

## R15 Total Station

Precise, accurate  
and reliable





# R15

## The companion of every PROFESSIONAL SURVEYOR

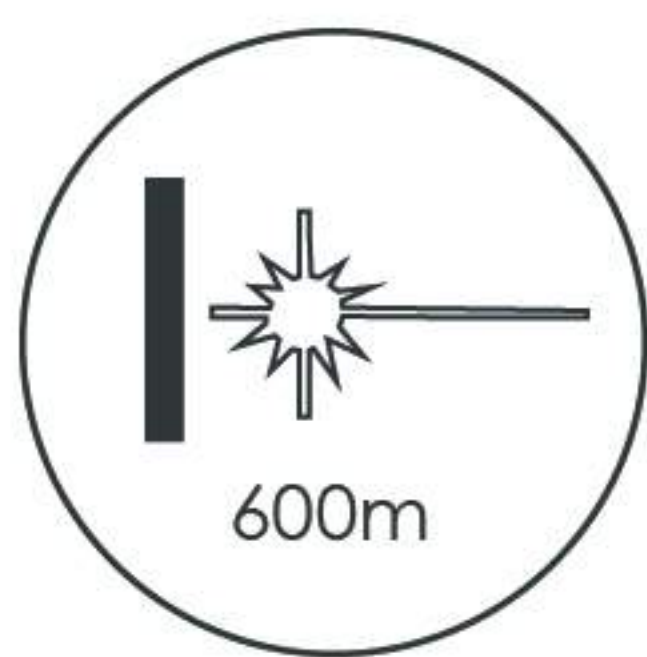
Stonex R15 Total Station, precise distance and angles measurements, concentrated in 5 Kg of pure technology.

The perfect tool whenever the topographic works require a light and fast machine, all day working thanks to 24 hours of continuous operating time.

The onboard field programs, included as standard, make R15 suitable for any construction site, cadastral, mapping and staking out, works.

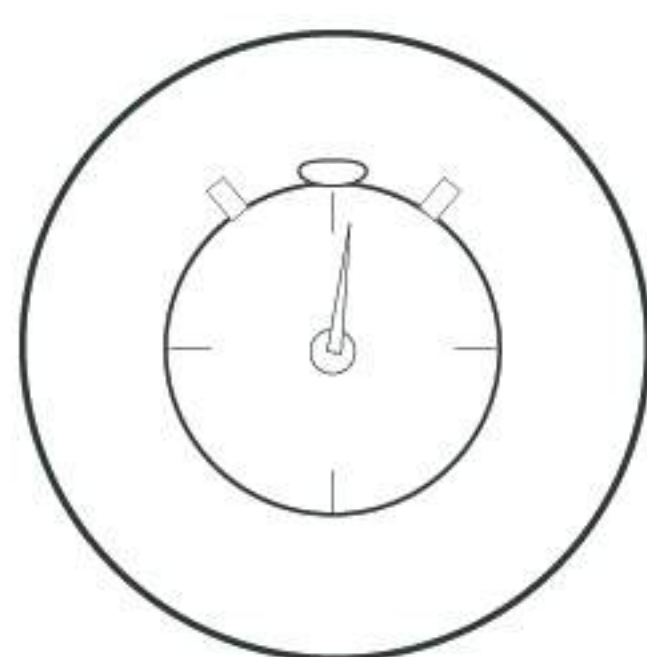
No limitation for distance measurements, up to 5000 m with a single prism 600 m reflectorless and 2" as angular accuracy, always guarantee a reliable points calculation.

R15 has been designed to hold out against rain and dust: the IP55 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, R15 guarantees long distance measurements: 600 m in reflectorless mode and up to 5000 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 24 hours and to measure over than 1000 distances. The SD card up to 16 Gb can store a huge amount of data.



### HIGH PROTECTION GRADE

IP55 dustproof/waterproof rating ensures R15's high reliability in all weather conditions and allows to continue working even under very humid conditions and where sand and dust are present.



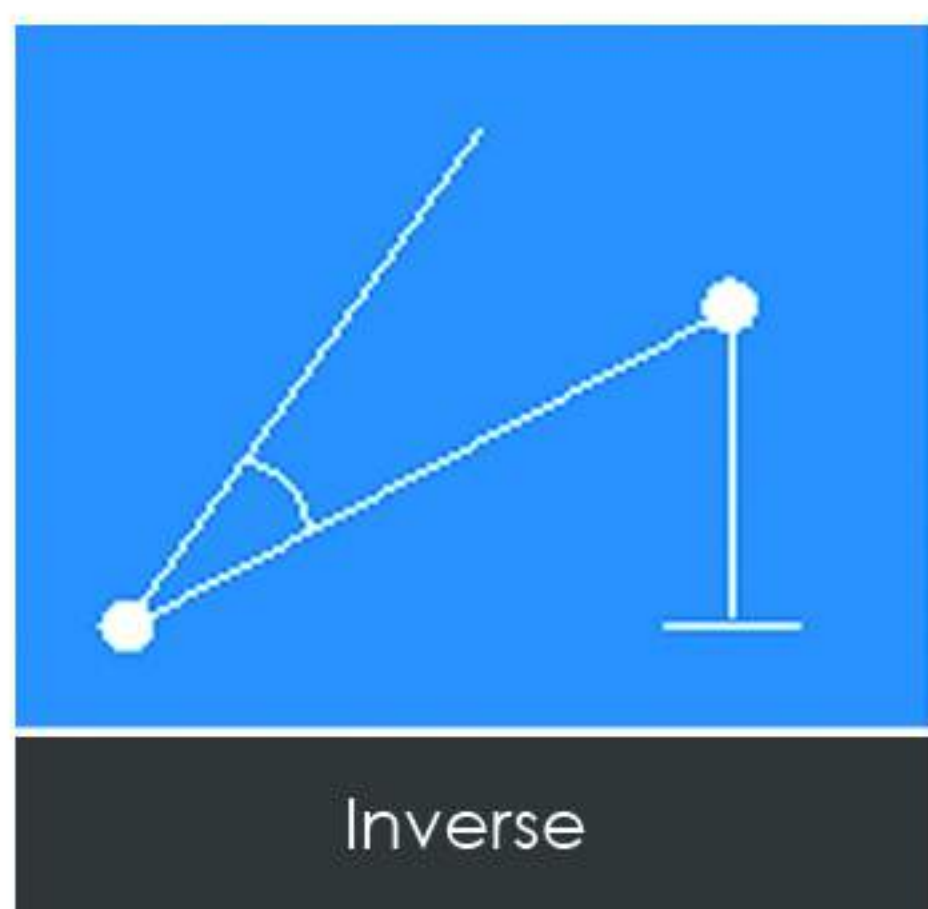




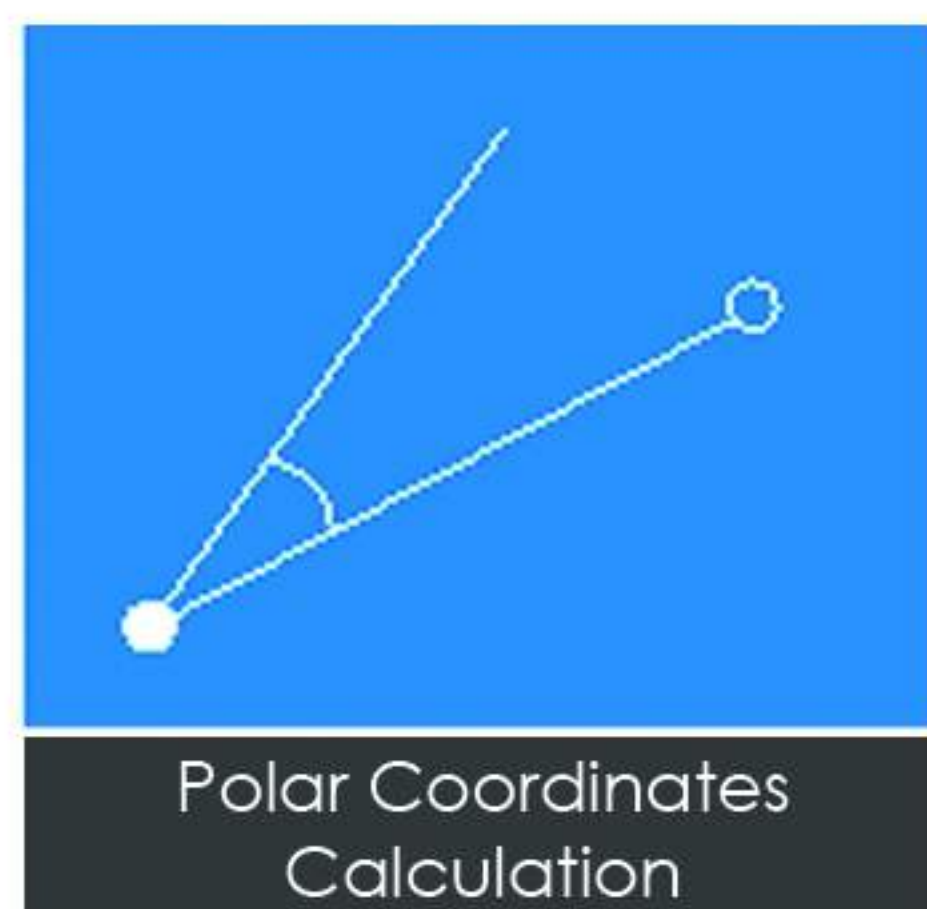
# R15

## The most complete field software suite at your service

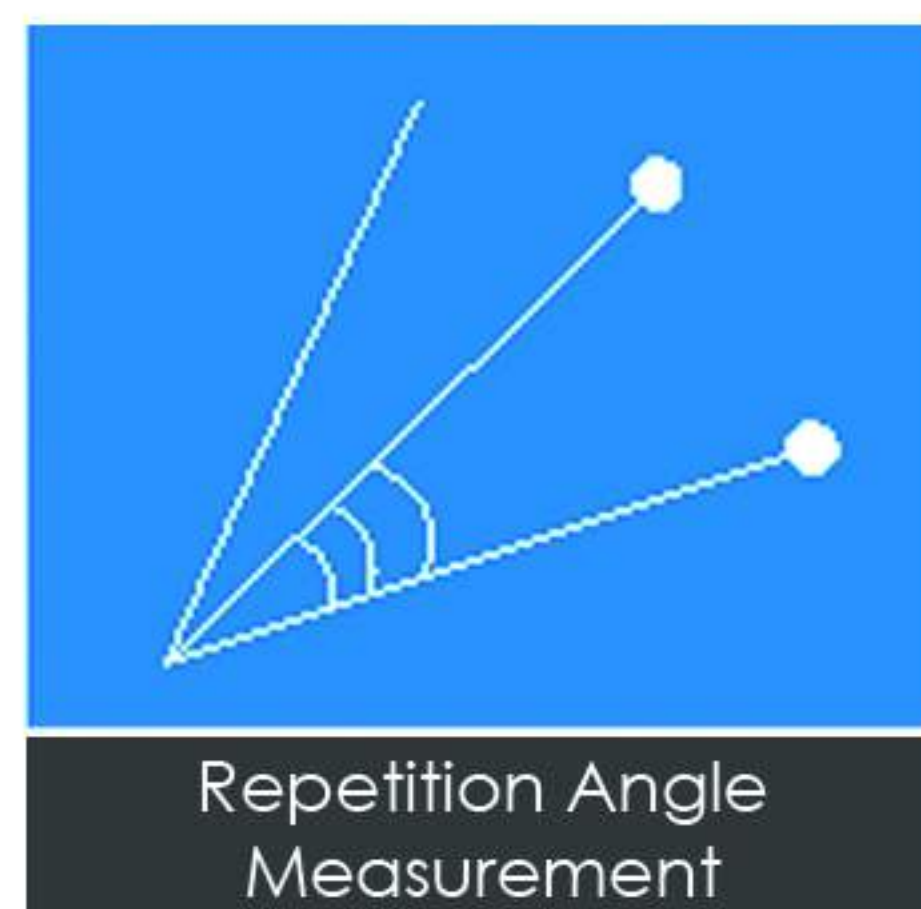
When the work is not limited to points collection, R15 becomes your portable equipment for COGO calculations and setting out of points, lines, roads. It's easy to calculate an area, the height of remote points, such as power lines and bridges, the accuracy of a traverse. More than 15 programs are available.



Inverse



Polar Coordinates Calculation



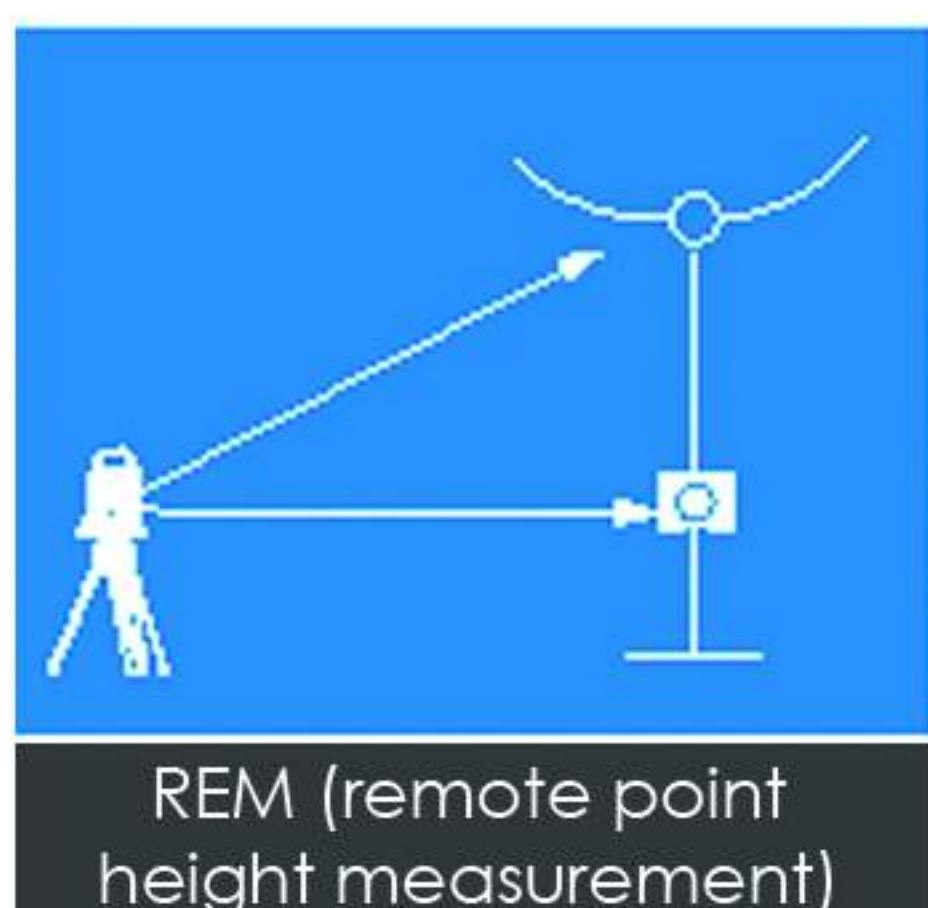
Repetition Angle Measurement



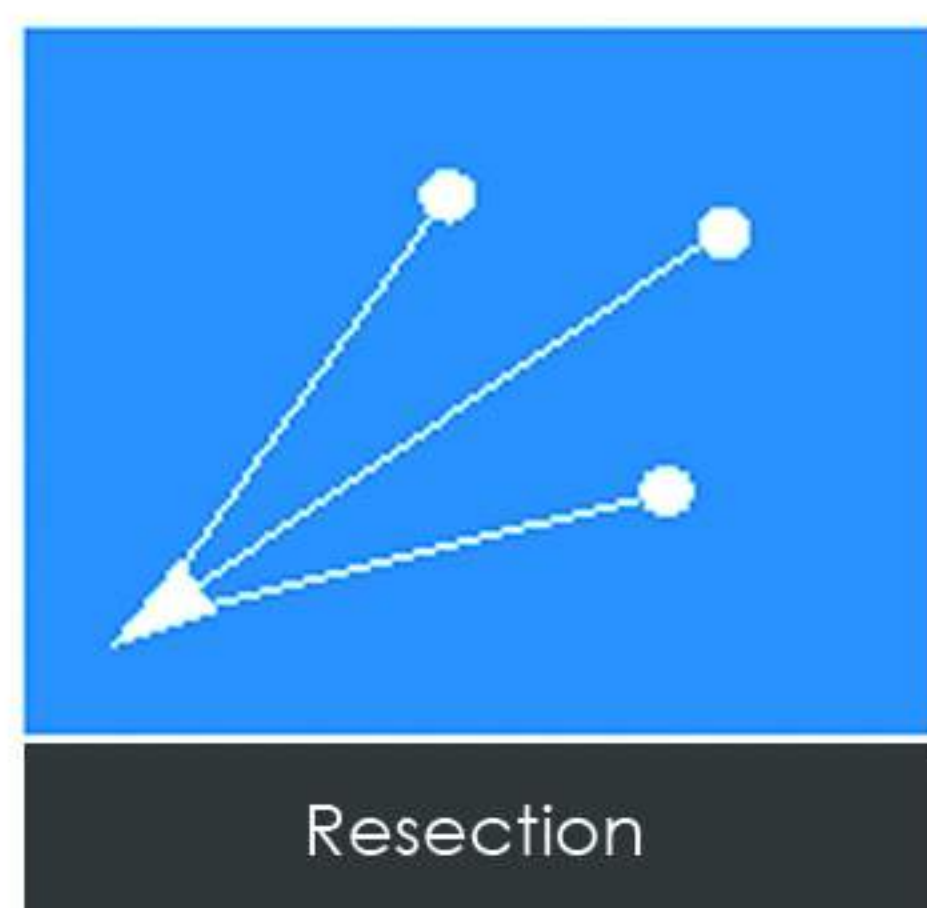
Arc Staking Out Measurement



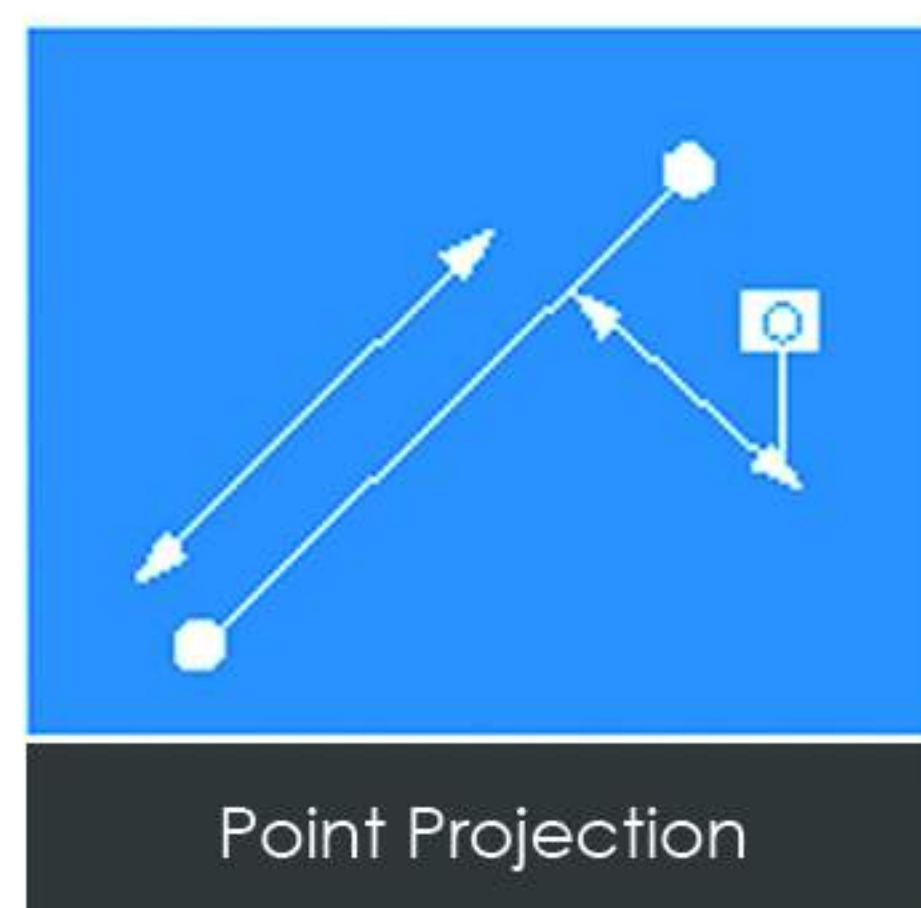
Road Staking Out Measurement



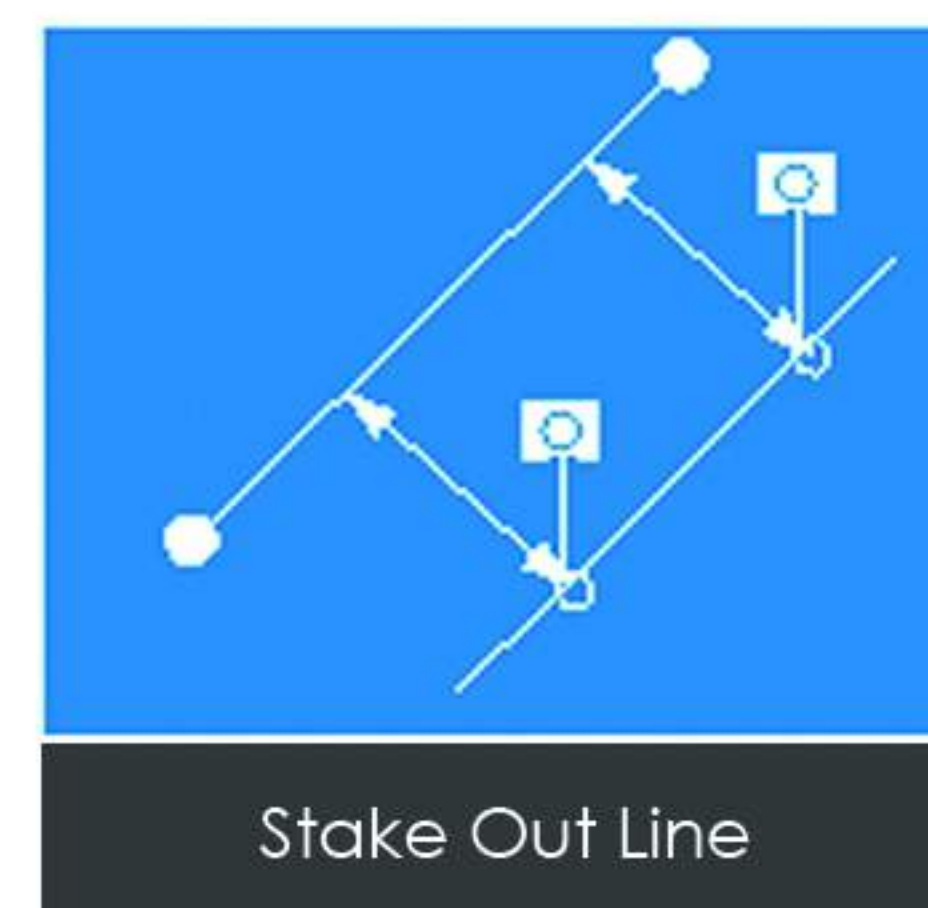
REM (remote point height measurement)



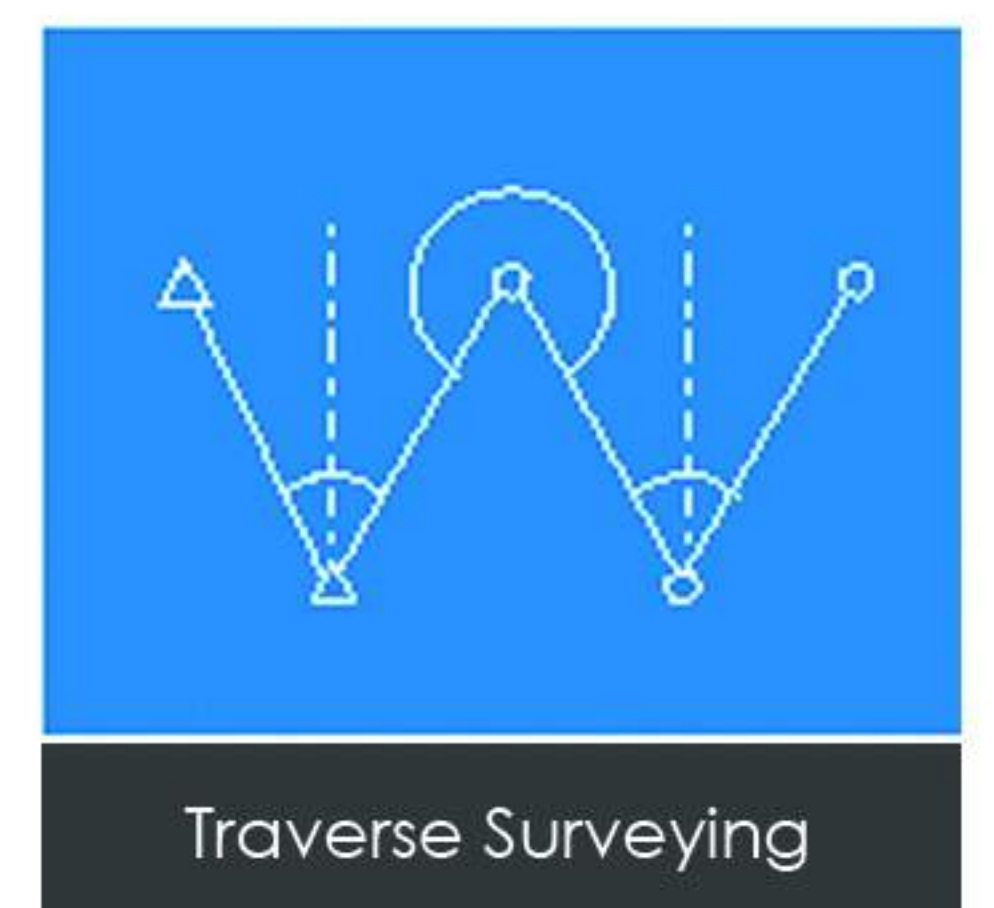
Resection



Point Projection



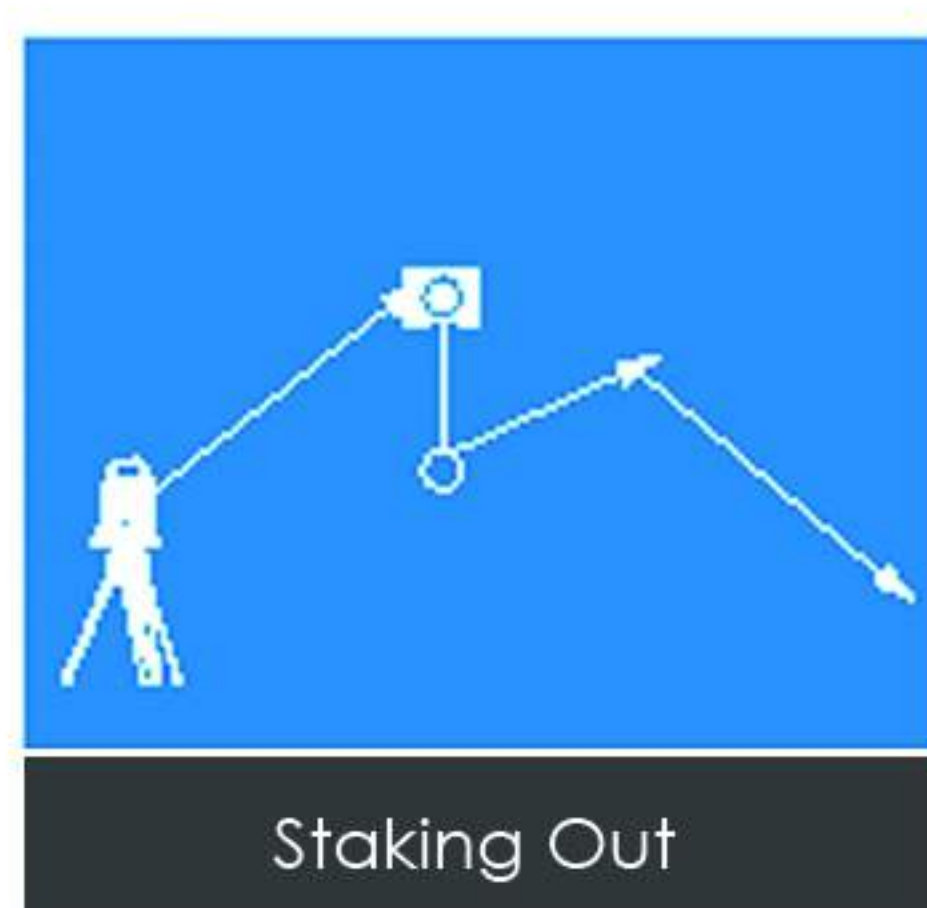
Stake Out Line



Traverse Surveying



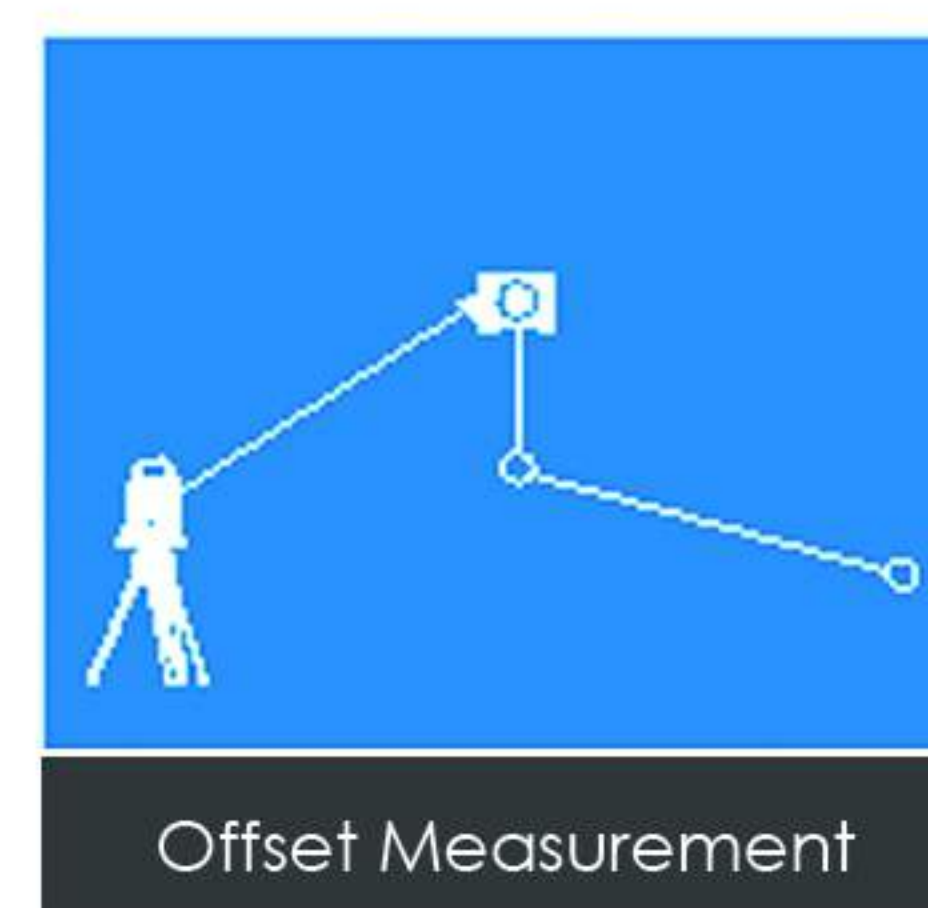
Coordinates Calculation



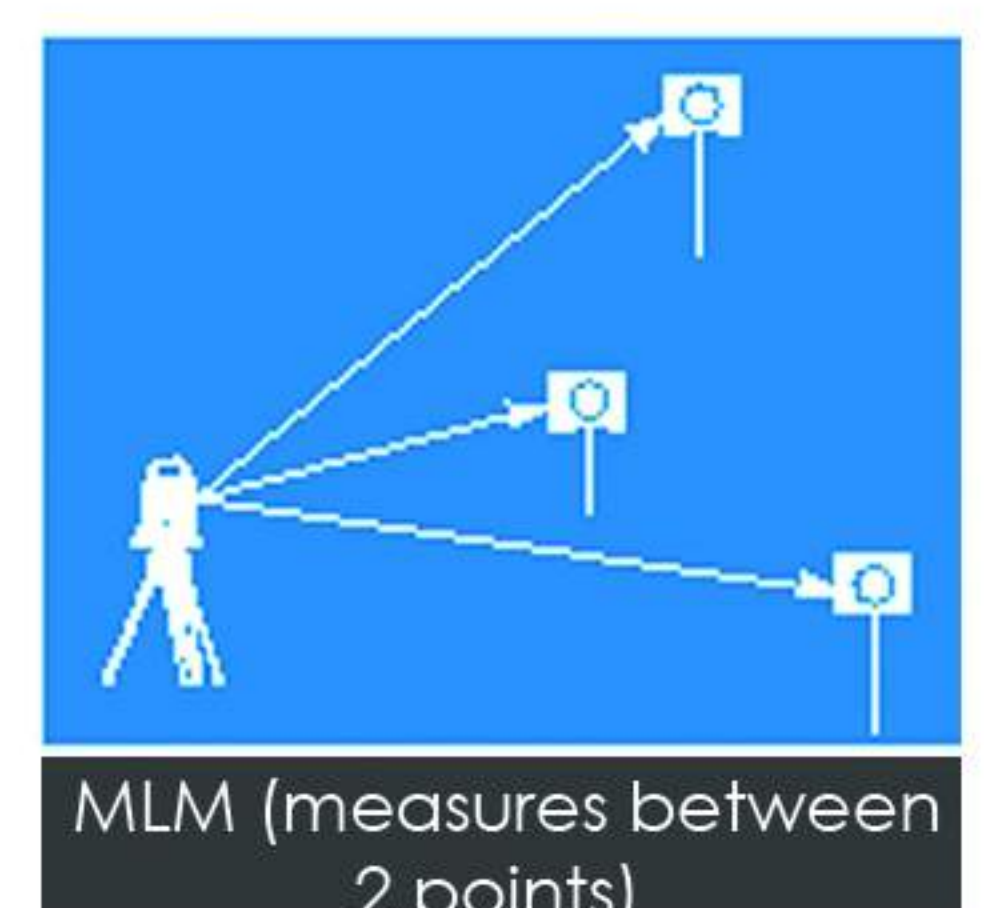
Staking Out



Area Calculation



Offset Measurement



MLM (measures between 2 points)



# R15 TECHNICAL FEATURES

## ANGLE MEASUREMENT

Accuracy <sup>1</sup>	2"
Reading system	Absolute encoder
	1" /5" /10"
Display Resolution (selectable)	0.0002g/0.001g/0.002g 0.005mil/0.02mil/0.05mil
Angle Units	DEG 360°/GON 400/MIL 6.400

## TELESCOPE

Magnification/ Field of view	30x/1°30'
Tube length	156 mm
Minimum focus distance	1.0 m (3.26 ft)
Reticle	10 brightness levels adjustable
Objective aperture	φ 45 mm
Laser pointer	Red light, coaxial

## TILT SENSOR

Type	Electronic, dual-axis
Compensation range/accuracy	± 3.0°/1"

## DISTANCE MEASUREMENT RANGE<sup>2</sup>

Standard mode prism	3.000 m <sup>3</sup>
Long mode prism	5.000 m <sup>4</sup>
Reflective sheet (6cm x 6cm)	800 m <sup>4</sup>
Reflectorless <sup>5</sup>	Up to 600 m <sup>4</sup>

## DISTANCE MEASUREMENT ACCURACY<sup>6</sup>

Standard mode prism	2 mm + 2 ppm
Long mode prism	2 mm + 2.5 ppm
Reflective sheet (6cm x 6cm)	3 mm + 2 ppm
Reflectorless	3 mm + 2 ppm

## MEASUREMENT TIME

Standard mode/Prism (Tracking/Fast/Fine)	0.4/0.6/1.0 sec
Reflectorless	1.5÷5 sec

## DISTANCE MEASUREMENT

Distance Units	m/US ft/INT ft
Display Resolution (selectable)	0.0001m/0.001m 0.001ft/0.01ft

## LASER PLUMMET

Laser type	635nm semiconductor laser
Accuracy	1mm/1.5 m
Spot	± 1.5mm/1.5 m

## 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	IP55

## PHYSICAL SPECIFICATION

Dimensions	202 x 197 x 345 mm
Weight including battery and tribrach	5.5 Kg

## POWER

Battery Voltage/Capacity	7.4V/3.400mAh Li-ion
Operating time (angle measurement)	Up to 24 hours
Operating time (distance meas. every 30 sec)	Up to 12 hours
Operating time (angle + distance meas.)	Up to 10 hours
Battery charger	110/220V, charging time 4h

## OTHER SPECIFICATIONS

Display/Keyboard	Two sides, LCD 96x160 Dots/Alphanumeric
Memory	120.000 points SD card (max 16Gb)
Interface	RS-232C/mini USB/SD card/ Bluetooth
Sensor	Temperature/Pressure

## ON BOARD FIELD APPLICATION PROGRAMS

Data recording and management, Stake out, Area, Offset, Traverse, Inverse, Point projection, MLM, REM, Resection, Line stake out, Arc stake out, Polarize, Repeat measure, Road calculation

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

- 1 Standard deviation based on ISO 17123-3
- 2 Good condition: no haze, visibility about 40km, no heat shimmer, breeze.
- 3 Class 1
- 4 Class 3R
- 5 Under optimal conditions on good surface
- 6 Standard deviation based on ISO 17123-4



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