TOPCON

## Standard Package Components

- OS main unit
- Battery (BDC72)
- Battery charger (CDC77)
- Power Cable
- Lens cap
- Lens hood
- Tool pouch
- Precision screwdriver
- Lens brush
- Adjusting pin×2
- Silicon cloth
- Quick manual
- USB flash drive(Manual)
- Laser caution sign-board
- Carrying case
- Carrying strap

## SPECIFICATIONS

| | | OS-201 | OS-202 |
|---|---|---|---|
| Telescope | | | |
| Magnification / Resolving power | | 30x / 2.5" | |
| Others | | Length: 171mm (6.7in.), Objective aperture: 45mm (1.8in.) (48mm (1.9in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.), Reticle illumination: 5 brightness levels | |
| Angle measurement | | | |
| Display resolution | | 0.5" / 1" (0.0001 / 0.0002gon, 0.002 / 0.005mil) | |
| Accuracy (ISO 17123-3:2001) | | 1" | 2" |
| Dual-axis compensator / Collimation compensation | | Dual-axis liquid tilt sensor, working range: ±6' (±111mgon) / Collimation compensation available | |
| Distance measurement | | | |
| Laser output *1 | | Reflectorless mode: Class 3R / Prism/sheet mode: Class 1 | |
| Measuring range (under average conditions *2) | Reflectorless *3 | 0.3 to 800m (2,620ft.) / Under good conditions *6 : 1,000m (3,280ft.) | |
| | Reflective sheet *4 *5 | RS90N-K: 1.3 ～ 500m、RS50N-K: 1.3 ～ 300m 、RS10N-K: 1.3 ～ 100m | |
| | Mini prism | 1.3 to 500m (1,640ft.) | |
| | One prism | 1.3 to 5,000m (4.3 to 16,400ft.) / Under good conditions *6: 1.3 to 6,000m (19,680ft.) | |
| Display resolution | Fine/Rapid measurement | 0.0001m(0.001ft. / 1/16in.) / 0.001m (0.005ft. / 1/8in.) (selectable) | |
| | Tracking/Road measurement | 0.001m (0.005ft. / 1/8in.) / 0.01m (0.1ft. / 1/2in.) (selectable) | |
| Accuracy *2 (ISO 17123-4:2001) (D=measuring distance in mm) | Reflectorless *3 | (2 + 2ppm x D) mm *7 | |
| | Reflective sheet *4 | (2 + 2ppm x D) mm | |
| | Prism | (1.5 + 2ppm x D) mm | |
| Measuring time *8 | | Fine: 0.9s (initial 1.5s), Rapid: 0.6s (initial 1.3s), Tracking: 0.4s (initial 1.3s) | |
| OS, Interface and Data management | | | |
| Operating system | | Windows Embedded Compact7 | |
| Display / Keyboard | | 3.5inch, Transmissive TFT QVGA color LCD with LED backlight, Touch screen, Automatic brightness control / 29 keys with backlight | |
| Control panel location *9 | | On both faces (Face 2 is only touch screen display ) | |
| Trigger key | | On right instrument support | |
| Data storage | Internal memory | 1GB internal memory (includes memory for program files) | |
| | Plug-in memory device | USB flash memory | |
| Interface | | Serial RS-232C, USB2.0 (Type A / mini B) | |
| Bluetooth modem (Factory Option) *9 | | Bluetooth Class 1, Operating range: up to 10m *10 | |
| General | | | |
| Guide light *11 | | Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.) *12 | |
| Laser-pointer *11 | | Coaxial red laser using EDM beam | |
| Calendar / clock function | | Yes | |
| Levels | Graphic | 6'(inner circle) | |
| | Circular level | 10' / 2mm | |
| Optical plummet | | Magnification: 3x, Minimum focus: 0.3m (11.8in.) from tribrach bottom | |
| Laser plummet (option) | | Red laser diode (635nm±10nm), Beam accuracy: <=1.0mm@1.3m, Class 2 laser product | |
| Tribrach | | Detachable | |
| Dust and water protection | | IP65 (IEC 60529:2001) | |
| Operating temperature *11 | | -20 to 60℃ (-4 to 140°F) | |
| Size (with handle) | | 191(W)x190(D)x348(H)mm | |
| Instrument height | | 192.5mm from tribrach mounting surface 236mm +5/-3mm from tribrach bottom | |
| Weight with battery & tribrach | | Approx. 5.7kg (12.3 lb.) | |
| Power supply | | | |
| Battery | BDC72 | Li-ion rechargeable battery | |
| Operating time (20℃) | BDC72 | Approx. 20hours (single distance measurement every 30 seconds) | |

*1 IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 11
*2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation.
*3 Fine mode. With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions.
*4 When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target.
*5 Measuring range in temperatures of -30 to -20°C (-22 to -4°F) with Low Temperature models and 50 to 60°C (122 to 140°F) with High Temperature models: RS90N-K: 1.3 to 300m (4.3 to 980ft.), RS50N-K: 1.3 to 180m (4.3 to 590ft.), RS10N-K: 1.3 to 60m (4.3 to 190ft.)
*6 Good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation.
*7 Measuring range:0.3 to 200m
*8 Typical, under good conditions. Reflectorless measurement time may vary according to measuring objects, observation situations and environmental conditions.
*9 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local oce or representative in advance.
*10 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain.
*11 The laser-pointer and the guide light do not work simultaneously.
*12 Low Temperature models:-30 to 50 °C (-22 to 122°F) is available on built-to-order basis.

TOPCON

**TOPCON CORPORATION**
75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580, Japan
Phone: (+81)3-3558-2993 Fax: (+81)3-3960-4214
www.topcon.co.jp



**Your Local Authorized Dealer is:**



OS

TOPCON

# OS-200series

## Onboard Station



Field

## For professionals like you

- High performance EDM for rapid, repeatable measurements
- Modern, intuitive onboard MAGNET® Field software
- Convenient EDM trigger key
- Reflectorless laser measurement

# Professional results from basic to advanced applications

## Survey

### Boundary and Cadastral Survey

Quickly and easily calculate areas with the Area function. Determine the center point for objects such as a columns or electrical poles which cannot be directly measured by using the Offset calculation.

### Topographic Survey

The trigger key, or measuring distance key, helps you perform topography quickly while continuously viewing through the telescope. Also, the long distance measuring range reduces the number of the instrument changes for more efficient working time.

### Traverse Adjustment

Adjust and correct closure errors for latitudes, departures, angles and/or elevations directly from the MAGNET Field onboard software.

## Construction

### Stake Points

A complete solution for every type of layout and stakeout is included in the software. Points, lines, offsets, roads, surfaces, slopes, and real-time roads are all available.

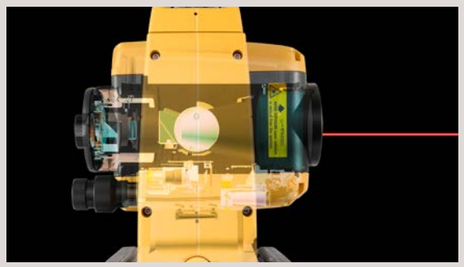
### Topographic Survey

Collect points, lines, areas, cross sections, and surfaces including automatic topo point capture. Select Map or Measurement View and even record offset shots all while within Topo Survey.

### Road/Cross-Sectional Survey

All the road stakeout information can be seen on one screen as you stake anywhere along the road design in real-time. Be more productive with real-time roads information.

## Improve topography and stake out with features to achieve faster and more efficient workflows



Distance Measurement Accuracy (Prism Mode)

OS-200 — Accuracy 1.5mm+2ppm

Previous Model — 2.0mm+2ppm

Measuring Range(Reflectorless Mode)

OS-200 → Distance 1,000m

Previous Model → 500m

### Newly Designed High-Performance Class EDM

Especially effective in surveying control points that require high-accuracy, and in cross sectional surveying in large areas with reflectorless measurement mode.

**All Features are at Top Class**

| | Accuracy | Measuring Range |
|---|---|---|
| Prism-Mode | 1.5mm+2ppm | 6,000m* |
| Reflectorless | 2.0mm+2ppm | 1,000m* |

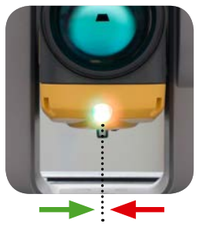
* Good atmospheric condition

**Total station Line up**

| Entry Model | Onboard Model | High-end Model |
|---|---|---|
| | | Automatic collimation / tracking |
| GM-100 | OS-200 | GT-1200/600 |


**Discover MAGNET Field features and benefits.**

- Intuitive user interface
- Advanced roading tool set
- Vast library of Import / Export file formats
- Calculate, contour, and compare surfaces
- Surface staking with automatic Digital Terrain Model creation
- Colorized cut and fill indicators, as well as volume calculations
- Direct connectivity to your private Company Account for easy data exchange and quick chat
- Microsoft Bing Maps® for real-time images behind your points, lines, and imported design files



### Guide Light System

Anybody can move to Stake Out Line easily. Green and Red colored lights will show you the direction to move.

Move to right on Green light → Layout line ← Move to left on Red light

### Target Key & Screw System

By using tangent screws for sighting, you can measure a distance with a single-button click. Work efficiently and increases productivity for sighting task such as Stake Out, Topography, and Elevation Stakes.