

## R1 Plus Total Station

- Precise and accurate
- Reliable
- User friendly



# R1 Plus

The companion of every  
**PROFESSIONAL SURVEYOR**

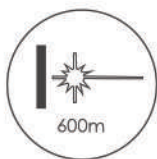
Stonex R1 Plus Total Station, precise distance and angles measurements, concentrated in 5 Kg of pure technology.

The perfect tool whenever the topographic works requires a light and fast machine, all day working thanks to 26 hours of continuous operating time.

The onboard field programs, included as standard, make R1 Plus suitable for any construction site, cadastral, mapping and staking out, works.

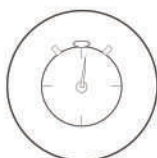
No limitation for distance measurements, up to 5.000 m with a single prism - 600 m reflectorless (KGC 90%) - and 2" as angular accuracy, always guarantee a reliable points calculation.

R1 Plus has been designed to hold out against rain and dust: the IP66 certification allows to go ahead with the survey even during hard rain. The body design is distinguished by its robust mechanical structure, and the high performance telescope, featuring 30X magnification and illuminated reticle, provide the best sighting quality in any lighting condition.



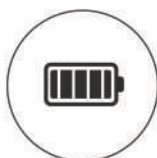
## LONG DISTANCE MEASUREMENTS

Thanks to the high efficiency EDM, R1 Plus guarantees long distance measurements: 600 m in reflectorless mode and up to 5.000 m using a single prism, with millimeter accuracy.



## FAST, ACCURATE, RELIABLE

Measuring distances in one second, with 2 mm accuracy, makes any job extremely cost effective and reliable. The wide range of application software allows to complete the Surveyor's tasks directly in the field.



## 3 DAYS OF FIELD WORK

The low power consumption circuit design and to the two high capacity batteries allow to continuously work for 26 hours and to measure over than 1.000 distances. The SD card up to 16 Gb can store an huge amount of data.



## HIGH PROTECTION GRADE

IP66 dustproof/waterproof rating ensures R1 Plus's high reliability in all weather conditions and allows to continue working even under very humid conditions and where sand and dust are present.

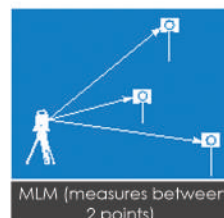
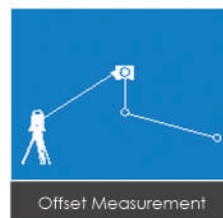
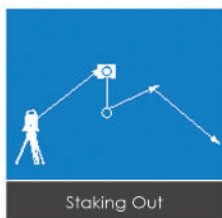
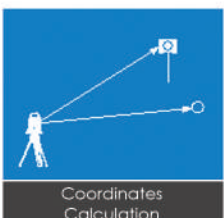
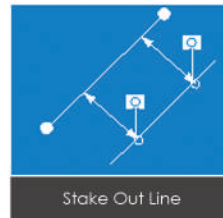
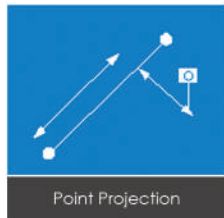
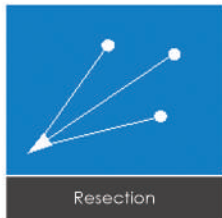
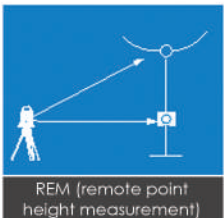
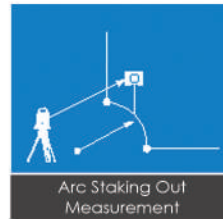
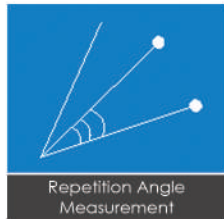
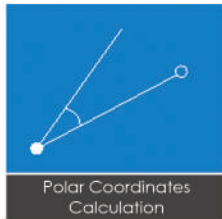
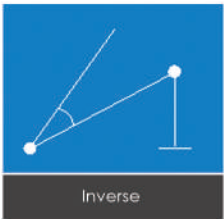




# R1 PLUS

The most complete field software suite at your service

When the work is not limited to points collection R1 Plus becomes your portable equipment for COGO calculations and setting out of points, lines, roads. It's easy to calculate an area, the height of remote points, such as power lines and bridges, the accuracy of a traverse. More than 15 programs are available.



# TECHNICAL FEATURES

## ANGLE MEASUREMENT

|                       |   |
|-----------------------|---|
| Reading system        | Absolute encoder                          |
| Display resolution    | 1" / 5" / 10"<br>(or 0.2mgon/1mgon/2mgon) |
| Angle Unit            | 360°(dms/d)-<br>400gon/6400mil            |
| Accuracy <sup>1</sup> | 2"  |

## TELESCOPE

|                      |                                   |
|----------------------|-----------------------------------|
| Magnification/Length | 30 x/156 mm                       |
| Field of view        | 1°30'                             |
| Minimum focus        | 1.0 m                             |
| Reticle              | 9 brightness levels<br>adjustable |
| Objective aperture   | φ 45 mm                           |

## AUTOMATIC COMPENSATOR

|                             |   |
|-----------------------------|---|
| System                      | liquid detection<br>dual axis compensator |
| Compensation range/Accuracy | ± 3' / 1"                                 |

## DISTANCE MEASUREMENT RANGE

|                                     |  |
|-------------------------------------|--|
| Reflectorless                       | 2.0 ~ 600 <sup>2</sup> m   |
| With Prism                          | 2.0 ~ 3000 <sup>3</sup> 2000 <sup>4</sup> 1500 <sup>5</sup><br>Class 1<br>up to 5000 m Class 3 |
| With reflective sheet (60mm x 60mm) | 2.0 ~ 800 m  |

## MEASUREMENT ACCURACY

|                                |                              |
|--------------------------------|------------------------------|
| Reflectorless                  | ± (3+2×10 <sup>-6</sup> D)mm |
| Prism                          | ± (2+2×10 <sup>-6</sup> D)mm |
| Reflective sheet (60mm x 60mm) | ± (3+2×10 <sup>-6</sup> D)mm |

## MEASUREMENT TIME

|                                     |                             |
|-------------------------------------|-----------------------------|
| Measuring time (Tracking/Fast/Fine) | 0.4 sec / 0.6 sec / 1.0 sec |
| Distance Unit                       | m/ft/US ft                  |

Illustrations, descriptions and technical specifications are not binding and may change

1. Standard deviation based on ISO 17123-3
2. Visibility about 40 km, back light less than 5000 lx, no haze, no direct sunlight.
3. Visibility about 40 km, sunny, no heat shimmer.
4. Visibility about 20 km, moderate sunlight, slight heat shimmer.
5. Visibility about 10 km, light haze, severe heat shimmer.

## LASER PLUMMET

|            |                           |
|------------|---------------------------|
| Laser type | 635nm semiconductor laser |
| Accuracy   | 1mm at 1.5 m instrument H |
| Laser spot | ±1,5mm/1,5m               |

## LEVEL VIAL SENSITIVITY

|                |           |
|----------------|-----------|
| Plate level    | 30 ("2mm) |
| Circular level | 8 ('/2mm) |

## ENVIRONMENTAL CONDITIONS

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -20° C ; +50° C |
| Storage Temperature   | -40° C ; +70° C |
| Waterproof/Dustproof  | IP66            |

## PHYSICAL SPECIFICATION

|   |                          |
|---|--------------------------|
| Dimensions                              | 175 mm x 178 mm x 340 mm |
| Weight (including battery and tribrach) | 5.1 Kg                   |

## BATTERY

|   |   |
|---|---|
| Voltage/Capacity  | 7.4V / 3400mAh Li-ion battery           |
| Operating period with continuous angle measurement                      | 36 hours                                |
| Operating period with measurement up to 5000 m Class 3 every 30 seconds | 26 hours (>1.000 measurement at 20° C ) |

## OTHER SPECIFICATIONS

|           |   |
|-----------|---|
| Display   | Two sides, LCD, 96x160 dots<br>120000 points, support SD card |
| Memory    | 16 Gb   |
| Interface | RS-232C / mini USB/ SD card                                   |
| Charger   | 110/220V,<br>Charging time: about 4h                          |



STONEX AUTHORIZED DEALER

**STONEX®**  
Part of UniStrong

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