

# LAYOUT PRO SOLUTIONS



**Start here**

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## CONVENIENCE & POWER IN AN INNOVATIVE PACKAGE

Layout Pro™ software offers the convenience of carrying, managing, editing, and laying out your job site blueprint while you're on the go. And this is all possible regardless of the method or instrumentation used.

The power of a simple user interface makes Layout Pro a must-have tool that will revolutionize the way you work.

- Perform layout tasks on your own with Layout Pro.
- Reduce your subcontracting to cut costs and minimize down-time.
- You can even re-lay out critical job site points if they're damaged during construction.

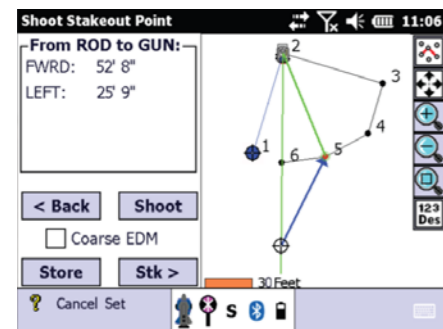
Plus, Layout Pro has basic site survey capabilities and allows the creation of as-built records.

Layout Pro organizes and standardizes all layout activity for your equipment from a transit and tape to a mechanical total station and even the FOCUS® 35 robotic total station. You'll see the savings in shorter training times as well as more flexibility and independence—if one instrument is unavailable, you can quickly and easily swap out for another. When used with a total station, Layout Pro provides the most significant gains in productivity, accuracy and reliability.

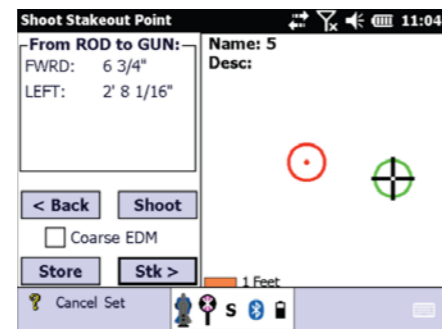


## LAYOUT WITH ROBOTIC TOTAL STATIONS

For the highest level of productivity and flexibility, Layout Pro can be used with the FOCUS 35 robotic total station. Layout Pro on the Ranger 7 data collector with its built-in radio, provides remote control capability to your total station. All layout tasks can then be completed by just one person at the rod. Setup the instrument, connect to it with the radio using the Ranger 7 and Layout Pro, and you're ready to layout points. In this one-person operation, the robotic total station will track you and update measurement information at the prism pole – where the positioning information is required. The on-screen real-time display will guide you directly to each point.



Once you are close to the point, the display changes to a precise position display. It's easy and fast to get the rod right on the point.



One person. Fast, accurate, and reliable. The FOCUS 35 and Layout Pro make for quick work of all your layout requirements.



## SPEED AND RELIABILITY

Layout Pro software is a critical tool in the field of construction layout, designed to make the layout process more productive, accurate and reliable.

Layout Pro is specifically designed to meet the unique requirements of in-the-field construction layout. With Layout Pro you have the ability to input blueprint dimensions and build a digital replica of the layout plan. Then you can use Layout Pro to guide the layout of the major points, add string dimensions on the print, as well as calculate diagonals and angles. Layout Pro makes your most complex layouts – such as curves and arcs – as straightforward as any other.

## TYPICAL LAYOUT APPLICATIONS

### Concrete Forms and Anchor Bolts

Layout complex concrete forms or anchor bolts from any location by referencing any two known points.

### Excavation Lines

Layout all lines from one reference location without string lines, transits or theodolites.

### As-Built Checks

Perform and record as-built checks quickly and efficiently using reflectorless measurements.

### Control Points and Offset Hubs

Layout control points and offset hubs faster and more cost effectively on your own schedule.

### Control Lines

Layout control lines for subcontractors faster and more accurately than with theodolites and tapes.

### Topographical Measurements

Collect topographical data easily and import it into third-party software for elevation and cut and fill analysis.

## ELECTRONIC DATA

Import a DXF file with your layout data – be it a simple building pad or an entire building. Use the easy-to-use snap features in the field to digitize points quickly and accurately. Then, use the layout tools to set those points. The DXF file will even be shown as a background to your points map so it's easy to know where you are. Layout Pro also gives you complete control over the DXF file layers so it's easy to see only the data you want to see.

Layout Pro also supports creating point patterns to represent bolt patterns or other complicated patterns. Create or edit a point pattern in the field and place that pattern on multiple center points at the same time.

## LAYOUT PRO OFFICE

This office software is the perfect companion tool for Layout Pro in the field. Layout Pro Office provides the necessary tools to extract points and lines from CAD drawings to use in the field. It also provides a point pattern editor to create patterns for such things as anchor bolts.

Layout Pro Office includes the same basic tools for plan design, measuring, and calculations as the field software, so it is easy to use. Layout Pro Office can then be used to transfer the files to the data collector or total station for use in the field.

**Layout Pro Function Table**

**FILE MANAGEMENT FUNCTIONS**

- New job
- Open job
- Save job as
- Delete a job
- Rename a job
- Lock/Unlock job

**SETTINGS & PREFERENCES**

- Instrument
  - Manual mode
  - Do Not Prompt for Measurements
    - Prompt for Measurements
  - Total station
    - Multiple models supported
    - Communications settings
  - Robotic Total Station
    - FOCUS 35
    - Radio Com Settings
- Units
  - Distances
    - Feet
    - Feet-Inch
    - Meters
  - Angles
    - Degrees
    - Grads/Gons

- Format
  - Data display
  - Coordinate order
- Stakeout (Layout Tolerances)
  - Horizontal
  - Vertical

**ENTER PLAN**

- Input plan
  - Enter point, distance, direction
  - Change elevation
  - Enter an arc
  - Intersect lines
  - Mid-point of lines
  - Offset points
  - Connect points
  - Closure checks
- Edit plan
  - Change
  - Insert
  - Delete
- Create Points from DXF
- Edit Point Patterns
- Create grid points
- View plan/Compute with plan
- Input/Edit coordinates

**IMPORT/EXPORT**

- Import DXF
- Export
  - DXF
  - Text file
- Reports,
  - Stakeout
  - Deviation
  - Out of tolerance

**SETUP & LAYOUT**

- Setup instrument point
- Stakeout using
  - Entered plan
  - Reference line
  - Reference arc
- Layout using two tapes
- Measure site



**FOCUS 35 Key Specifications**

**ANGLE MEASUREMENT**

- Accuracy<sup>1</sup>
  - (Standard deviation based on ISO 17123-3)
    - 1" (0.3 mgon)
    - 2" (0.6 mgon)
    - 3" (1.0 mgon)
    - 5" (1.5 mgon)
- Angle reading (least count display)
  - Standard: 1" (0.3 mgon)
  - 1" model: 0.5" (0.15 mgon)
  - Tracking: 2" (0.6 mgon)

**DISTANCE MEASUREMENT<sup>2</sup>**

- Accuracy to Prism
  - (Standard deviation based on ISO 17123-4)
    - Standard: 2 mm + 2 ppm (0.007 ft + 2 ppm)
    - Tracking: 5 mm + 2 ppm (0.016 ft + 2 ppm)
- Accuracy Reflectorless Mode
  - Standard
    - <300 m (984 ft): 3 mm + 2 ppm (0.01 ft + 2 ppm)
  - Standard
    - >300 m (984 ft): 5 mm + 2 ppm (0.016 ft + 2 ppm)
- Tracking: 10 mm + 2 ppm (0.033 ft + 2 ppm)
- Measuring time
  - Prism Standard: 2.4 sec.
  - Prism Tracking: 0.5 sec.

- Reflectorless Standard: 3-15 sec.
- Reflectorless Tracking: 0.7 sec.
- Range Prism Mode
  - 1 prism: 4000 m (13,123 ft)
  - 3 prisms: 7000 m (22,966 ft)
  - Foil Reflector 60 mm: 300 m (984 ft)
- Range Reflectorless Mode

	Good <sup>4</sup>	Normal <sup>5</sup>	Difficult <sup>6</sup>
KGC <sup>3</sup> (18%)	400 m (1,312 ft)	350 m (1,148ft)	300 m (984 ft)
KGC (90%)	800 m (2,625 ft)	600 m (1,969 ft)	400 m (1,312 ft)
Foil Reflector 60 mm	1,000 m (3,280 ft)	1,000 m (3,280 ft)	800 m (2,625 ft)

**ENVIRONMENTAL**

- Operating temperature:
  - 20 °C to +50 °C (-4 °F to +122 °F)
- Dust and water proofing: IP55

**POWER SUPPLY<sup>7</sup>**

- Internal battery: Li-Ion, 11.1 V/5.0 Ah
- Operating time with one internal battery:
  - Approx. 6 hours
- Models with two internal batteries:
  - Approx. 12 hours

**ROBOTIC OPERATION<sup>2</sup>**

- Maximum Robotic Range:
  - 300 m to 800 m (984 ft to 2,625 ft)
- Point precision at 200 m (656 ft):
  - <2 mm (0.007 ft)
- Maximum Search Distance: 300 m to 800 m (984 ft to 2,625 ft)
- Search Time (typical): 2-10 sec.

**COMMUNICATIONS**

- Internal/external: 2.4 GHz, frequency hopping, spread spectrum

**GPS SEARCH GEOLOCK<sup>8</sup>**

- GPS Search GeoLock™: 360° (400 gon)
- Range: Full robotic operation range

1. RX models are not available in 1" accuracy.  
 2. Standard clear: No haze, overcast or moderate sunlight with very light heat shimmer. Range and accuracy are dependent on atmospheric conditions, size of prism and background radiation.  
 3. Kodak Gray Card, Catalog number E1527795.  
 4. Good conditions (good visibility, overcast, twilight, underground, low ambient light)  
 5. Normal conditions (normal visibility, object in the shadow, moderate ambient light).  
 6. Difficult conditions (haze, object in direct sunlight, high ambient light).  
 7. RX models have two internal batteries.  
 8. Spectra Precision GeoLock is available on data collectors after station setup.

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Please visit [spectrageospatial.com](http://spectrageospatial.com) for the latest product information and to locate your nearest distributor. Specifications and descriptions are subject to change without notice.