

**FIELD SERVICE BULLETIN**

**FSB #:** 098-41620-002k  
**DATE:** September 20, 2002

2300 Orchard Parkway  
 San Jose, CA 95131-1017  
 Customer Assistance Center: 1-408-428-7907  
[TechSupport.ttm@symmetricom.com](mailto:TechSupport.ttm@symmetricom.com)

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**System:** NTS-90, NTS-100, NTS-100I, NTS-XL, XL-DC, XL-AK, GPS Mark III, 56K-GPS, and G to G units.

<u>Product Identity:</u>	<u>Product Code:</u>
NTS-90	NTS-90
NTS-100	NTS-100
NTS-100I	NTS-100I
NTS-XL	NTS-XL
XL-DC	XL-DC
XL-AK	XL-AK
GPS Mark III	GPS Mark III

**Customer Service:** 1-888-367-7966 (1) (1) Toll free – North America  
 1-408-428-7907 (1) (1) Worldwide

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### 2002 Rollover Anomaly Bulletin #11 (Rack-Mount Units)

This bulletin applies to all affected rack-mounted products

#### Testing Update:

We have completed validation of the reference point solution (F68 setting) to the 2002 Rollover problem for our rack-mounted units. The reference point solution has continued to work satisfactorily for customers in the field, and testing through 2010 has shown no failures, which sufficiently verifies our engineering solution. Based on these findings, the reference point solution documented in a previous Field Service Bulletin, and repeated below, is our complete remedy to this problem.

#### Reference Point Solution:

The solution that forces the GPS engine to the correct epoch can be implemented for the NTS-90, NTS-100, NTS-100i, NTS-XL, XL-DC, XL-AK, and 56000-GPS products as follows:

1. Select Function 68 (F68) command on the front panel/keypad or via the RS-232 interface;
2. Enter the year "1996";
3. Respond to "Change Year?" with "Yes"

It may take up to one minute for the unit to resolve the correct date information. External time outputs will then show the correct year; only a query to the F68 command will show 1996.

**Test Summary:**

The testing associated with this problem focused on the high-risk date rollover points through 1-January, 2010. The tests were performed with a Spirent Communications GSS Model STR4760 GPS Simulator. This instrument is capable of simulating the radio signals from up to 12 GPS satellites. For each of the rollover points, the simulator time was set to UTC 23:15:00, and allowed to run for an hour. This gave each Unit Under Test (UUT) 45 minutes to synchronize to the future date before rolling over to the next date. To test year rollovers, the simulation date was set to UTC 31-December, and the UUTs were observed to insure they correctly updated to 1-January of the next year at midnight. To test for the correct handling of leap years, the simulation date was set to UTC 28-February, and the UUTs were observed to insure they correctly updated to either 29-February (in the case of a leap year) or 1-March (in the case of a non-leap year). All of the units tested, including XL-DC, NTS-100, and 56000 products, had unmodified software, with the F68 reference point set to 1996.