GLONASS Frequency Change

Summary:

A frequency change on two GLONASS satellites may cause GLONASS enabled receivers to exceed COCOM limits which will lock down all channels and require a receiver power cycle.

Products Affected:

OEMV receivers with GLONASS enabled model using firmware versions 3.200 to 3.500.

Region Affected:

Worldwide.

Details:

On March 11, 2009 GLONASS authorities changed the operating frequency channel of two satellites to use channel -7 (GLONASS slot 10 and GLONASS slot 14). In situations with low numbers of satellites and poor geometry (DOP), using one of these satellites in the solution may cause a velocity jump that will trigger security measures once the COCOM threshold is surpassed. Once COCOM limits (greater than 515 m/s) are exceeded the receiver will lock down all channels and require a power cycle for the unit to return to navigating state.

This issue affects all GLONASS enabled receivers with firmware 3.200 and above; **however, if a GLONASS PRN is not used in the solution computation, there is no impact.**

Positioning and raw data performance is not directly impacted. Those using GG differential code positioning may in rare cases experience position errors. Pseudorange velocities will be incorrect.

Solution:

This issue has been corrected in the 3.620 firmware release. Alternatively, the suggested workaround is to lockout the affected satellites:

For slot 10

- LOCKOUT 47

For slot 14

- LOCKOUT 51

Application Notes:

None available at this time.

Download Update:

Firmware 3.620 is available for download from the NovAtel website at:

http://www.novatel.com/support/fwswupdates.htm

For more information please contact support@novatel.com.