

Topcon DL-500 Series Digital Levels

Topcon DL-500 series digital levels maximize work efficiency and minimize human error, providing consistent measurement precision and speed, regardless of operator skill.

Features & Benefits

- One Button Triggers Measurement and Data Storage
- 0.6mm/0.8mm Height Accuracy
- “Wave-and-Read” Technology Guarantees Easy and Accurate Measurement
- Pre-installed Measurement Programs, Height Difference Measurement
- Inverse Staff Reading for Ceiling Height
- Internal Memory

Single Button Operation

After focusing on the staff, just press one button. The DL-500 reads height and distance, and stores data. Auto levels require you to read the graduations on the staff with your own eye, but digital technology eliminates misreading and reduces operator’s eye fatigue.

High Accuracy! 0.6mm/0.8mm

Two models are available for different accuracy requirements.

- DL-502: 0.6mm (Invar staff), 1.0mm (fiberglass staff)
- DL-503: 0.8mm (Invar staff), 1.5mm (fiberglass staff)

World’s First “Wave-and-Read” Technology

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Incorporating cutting-edge Random-Bidirectional (RAB) coding technology, an optimized digital processing algorithm, the DL-500 provides exceptional measurement accuracy, stability and speed, under a variety of environmental conditions. Even when the staff surface is partially shaded, or in dim lighting conditions as low as 20 lux, a single button triggers measurement and the DL-500 instantly provides reliable results.

The world’s first “Wave-and-Read” technology provides an additional survey style option that allows a rod operator to wave the staff forward and back, instead of keeping the staff plumb. This simpler method is faster, easier, minimizes the fatigue and is just as accurate.

Pre-installed measurement programs

Pre-installed measurement programs assist various leveling tasks and accompanied calculations. Internal memory stores field data, and can be directly transferred to your computer via serial cable, eliminating human error.

Elevation

Calculates elevation of foresight (FS) with reference to backsight (BS) elevation. Elevation of the turning point (TP) is used for a new backsight, allowing for consecutive leveling.

Height Difference

Automatically displays the height difference between backsight (BS) and foresight (FS) in 0.1mm or 1mm (0.001ft. or 0.01ft.) unit.

Cut and Fill

Cut and fill stakeout routines facilitate slope work. Measurement can be taken with 0.1mm or 1mm (0.001ft. or 0.01ft.) resolutions.

Ceiling Height



DL-500 Specifications	
Telescope	
Magnification	DL-502 32X, DL-503 28X
Objective aperture	DL-502 45mm, DL-503 36mm
Field of View	1 degree 20 minutes

Minimum Focus	5.0 ft (1.5m)
Stadia ratio	100
Compensator	
Type	Pendulum compensator with magnetic damping system
Working Range	+/- 15'
Height Measurement	
Accuracy	standard deviation for 1km double run leveling
Electronic Reading	
Invar staff	DL-502 0.6mm DL-503 0.8mm
Fiberglass staff	DL-502 1.0mm DL-503 1.5mm
Measuring Range	5.3 to 328 ft (1.6m to 100m)
Measuring Time	
Fine	3 sec
Tracking	1sec
Minimum Brightness	20lx. at the staff surface
User Interface	
Display	128x32 dot matrix LCD with backlight
Keyboard	8 keys (7 on front panel, 1 on side panel)
Circular Level Sensitivity	10"/2mm
Data Storage	2,000 points
Environmental	
Waterproof	IPX4
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Operating Time	Approx. 16 hours