

# N40 Series

## Graphic Total Station



- 1"/2" Angle Accuracy, 1000m Reflectorless EDM
- Graphic Display with 3.5 Inches Touch Screen
- Cable-Free Connection by Bluetooth or USB
- EDM Trigger Key
- Auto Instrument Height & Guide Light (\*1)
- Camera for Target Aiming & Recording (\*2)

# Class-leading Performance

## Graphic Display to Boost Your Daily Work

Featuring a easy-to-use O.S with graphical display, N40 series total station enriches your surveying workflow with visual possibility and productivity. With extreme long-range EDM, quadruple-axis compensator, trigger key and powerful onboard applications, it allows you to work quickly and effectively from the first day.



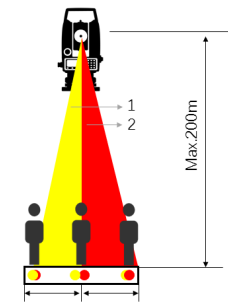
### Advanced Accuracy with Long-Range EDM

Up to 1+1ppm, 1" angle accuracy. Or 2+2ppm with 2" angle accuracy. With 1000m reflectorless range, N40 series total station is a powerful tool for all the surveying jobs.



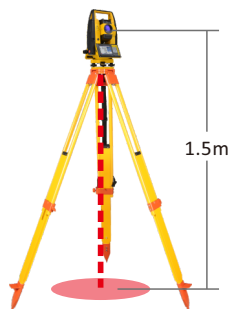
### Trigger Key

The measurement can be taken at any time with just a simple button press by EDM trigger key. You can measure and get the result without taking your eye off the telescope.



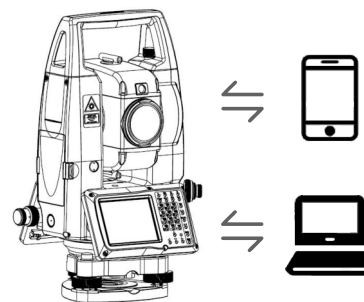
### Guide Light \*1

With red and yellow flash lights, the guide light is an efficient tool, helping to speed up your working when stake out.



### Save Time with Auto Height \*1

With integrated LPDM module on laser plummet, N40 minimizes errors and accelerates the setup process onsite. Auto height enables the operator the get the instrument height with a simple press.



### Versatile Connectivity

Transfer the data by versatile methods, for example SD card, USB or mini USB. It provides a faster connection to your laptop and Android mobile by Bluetooth.

Also you can export the data to data processing software via serial port.

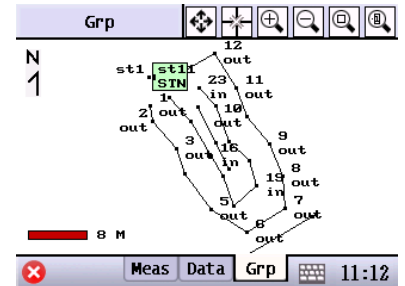


# Powerful Applications

Every N40 total station comes with a complete range of powerful applications, like stake out, area 2D&3D, volume, REM, MLM, offset, road.

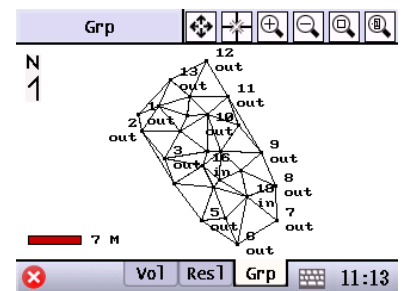
## Graphic Display

With 3.5 inches high-resolution touch screen, each measured point can be linked automatically to generate a sketch intuitively and clearly. The easy-to-use graphical interface makes your job more efficient than ever.



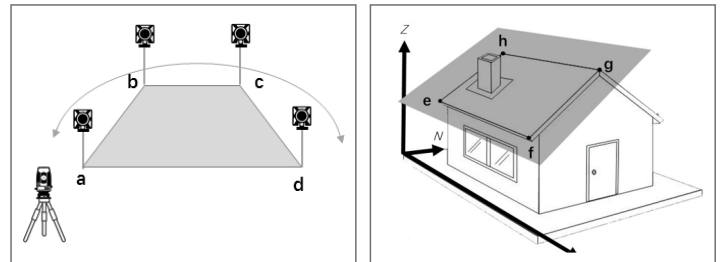
## Volume

It is used to calculate the volume from points which connected by straights. Those points can be measured, selected or inputted in bulk or individually. With graphic display, N40 provides fluent workflow and brilliant readability for your daily tasks.



## Area 2D & 3D

Area program can be projected onto the horizontal plane (2D) or a slope reference plane defined by 3 points (3D), which is widely used in the measurement of inclined surface (e.g. roof) or vertical surface (e.g. billboard).

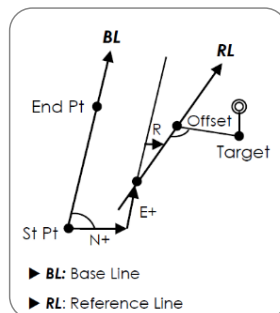


## Stake-Out

Featured electronic compass, a complete solution for every type of stakeout is included in N40 series total station. Stake-out function calculates the required elements to find out the stake-out points from coordinates, angles & distance, alignment, lines and reference lines.

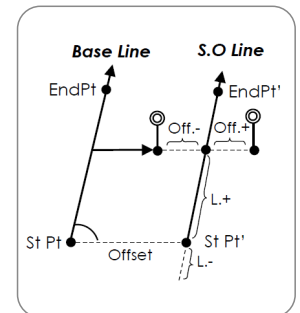
### • Reference Line

It calculates the coordinate of stake-out point by a known base line, which defined by two know points, and the related offset. The reference line can be offset either longitudinally, parallelly or vertically to the base line, or be rotated around the base point.



### • Line S.O

Line stake-out calculates the coordinate of stake-out points by a base line, which defined by two know points and the offset distance.



## SPECIFICATIONS

		N41	N40
<b>Angle Measurement</b>			
Accuracy		1"	2"
Minimum Reading		0.1"/1"	1"/5"
Measure Method	Absolute Encoding Disk		
Diameter of Encoding Disk	79mm		
Detection Method	Horizontal: 4-path, Vertical: 4-path		
Angle Unit	360°/400gon/6400mil		
Horizontal 0/Vertical 0	V0/H0		
<b>Distance Measurement</b>			
Laser Class	Laser Class 3R①		
Wavelength	685nm		
Distance Unit	m/ft		
EDM System	Basic Frequency 70-150MHz		
Constant K	Auto Correction, K=0.14/0.2		
Prism Constant	Auto Correction		
Atmospheric Correction	Auto Correction		
Accuracy	Prism	1+1ppm	2+2ppm
	Reflective Sheet		2+2ppm
	Reflectorless		2+2ppm
Measure Range	Prism②	Single: 4000m / Triple: 5000m	
	Prism Enhanced	Single: 5000m / Triple: 6000m	
	Reflective Sheet③	1200m	
	Reflectorless ④	1000m	
Measure Speed	Prism	Single <1.2s, Repeat <0.5s, Tracking <0.25s	
	Reflective Sheet	Single <1.0s, Repeat <0.5s, Tracking <0.25s	
	Reflectorless	Single: 0.5s-3s; Tracking: 0.25s-3s, max. 10s ⑥	
<b>Telescope</b>			
Image	Erect		
Magnification	30x		
Effective Aperture	45mm (DTM: 47mm)		
Resolution	3"		
Field of View	1°30'		
Minimum Focus	1.5m		
Tube Length	152mm		
Retical Illumination	Adjustable, 4 Levels		
<b>Vial</b>			
Plate Vial	30"/2mm		
Circular Vial	8'/2mm		
<b>Compensator</b>			
System	Dual-axis Liquid-electric Sensor		
Working Range	±6'		
Resolution	1"		
<b>Plummet</b>			
Laser Plummet	Laser Class	Class 2. Red Laser	
	Wavelength	635nm	
	Power	0.5mW	
	Diameter	≤2.0mm@1.5m	
	Brightness	Adjustable, 5 Levels	
Auto Height *1*2	Measure Range	0.5m-3m	
	Accuracy	±1.5mm@1.5m	
Optical Plummet	Image	-	Erect
	Magnification	-	3x
	Focusing Range	-	0.3m~∞
	Field of View	-	±4°
<b>Guide Light*1</b>			
Type	LED		
Wavelength	Red 635nm / Yellow 590nm		
Effective Distance	200m		
<b>Camera*2</b>			
Pixel	780,000	-	-
Focal Length	16mm	-	-
Sight of View	12.5*11.7 Degree	-	-
Refresh Rate	11 Frames/s	-	-
Depth of Field	2m~∞	-	-
Storage	jpeg	-	-
Digital Zoom	1x, 2x, 3x	-	-
White Balance	Auto	-	-
Brightness	Auto	-	-
<b>Display Unit &amp; Keyboard</b>			
Display Unit	3.5 Inches Colorful LCD Touch Screen		
Resolution	320*240dpi		
Backlight	Adjustable, 8 Levels		
Keyboard	30 Keys		
<b>Memory</b>			
Internal Memory	98M, ready for 833,000 Points		
External Memory	USB & SD Card Available, Maximum 32G		
Data Transfer	USB, Mini USB, Bluetooth 2.1+EDR, SD Card, RS-232		
<b>Power Supply</b>			
Type	LI-ION Rechargeable Battery		
Voltage	7.4V		
Capacity	3900mAh, 29Wh		
Working Time	10 Hours ,20 hours in Angle measurement mode only		
Charging Time	3 Hours		
<b>Others</b>			
Working Temperature	-20°C~+50°C		
Storage Temperature	-40°C~+70°C		
Size	206mm*200mm*353mm		
Weight	6kg		
Dust/Water	IP66		

## STANDARD PACKING LIST

Main unit	1x
Lens cover	1x
Battery	2x
Tools pouch	1x
SD card	1x
Manual	1x
Charger	1x
Reflective sheet	1x
Carry case	1x
Belt	2x
Mini USB cable	1x

①EN60825-1: 2007 ②Good conditions: No haze, visibility about 40km. Overcast, no scintillation  
 ③Good conditions. With Koda gray card white side (90%) reflective. standard sheet size. 300m under good conditions with koda gray card grey side (18%).  
 ④With Kodak gray card white side (90%) reflective. Reflectorless range /accuracy may vary according to measuring objects, observation situations and environmental conditions ⑤Range less than 200m. When the measure range is over 200m, the accuracy will be 5+2ppm. ⑥Typical, under good conditions. Range less than 500m. It also depend on object surface. Maximum less than 10s

\*1: Available on N41, N40X total station  
 \*2: Available on N41I total station

## OPTIONAL ACCESSORIES



ATS-2B Fiberglass Tripod  
 NLS-15 Prism Pole  
 TK21T Prism Set

You Local Authorized Dealer

**SOUTH**  
 Target your success

SOUTH SURVEYING & MAPPING TECHNOLOGY CO., LTD.  
 E-mail: mail@southsurvey.com  
 http://www.southinstrument.com