

Onick

激光测距仪使用说明书

Laser rangefinder manual

AS 系列

Onick AS Series

Measuring Laser Ranging Telescope



Product Features:

1) Measuring range:

Onick 600AS 4-600M

Onick 800AS 4-800M

Onick 1000AS 5-1000M

Onick 1200AS 5-1200M

2) Accuracy: $\pm 0.5M$

3) Speed range: 0-300KM

4) Battery: 3V (CR2)

5) Waterproof

Size:

1) objective lens: 21mm

2) Magnification: 6X

3) Field of view: 7.2 °

4) Exit pupil: 16mm

**5) Resolution: +/- 1M (ranging values within
200 m resolution: 0.5m)**

**6) Length: 97mm (excluding the eyepiece)
106mm (including eyepiece)**

Width: 35mm

High: 73mm (front end)

68mm (back-end)

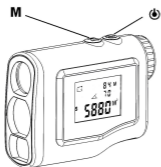
7) Weight: 166g

—: **Basic operations:**

1, boot interface

Press the  key to boot

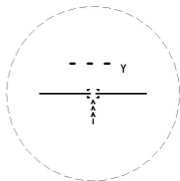
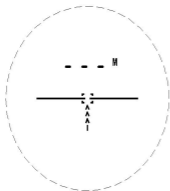
Boot screen, the interface is functional after the last operation.



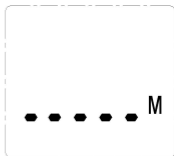
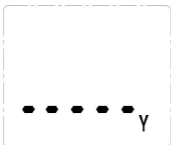
2, unit conversion

Press  key to switch away from the unit, M and Y.

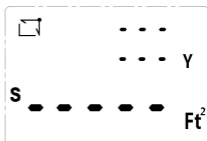
Internal LCD Display



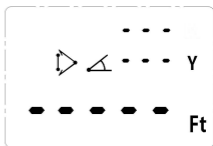
External LCD Display



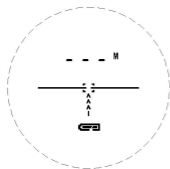
In the English area, the unit is square fee



In imperial height, the unit is feet



3, low voltage alarm



When the product of battery low voltage, low power design would have been displayed to remind battery replacement.

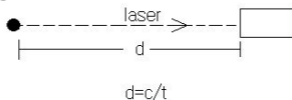
4, the mode selection

Press **M** key in the "ranging", "Rectangular area perimeter" "perimeter area of a circle," "rectangle area perimeter" angled "perimeter area of a circle with an angle," "horizontal distance measurement," "vertical height measurement (two altimetry) toggle between "and" angle measurement. "

二、Function:

1. Location

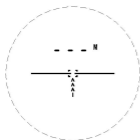
Ranging principle



**Ranging values within 200 m resolution:
0.5m**

Press the  key to boot

Internal LCD Display



Outside of the LCD display

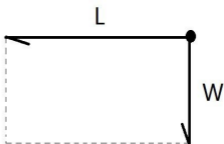


Press  Ranging



2. Measured rectangular area, perimeter.

The measuring principle



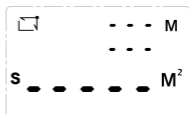
$$S=L * W$$

$$C=2(L+W)$$



Internal LCD Display

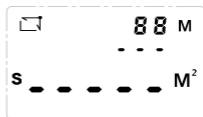
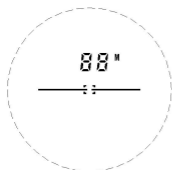
Outside of the LCD display



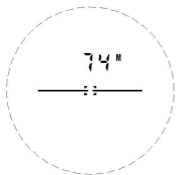
Function Description

Measure twice the two rectangular side length, calculate the area and perimeter of a rectangle.

Press  first length measurement



Press the  key measure of the second side length



Rectangular area

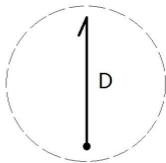


Rectangular perimeter

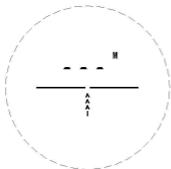


**3. The measured area of a circle (diameter),
circumference.**

The measuring principle



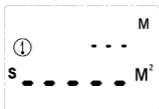
Internal LCD Display



$$S = \pi (D/2)^2$$

$$C = \pi D$$

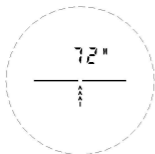
Outside of the LCD display



Function Description

By measuring the diameter of the circle, calculate the area and perimeter of a circle

Press  measure the diameter



Area of circle



Circumference

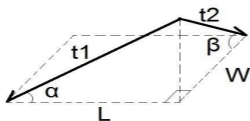


4. angled rectangular area, perimeter.

The measuring principle

The hypotenuse angled away, get its horizontal distance by triangulation

calculation, and then carry out a rectangular area and perimeter of operations.



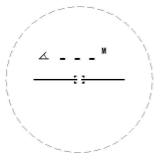
$$L = t1 \cos \alpha$$

$$W = t2 \cos \beta$$

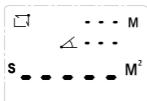
$$S = L * W$$

$$C = 2(L + W)$$

Internal LCD Display



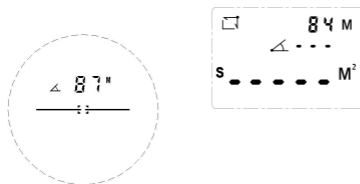
Outside of the LCD display



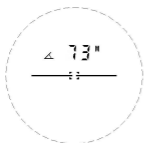
Function Description

Measure twice the two rectangular side length, calculate the area and perimeter of a rectangle. Among them, the tilt angle is automatically brought into the calculations.

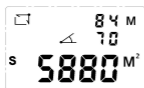
Press  first length measurement



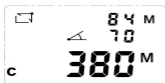
Press  first length measurement



Rectangular area



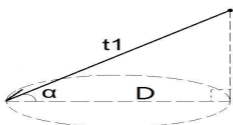
Rectangular perimeter



5. angled circular area, perimeter

The measuring principle

The hypotenuse angled away, get its horizontal distance by triangulation calculation, and then make a circle the area and perimeter of operations.

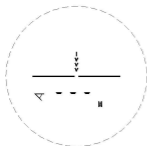


$$D = t_1 \cos \alpha$$

$$S = \pi (D/2)^2$$

$$C = \pi D$$

Internal LCD Display



Outside of the LCD display



Function Description

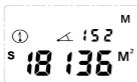
By measuring the diameter of the circle, calculate the area and perimeter of a circle.

Among them, the tilt angle is automatically brought into the calculations.

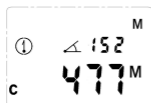
Press  measure the diameter



Area of circle



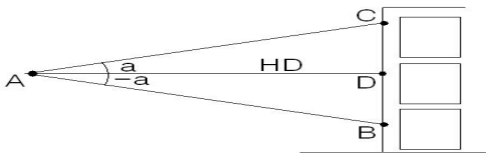
Circumference



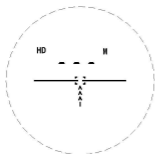
6. The horizontal distance measurement

The measuring principle

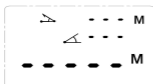
During distance measurement, because of the angle (a , or $-a$) the impact of measured values is a straight line from AB or AC, but this feature provides testers A horizontal distance between the measured



Internal LCD Display



Outside of the LCD display



Function Description

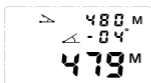
Measure the hypotenuse distance, horizontal distance is calculated according to the tilt angle.

Press the  key measure

Internal display the measured distance



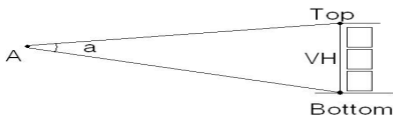
Show the measured lateral distance, tilt angle and the horizontal distance



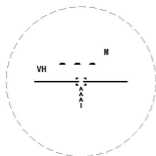
7. The vertical height measurement

The measuring principle

Calculate the vertical height between two points in the vertical direction using the measurement points (Bottom and Top) of the distance and angle between two points (a)



Internal LCD Display



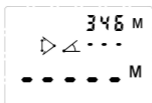
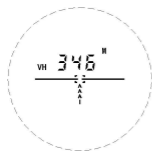
Outside of the LCD display




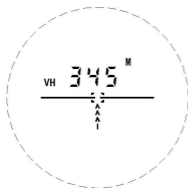
Function Description

Measure the distance from one end of the object, and then measured the distance from the other end, the final calculation of the display height.

Press  end distance measurement



Press the  key to the other end of the distance measurement and display the results



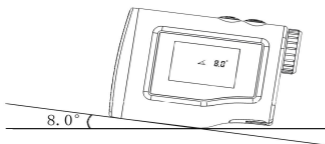
Distance and height at both ends



8. Elevation Measurement

The measuring principle

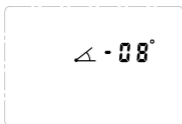
Measuring the angle between the longitudinal axis of the machine with the horizontal.



Internal LCD Display



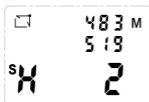
External LCD Display



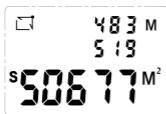
9. With respect to the measurement of large area display data

In the area of measurement, since the measurement range finder of more than 320 meters, the operation was likely to exceed the area of 99,999 square meters of display limitations.

**In the case of reading appears as follows:
To show a high level, and there is a prompt
H**



**Again show low, there are units in line
prompt**



In this case: two sides of the rectangle is length: 483 m and 519 m.

The final area of reading: 250,677 square meters.

Onick AS 系列

测量型激光测距望远镜



产品特性:

1) 测量范围:

Onick 600AS 4-600M

Onick 800AS 4-800M

Onick 1000AS 5-1000M

Onick 1200AS 5-1200M

2) 测量精度: $\pm 0.5M$

3) 测速范围: 0-300KM

4) 电池: 3V (CR2)

5) 防水

产品尺寸:

1) 物镜: 21mm

2) 放大倍率: 6X

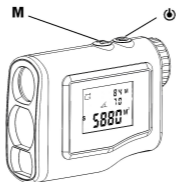
- 3) 视场角: 7.2°**
- 4) 出瞳: 16mm**
- 5) 分辨率: +/- 1M(测距值在 200 米以上分辨率: 0.5m)**
- 6) 长: 97mm(不含目镜)
106mm (含目镜)**
 - 宽: 35mm**
 - 高: 73mm (前端)
68mm (后端)**
- 7) 重量: 166g**

一 基本操作:

1, 开机界面

按  键开机

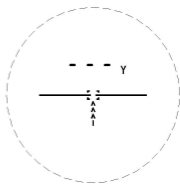
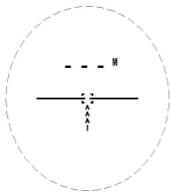
开机画面，是上次操作后的功能界面。



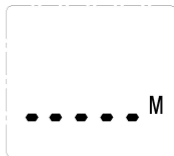
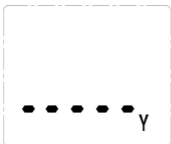
2, 单位转换

长按 **M** 键可切换距离单位，M 和 Y。

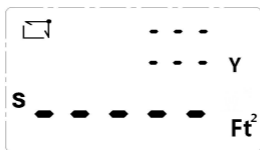
内部 LCD 显示



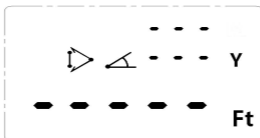
外部 LCD 显示



在英制面积中，单位是平方英尺



在英制高度中，单位是英尺



3、低电压告警



当产品中的电池电压过低时，低电图案会一直显示，提醒更换电池。

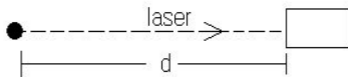
4. 模式选择

短按 **M** 键可在“测距”“矩形面积周长”“圆面积周长”“带角度的矩形面积周长”“带角度的圆面积周长”“水平距离测量”“垂直高度测量（两点测高）”和“测角”之间切换选择。

二 功能说明：

1. 测距

测距原理

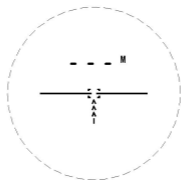


$$d=c/t$$

测距值在 200 米内分辨率：0.5m

按 键开机

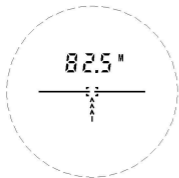
内部 LCD 显示



外侧 LCD 显示

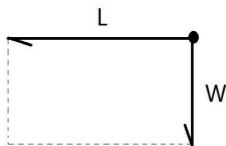


按 键测距



2. 测矩形面积，周长

测量原理



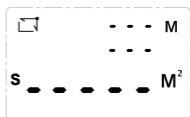
$$S=L * W$$

$$C=2(L+W)$$

内部 LCD 显示



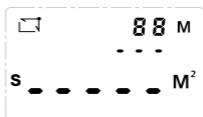
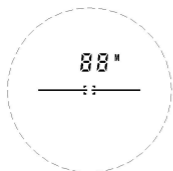
外侧 LCD 显示



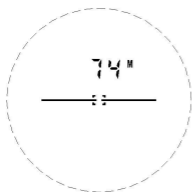
功能说明

分两次测量矩形的两条边长，计算出矩形的面积和周长。

按  键测量第一边长



再按  键测量第二边长



矩形面积

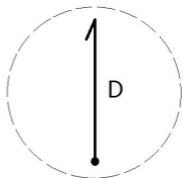


矩形周长



3. 测圆面积（直径），周长。

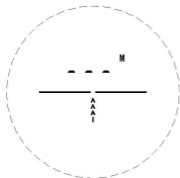
测量原理



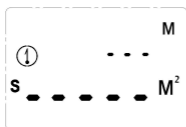
$$S = \pi (D/2)^2$$

$$C = \pi D$$

内部 LCD 显示



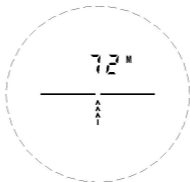
外侧 LCD 显示



功能说明

通过测量圆的直径，计算出圆的面积和周长。

按  键测量直径



圆面积



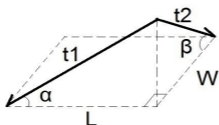
圆周长



4. 带角度矩形面积与周长

测量原理

将带角度的斜边距离，通过三角运算获得其水平距离，后再进行矩形面积和周长的运算。



$$L = t_1 \cos \alpha$$

$$W = t_2 \cos \beta$$

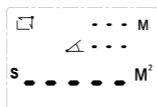
$$S = L * W$$

$$C = 2(L + W)$$

内部 LCD 显示



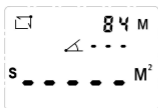
外侧 LCD 显示



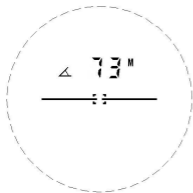
功能说明

分两次测量矩形的两条边长，计算出矩形的面积和周长。其中，倾斜角度会自动带入计算。

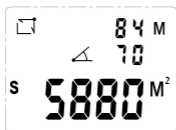
按  键测量第一边长



再按  键测量第二边长



矩形面积



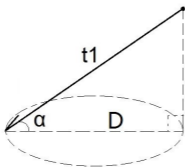
矩形周长



5. 带角度的圆面积，周长

测量原理

将带角度的斜边距离，通过三角运算获得其水平距离，后再进行圆面积和周长的运算。

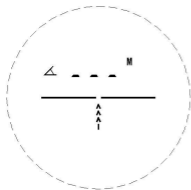


$$D = t1 \cos \alpha$$

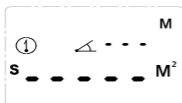
$$S = \pi (D/2)^2$$

$$C = \pi D$$

内部 LCD 显示




外侧 LCD 显示



功能说明

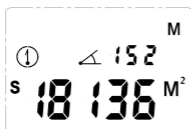
通过测量圆的直径，计算出圆的面积和周长。其中，

倾斜角度会自动带入计算。

按  键测量直径



圆面积



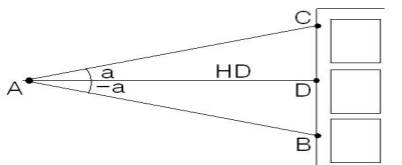
圆周长



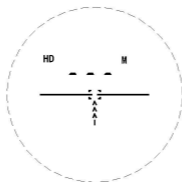
6. 水平距离测量

测量原理

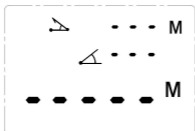
在进行距离测定时，由于有角度(α ，或 $-\alpha$)的影响，测到的值是直线距离 AB 或 AC，而该功能可提供测试者 A 与被测点 D 间的水平距离 HD。



内部 LCD 显示



外侧 LCD 显示

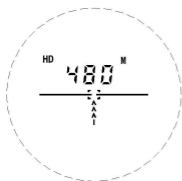


功能说明

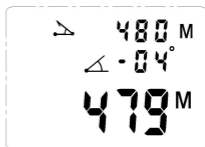
测量出斜边距离，根据倾斜角算出水平距离。

按  键测量

内部显示实测距离



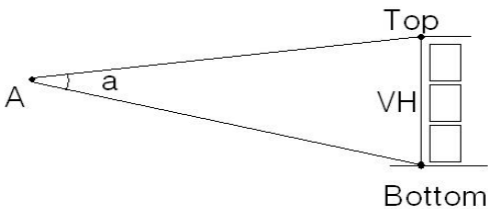
外侧显示实测距离，倾斜角及水平距离



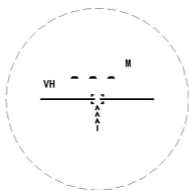
7. 垂直高度测量

测量原理

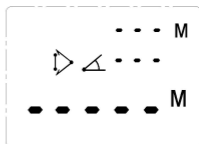
利用测量垂直方向上两点（Bottom 和 Top）的距离及两点间的角度（ a ）计算出两点间的垂直高度 VH 。



内部 LCD 显示



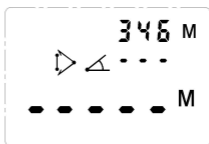
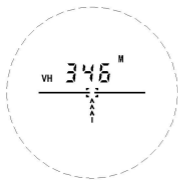
外侧 LCD 显示



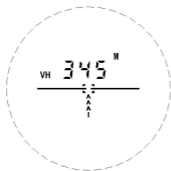
功能说明

先测量物体一端的距离，再测另一端的距离，最后计算显示高度。

按  键测量一端距离



再按  键测量另一端距离，并显示计算结果



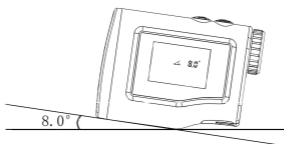
两端的距离及高度



8. 俯仰角测量

测量原理

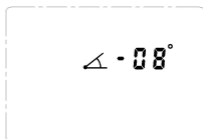
测量机器纵轴与水平面的夹角。



内部 LCD 显示



外部 LCD 显示



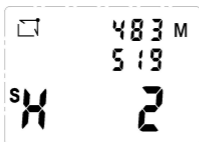
9. 关于面积测量中大数据的显示

在面积测量中，由于测距仪的测程超过 320 米后，运算得到的面积就有可能超出 99999 平方米的显示限

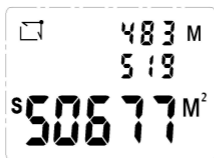
制。

在出现该情况是的读数方式如下：

先显示高位，并有 H 显示提示



再显示低位，有单位符合提示



该情况下：矩形的两个边长是：483 米和 519 米。

最后的面积读作：250677 平方米。

