

SOKKIA



SRX POWERED
BY YOUR
IMAGINATION



A surveying total station is mounted on a yellow tripod in a field of tall grass. The background features a range of mountains under a dramatic, cloudy sky at sunset or sunrise. The text is overlaid on the image.

**The Ultimate in Remote Control
Flagship Total Station SRX**

SRX

SRX

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Revolutionary Remote Control Concept

The unique **SRX On-Demand Remote Control System** revolutionizes the way you survey with total stations.

It eliminates the drawbacks of previous systems which were often stressful and time-consuming.

- Minimize downtime during target search and lock.
- Instant recovery from accidental sighting of undesired reflective objects.
- No more worrying about line-of-sight even while tracking the target.

SRX is fast, dependable, and gives you unheralded surveying freedom.

■ On-Demand Remote Control System

The On-Demand Remote Control System is comprised of the prism-side RC-Controller and an RC-Detector in the SRX handle.

The RC-Controller emits a laser fan beam that is detected by the RC-Detector. SRX quickly rotates in the direction of the prism, auto-points and starts measurement right away.



** Red fan beam is for explanation purposes only. The actual search beam is an eye-safe Class 1 invisible laser.*

■ SDR Data Collection Software

SDR is a versatile data collection software package for prism-side SRX control. SDR provides full support for all total station measurements and calculations from as-built surveys to setting-out.



Offers Unprecedented Freedom and Productivity

■ Fast Search and Lock

Simply press the key on prism-side data collector. The intelligent RC-Controller commands SRX to rotate in the shortest direction and the SRX quickly detects the search beam from the RC-Controller for a smooth prism lock.



■ Focus on Where You're Going

With SRX, you can smoothly continue measurement even if buildings, trees or passing traffic interrupt the line of sight. Even the roughest terrain poses no problem for SRX. All you need to do is pay attention to your footing and SRX will take care of the rest. If prism lock should be lost, press the measurement key and the RC-Controller automatically calls the SRX, allowing you to recover the target lock without missing a beat.



■ False Sighting Recovery

If SRX gets caught sighting another reflective object, the on-demand remote control system quickly calls it back to the prism. Recovery and measurement are done at the push of a button.



■ Dramatically Improve Setting-Out Efficiency

- SRX in combination with the On-Demand Remote Control system dramatically improves setting-out efficiency.
- Using SRX Auto-Tracking, direction and distances are graphically and numerically displayed on the prism-side data collector for real-time point navigation.
- Speed up operation using the Guide Light for rough lateral positioning. Setting-out efficiency can also be improved using the SRX Auto-Pointing function.



Range pole, RC-Controller and ATP1



Pin pole and RC Handle

SRX

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State-of-the-Art Technology for Maxim

■ RED-tech EX

High Precision Reflectorless Measurement Using Revolutionary Digital Signal Processing Technology

RED-tech EDMs are acclaimed for pinpoint accuracy using an ultra-narrow red laser beam and for the flexibility to measure from the industry's shortest distance of 30cm (1ft.).

SRX features RED-tech EX, the latest in SOKKIA's innovative EDM technology. It performs fast, stable reflectorless measurements up to 500m (1,640ft.) in daylight conditions. Further refined signal processing technology offers greater stability and less constraints.

RED-tech EX performs accurate reflectorless measurement of building corners, telephone/electrical wires, manholes, and even through fences. Using prisms RED-tech EX can measure up to 10,000m (32,800ft.) and 500m (1,640ft.) with convenient reflective sheet targets.



RED-tech EX 30cm \longleftrightarrow 500m



■ Single Optimized Beam

RED-tech EX uses only one laser beam for distance measurement and pointing, meaning it exactly measures the red laser point. The laser beam diameter and output level are automatically optimized according to the target type providing stability and safety like you have never experienced before.

■ Enhanced Angle Measurement System

SRX features further refined absolute encoders based on original RAB (Random Bi-directional) Code technology developed for digital levels, making more reliable angle measurement possible. SRX is available in 1", 2", 3" and 5" models. SRX1 and SRX2 models are equipped with an innovative IACS (Independent Angle Calibration System) technology to ensure a lifetime of dependability.

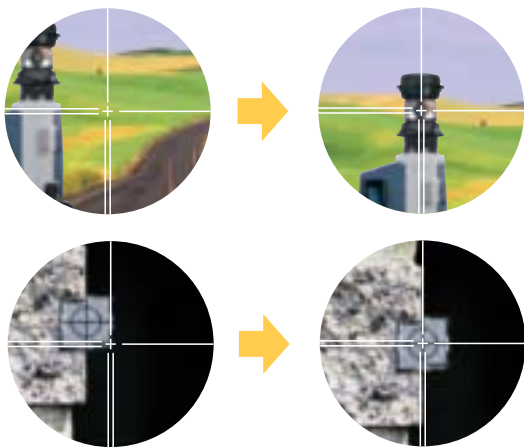


um Accuracy, Reliability and Flexibility



■ Fast, Accurate Tracking and Pointing

High speed, intelligent signal and image processing technology was developed exclusively for SRX. Accurate results with high repeatability are quickly obtained using both Auto-Tracking and Auto-Pointing modes. Select sighting accuracy and speed using "Rapid" and "Fine" measurement options. Fine mode forces measurement to the center of a stable target achieving accurate results by avoiding measurement while shaking, one of the drawbacks to other tracking and sighting systems. Auto-Pointing can also be performed using reflective sheet targets.



■ Completely Cable-Free

The RC-PR3 RC-Controller creates a 100% wireless link* between SRX, RC-PR3 and the data collector. License-free Class 1 *Bluetooth*® technology is employed for wireless communications up to 300m (980ft.).

* When using SRX handles RC-TS3 or H-BT1.



■ RC-PR3 RC-Controller

RC-PR3 incorporates a search fan beam emitter, a directional sensor, a *Bluetooth* wireless unit and attachments for prisms, poles and RC-Handle. RC-PR3 monitors the movement of prism pole with a built-in directional sensor and commands SRX to rotate in shorter direction to the prism. In combination with a wide search beam, SRX acquires prism lock with unprecedented speed and ease. The search beam is an eye-safe Class 1 invisible laser.

■ Unique Pole System for Unmatched Flexibility

Freely configure the prism, RC-Controller and data collector using range poles and pin poles to create your own pole system.

Pin Pole and RC-Handle for Highest Accuracy

- Pin poles reduce the prism height to as low as 10cm (4in.). Achieve the highest accuracy by reducing the error from wobbling poles.
- Comfortably hold the pole and take measurements with the thumb-operated trigger key on the RC-Handle.



ATP1 360° Prism

No matter which way you sight it, SOKKIA's unique ATP1 360° prism plays an important role in high-precision measurement by minimizing sighting error. The focally aligned 6-piece ATP1 offers the industry's best accuracy.

SRX

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Advanced Functionality for Unparalleled

■ Auto-Tracking and Auto-Pointing Models

SRX is available in Auto-Tracking and Auto-Pointing models. An Auto-Pointing model can be upgraded to a fully functional Auto-Tracking model.

■ Handle Variations



Function \ Handle	RC-TS3	RC-TS3A	H-BT1	H-BC1
Bluetooth Unit	Yes	—	Yes	—
RC-Detector	Yes	Yes	—	—

■ High Performance Telescope

SOKKIA's advanced optics technology provides unparalleled brightness and sharpness. SRX offers 2.5" telescope resolving power.



■ Easy to See Guide Light Unit

SOKKIA's guide light unit assists in setting out measurements. It consists of two different color LEDs emitted from a single aperture. The lateral position of a prism can be easily determined at both long and short ranges. A special flashing pattern is also included to assist users with color weakness.



ed Productivity

■ Rechargeable Li-ion Battery

The battery compartment is located for easy-access to make battery replacement effortless. SRX comes with two rechargeable large capacity Li-ion batteries as standard. A long-life external battery is available as an option.*



* Refer to the separate "Equipment List" for external battery details.

■ Jog Dials / Trigger Key

Jog dials have a comfortable finger fit and change instrument rotation speed according to how fast the dials are turned. A handy trigger key lets you take a measurement without taking your eye from the telescope.



■ Color Display / Illuminated Keyboard

SRX features a color LCD touch screen display with high angle visibility and adjustable contrast for maximum visibility. The full alphanumeric keyboard has concave keys that can be easily pressed by gloved fingertip or with the stylus. Fully illuminated display and keyboard enable the operation under dim or dark conditions.



■ Environmental Protection

Featuring advanced protection against dust and water, SRX is able to withstand harsh environmental conditions. IP64 rating is the highest among existing motorized total stations.

The International Electrotechnical Commission standard IEC 60529 describes a system for classifying degrees of protection provided by enclosures of electrical equipment. The IP Code consists of the letters IP and two numerals. Larger numbers represent greater levels of protection.

Protection against ingress of solid foreign objects
Highest level: 6
7 levels: 0 to 6.
X: unspecified.



Protection against ingress of water
Highest level: 8
9 levels: 0 to 8.
X: unspecified.

■ MULTIPLE DATA INTERFACES

Multiple data interfaces provide seamless data handling and transmission for a variety of file types.

CompactFlash Card Slot

USB Type A Port

USB Type miniB Port



CompactFlash Card Slot

Support for Type II cards up to 1GB. SD cards are supported using an adapter (up to 1GB). CompactFlash card style communication cards are also supported.

USB Port

Up to 1GB FAT32 format USB flash memory is supported. A USB card reader can be used to further broaden useable media possibilities.

Waterproof Multi Port

Data transmission and external power connection are available in a single waterproof port. The port boasts an environmental rating of IP64 with data and battery cables connected.



SFX

SRX includes SOKKIA's original SFX technology for convenient data transfer to anywhere in the world using an internet-capable mobile phone or a CompactFlash modem.



Standard Accessories

BDC58 rechargeable Li-ion battery (2 pcs.) ● CDC68 quick charger with EDC113A/EDC113B/EDC113C power cable ● CP9 Tubular compass ● Lens cap ● Lens hood ● Plumb bob ● Tool kit ● Wiping cloth ● Vinyl cover ● CD-ROM* ● Stylus (2 pcs.) ● Operator's manual ● Quick manual ● Laser caution sign board (Class 3R) ● Carrying Case and shoulder strap ● Protective film for LCD screen

* CD-ROM includes SDR Software Reference Manual, SFX Dialup Program Explanations, and Quick Manual.

Optional Accessories

Please refer to the separate "Equipment List" for detailed information about options.

SRX

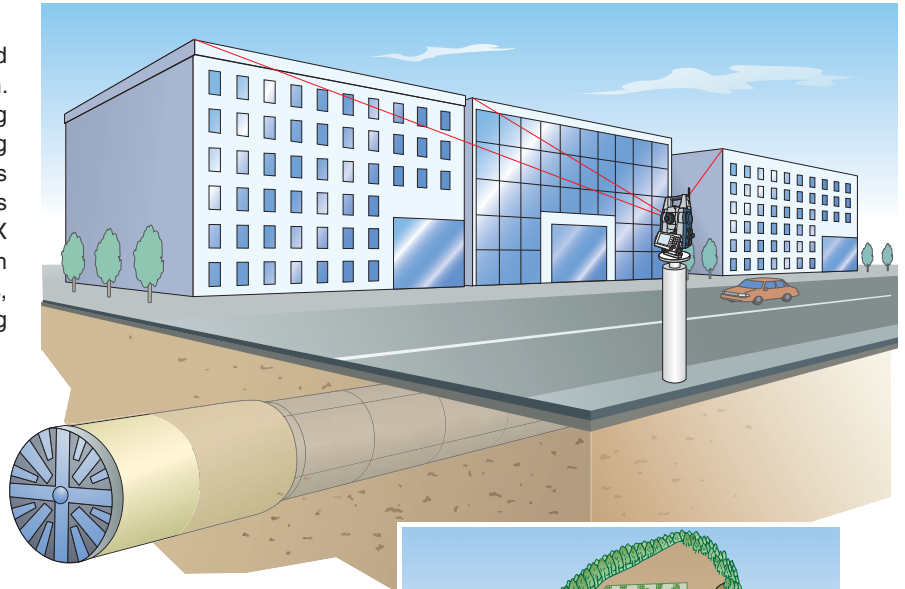
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Advanced Software Provides Field Su

Exclusive Programs for Automated Measurement

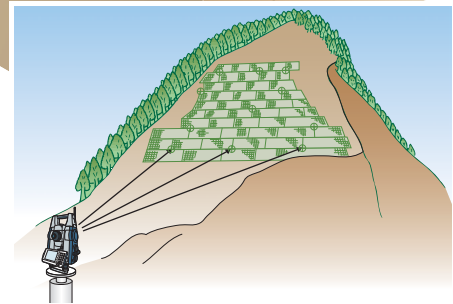
■ Periodic Monitoring Program*

Use SRX to monitor the deformation and displacement of buildings and natural terrain. Perform automatic monitoring by configuring the starting and stopping times and monitoring intervals. A time-based deformation graph is shown on the instrument display. This function is especially effective for disaster prevention. SRX detects the movement of large structures both existing and under construction such as bridges, underpasses, tunnels, buildings, dams, mining sites and slope faces.



■ Mesh-scan Survey*

Mesh-scan survey creates a mesh over a designated observation area and automatically measures the intersecting points (mesh points) at designated intervals. Select between two measurement modes depending on the jobsite conditions for surface observation of developed land, cliff faces and road surfaces.



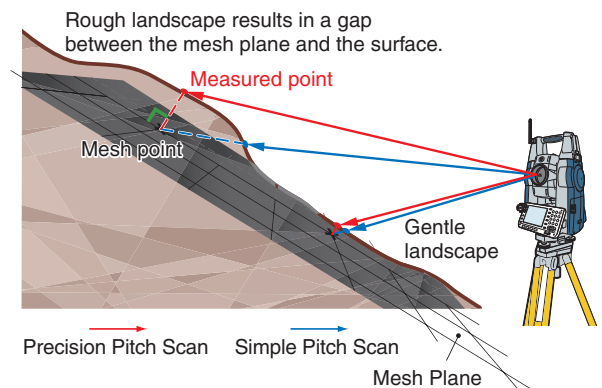
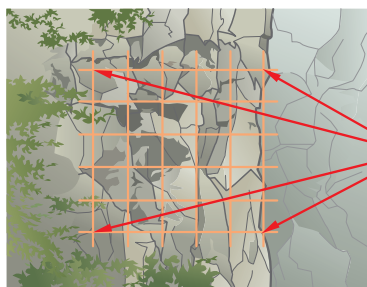
● Simple Pitch Scan

Simple Pitch Scan measures the aspects of the mesh points. This function is effective for gentle landscapes where the mesh plane is close to the earth's surface.

● Precision Pitch Scan

Precision Pitch Scan measures the mesh plane with greater accuracy. SRX measures surface points that are perpendicular to the mesh plane. This function is effective for performing accurate measurement on rough jobsites and creating cross sectional views.

* "Periodic Monitoring" and "Mesh-scan Survey" programs are available with SRX onboard software only.



Support for all Operations

SDR Onboard Program

Built on knowledge from surveyors and legacy of SOKKIA electronic fieldbooks, SDR program makes SRX a powerful tool for surveying, data collection and laying out. This Windows CE-based data collection software increases functionality with an easy-to-follow workflow, customizable settings and a graphic interface. SDR program offers a full range of job file handling capacity, user-definable feature code lists with point-sorting capabilities, easy setting-out guidance and the ability to export/import data with industry standard formats.

SDR Program offers an integrated solution to a wide variety of surveying tasks.

SURV	COGO	ROAD
Topography	Set Out Cords	Select Road
Traverse Adjustment	Set Out Line	Set Out Road
Resection	Set Out Arc	Set Out Road Surface
Set Collection	Resection	Road Topo
Set Review	Inverse	Cross-Section Survey
Building Face Survey	Areas	Define Road
Collimation	Intersections	Review Road
Remote Elevation	Point Projection	Define Template
Keyboard Input	Taping from Baseline	Review Template
Periodic Monitoring	Transformation	
Mesh-Scan Survey	Keyboard Input	

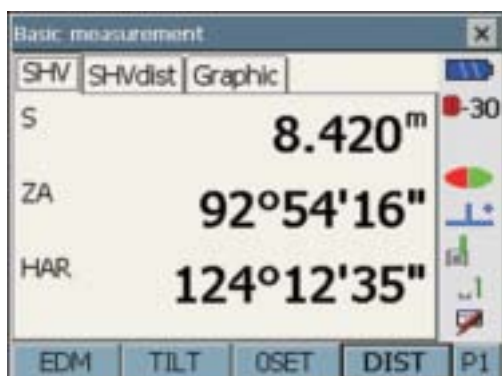
Status Bar

See the instrument status at a glance. Quickly select and configure instrument settings with a touch of the stylus or your finger.



BASIC

Use SRX in basic mode to take basic total station measurements.



FUNC

The Functions menu is used to set up or start survey jobs and controls SDR program settings.

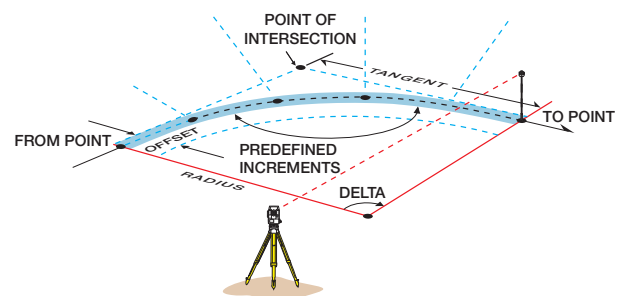


Traverse Adjustment

Traverse adjustment allows you to specify a sequence of stations through which a traverse can be calculated and adjusted. Observations do not need to be in order of the traverse route.

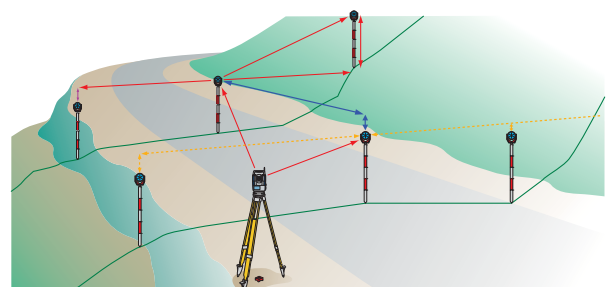
Set Out Arc

Set Out Arc provides an arc calculator to define curves from almost any combination of parameters. Points along the arc can be calculated and directly set out.



Road Topo

Perform a topographical survey relative to a defined road.



SRX

SRX1 SRX2 SRX3 SRX5

SPECIFICATIONS

Model		SRX1	SRX2	SRX3	SRX5
Angle measurement		Absolute rotary encoder scanning. Both circles adopt diametrical detection.			
Display resolutions (selectable)	Degree	0.5' / 1"		1' / 5"	
	Gon	0.0001 / 0.0002gon		0.0002 / 0.001gon	
	Mil	0.002 / 0.005mil		0.005 / 0.02mil	
Accuracy (ISO17123-3:2001)	H&V	1' / 0.3mgon / 0.005mil	2' / 0.6mgon / 0.01mil	3' / 1mgon / 0.015mil	5' / 1.5mgon / 0.025mil
Automatic dual-axis compensator		Dual-axis liquid tilt sensor, Working range $\pm 4'$ ($\pm 74\text{mg}$, $\pm 1.18\text{mi}$)			
Distance measurement		Modulated laser, phase comparison method with red laser diode.			
Measuring range	Reflectorless*1	0.3 to 500m (1 to 1,640ft.)			
	With reflective sheet target	1.3 to 500m (4.3 to 1,640ft.) with RS90N-K (90x90mm) reflective sheet			
	With ATP1 360°Prism	1.3 to 1,000m (4.3 to 3,280ft.) With ATP1 360°Prism			
	With 1 AP prism	1.3 to 5,000m (4.3 to 16,400ft.) 1.3 to 6,000m (4.3 to 19,680ft.) under good conditions			
Accuracy (D=measuring distance, unit:mm) (ISO17123-4:2001)	Reflectorless*1	(3 + 2ppm x D)mm : 0.3 to 200m (1 to 650ft.) (5 + 10ppm x D)mm : over 200m to 350m (over 650 to 1,140ft.) (10 + 10ppm x D)mm : over 350m to 500m (over 1,140 to 1,640ft.)			
	With reflective sheet target	(3 + 2ppm x D)mm			
	With CPS12 precision prism system	(1.5 + 2ppm x D)mm			
	With prism	(2 + 2ppm x D)mm			
	With prism	(2 + 2ppm x D)mm			
Auto-tracking & Auto-pointing*2		Pulse laser transmitter and CCD detector integrated in telescope with co-axial optics			
Auto-tracking range		500m (1,640ft.)			
Auto-pointing range	With ATP1 360° Prism	2 to 600m (6.5 to 1,960ft.)			
	With 1 AP prism	2 to 1,000m (6.5 to 3,280ft.)			
On-Demand Remote Control System					
Working range*3 (slope distance)	Shortest distance	2m (6.6ft.) / Horizontal distance: 1.8m (5.9ft.)			
	Maximum distance	300m (980ft.)			

*1 With Kodak Gray Card White side (90% reflective). Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions.

*2 Auto-tracking function is not available with "Auto-Pointing" models.

*3 Range depends on atmospheric conditions and type of wireless modem.



LASER RADIATION
AVOID DIRECT EYE EXPOSURE
 MAX 5mW LD 635-690nm
 CLASS 3R LASER PRODUCT
 IEC 60825-1 Am.2 2001



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