



Operating Manual for Laser Rangefinder

Operating Manual for HK Laser Rangefinder



Networking Rangefinder Pioneer

I. Introduction

Thank you for purchasing Uineye's professional networking Rangefinder. Portable and user-friendly, this Rangefinder is characterized by superior ranging performance, fashionable Bluetooth function and mobile APP, bringing you more than simple ranging.

Key Features of Uineye HK Series:

- + **Telescoping-----Single-tube observation lens**
 Durable; rubber buttons; waterproof optical instrument; fully replace the telescope
- + **Ranging-----Laser Rangefinder**
 A ranging distance of 5-2,000m, depending on the model, target visibility and properties of the Rangefinder
- + **Angle measurer**
 Measure all the angles between 90° and 90°; the resolution and accuracy are 0.1° and 0.35°, respectively; outperforming all similar competitive products
- + **Built-in electronic compass**
 Adopt the same electronic compass technique with Apple 6s to calculate the angle, the height, the coordinate azimuth and the magnetic azimuth .

Technical Indicators of Uineye HK Series:

1. Measuring range: 800/1000/1500/1800
2. Telescope multiple: 8X
3. Field angle: 7°
4. Objective lens aperture: 25mm
5. Accuracy: 0.3/0.5/ 1m optional
6. Minimum ranging distance: 5m
7. Bluetooth + APP: Yes/No
8. Battery: Lithium battery CR2 3V

Working Principles of Uineye HK Series:

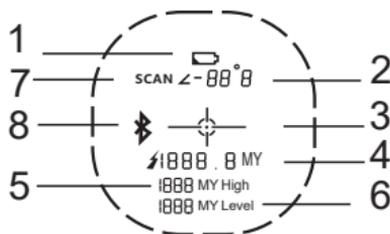
Uineye HK Handheld Telescopic Laser Rangefinder adopts 905 nm safe laser (Class I; eye safety is guaranteed; invisible laser) to record the time needed for the emitting laser to meet the object and get back; then, the distance can be calculated by taking half of the product of time and velocity of light.

II. Functional Architecture

Appearance



Internal Display & Icons



- | | |
|---|---------------------------|
| 1. Icon  | Low battery voltage; |
| 2. Icon $\angle -88^{\circ}8'$ | Angle data; |
| 3. Icon  | Target indication; |
| 4. Icon 1888.8 MY | Linear distance data; |
| 5. Icon High | Vertical height data; |
| 6. Icon Level | Horizontal distance data; |
| 7. Icon SCAN | SCAN mode; |
| 8. Icon  | Bluetooth mode. |

Keys

1.  Power/Measuring key. When the Rangefinder is off, the key serves as the power key; when the Rangefinder is on, the key (a short press) will serve as the key to start and end measuring (SCAN mode);
2. M1 Switch between single measurement and all-in-one machine (SCAN mode).

III. Operating Instructions

Without power supply, the Rangefinder will work as a precise optical telescope. The operator may observe objects through the eye lens. When the objects are not clear enough, the operator may rotate the eye lens patch to adjust the visibility, thereby achieving the goal of seeing the details of the objects.

1. Battery Installation

1) Open the battery cover and put the batteries into the battery compartment in accordance with their polarity;

2) If the icon  occurs when the Rangefinder is powered on, it means that the battery runs low. Please remove the batteries out of the compartment to prevent the unnecessary damages caused by battery leakage when the Rangefinder is not in use for a long time;

3) The Rangefinder has designed a protective device for power installation error. Reverse connection of the batteries will not cause damage to the instrument, but the erroneous voltage exceeding the voltage limit will damage the internal precise measuring parts. Please use the batteries with a normal voltage of 3v.

2. Measurement

1) Press  to observe the distant objects through the eye lens. Select the target, aim at the target center, choose the corresponding mode, and press  for measurement.

2) If no operation is made within 20 seconds, the system will automatically shut down.

3. Unit switch

This machine contains two units of meter and yard, the default unit is meter, while press  and M1 two keys 0.5 seconds, you can switch and save as yard, want to switch back, action repeat.

IV. Measuring Modes & Operations

Mode Name	Mode Description	Mode Operation
Single measurement	Measure the distance between the measuring instrument and the target	Press \odot , select the target, aim at the target and press \odot for single measurement.
All-in-one machine	Measure the distance and angle, and calculate the height and horizontal distance	Press \odot and M1, select the target, aim at the target and press \odot for measurement.
SCAN mode	Continuous measurement	Press \odot , continuously press M1 for twice, select the target, aim at the target and press \odot for continuous measurement.
Angle calibration	Angle calibration	When the Rangefinder is on \odot , have a long press on. When the angle $0^{\circ}0$ flashes once in one second, anchor the Rangefinder to the tripod with adjusted level angle, and press M1 to complete the angle calibration

V. Common Faults & Disposal Plans

Fault	Reason	Disposal Plan
The target icon does not occur when the batteries are loaded	There is something wrong with the batteries	Check the battery polarity and replace the old batteries with new ones
Abnormal noise occurs in the instrument	The instrument is damaged during the transportation or hit by an external force	The instrument should be returned to the manufacturer
The measuring data are not correct	The unit is not correct	Check the unit for meter/mu switching
The measuring error is huge	The vibration exceeds the limit	The holding position should be stabilized, or a tripod can be used, or the instrument can be manually recalibrated
The accuracy drops as the instrument has exceeded its designed lifetime	Another calibration is needed	The instrument should be returned to the manufacturer for calibration

VI. Model Selection Guide

H K-xxxx-x _____ B/H/P
 _____ 800/1000/1500/1800

Code	Description
800	The measuring distance is 800m under good meteorological conditions
1000	The measuring distance is 1,000m under good meteorological conditions
1500	The measuring distance is 1,500m under good meteorological conditions
1800	The measuring distance is 1,800m under good standard conditions
B	Basic model, measuring the distance, SCAN mode
H	High model, measuring the distance, the height and the angle, horizontal distance, SCAN mode
P	Plus model, measuring the distance, the height and the angle, horizontal distance, electronic compass

VII. Miscellaneous Matters

1. The instrument has no batteries inside it when leaving the factor. The user may purchase appropriate batteries for it by themselves.

2. Warranty terms: One year of free maintenance and repair is guaranteed (except for the faults caused by improper use) from the date of selling the instrument. For the product maintenance beyond the maintenance period, the manufacturer will charge related maintenance fees.

VIII. APP application(This feature supports Bluetooth 4 and above versions of the phone)

Usage:(android)

1) Install the file Uineye4.apk onto the mobile phone with Android system, Icon for  ;and select the appropriate language when initial installation is conducted;

2) Open the APP software during which Bluetooth and GPS must be activated and the mobile phone must be connected to the network to achieve all functions;

3) Main menu

Click the icon  in the top left corner to open the main menu.

Main Menu Function	Function Description
Connect/Disconnect the Instrument	When the Rangefinder is on, have a long press on M1 key and open the Bluetooth device. Then, the APP will detect the devices surrounding the Bluetooth device and select the default Rangefinder called SPP-CA and connect to it, as shown in Fig.1. Enter the password 1234 into the prompt bar and enter the link state as shown in Fig.2. At this time, the Bluetooth sign on the Rangefinder will flash.
Instrument	Rename SPP-CA
Data Records	Check the measuring data, as shown in Fig.3
About Us	The agent information will be displayed, which can be customized, as shown in Fig.4
Settings	Voice broadcast, vibration notice, center following, and map pattern (satellite map and common map) are displayed,
Question Feedback	The feedback can be submitted, as shown in Fig.6

4 Measuring Menu

Click  in the top right corner of the APP (as shown in Fig.7), and the measuring menu will be displayed: Linear Mode, Area Mode, Enclosure Mode and Exit.

Functions on Measuring Menu	Function Description
Linear Mode	Transmit the measuring data to the mobile phone, display and record the single-point measurement data (as shown in Fig.8); the multi-point measurement is as shown in Fig.9
Area Mode	Measure the target area with a Rangefinder. Use the multipoint broken line method to achieve the area designation and then calculate the area, as shown in Fig.10
Enclosure Mode	Under this mode, the operator will move in the target area with a mobile phone in hands to directly measure the area of the enclosed land, which can fully replace the Mu meter
Exit	Exit the APP

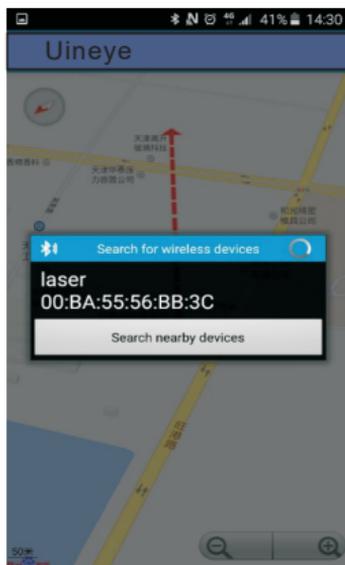


Fig.1

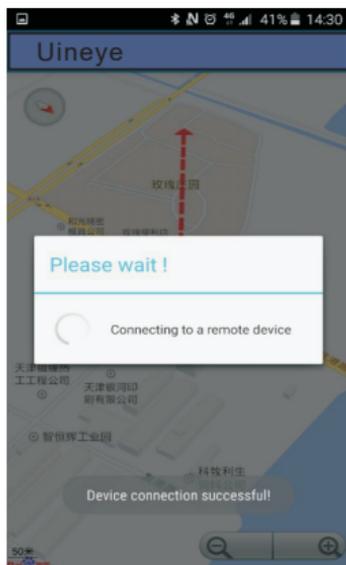


Fig.2

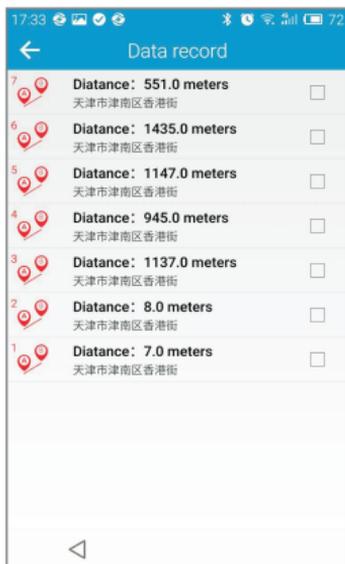


Fig.3

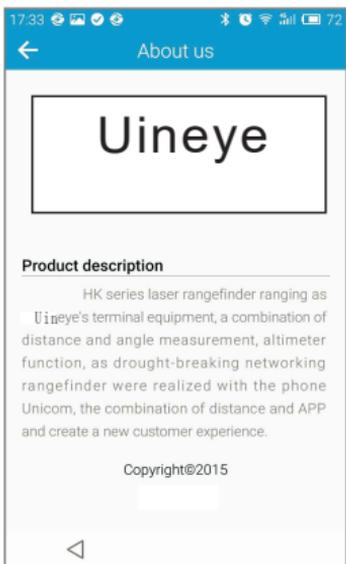


Fig.4

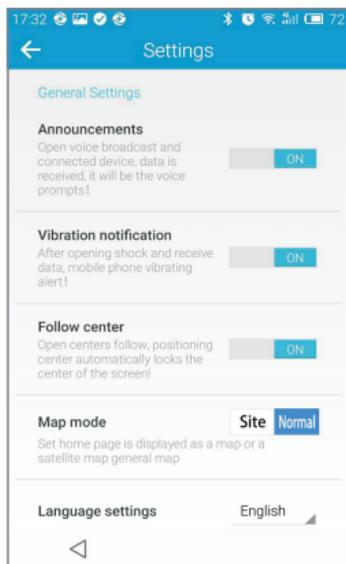


Fig.5

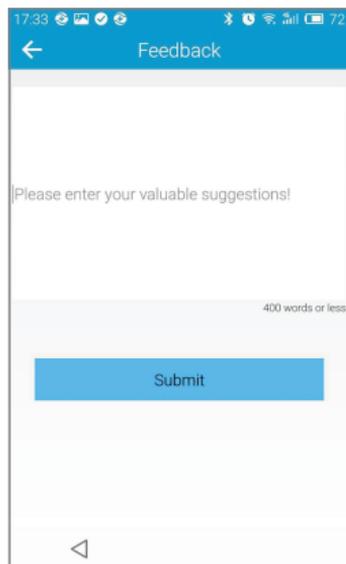


Fig.6

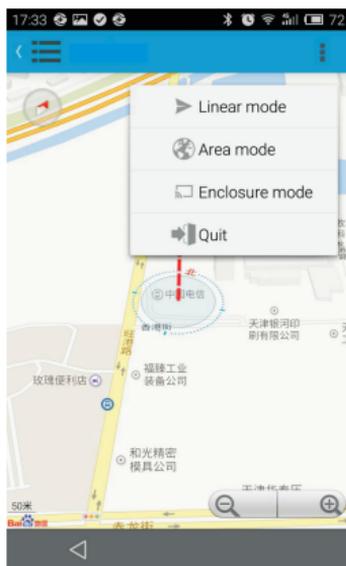


Fig.7



Fig.8



Fig.9



Fig.10

Usage:(IOS)

- 1) Search and download Uineye in APP Store for iphone and install it;
- 2) Open the App, which has to use Bluetooth, GPS and connect to Internet to use all the functions;
- 3) Main menu

After installation, click the Uineye icon to enter the APP. The software will advise you to open the Bluetooth and positioning function, please click "OK".

Main Menu Function	Function Description
connect/Disconnect the Instrument	Choose the Rangefinder to be connected in setting screen. Please pay attention: Press and hold "M" key for a long time until the mark  for Bluetooth appears, then connect iPhone; After connecting, the Bluetooth mark  should blink and APP should be in connected state, here the Bluetooth communication can be use, shown as figure 1
Instrument Switch	You can switch the connected/disconnected state by clicking device name in "My Device".
Date Setting	In the fixed view mode for map, the compass in the top right corner is square; the directionality for the distance measurement doesn't change as the phone angle. All the measurement data of the diastimeter should appear on the map as shown in figure 2. The displayed specific data are: the distance value, the longitude and latitude of the object. Click the followed "+" can change the data name and store if necessary.
Date Record	The stored data show in the Data Record. Click the recorded data to have corresponding change, shown as figure 4. Slide the record to left can delete the record, shown as figure 5.
View mode switch	In the free view mode for map, the indicator in the top right corner is a circular; the directionality for the distance measurement changes as the phone angle; the measurement data appears in the map, shown as figure 3. Click the compass icon on the top right to switch between two view modes.
language Setting	The language of this software can be changed in the language setting in IOS system, shown as figure 6.



Fig.1

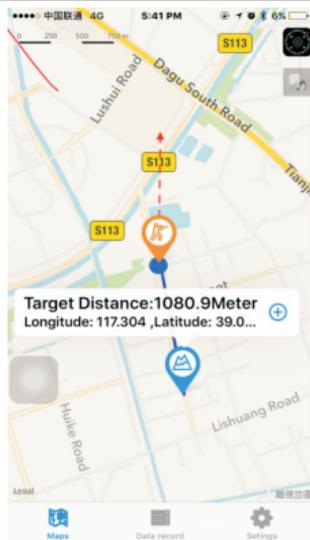


Fig.2

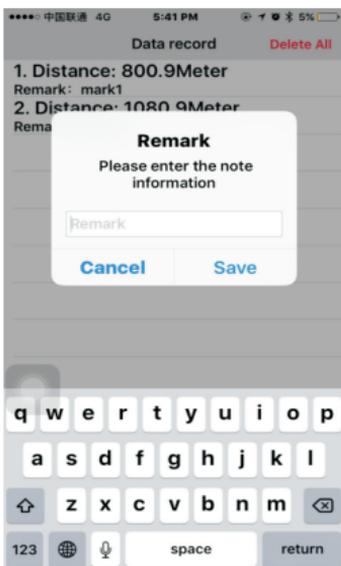


Fig.3



Fig.4

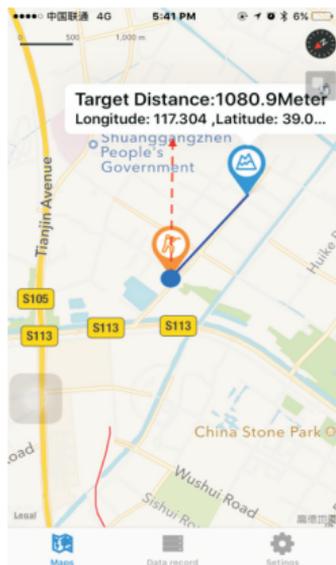


Fig.5



Fig.6

Prompt:

1 Remember to download the Laser Rangefinder Soft Measure APP (Android) on your Smartphone!

GET IT ON:



APP:Uineye4

2 If unable to connect to the device with Android 6.0 system, please find Uineye4, click and trust the application in your Access Control under Settings.

3 Download the Laser Rangefinder Soft Measure APP (IOS) : Search and download Uineye in APP Store for iPhone