

SOKKIA

SET6F

TOTAL STATION





Built to handle tough field conditions

Made for mobility

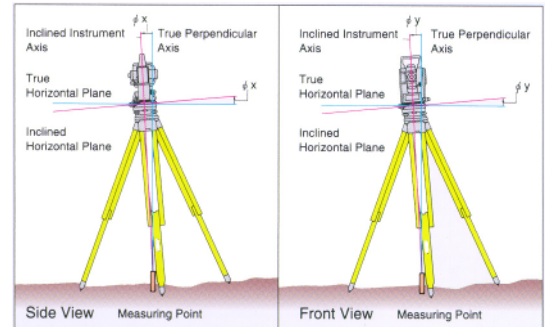
Thanks to Sokkia's extremely portable, lightweight design, changing field positions with the SET6F takes a minimum of effort. Total carrying weight—including instrument, tribrach, battery and durable hard case—is under 8kg, the lightest in its class. And on long days trekking over unpredictable terrain, there's probably nothing your back and arms will appreciate more.



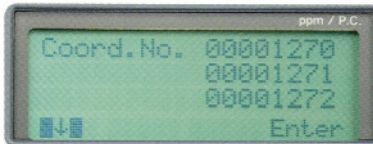
Accurate dual-axis compensation—the first in its class

Sokkia's affordable SET6F now gives you the superior accuracy of dual-axis compensation, a luxury normally available only on more expensive models. As the first and only product in its price range to include this powerful, easy-to-use feature, the SET6F helps you meet your most exacting standards.

Even on uneven ground, you can rely on horizontal and vertical angle readings that are virtually error free. Deviation of the standing axis from the perpendicular is automatically compensated for on both the X and Y axes, and corrections for horizontal and vertical circle readings are automatically computed and applied.



100 preset coordinates boost efficiency

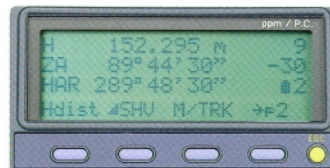


For maximum productivity in the field, you can preset up to 100 coordinate points defining instrument station, backlight station, known station and setting-out points—before you leave your office. Stored data can be conveniently recalled and displayed at any time as well as transmitted to an external device.

If you need to expand your capacity to gather field data, just add Sokkia's SDR33/31 Electronic Field Book, the sophisticated option that makes data collection fast and easy.

Custom keyboard and screen setup get the job done fast

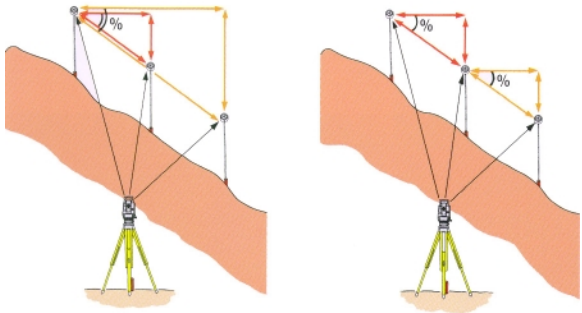
By offering the ultimate in keyboard flexibility—any function can be assigned to any screen of any module—the SET6F makes your time in the field more efficient than ever. A powerful "softkey" feature lets you assign frequently used functions to designated keys, and eliminate unused functions from the screen entirely. A large display further ensures quick recognition and easy operation.



- Allocate any function to any screen
- Create dedicated work menus for each job

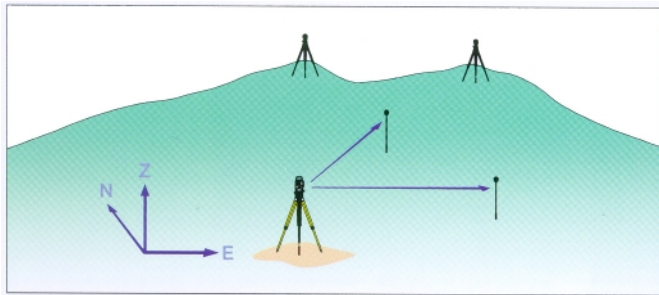
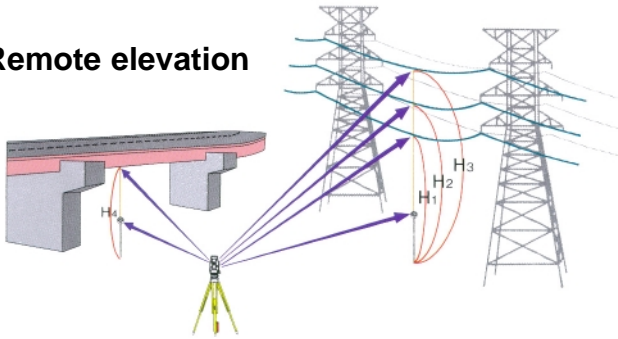
- Eliminate non-essential function displays
- Rearrange your keyboard at will

Sophisticated software handles all your measuring needs

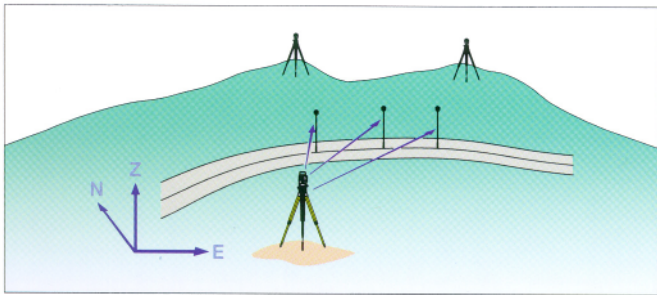


- **Missing line**

- **Remote elevation**



- **Three-dimensional coordinates**



- **Setting out**

- **Azimuth angle setting**

Using the coordinates of the instrument station and backlight point, the horizontal circle can be set to an azimuth on the backlight and the azimuth calculated automatically.

- **Resection**

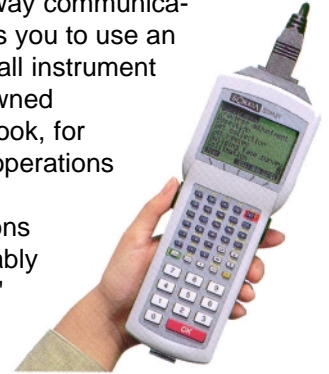
Based on the measured angles and distances of two known points, the SET6F calculates the coordinate value of the instrument station and the azimuth of the second target point.

- **Horizontal angle and distance averaging**

Maximize your productivity

- **Easy expansion via two-way data port**

Thanks to its advanced two-way communications port, the SET6F enables you to use an external controller to access all instrument functions. Add Sokkia's renowned SDR33/31 Electronic Field Book, for example, and complex field operations such as traverse adjustment, intersection or area calculations and roading become remarkably simple. Our popular "roading" function lets you load horizontal and vertical alignment and template data, select a point to set out and then just touch a button—angles and distances are calculated automatically.



- **Resume function remembers where you left off**

When you turn off the power, the SET6F remembers your preset points and other settings—for an entire week. To save time and effort, it even returns to your last operation mode when you switch it back on.

- **Convenient rechargeable battery**



A powerful pocket-sized battery lets you perform up to 840 angle and distance measurements on a single charge. An optional backup battery provides five times that capacity.



SET6F

SET6F Specifications

Telescope		Fully transiting, coaxial EDM transmitting and receiving optics integrated in the theodolite telescope.
Length		165mm (6.5in)
Objective aperture		45mm (1.8in)
Magnification, Image		26x, Erect
Resolving power		3.5"
Field of view		1°30' (26m/1,000m)
Minimum focus		1.3m (4.3ft)
Reticle illumination		Bright or Dim settings (Selectable with parameter)
Angle measurement		Photoelectric incremental rotary encoder scanning. Both circles adopt diametrical detection and are provided with absolute 0 index points
Display resolution	H&V	5", 1 mgon, 0.02mil/1", 0.2mgon, 0.005mil selectable
Angle unit	H&V	Degree / Gon / Mil
Accuracy (standard deviation)	H&V	7" (2.2mgon / 0.03mil) according to DIN 18723
Measuring time	H&V	Less than 0.5sec. continuous
Automatic dual-axis compensator		Selectable ON (V&H / V only) / OFF
	Type	Liquid Dual-axis tilt sensor
	Display resolution	According to selection of display resolution
	Range of compensation	±3' (±55mgon), Out of range warning: Message displayed
Display mode	H	Clockwise / Counterclockwise / Average of accumulation in clockwise direction
	V	0 set / Hold (Selectable with keyboard) Zenith 0° / Horizontal 0° / Horizontal 0±90° (Selectable with parameter) Slope in% (Selectable with keyboard)
Distance measurement		Electro-optical with modulated infrared light
Measuring range (Slope distance)		A. Average conditions: slight haze, visibility about 20 km(12miles), sunny periods, weak scintillation G. Good conditions: no haze, visibility about 40km(25miles), overcast, no scintillation
With CP01 compact prism		A. 1.3m(4.3ft.) to 500m (1,800ft.)
With one AP01 prism		A. 1.3m(4.3ft.) to 700m (2,300ft.) G. 1.3m(4.3ft.) to 900m (2,900ft.)
With three AP01 prisms		A. 1.3m(4.3ft.) to 1,000m (3,300ft.) G. 1.3m(4.3ft.) to 1,200m (3,900ft.) Maximum range is achieved by using Sokkia CP01 Compact prism and AP prism system
Display resolution		Fine and coarse measurements: 0.001m (0.01ft.), Tracking measurement: 0.01m (0.1ft.) Fine and average measurement (2~9 times): 0.0001 m (0.001ft.)
Distance unit		Meters or feet. selectable
Accuracy(standard deviation)	Fine measurement	±(5+3ppmxD)mm D=measuring distance unit=mm
Measuring time(slope distance)	Fine measurement	Every 3.0sec.(initial meas. 4.1sec.)
	Coarse measurement	1.4sec.
	Tracking measurement	Every 0.4sec.(initial meas. 1.4sec.)
Modulation frequencies		2 frequencies
Unambiguous measuring range		1999.999m (6,561.66ft)
Atmospheric correction	Input range	The factor (ppm) automatically calculated and applied by keying in temperature (°C or °F) and pressure (hPa, mmHg, inchHg) within the range of -30°C to +80°C and 500 hPa to 1,400 hPa
	PPM range	-499 to +499 ppm (1 ppm steps) -99 to 0mm (1 mm steps)
Prism constant correction		ON/OFF selectable with parameter
Refraction & Earth curvature correction		ON/OFF selectable with parameter
Audio target acquisition		ON/OFF selectable with parameter
General		
Display		LCD dot matrix display (20 characters x 4 lines)
Keyboard		5 softkeys, Free allocations of functions
Sensitivity of levels	Plate level	60"/2mm
	Circular level	10"/2mm (in tribrach)
Optical plummet		In alidade, Image: Erect, Magnification: 3x, Minimum focus: 0.5m (1.6ft.)
Standing axis		Single
Self-diagnostic function		Provided
Automatic power cut-off		30 minutes after operation, ON/OFF selectable
Data storage		100 preset coordinate data points can be stored in an internal memory
Interface		Asynchronous serial, RS-232C compatible
2-way communication		Provided
Resume function		Selectable ON/OFF with parameter, The previous mode is recovered after switching on
Operating temperature		-20°C to +50°C (-4°F to 122°F)
Tilting / Trunnion axis height		236mm(9.3inch) from tribrach bottom, 193mm (7.6inch) from tribrach dish
Size with handle and standard battery		150(W) x 165(D) x 353(H)mm (5.9(W)x6.5(D)x13.9(H)inch)
Weight with handle and standard battery		5.2kg(11.5lbs) including BDC25 battery: 230g(8.1oz)
Operating voltage	6V DC	
Power supplies		
Power source		BDC25 Rechargeable Battery Ni-Cd 6V
Working duration at 25°C (77°F)		Distance & angle measurement (Fine & single measurement, Measurement interval = every 30 secs) BDC25: About 7 hours (About 840 points) Optional battery BDC12: About 35 hours (About 4,200 points) Angle measurement only BDC25: About 9 hours Optional battery BDC12: About 45 hours
Charging time		CDC11/11D/11 E: About 15 hours CDC27/31 (option): About 80 minutes

•Standard equipment

SET6F main unit, BDC25 rechargeable battery, EDC19 Battery Charging Adapter, CDC11/11D/11E Charger, CP7 Tubular Compass, carrying case, sun shade, lens cap, plumb bob, vinyl cover, tool kit, operator's manual

Designs and specifications are subject to change without notice.

SOKKIA CO., LTD.

1-1, TOMIGAYA I-CHOME, SHIBUYA-KU, TOKYO, 151 JAPAN

PHONE +81-3-3465 5211 FAX +81-3-346-5203

INTERNATIONAL DEPT. PHONE +81-3-346-5201 FAX +81-3-3465-5202



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