**LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY**

**-LIGO-**

**CALIFORNIA INSTITUTE OF TECHNOLOGY**

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**

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| Document Type  Test Procedure | DCC Number  **T1400300**-v1 | April 23, 2014 |
| **aLIGO DC Breaker Switch Box Test Procedure** | | |
| B. Abbott | | |

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Performed by:\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

Board Serial Number: \_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Overview**

The aLIGO DC Breaker Switch Box was designed because some satellite modules in aLIGO did not have breaker switches of their own, so the breaker box is to be put inline with their power supply cable back at their host rack. They are only a breaker switch with indicator lights.

1. **Test Equipment**

**2.1** Power Supply capable of +/- 18V

**2.2** Digital Multimeter (DMM)

1. **Preliminaries**

**3.1** Perform visual inspection of the box to make sure nothing looks overtly broken.

**3.2** Before connecting the power to the box, set power supplies to +/- 18 Volts and then turn them off. Connect the power supplies to the box under test at the end of its cable labeled “DC In.

1. **DC Tests**
   1. Turn on the +/- 18V power supplies to the box under test and then turn on the box Power switch. Record the Voltage on the pins below, and notice if the Front Panel LEDs come on.

|  |  |  |  |
| --- | --- | --- | --- |
| **Measure** | **Pins** | **Observed Voltage** | **FP LEDs On?** |
| +18V | Pin 1 to Pin2 (GND) |  |  |
| -18V | Pin 3 to Pin2 (GND) |  |  |

If the correct voltages are present, and the LEDs are lit, the box passes test.