

Topcon (GB) GPS+ e-Newsletter

May 2005

Welcome to the Topcon GPS+ e-Newsletter. This monthly e-Newsletter is designed to bring you the latest information about Topcon GPS+ and GPS+ activities. If you do not wish to continue to receive this GPS+ e-newsletter, please reply with "No GPS+ e-news" in the subject heading only. Or if you wish to sign someone else onto the newsletter please forward and ask them to reply to GPSnewsletter@topcon.co.uk with "Yes GPS+ e-news" in the subject field.

We would welcome any comments to improve this service.

O'Keefe's Purchase the first UK mmGPS+ LaserZone 3D Machine Control System

O'Keefe's Soil and Remediation Ltd have purchased the first full mmGPS+ 3D machine control system in the UK, with full survey mmGPS+ ability. This new system concept from Topcon combines GPS+ positioning with very accurate height information from a local PZ-L1 laser transmitter. This provides all the flexibility of using GPS+ for machine control applications together with the ability of achieving mm height positioning from the laser.

The system comprises of a full GPS+ base and rover station, GPS+ machine kit, PZL-1 laser, PS-L1 survey sensor, PZS-MC integrated GPS & laser machine sensor. The PZ-L1 laser transmits a unique laserZone™ signal instead of the traditional flat plane and provides a vertical working area of 10m.

Following the install in January, O'Keefe's have immediately used the system on 2 live jobs with great success. As an added benefit the system also includes a mmGPS+ rover for survey work and real time DTM and cut/fill stakeouts.

Mark Jones operations Manager for O'Keefe's says "*Following the purchase in 2000 of the Topcon fully automated LPS robotic machine control system, we have found the system to be a very effective work winning tool and has been the key to winning many contracts. It was a natural progression for us to move with the times and purchase the latest state of the art mmGPS+ machine control system from Topcon. Not only do we get the flexibility of using the GPS+ system, but we also get the added ability of using the PZ-L1 laser and machine sensor when we need the highest accuracy for our stabilisation works. We have now used the mmGPS+ machine control system in anger on 3 job sites and found it to be extremely reliable, accurate, user friendly and consistent. We also equipped our surveyor with an extra GPS+ RTK rover kit and Pocket3D software, which gives an added advantage of increased survey data productivity, real time cut & fill and volume information. We pride ourselves as being at the cutting edge of the stabilisation market and using this latest machine control technology from Topcon is helping us maintain our lead*"

For further information on GPS+ 3D Machine Control systems, please contact mark.burbidge@topcon.co.uk or Keith.kelly@topcon.co.uk

New Hiper Pro GPS+ receivers pitched against the latest from Leica and Trimble

Orders are now being taken for the new "cable free" Hiper Pro GPS+. The new Hiper Pro extends the current Hiper range with internal TX/RX radios for the base and rover, utilizing the latest Bluetooth technology. Options include GSM for base and rover or the ability to convert the receivers to 2 x Ordnance Survey VRS network rovers, when the service becomes commercial.

The Hiper Pro has recently been pitched against the latest GPS from our competitors and on each occasion has outperformed the competition. On one occasion the Hiper Pro was said to be utilising 16 GPS+Glonass satellites compared to 7 GPS from the competition, making significant productivity gains in tough environments where many satellites may be masked from view.

Manville Philips from A1 surveys says "*having already purchased Topcon GPS and seen significant gains to my business, I was looking to improve further my system to the new Hiper+ Pro series. To*

satisfy myself I decided to compare the latest Topcon Hiper Pro with the very latest Leica GPS System. I found that Topcon still had significant all round advantages with the speed of set-up to the amount of satellites that I can use throughout the whole day, this is an extremely important factor for me and my business to have the confidence of visiting a site and obtaining fixed solutions for maximum productivity gains. Needless to say following demonstrations from Topcon and Leica I decided to immediately upgrade my existing Topcon GPS to the new Hiper+ Pro"

Dan Evans, senior surveyor says "Our company was looking to extend our Trimble GPS systems, having already used Topcon GPS in the past on landfill and civil engineering works I was extremely pleased with the performance and support, so I decided to compare the latest Trimble R8 system against the Topcon Hiper, on a site notorious for not being able to acquire fixed solutions. The Hiper Pro Base Station was unbelievable; it was exactly the same as the rover unit with no external battery or radio a lot easier to carry around. The performance of this unit really was outstanding compared to the Trimble because it uses not just USA GPS satellites it also uses another 11 Russian Glonass satellites. I set the two units up about ten meters apart on top of a hill and went around the site to record the control points with the Trimble I was working with a maximum of 7 satellites and sometimes only 2, as you need at least 5 to maintain a fixed position I couldn't even record the minimum of 4 control points needed to set the system. With the Topcon I was working with a maximum 15 satellites and a minimum 6 so I could go about my work and not have to wait around for the instrument to receive satellite coverage. We had no argument that the Hiper Pro was the system for us and placed the order with Topcon"

Russia & United States form a GPS-Glonass cooperation

Russia and the United States have signed a joint statement that said that both sides intend to cooperate on matters of civil satellite-based navigation.

The State Department's statement said, "Delegations of the United States and the Russian Federation met in Washington D.C. on December 9-10, 2004, to continue discussions on matters relating to GPS and GLONASS cooperation." "Both sides reiterated their commitment to continuing these talks and reaffirmed that the United States and the Russian Federation intend to continue to provide the GPS and GLONASS civil signals appropriate for commercial, scientific and safety of life use on a continuous, worldwide basis, free of direct user fees." The statement also said that both sides intend to establish working groups on matters of development and use of GLONASS and GPS and their respective augmentations and that both sides will start preliminary negotiations on an agreement for GPS-GLONASS cooperation.

Russian GLONASS System receives three more Satellites for 2005

KRASNOYARSK, March 3 (RIA Novosti, Boris Ivanov) - The Russian orbital satellite group, which is part of navigational system GLONASS, will be augmented by a further three new satellites at the end of 2005, announced Albert Kozlov, general designer and director general of the Mikhail Reshetnev scientific-production association of applied mechanics.

Currently Glonass has 14 satellites in orbit with 11 operational and 3 in commissioning. Within the constellation are the new Glonass-M type with L2C capability.

For further information on Glonass, please visit <http://www.glonass-center.ru>

New Glonass M & K-type satellite information [http://www.skyrocket.de/space/index_frame.htm?](http://www.skyrocket.de/space/index_frame.htm?http://www.skyrocket.de/space/doc_sdat/uragan-m.htm)
http://www.skyrocket.de/space/doc_sdat/uragan-m.htm

GPS & Glonass – Everyone's talking about it!

At Topcon using dual constellation for improved positioning is not new, we have always made it our policy to track all available satellites that are beneficial to precise surveying applications, including

Glonass as the main combination today. Our competitors are even promoting this fact.

At Trimble they have planning software available for GPS & Glonass
<http://www.trimble.com/planningsoftware.html>

At Leica http://www.leica-geosystems.com/corporate/en/products/machine_automation/lgs_4949.htm
they quote

" ...the Russian GLONASS system. The advantage of this receiver is in deep pit mining situations where there could be a lack of viewable satellites. The additional satellites from the Russian constellation can make the difference"

At Thales <http://www.thalesnavigation.com/en/products/aboutgps/glonass.asp> they quote

" ...GLONASS. These systems are constantly being upgraded to meet higher standards of reliability"

At Sokkia <http://www.sokkia.com/downloads/supportservices/gsr2400.pdf> they quote

"the addition of Glonass helps...overcome many limitations of GPS, providing unprecedented accuracy and performance."

Topcon GPS+ Facts & Information

New GPS+ information with frequently asked questions, 10 reasons why you should purchase Topcon GPS+ and PDF downloads has been uploaded to our web site. FAQ's include

- what is Topcon GPS+?
- Is GPS+ Accurate?
- Why is GPS+ a better positioning solution than GPS only?
- Is GPS+ Reliable?
- Is GPS+ Current Technology?

Please follow the link <http://www.topconsurvey.co.uk/gps/index.htm>

Topsurv WinCE Software 4.11p1

The Latest release of Topsurv 4.11p1 WinCE field controller software is now available. Some of the new features include

- **mmGPS+ Module**

For further information on mmGPS+ <http://www.topconeurope.com/index.asp?pageid=8087c897f0a74d79b59adbee27772478>

For video explanation <http://www.topconeurope.com/index.asp?pageid=9bc774dadfdc4846b7cdf8f2540c222f>

- **Multiports**

There is now an option to select multiple ports for both base and rover.

- **Laser Config**

There is an option to configure an MDL LaserAce 300 range finder that can be connected to either the receiver or the controller.

- **Linework**

- **DTM**

The DTM option is now available. You can also import DXF/DWG 3D faces which converts to the Topsurv .TN3 TIN surface.

- **Scatter Plots for GPS RTK**

RTK data can now be represented in a graphical mode under status

- **Real Time Road Stakeout**

Real Time Road Stakeout has been added to roads.

- **Base Station Offsets**

- **Multibase RTK**

This unique option allows you to set and assign Multibase stations for RTK on start base. An extra tab will be shown on the rover when in this mode to enable you to tick the base stations that you want to receive.

For further information on the latest software and the latest release download, please follow this link.

<http://www.topcongps.com/software/topsurv.html>

Please note that any customers wishing to upgrade from earlier versions 1.20 or below, should contact their local technical representative or the technical office for new FREE GPS+ 4.11 codes.

Regards

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