

**LASER INTERFEROMETER GRAVITATIONAL WAVE
OBSERVATORY**

-LIGO-

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Test Procedure and Results	LIGO-T020044-A-C	March 19, 2002
GPS Clock Fan-out Board Test Procedure		
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Distribution of this draft: NSF reviewers, LIGO scientists
This is an internal working note of the LIGO Laboratory

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LIGO-T020044-A-C

1. Overview

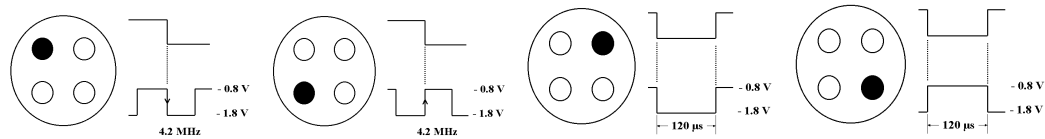
The GPS Level 1 clock fan-out (D980362-01-C) board's function is to take two signals derived from the GPS receiver and distribute the signals to 8 four-pin Lemo outputs. One input signal is 1 PPS (Pulse Per Second) TTL; the other is 4.194304 MHz (2^{22} Hz) TTL. Each Lemo connector has 2 pins dedicated to a differential 1PPS ECL signal and 2 pins dedicated to a 2^{22} Hz differential ECL signal.

2. Test Setup

Put the card under test into a de-energized test VME crate containing a GPS clock receiver board. Connect the 1 PPS and 2^{22} Hz outputs of the GPS clock receiver board to the complimentary inputs on the GPS clock fan-out board. Turn on the power to the VME crate.

3. Test Results

- GPS OUT (Diagram 1)



The diagram above has a pin highlighted in black to indicate where to insert the tip of the scope probe. The orientation of the connector assumes the board is normally vertically mounted in the VME crate. The scope should be triggered off the falling edge of the 1 PPS signal from the GPS receiver available on the 1 PPS front panel monitor jack, J11.

Output Port	Check Each Pin Per Diagram 1
J1	
J2	
J3	
J4	
J5	
J6	
J7	
J8	

Check that the clock monitor BNC has the 2^{22} Hz signal present. Check OK _____