

Standard accessories

- Carrying handle
- Plastic carrying case
- Plumb bob
- AA-type (R6) penlight battery (6 pcs.)
- Objective lens cap
- Tool set
- Lens hood
- Instruction manual



Optional accessories

- 36X high- and 18X low-power eyepiece lenses
- Traversing target set
- Solar filter
- Auto collimation set
- Diagonal eyepiece prism
- Zenith prism
- EDM yoke-mount adapter
- Suunto compass adapter
- Solar prism



• EDM with yoke-mount adapter



• Diagonal eyepiece prism



• Suunto compass adapter



• Zenith prism



• Solar prism

Specifications

Telescope		
Effective diameter of objective	45mm (1.77 in)	
Magnification	30X	
Image	Erect	
Field of view (at 100m/100 ft)	1°20' (2.3m/2.3 ft)	
Shortest focusing distance	0.7m (2.3 ft)	
Stadia multiplier constant	100	
Stadia additive constant	0	
Reticle illuminator	Provided	
Angle measurement		
Reading system	Photoelectric detection by optical incremental encoder	
Circle diameter	79mm/3.1 in	
Unit of reading	Degree/gon/mil (selectable)	
Minimum digital reading	5"/10", 1mgon/2mgon, or 0.02mil/0.05mil (Selectable)	
Accuracy (based on DIN 18723)	5"/1mgon (in 5"/1mgon display mode)	
Automatic vertical compensator (NE-10LA only)		
Type	Liquid-electric detection system	
Working range	±3' (out-of-range warning provided)	
Display		
Type	Dot matrix LCD	
	20 characters X 2 lines	
Illumination	Backlight illumination provided	
Keyboard		
Location	Both sides of alidade	
Optical plummet		
Magnification	3X	
Field of view	5°	
Focus range	0.5m (1.6 ft) - infinity	
Level sensitivity		
Plate level	30"/2mm	
Circular level	10"/2mm	
Leveling base		
Type	Detachable	
Internal power source		
Type	Standard AA-type (R6) penlight battery (6 pcs.)	
Hours of continuous operation		
NE-10LA	17 hrs. (manganese)	
	34 hrs. (alkali)	
NE-10L	22 hrs. (manganese)	
	42 hrs. (alkali)	
Ambient temperature range		-20°C to +50°C (-4°F to +122°F)
Dimensions (DXWXH)		150X162X324mm (5.9X6.4X12.8 in)
Weight		
Instrument NE-10LA	4.6kg (10.1 lbs)	
NE-10L	4.5kg (9.9 lbs)	
Plastic carrying case	3.6kg (7.9 lbs)	

Nikon

Electronic Digital Theodolites NE-10LA/10L



NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo 100, Japan
Phone: +81-3-3216-1026 Telex: 22601 (NIKON J) Telefax: +81-3-3201-5856

NIKON EUROPE B.V.

Schipholweg 321, P.O. Box 222, 1170 AE Badhoevedorp, The Netherlands
Phone: +31-20-4496222 Telex: 13328 (NIKON NL) Telefax: +31-20-4496299

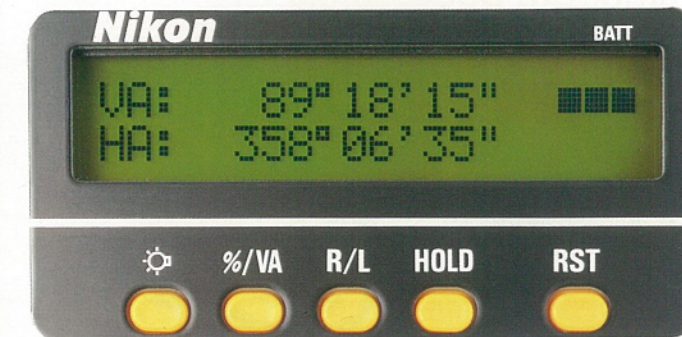
NIKON INC.

Instrument Group, Surveying Dept.
1300 Walt Whitman Road, Melville, NY 11747-3064, U.S.A.
Phone: +1-516-547-4200 Telefax: +1-516-547-5251

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. December 1993
©1991 NIKON CORPORATION

Superior Technology for Optimal Results

These superb new theodolites provide a multitude of functions with the simplest operation possible. New photoelectric encoders in both the horizontal and vertical axes make these theodolites much easier to use. And of course they provide the optical performance that only Nikon can offer.



Keyboard

- : LCD panel and reticle illumination
- % / VA: Converts vertical angles to gradients expressed as percentages
- R / L: Selects direction of horizontal angle reading
- HOLD: Holds current horizontal angle reading on the display
Enables repeat angle measurement
- RST: Resets horizontal angle to zero



New Telescope focuses as close as 0.7m

The 30X telescope has a 45mm objective diameter and uses a unique linear focus mechanism to ensure easy focusing at both short and long distances with sharp, bright images. The minimum focusing distance of 0.7m (2.3 ft).

Extra-low Dispersion (ED) lenses

Extra-low Dispersion (ED) glass is used in the telescope optical system to provide much brighter, sharper and clearer images through the eyepiece. These brighter images allow you to work early in the morning and into the evening twilight.

Selectable least count display

Angle unit	Least count display(selectable)
360°	5"/10"
400G	1mgon/2mgon
MIL	0.2mil/0.5mil

Quick initial vertical zero setting

Just transit the telescope once through the horizon when the instrument is turned on to set the vertical zero at the correct position.

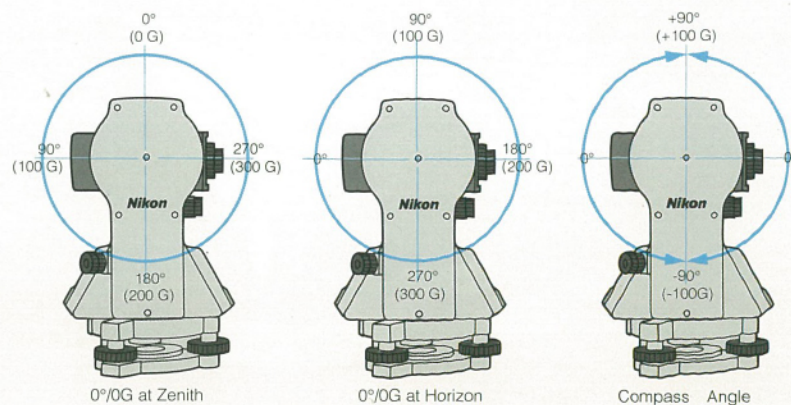
One-touch percent of grade display

Vertical angles can be instantly converted to the percent of grade by pressing the %HL key. When the vertical angle exceeds $\pm 45^\circ/100G$, the message "OVER" appears on the LCD screen.

Three vertical angle zero positions

A simple initial setting lets you select from three vertical angle reference circles to meet specific job requirements:

- 0° at zenith, 90° at horizon in face-left position
- 0° at horizon, 90° at zenith in face-left position
- Compass angle (0° at horizon, $\pm 90^\circ$ at zenith/nadir)



Counterclockwise measurement

In addition to standard clockwise angle measurements, you can also select counterclockwise horizontal angle measurement by simply pressing the R/L key.

Easy reset of horizontal angle to zero

Resetting the horizontal angle to zero is simple. Just press the RST key for about 1.0 second.

Speedy right-angles with audio signal

An audible tone tells you when you are approaching 90°, 180°, 270° and 0° for quick, easy right-angle positioning.

Horizontal angle hold / repeat

Press the HOLD key to lock the horizontal angle displayed on the LCD while you reposition the instrument. Press it a second time to release it and continue measuring. You can also select repeat measurement (up to $\pm 1999^\circ 59' 55''$

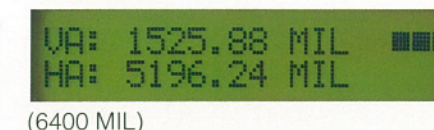
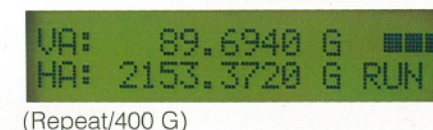
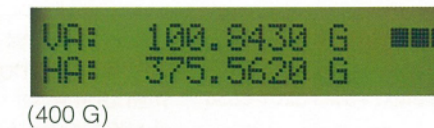
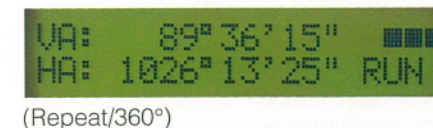
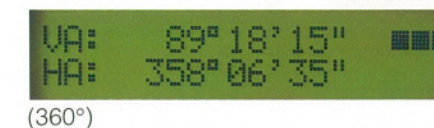
or ± 2222.2220 gon) by pressing the HOLD key for about 1.0 second.

Built-in vertical axis compensator (NE-10LA only)

The NE-10LA can detect instrument tilt as far as 3' from the vertical and automatically compensate to ensure precise vertical angle readings.

Two-line display and keyboard on both sides

The large, dot matrix two-line LCD screen can display both vertical and horizontal angles at the same time, and backlight illumination makes it easy to read even in low light conditions. The keyboard has been simplified, and both the front and back of the instrument are equipped with a display and keyboard for greater convenience.



Power source

Six standard AA-type (R6) batteries provide up to 22 hours (17 hrs. for NE-10LA) of continuous operation. This can be extended up to 42 hours (34 hrs. for NE-10LA) by using alkaline-manganese (LR6) batteries.

Power-saving feature

In case you forget to turn the power off, it will turn itself off. The time before shutoff can be set from 10 to 30 minutes. This function helps to extend battery life during field work.

Back-up memory for displayed horizontal angle

The last horizontal angle on the display is retained in back-up memory when the power-saving function automatically shuts off the power, so it does not interrupt your work.

Battery level indicator

The amount of remaining battery power is constantly displayed by a three-level bar graph on the LCD screen.

Quick initial mode setting

Instrument mode settings are very simple to make. Just hold down the RST key while turning on the power to enter the setting mode and access the setting menu.