



Testing Results

Leap Second Testing
Model Name: XL-GPS P/N 1530-602
Firmware Version: Project revision 2.0
Date Tested: November 2008

The following leap second testing results provide time of year information across the boundary between December 31, 2008, and January 1, 2009 (UTC time). This includes, but is not limited to, handling of the time information provided via the unit's output ports. Note: since 2008 is a leap year the leap second will be added at the end of the 366th day.

Please see [Field Service Bulletin 098-50620-004](http://www.symmetricom.com/support/online-support/ttm-product-support/software-downloads/) for details on an issue that could have affected the leap second insertion on XL-GPS. All testing below has been done on an XL-GPS running Project revision 2.0, which resolves the above issue. If you are running a version of firmware that is lower than this Symmetricom highly recommends that you download the latest revision for your XL-GPS. Project revision 2.0 will be posted to the following website by December 12th, 2008.

<http://www.symmetricom.com/support/online-support/ttm-product-support/software-downloads/>

Symmetricom products that report time information will do so as described below. The system time and all of its related outputs should increment time monotonically except for the following discontinuity, which is expected:

1. December 31st, 2008 23:59:59
2. December 31st, 2008 23:59:60 (some clocks may display a repeated value of 59 sec)
3. January 1st, 2009 00:00:00

XL-GPS locked to GPS:

For the below tests, the simulation time was started on December 31st, 2008 at 22:30 and allowed to run until January 1st, 2009 at 00:15, for a total simulation time of 1 hour and 45 minutes. The leap second is handled as follows on the XL-GPS's IRIG, serial and NTP server ports:

Output on IRIG port with IEEE 1344 enabled:

366:23:59:58
366:23:59:59
366:23:59:60
001:00:00:00
001:00:00:01

Output on serial port (via F08 command) or on IRIG port without 1344 enabled:

366:23:59:58
366:23:59:59
366:23:59:59
001:00:00:00
001:00:00:01

Output on optional NTP server:

The NTP server correctly sets the Leap Indicator pending bits in packets served.

Symmetricom is not responsible for the correct processing of this information by any external program or device, only the transition from the year 2008 to the year 2009 as provided by the unit's output ports.

Symmetricom, Inc. is making every effort to provide accurate and up-to-date information on the Leap Second readiness of its products. This information reflects the current results of compliance tests of standard products and may be updated or changed without notice as testing continues.

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