*LIGO Laboratory / LIGO Scientific Collaboration*

LIGO-E12xxxxx-v1 *LIGO* Date

*Subsystem Name* Acceptance Documentation

Author(s)

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LIGO Scientific Collaboration

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# Requirements documentation

*The design requirements document must be brought up to date, and pointers to background material, analyses, etc. added to the Requirements document. Pointers to prototyping endeavors including testing results if they are not superseded by subsequent testing should be included here.*

*a. Design Requirements Document (DRD)*

*b. Supporting documents (models, analyses, …)*

# Design overview and detailed design documentation

*a) Final Design Document (FDD): must bring the FDD up to date.*

*b) Review reports:*

*- cite the final design review committee's report*

*- cite the design team's response to the final design review (note that any resulting changes to the design should have been incorporated into the FDD).*

*c) Supporting design documents: models, analyses, specifications, etc. If not applicable, then state so.*

*d) Drawings: cite the top level assembly drawing for each major assembly or subsystem. In the DCC, all subsidiary drawings (sub-assemblies and part drawings) must be linked in a drawing tree manner.*

*e) Bill(s) of Materials (BOM): cite any collected BOMs. If the BOMs are only to be found on the Assembly and Sub-Assembly drawing sheets, then state so.*

*f) Interface control: cite any documents (such as RODAs) with interface definition/control and/or cite the relevant sections of the DRD and FDD.*

*g) Software: cite any software design description documentation. If not applicable, or not available, then state so.*

*h) Design source data:*

*- Confirm that all mechanical design CAD models are in the SolidWorks/PDMWorks vault, or explain what is not and why.*

*- Confirm that all electronics design CAD models (schematics and PWB layouts) are backed up and available on LIGO Lab archives, or explain what is not and why.*

# Materials and fabrication specification

*Any special materials, or treatment of materials including preparation for in-vacuum use; this may be integrated into the Design documentation.*

# Parts and in-process spares inventoried

*All elements of aLIGO must be recorded in the ICS or in the DCC using the S-number scheme. As-built modifications for parts or assemblies should be found here.*

# Assembly procedures

*All assembly procedures must be in the DCC and annotated or updated for lessons learned. Storage, if used, should be described here along with procedures to maintain the equipment in good condition (e.g., purge frequency). Transportation procedures and cautions must be noted.*

# Installation procedures

*All installation procedures must be in the DCC and annotated or updated for lessons learned.*

# Test documents

*Test rationale, plans, and data for each unit must be documented as described in M1000211. That tree structure should be pointed to by the overall tree structure laid out in this Acceptance prescription. The top-level objective is to make clear how the measurements performed, which often will not directly measure a required performance parameter, give confidence that the subsystem will fulfill the requirements.*

# User interface software

*User interface software, and the test routines indicating proper functioning of the software, must be described in words and have code under configuration control (SVN). Watchdog and Guardian routines must also be treated in this way.*

# Operation Manual

*A manual appropriate for operators, written in accordance with M1200366, covering setup/initialization, check-out, operating instructions, calibration, maintenance, operations spares plan, storage/transport and troubleshooting. It must be accessible from standard user screens.*

# Safety

*Safety documentation must be in the DCC for all phases of the subsystem development, including any needed for normal use or foreseen maintenance/repair scenarios.*