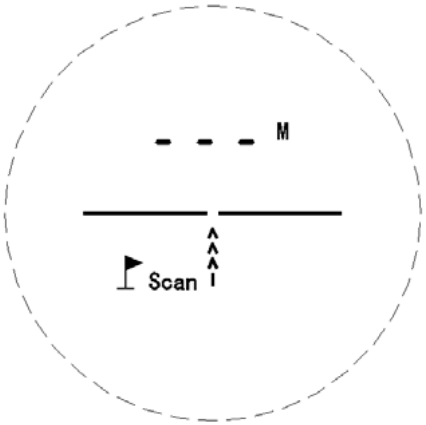


4.2 Modalità “flagpole lock’



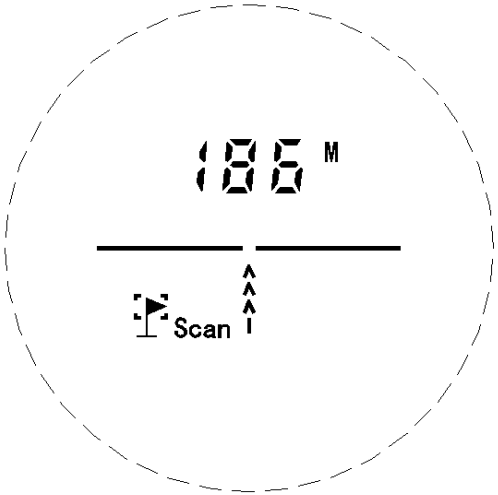
In modalità Flagpole lock, il punto D può essere isolato da un insieme di letture sullo sfondo, per misurare solo la distanza d1. Gli altri oggetti intorno saranno ignorati.

Questa la schermata in modalità Flagpole lock



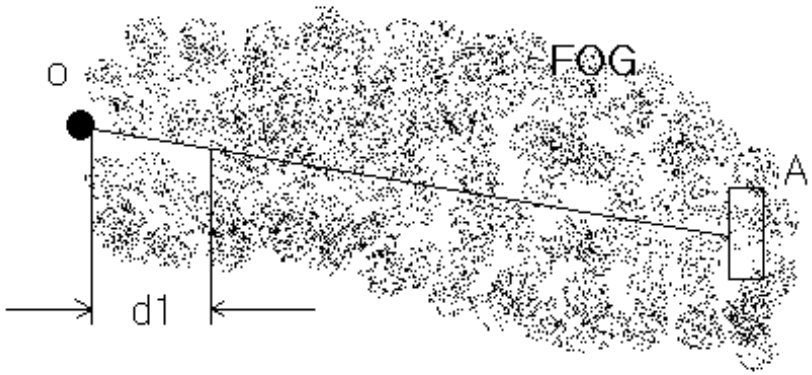
Quando viene attivata la modalità, premere e tenere premuto il pulsante principale per iniziare la funzione di scansione delle distanze in modalità Flagpole. L'icona della bandierina sullo schermo inizierà a lampeggiare. Puntare al bersaglio desiderato, quindi spostare il punto di mira verso destra e sinistra finché l'icona non smette di lampeggiare. La misurazione è completa.

Questa la schermata in modalità “flagpole lock”



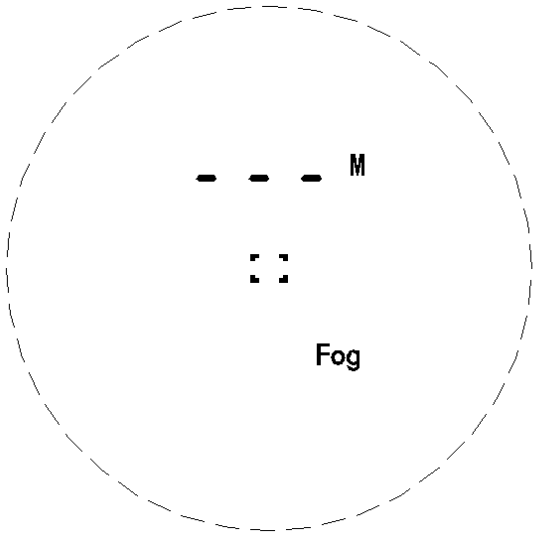
4.3 Modalità “fog”

Principio di funzione



Poiché la nebbia riflette il raggio laser generato dallo strumento, diventa difficile misurare le distanze in caso di nebbia. Filtrando gli errori causati dalla riflessione della nebbia sulla distanza (d1=25m), sarà possibile ottenere anche valutazioni sulla lunga distanza.

Schermata in modalità “fog”

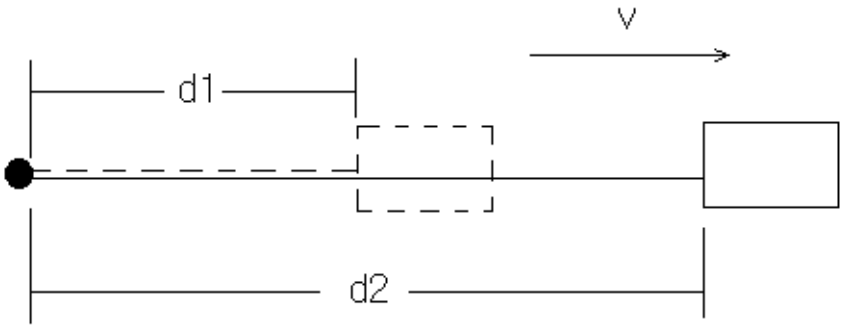


In questa modalità è possibile tener conto del disturbo causato dalla nebbia che, altrimenti, determina false letture.

Schermata in modalità “fog”

4.4 Modalità “Speed”

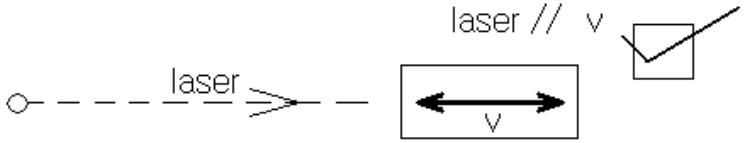
Principio di funzione

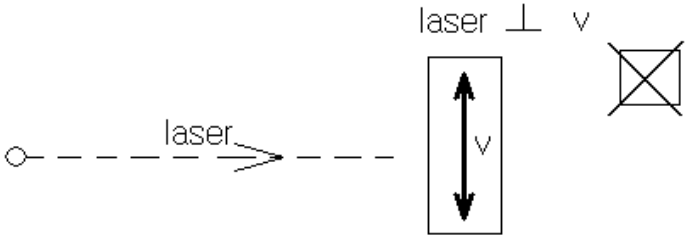


v=(d2−d1)/t

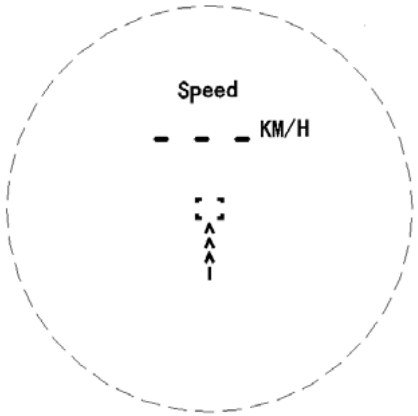
In questa modalità, lo strumento può misurare la velocità di un oggetto in movimento.

Meteodo del velocimetro:





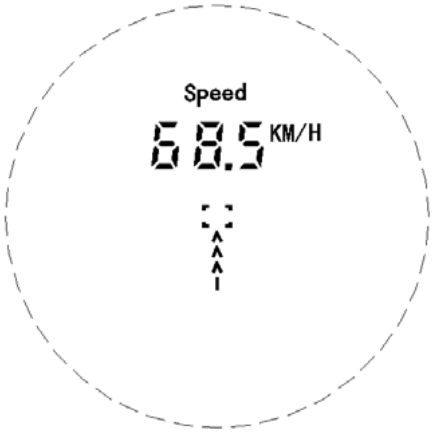
Schermata in modalità “**Speed**”



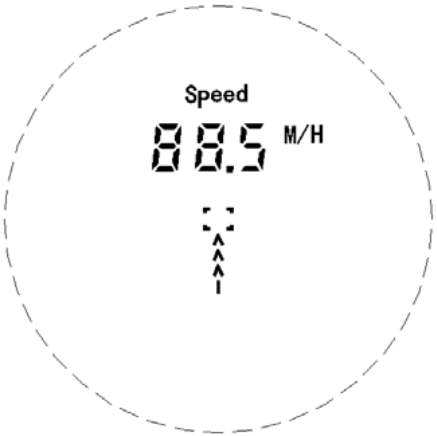
Premere a lungo il tasto **M** per passare da km/h a miglia/h.

Premere il pulsante principale per iniziare la misura della velocità.

Schermata con modalità chilometri orari.

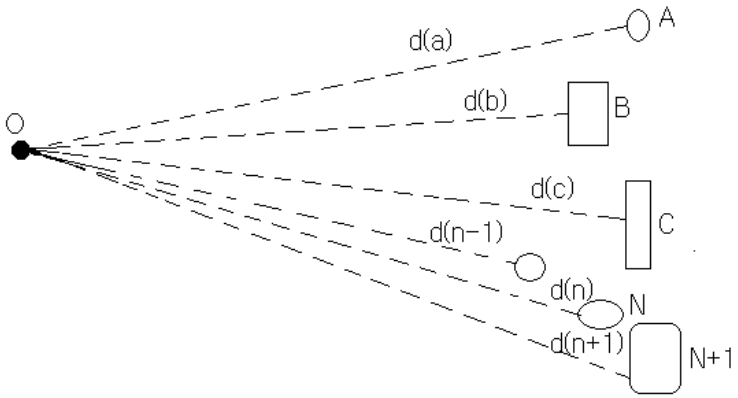


Schermata con modalità miglia orarie.



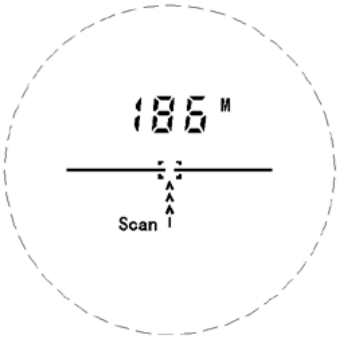
4.5 Modalità “scan”

Principio di funzione



In modalità Scan, il laser eseguirà un campionamento continuo delle letture, visualizzando le distanze una alla volta.

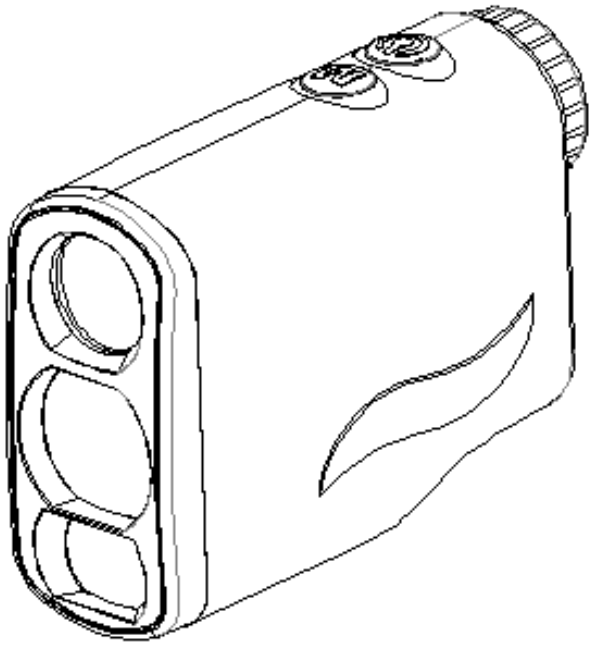
Schermata in modalità “scan”



Per attivare la modalità Scan dalla modalità Ranging, tenere premuto il pulsante principale .

L’uscita da questa modalità sarà automatica dopo 20 letture.

Laser Entfernungsmesser Bedienungsanleitung

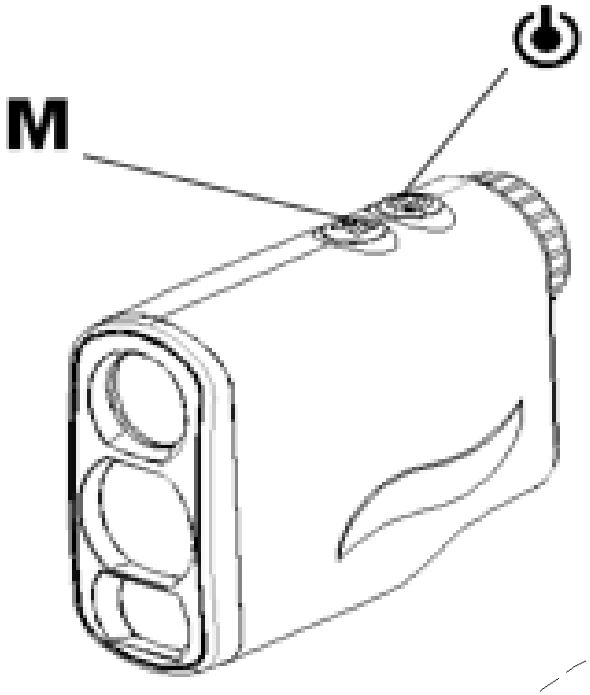


Schlüsselmerkmale:

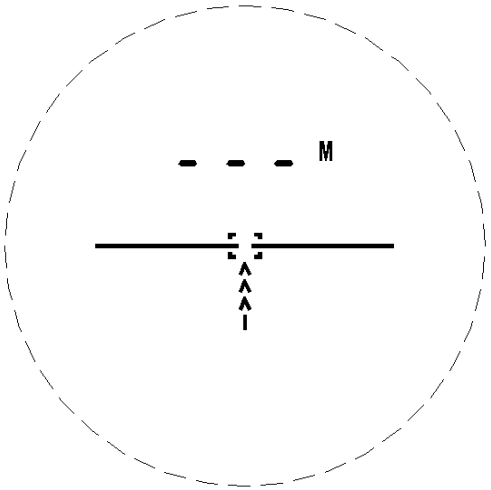
21mm Objektivdurchmesser
6-fache Vergrößerung
7.2° Sichtwinkel
16mm Pupillenabstand
Genauigkeit +/-1 M
Maximale Reichweite: 600 m
Kürzeste Entfernung: 4m
Geschwindigkeitsbereich:
0-300 km/h3V Battery (CR2)
3 V Batterie (CR2)
Wasserfest

Abmessungen:

Länge: 97mm (ohne Okular)
106mm (mit Okular)
Breite: 35mm
Höhe: 73mm (Vorderseite)
68mm (Hinterseite)
Gewicht: 152g (inklusive Batterie)

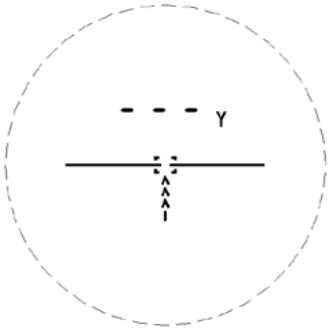


1. Startbildschirm



Drücken sie zum einschalten.
Startmodus ist **“Ranging”**.

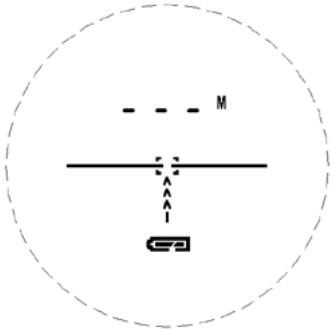
2. Einheitsumwandlung



Halten Sie die Taste **M**, zum Umschalten der Einheit zwischen M(Meter) und Y(Yard), verlängert gedrückt.

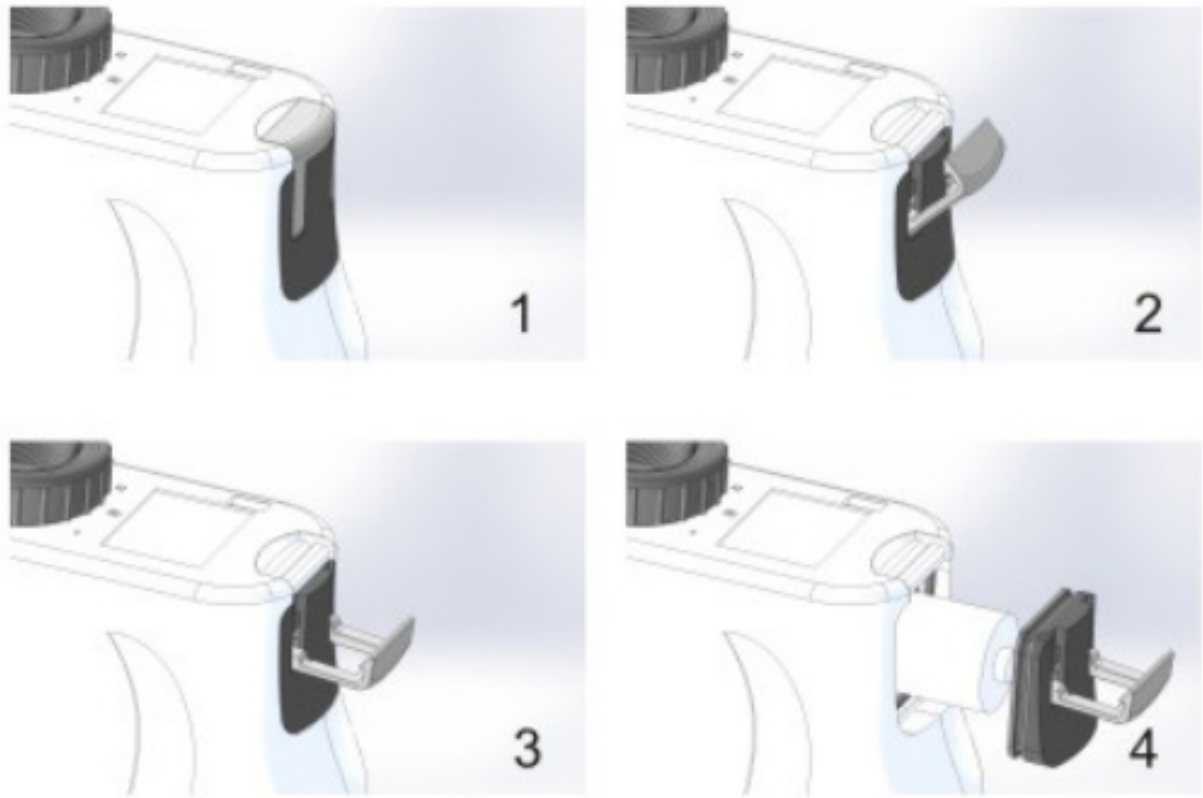
Drücken Sie die Taste **M** zum Umschalten zwischen den Betriebsmodi: **“Ranging”**, **“Flagpole lock”**, **“Fog”** und **“Scan”.**
Nur im **“Speed”** muss die Einheit des Messwertes separat konvertiert werden.

3. Alarm “Batterie schwach”



Wenn die Batteriespannung zu niedrig ist, wird das entsprechende Symbol zur Erinnerung angezeigt.

Batterie austauschen

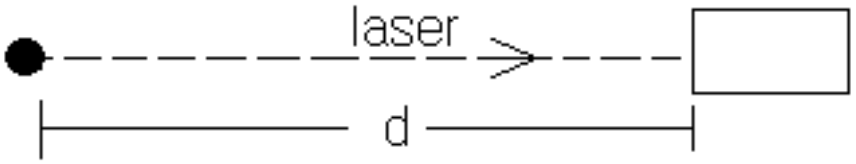


4. Modusauswahl

Drücken Sie **M** um zwischen den Betriebsmodi “**Ranging”, “Flagpole lock”, “Fog”, “Speed” und “Scan”** auszuwählen.

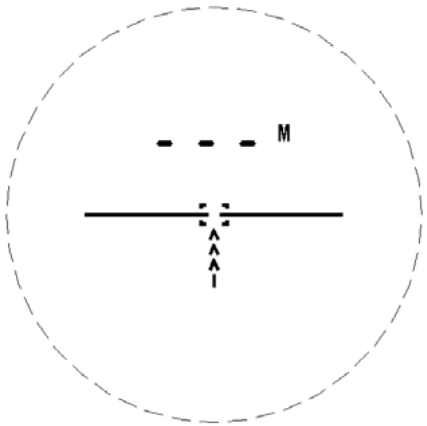
4.1 “Ranging” Modus

Funktionsprinzip:



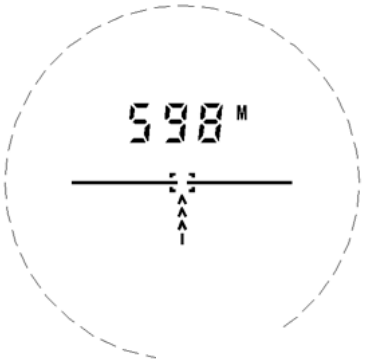
$$d=c/t$$

“Ranging” Blidschirm:

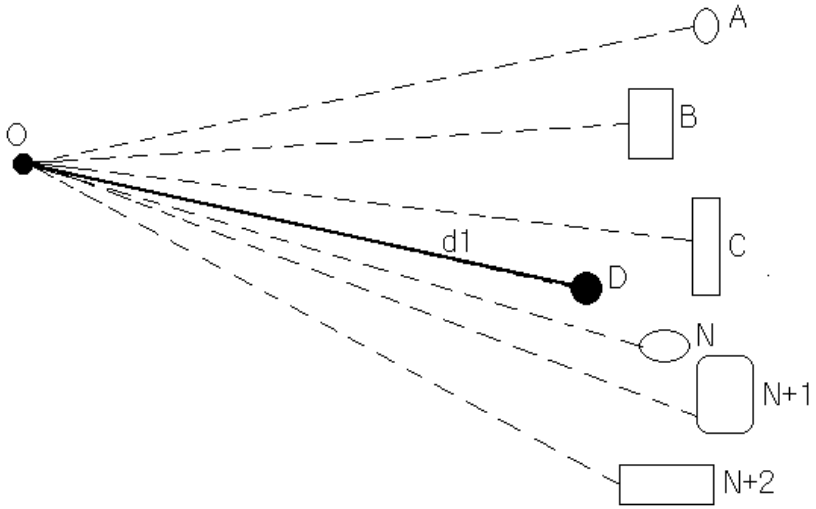


Im Ranging Modus wird beim drücken des Hauptschalters ein Laser Strahl zum Ziel geschickt und die Distanz wird gemessen.

“Ranging” Bildschirm:



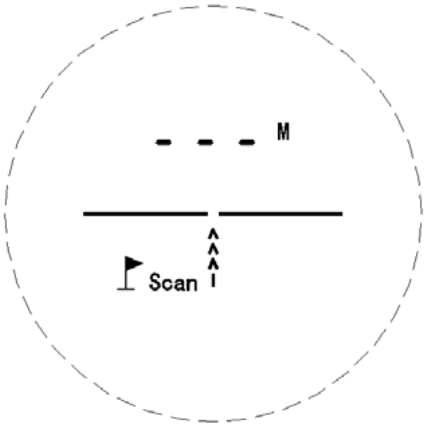
4.2 “Flagpole lock” Modus



Im “Flagpole lock Modus” kann Punkt D von einer Reihe von Punkten im Hintergrund abgeschirmt gemessen werden.

Nur die Entfernung d1 wird gehalten, die anderen Ziele werden hinter dem Flaggenstock abgeschirmt.

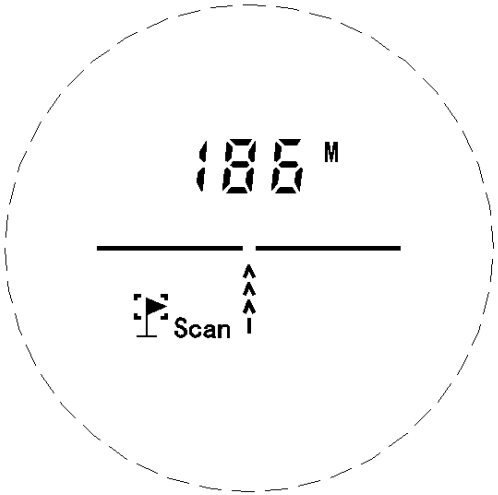
Bildschirm “Flagpole lock” Modus:



Wenn der “Flagpole lock Modus” angezeigt wird, halten Sie zum Start der Flagpole Scanfunktion gedrückt, das Flaggensymbol blinkt.

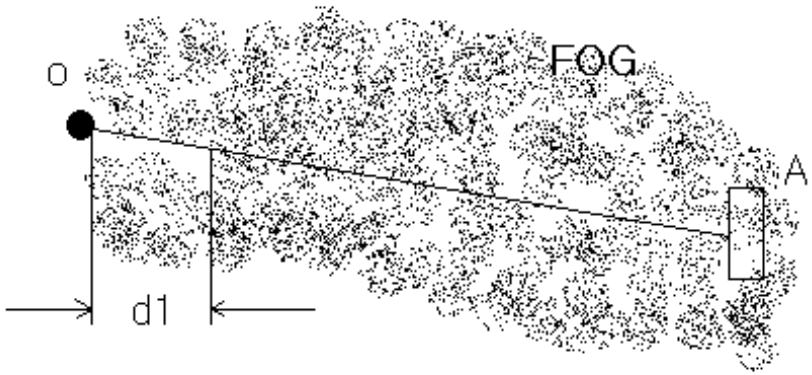
Richten Sie den Zielpunkt zunächst auf das zu messende Ziel und bewegen Sie diesen nach rechts/links, bis das Flaggensymbol nicht mehr blinkt. Die Entfernung ist nun aufgezeichnet.

Bildschirm “Flagpole lock” Modus:



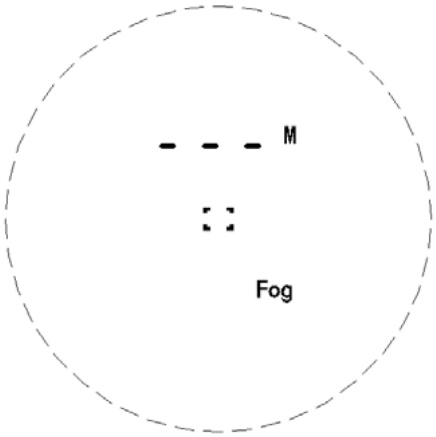
4.3 “Fog” Modus

Funktionsprinzip



Da der vom Instrument erzeugte Laserstrahl vom Nebel reflektiert wird, ist es schwierig, Entfernungen im Falle von Nebel, zu messen. Durch das Wegfiltern der Fehler (die durch die Reflexion auf dem Nebel verursacht werden) auf die Distanz (d1 = 25 m), ist es möglich auch Fernbewertungen zu erhalten.

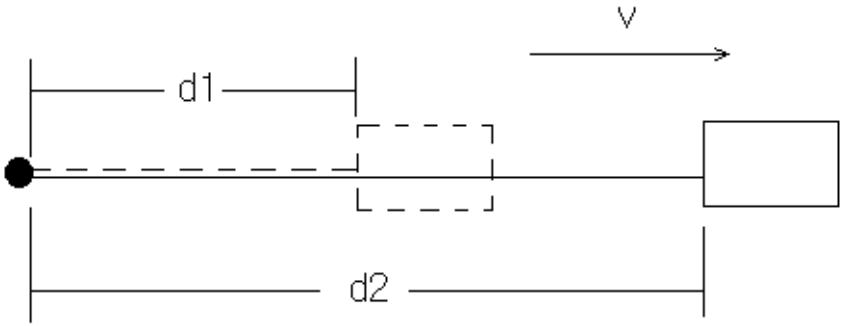
“Fog” Bildschirm



Der Fogbildschirm wird angezeigt, drücken Sie zur Entfernungsmessung. Der Nebelmodus verarbeitet die Störung die durch den Nebel verursacht wird.

Fogbildschirm

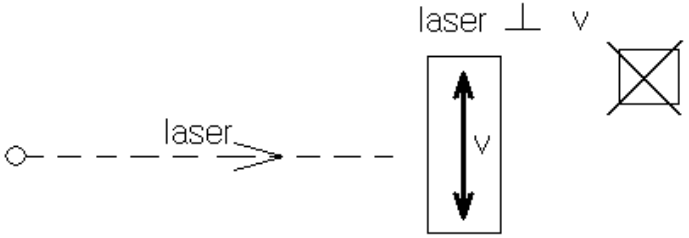
4.4 “Speedmodus”
Funktionsprinzip



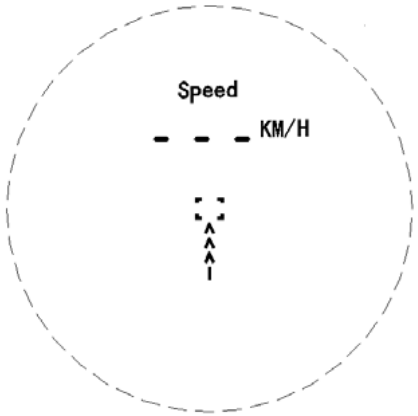
v=(d2-d1)/t

In diesem Modus kann das Gerät die Geschwindigkeit eines sich bewegenden Objektes messen.

Velometer-Methode:



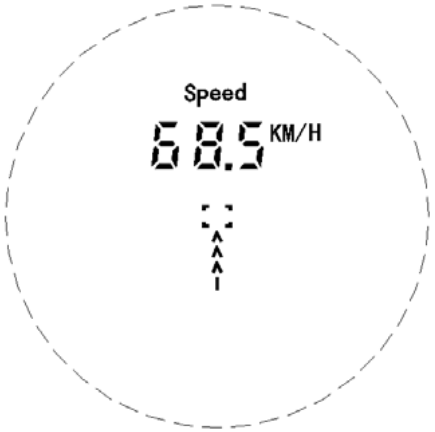
Speedbildschirm



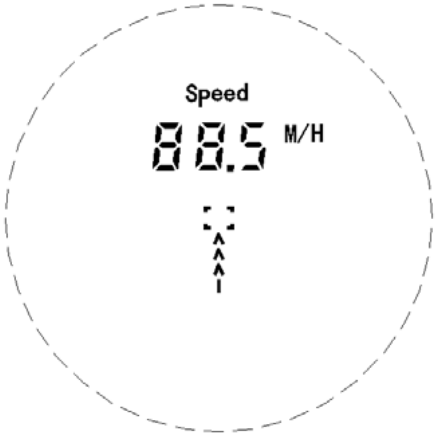
Halten Sie die Taste **M** verlängert gedrückt um zwischen km/h und Meilen/h umzuschalten.

Drücken Sie um die Geschwindigkeitsmessung zu starten.

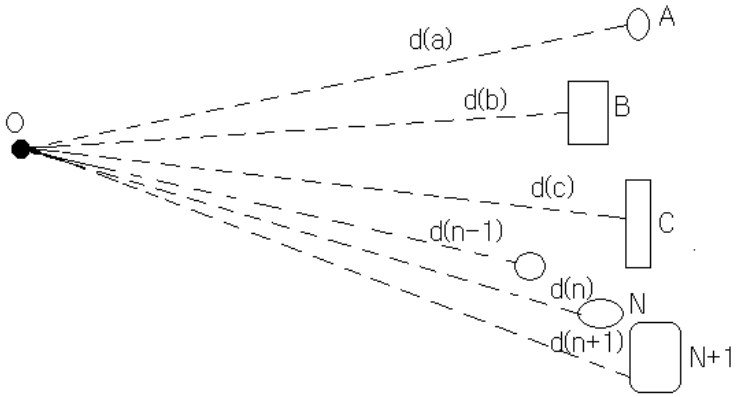
Einheit Kilometer: Kilometer/Stunde



Einheit Meilen: Meilen/Stunde

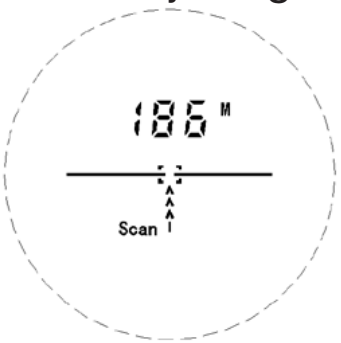


4.5 “Scanmodus”
Funktionsprinzip



Im Scanmodus emittiert der Laser kontinuierlich und jede gemessene Entfernung wird nacheinander angezeigt.

Scanbildschirm



Im “Scan Modus” halten Sie zur Aktivierung des Scanmodus gedrückt. Der Modus wird automatisch nach 20 aufeinanderfolgenden Entfernungsmessungen verlassen.

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