

LIGO Laboratory / LIGO Scientific Collaboration

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Advanced LIGO UK

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Response to the Satellite box Evaluation Report, T0900261-v1

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This is an internal working note
of the Advanced LIGO Project, prepared by members of the UK team.

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<http://www.sr.bham.ac.uk/research/gravity/rh,d,2.html>

http://www.eng-external.rl.ac.uk/advligo/papers_public/ALUK_Homepage.htm

COMMENT 1

2.1.1 Chassis Labeling and Identification

All connectors and indicators are labeled. The serial number of the unit is also written on the cover. For the full production units, the drawing number associated with the chassis assembly drawing should also be added to front or rear panel labels.

RESPONSE to COMMENT 1

The DCC drawing number will be added to the custom made production front panel.

COMMENT 2

Power indicators and fault indicators are included on the top cover and should be maintained in the production design.

RESPONSE to COMMENT 2

This feature will be maintained in the production Design.

COMMENT 3

2.1.2 Circuit Boards

The circuit board has components mounted on both sides and includes silkscreen layers for each side. The silkscreen only shows the component designator for each component and there is no additional labeling to aid in circuit debug. If possible it would be advantageous to include additional information identifying key test points and components in addition to the component designators. In particular the position of jumpers J105, J205, J305 and J405 indicating grounded or voltage biased anode connections would be very helpful. In lieu of that a clear indication of pin 1 of each jumper should be added.

RESPONSE to COMMENT 3

Where possible the test points and links will be identified and labeled with their functions on the screen print.

COMMENT 4

Schematic and/or assembly documentation numbers and board design name should be added to the silkscreen of the board. The serial number for the circuit board should also be clearly identified on the board itself.

RESPONSE to COMMENT 4

In house identification numbers were added in copper on the board. Board names and identification numbers will be added to the board in silk screen print, and the boards will be numbered with their serial numbers.

COMMENT 5

2.1.3 Cabling, Connectors and Harnesses

There are no internal wiring harnesses, cables and/or connectors in the unit. All connections to the circuit board are made via connectors that mount through holes in the amplifier box. This feature should be maintained in the production units.

RESPONSE to COMMENT 5

This feature will be maintained in the production units.

COMMENT 6

2.3 Adequacy of Documentation

A complete set of schematics (D0900900-v1) was provided with the pre-production units. No bill of materials, test plans, quick start guide or other documentation was provided. Prior to production all materials listed in Electronics Requirements document (T060067) and LIGO document T000053-04D, "Universal Suspension Subsystem Design Requirements Document" will need to be evaluated.

RESPONSE to COMMENT 6

Response to the Satellite Box Evaluation Report (This document)

Satellite Box Design study:

Satellite Box Test Plan:

Satellite Box circuits and BOM:

Satellite Box Users Guide