SUPPORT BULLETIN

April 1, 2019

Spectra Geospatial GNSS Receivers and GPS Week Number Rollover – April 2019

WNRO occurs on April 6, 2019, when the week number will reach the maximum value of 1,023 and roll over to 0. GPS provides a current date and time, represented as a week number. The week number parameter is generated via a 10-bit binary number. The valid range for the week number parameter is 0 to 1,023, for a total of 1,024 weeks. After that time, the week number rolls over to 0. Any GNSS receiver that does not account for this rollover will report an erroneous date and may have significantly degraded GNSS performance. **This is an urgent required action and receivers will not function correctly without the correct firmware.**

Preparing Your Spectra Geospatial GNSS Receiver

Spectra Geospatial has tested the firmware in the table below using a GNSS simulator to verify that the receiver firmware correctly handles the week rollover in different scenarios, including real-time kinematic and static surveys with various input and output messages using a variety of file formats.

To prepare for the week number rollover event, it is required that you install, at minimum, the version number corresponding to each receiver in the table on the following page before the rollover event occurs on April 6, 2019. All receivers with the firmware listed will continue to operate normally following the rollover.

If a receiver does not have, at minimum, the version listed in the table below, the receiver will output incorrect UTC time and date in the output messages, data files, and in the WebUI (if applicable).

Availability and reliability of GNSS positioning will be significantly degraded in real-time mode as well as in post-processing.

Spectra Geospatial, 10368 Westmoor Drive, Westminster, CO 80021, USA
Spectra Geospatial, Rue Thomas Edison, ZAC de la Fleuriaye – BP 60433, 44474 Carquefou (Nantes), FRANCE

Firmware by Device Type

Device Type	Supported Firmware Versions	
	Minimum	Recommended
SP90m	V3.68	V3.68
SP80	V3.38 (for expired SP80 firmware maintenance – SP Loader V8.8)	V3.38 (for expired SP80 firmware maintenance – SP Loader V8.8)
SP60	V3.38 (for expired SP60 firmware maintenance – SP Loader V8.8)	V3.81
SP20	V3.67	V3.67
MobileMapper 50	Not impacted by GPS Week Number Rollover	
ProMark 800	V1.9.S815Kn27	V1.9.S815Kn27
ProFlex 800	V2.06.S850Kn27	V2.06.S850Kn27
ProMark 700	Not impacted by GPS Week Number Rollover	
ProMark 100/200	V2.5.aW215Hm27	V2.5.aW215Hm27
ProMark 120/220	V2.5.aW215Hm27	V2.5.aW215Hm27
MobileMapper 100/120	V2.5.aW215Hm27	V2.5.aW215Hm27
MobileMapper 300	Not impacted by GPS Week Number Rollover	
EPOCH 50	Not impacted by GPS Week Number Rollover	
EPOCH 35	Not impacted by GPS Week Number Rollover	
EPOCH 25	V2.32	V2.32
EPOCH 10	Not impacted by GPS Week Number Rollover	
ProMark 500	V6.8.S814G126	V6.8.S814G126
ProFlex 500	V4.5.S767G224	V4.5.S767G224
ProMark 3	Not impacted by GPS Week Number Rollover	
MobileMapper 10	Not impacted by GPS Week Number Rollover	
MobileMapper 6	Not impacted by GPS Week Number Rollover	
MobileMapper CX	Not impacted by GPS Week Number Rollover	
MobileMapper CE	Not impacted by GPS Week Number Rollover	
MobileMapper 20	Not impacted by GPS Week Number Rollover	
ProMark 2	Not impacted by GPS Week Number Rollover	

Users who are using any of the receivers in this table must ensure that they have upgraded to the minimum firmware for each receiver prior to the rollover event on April 6/7 2019. **This is an urgent required action and receivers will not function correctly without the correct firmware.**

For SP60 and SP80 firmware V3.38, Spectra Precision Loader V8.8 or later is required.

For SP90m firmware V3.68, Spectra Precision Loader V7.1.0 or later is required.

Survey Office and the GPS Week Rollover

Spectra Precision Survey Office (SPSO) software version 4.10 or later contains support for the GPS week number rollover, provided that the receiver firmware has also been updated. Users of SPSO version 4.10 will need to install patch 3 (version 4.10.3) available from the either the Spectra Geospatial website or through the “Check for Updates” utility within the software.

Affected users on older versions of SPSO with software warranty expiration before April 1, 2018, will be given an opportunity to upgrade to v4.10.3 at no additional cost by working through regular Support channels.

Survey Pro and the GPS Week Rollover

The updated Spectra Geospatial receiver firmware for the GPS week number rollover for current instruments will be backwards compatible with the current shipping version of Survey Pro, version 6.4.1. No new version of Survey Pro is required.

Survey Pro Version 5.5.2 and older are not compatible with GPS week number rollover receiver firmware versions on shipping instruments. Customers who currently have Survey Pro version 5.5.2 and either SP80 or SP60 on the 3.38 or higher version of the firmware must download and install version 5.6.4 in order to be compatible with the GPS week rollover firmware. All customers with Survey Pro v5.4 and newer are licensed for version 5.6.4.

All retired instruments will be compatible with Survey Pro versions that supported those instruments at the time the instrument was retired.

Spectra Geospatial Survey Data Collectors

The table below shows the Spectra Geospatial Survey Data Collectors containing GPS positioning. Trimble confirms that the following products of various models have been tested and are compliant for the 2019 GPS week number rollover.

Trimble Product	GPS/GNSS Type	Result
Ranger 7	SiRFStar IV	Compliant: All versions supported
Ranger 3	SiRFStar III / SiRFStar IV	Compliant: All versions supported
ST10	NEO-M8N / NEO-M8T	Compliant: All versions supported
Nomad 1050	SiRFStar IV	Compliant: All versions supported
T41	uBlox Neo-6T	Compliant: All versions supported
T41 (Enhanced GPS)	uBlox Neo-7P	Compliant: All versions supported

For further information, please contact your Spectra Geospatial representative.