

Topcon's X-TRAC 7 technology advances robotic system performance

Firmware and software provide true system-wide enhancements

A new advanced technology for robotic total stations – X-TRAC 7 – is now available from Topcon Positioning Systems (TPS).

X-TRAC 7 enhances robotic tracking, RC-3 “Quick Lock” remote control, radio, and data collector performance.

X-TRAC 7 technology is now included on all new Topcon 9 Series and Imaging Station (IS) robotic family total station systems. Users with 9 Series and IS systems – GTS-900, GPT-9000, and IS – purchased prior to the release of X-TRAC 7 may contact their Topcon authorized dealer for the X-TRAC 7 update.

Scott Langbein, TPS senior manager – product management, said, “Topcon wants our robotic users to feel the full return of our continued research and development in robotics technology. X-TRAC 7 is a firmware and software advancement that provides them with the latest and most reliable tracking technology available.”

Prism Tracking.

“The new X-TRAC 7 prism-tracking strength and allowable prism movement speed is increased,” Langbein said. “X-TRAC 7 uses a tracking beam sequence that keeps the instrument cross hairs focused on the moving prism pole. Internal firmware and advanced calculations are performed to determine and track the prism better than ever before.”

Remote Control.

The X-TRAC 7 firmware enhances the performance of Topcon's Quick Lock robotic remote control. “The RC-3 remote firmware and command logic has been redesigned to take full advantage of X-TRAC 7 technology,” Langbein said. “The RC-3's Quick Lock speed and accuracy have increased dramatically.

“X-TRAC 7 firmware updates the RC-3 handle as well as the total station instrument, with automatic power regulation and special sensor windows that determine the location of the prism pole and Quick Lock sensor,” Langbein said. “The X-TRAC 7 enhancement to the RC-3 handle precisely measures the center of the signal return. Quick Lock times are reduced and pointing of the instrument toward the prism is very reliable.”

Software.

Topcon's new release of TopSURV 7.2 software includes the X-TRAC 7 advanced technology. Langbein said, “TopSURV 7.2 is the user interface to control all of the advanced features of X-TRAC 7. It is the central hub of this enhanced X-TRAC 7 robotic system. TopSURV 7.2 with X-TRAC 7 is also available for Topcon controllers FC-200, FC-2200 and FC-2500.

“The new TopSURV software will provide improvements for the popular FC-200 field controller and the value-priced FC-2200,” Langbein said.



Langbein said, “X-TRAC 7 technology supports software on the IS imaging stations with Topcon IS live video broadcast. With X-TRAC 7, the live video supports WiFi broadcasts of images from the IS instrument to the TopSURV field controller. It gives the surveyor complete control of the IS from their field controller.”

Radio.

“By updating the robotic instrument firmware as well as radio module settings, users will find better re-establishment of radio performance at far distances,” Langbein said.

Features of the X-TRAC 7 technology include:

- Fast, strong tracking of a prism even when exposed to other reflective objects;
- Fast and accurate turning of the instrument when performing a RC-3 remote Quick Lock cycle;
- Automatic power regulation of the RC-3 remote;
- TopSURV 7.2 software support for instrument enhancements; and
- TopSURV 7.2 software live video support for IS systems. The enhancement through X-TRAC 7 now supports WiFi broadcasts of images from the IS instrument to the TopSURV field controller.

Langbein said, “X-TRAC 7 is a true system wide enhancement touching all elements of the robotic system from the instruments, remote control functions, field controllers and software.”

Information on X-TRAC 7 is also available at:

www.topconpositioning.com/products/optical/accessories/x-trac-7.html