

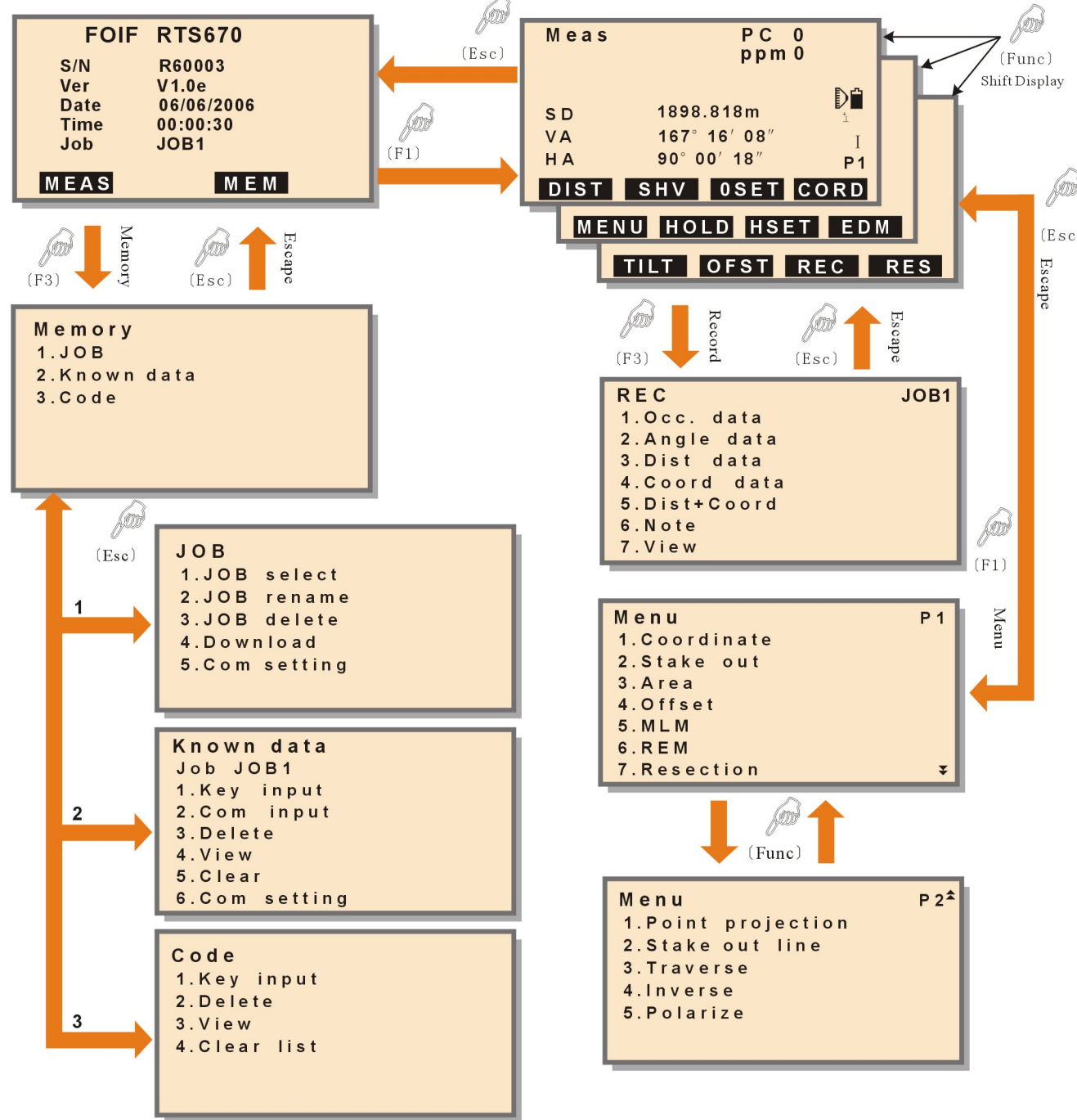
Menu:

RTS 670/680 series Total Station

Specifications

FOIF

RTS 670/680 series Total Station



Items	Model	RTS682(L) ¹	RTS683(L)	RTS685(L)	Items	Model	RTS682(L)	RTS683(L)	RTS685(L)
Telescope					Optical plummet				
Length		156mm			Accuracy		±0.8mm/1.5m		
Image		Erect			Image		Erect		
Objective aperture (EDM)		φ45mm			Magnification		3x		
Magnification		30x			Field of view		4°		
Field of view		1° 20'			Focus range		0.5m ~ ∞		
Resolving power		3.5"			Laser plummet (Factory optional)				
Shortest focus distance		1.1m			Accuracy		±0.8mm/1.5m		
Distance measurement					Laser spot size/intensity				
Measurement range (Good condition *2)					Laser class		Class2/IEC60825-1		
Single prism		1 to 2000m			Laser wave length		635nm		
Three prisms		1 to 2500m			Focus range		0.5m ~ ∞		
Accuracy		2m m+2ppm			Display				
Measuring time		1.7s/0.7s(Fine/Tracking), initial:3s			LCD				
Minimum reading		Fine mode	1mm(0.01ft)		LCD 8lines×24characters				
		Tracking mode	10mm(0.1ft)		Illumination				
					Yes				
Temperature input range		-30℃ ~ +60℃ (1℃ setps)			Power				
Steps		1℃/1°F(auto-correction selectable)			Battery				
					Ni-MH Rechargeable battery				
Pressure input range		510hPa to 1066hPa(1hPa steps)			Output voltage				
Steps		1hPa/1mmHg/0.1inchHg(auto-correction selectable)			7.2V DC				
Prism constant correction		-99.9mm to +99.9mm			Continuous operation time				
Distance unit		m/feet selectable			8 hours, continuous distance/angle measurement 20hour, angle measurement only				
Angle measurement					Charger				
Minimum reading		1" /5" /10" (0.2mgon/1 mgon/2mgon)			FDJ6 (100V to 240V accepted)				
Accuracy ³		2"	3"	5"	Sensors				
Angle unit		360° /400gon/mil selectable			Built-in temperature and pressure sensors				
Compensator					Programs				
Type		Liquid dual axis			NEZ/NEZ Stakeout/Resection/REM/MLM/A-D Stakeout/Point projection Area/Height Resection/Azimuth/Line setting out/NEZ inverse/Offset				
Range		±3'			Others				
Level vial sensitivity					Internal memory				
Plate level vial		30" /2mm			16000 points				
Circular level vial		8" /2mm			Weight(include battery)				
					6kg				
					Dimensions				
					220x184x360mm (WxDxH)				
					Operating temperature				
					-20℃ ~ +50℃				
					I/O				
					RS-232C				
					Water proof				
					IP54 (IEC60529)				

*1 "L" means laser plummet, without "L" means optical plummet
 *2 Good condition: no haze, visibility about 30km
 *3 Standard deviation based on DIN18723



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

★ Models

Absolute encoder:RTS682(L), RTS683(L), RTS685(L)
 Photoelectric incremental encoder:RTS672(L), RTS673(L), RTS675(L)

Press the key [Cnfg]

- Config
- 1.Meas condition
- 2.Inst config
- 3.Inst adjust
- 4.Com setting
- 5.Unit
- 6.Date and time

Press the key [★]

- Inst Config
- 1.Backlight : YES
- 2.LCD contrast : 9
- 3.Reticle intensity : 4
- 4.EDM signal :

FOIF

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RTS670/680 2006.08



RTS 670/680 series Total Station

Applied

RTS670/680 series total station is the FOIF latest Total Station, with convenient memory management function, professional on-board software and new appearance, which made it more reliable and easy to use. It can be widely used for building setting out, road lay out, topography survey and control survey, etc.

Features

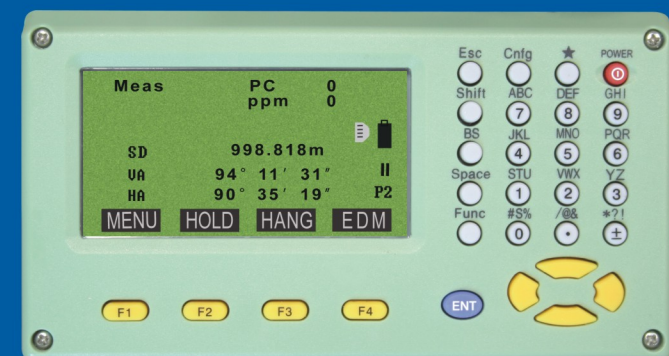
Long Life Battery

With low-power design, the working time is about 8 hours for angle and distance measurement together.



Easy Operation with Alphanumeric Keyboard & Large LCD

The large LCD(240×128 dots) has 8 lines and each line can display 24 characters at same time. Almost all the measured data can be displayed on one screen, you won't need to turn page frequently. There are 4 softkeys, 9 direct keys, 12 alphanumeric keys and 4 navigation keys on each face, they can enable fast and easy operations.



Quick & High Accuracy Distance Measurement

New EDM is used on RTS670/680 series:
Measuring time: 1.7s
Accuracy: ±2mm+2ppm
Shorest focusing distance < 1.1 m



RS-232C



Large Internal Memory

The RTS670/680 series can store 16000 data points, the recorded information for measured point are more versatile.

Two-way Communication

RTS670/680 series can work together with electronic fieldbooks or data collectors.

Laser Plummet(Optional)

It is easy to center, laser intensity and focus are adjustable, the laser spot is clear enough to be seen under any condition.

New On-board Software

The display and structure for 670/680 series software are improved completely, which can provide more easy operations.

Built-in Temperature and Pressure Sensors (Optional)

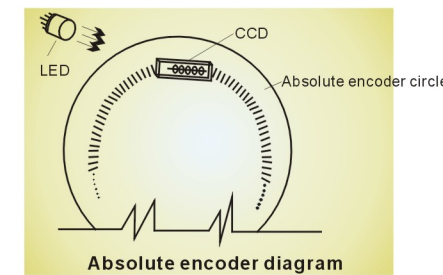
For high-accuracy distance measurement, the changing of pressure and temperature will cause the error for the result. With built-in temperature and atmospheric pressure sensors, RTS670/680 series can observe the conditions and correct the error in real time.

Software Upgrading Via RS-232C

FOIF can offer special program to upgrade the on-board software of RTS670/680 series by PC.

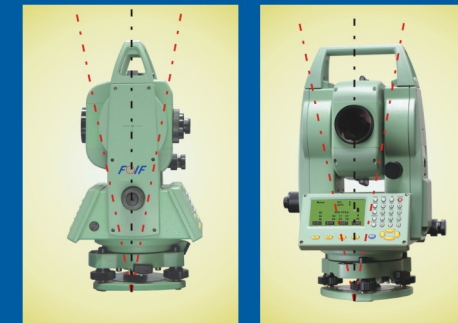
Absolute Encoder (RTS680 series)

RTS680 series are equipped with absolute encoders, you do not need to initial then 0 indexing when power on. With this technology, the horizontal angle can be memorized once power off, so it is unnecessary to set the azimuth again whenever restart the total station.

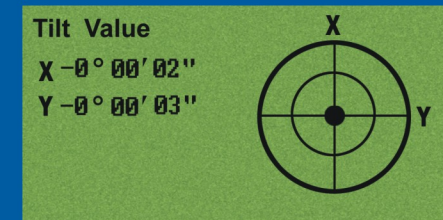


Dual-Axis Compensation

Auto dual-axis compensation can ensure the accurate leveling of total station. In the compensation range 3', although the instrument is tilt, the horizontal and vertical angle can be measured precisely.



Graphic Display for E-level



Integrated programs

RTS670/680 series total station offers many professional programs, including setting out, coordinate measurement, resection, REM, MLM, area, point projection, traverse, offset and so on. And this model total station has the strong functions of memory management and parameters setting, which can make you to run thousands of familiar applications.

<p>NEZ Stake out</p> <p>Angle difference (dHR), distance difference (dHD), and coordinate difference (dX, dY, dZ) can be displayed together on one screen.</p>	<p>NEZ Measurement</p> <p>Point's data can be recorded as angle, coordinate, slope distance, horizontal distance, height difference, instrument height and target height in details.</p>	<p>Resection</p> <p>By setting up the instrument at an unknown point and measuring to at least two (max ten) known points, the coordinates of the instrument can be computed, the results is very reliable.</p>	<p>REM</p> <p>Measure the height of point where a prism cannot be place, such as power lines, overhead cables and bridge, etc.</p>	<p>MLM</p> <p>The horizontal distance, slope distance and height distance of reference point to any point or two adjacent points can be easily measured.</p>
<p>A&D stake out</p> <p>It can be used to set out polar coordinate when the angle and distance are known.</p>	<p>Area</p> <p>The object surface area is calculated and displayed as each target point is measured in turn. It is possible to recall the points from memory to calculate the area.</p>	<p>Point projection</p> <p>It is used for projecting a point onto the reference coordinate system, the coordinate system is defined by two known points.</p>	<p>Z Resection</p> <p>Measuring several known points to calculate and reset Z coordinate of occupied point.</p>	<p>Azimuth measurement</p> <p>The azimuth angle from occupied point to unknown point can be measured conveniently.</p>
<p>Offset/Dist</p> <p>Confirming the target position by measuring the horizontal distance from the target point to the offset point.</p>	<p>Offset/2Dist</p> <p>Confirming the target coordinate by measuring two offset points and entering the horizontal distance from the target point to the second offset point.</p>	<p>Offset/Angle</p> <p>Confirming the target coordinate by measuring the offset point and angle between target point and offset point.</p>	<p>Traverse</p> <p>After moving the instrument, the last occupied station will be took as the current backsight point.</p>	<p>Line stake out</p> <p>Line setting out is used for setting out a required point at a designed distance from the baseline.</p>

Standard Components



Optional Accessories

