



December 2016

31 December 2016 Leap Second Note

Spectra Precision has made every effort to ensure our receivers will work seamlessly through the addition of one leap second on December 31, 2016. Our current firmware fully supports the introduction of a leap second on December 31, 2016.

In simple terms, the introduction will occur at the UTC cross over between 31 December 2016 and 1 January 2017. GNSS users must determine the time difference from their location to Greenwich Mean Time (GMT) to determine exactly when they should monitor their GNSS receiver.

GLONASS uses UTC in its time system and will introduce a leap second. GLONASS leap second will be introduced at 23:59:60 UTC on 31 December 2016. Any potential issues with tracking of GLONASS will be realized at 00:00:00 UTC on 1 January 2017.

To be vigilant with any continuously operating receivers for monitoring, real time networks, etc., we suggest monitoring all receivers during this period. In the event of any tracking issues during the leap second introduction (00:00:00 UTC 31 December 2016), a simple power cycle of the receiver will fix the problem.

Current receiver firmware version and behavior

The table below shows the current firmware versions for all Spectra Precision receivers and their expected behavior after the leap second introduction. Receiver firmware maintenance plans are available for upgrading your receiver to the current firmware version, if required. See your local distributor for information on maintenance plans.

GNSS Hardware	Firmware Version	Behavior
SP80	3.10	In the event of any tracking issues during the leap second introduction (00:00:00 UTC 31 December 2016), a simple power cycle of the receiver will fix the problem.
SP60	3.10	In the event of any tracking issues during the leap second introduction (00:00:00 UTC 31 December 2016), a simple power cycle of the receiver will fix the problem.
EPOCH 50	V5.10	Receiver should have no issues at leap second introduction.

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ProMark 800	V1.7 (S813KV26)	In the event of any tracking issues during the leap second introduction (00:00:00 UTC on 31 December 2016), a simple power cycle of the receiver will fix the problem.
ProFlex 800 *	V2.02 (S845K127)	In the event of any tracking issues during the leap second introduction (00:00:00 UTC on 31 December 2016), a simple power cycle of the receiver will fix the problem.
ProMark 700	V5.0	Receiver should have no issues at leap second introduction.
ProMark 220/120	V2.3 (W214He27)	In the event of any tracking issues during the leap second introduction (00:00:00 UTC on 31 December 2016), a simple power cycle of the receiver will fix the problem.
ProMark 500	V6.1 (S763Gx24)	In the event of any tracking issues during the leap second introduction (00:00:00 UTC on 31 December 2016), a simple power cycle of the receiver will fix the problem.
ProFlex 500 *	V4.3 (S766G124)	In the event of any tracking issues during the leap second introduction (00:00:00 UTC on 31 December 2016), a simple power cycle of the receiver will fix the problem.
ProMark 3	P011	In the event of any tracking issues during the leap second introduction (00:00:00 UTC on 31 December 2016), a simple power cycle of the receiver will fix the problem.
Z-Max	MD05	Z-Max will provide incorrect UTC timescale over the time interval between the leap second event and the reception of new almanac containing updated leap second field. It could last hours and even days. It can be fixed by resetting the unit with erasing almanac.

* A new release of the embedded RINEX converter supporting leap second will be available in the beginning of 2017.