Spica Technologies, Inc. Quality Manual

1.1 Spica Technologies, Inc. **Quality Policy:**

It is the goal of Spica Technologies to provide the finest in test and measurement services for the laser and optical industry. This goal can only be realized by performing all measurements to the best of our capabilities, being responsive to our customer's requirements, and foremost, reporting all test results accurately and fairly regardless of concern or consequence.

2.3 Procedure for **Document and Revision Control:**

2.3.1 ***Purpose*:**
To define the procedure used to control documents at Spica Technologies. Spica works/performs its inspection system IAW with 52.246-2 (gov. inspection of supplies).

2.3.2 ***Scope***:
This procedure applies to all documents containing specifications, drawings or procedures and considered controlled.

2.3.3 ***References*:**

Document Number	*Title*
QMI-011	Controlled Document Cover Sheet
QMI-012	Controlled Document Copy Log Sheet
QMI-013	Specification Update Sheet
QMI-014	Controlled Document List Sheet

2.3.4 ***Definitions:***

Drawing is a reference to a technical drawing or specification.

Procedure is defined as a set of instructions to document the method used to perform a task.

Specification is defined as the document or set of parameters that a component must conform to.

2.3.5 ***Procedure:***

2.3.5.1 When a specification arrives, it is logged into the *Controlled Document List* and given a *Controlled Document cover Sheet & Controlled Document Copy Log Sheet*. It should then be filed under the Specification or drawing number in the file.

2.3.5.2 If an addendum is provided for an existing specification, it needs to be attached to the specification, and "updated" written on the cover sheet.

2.3.5.3 If a replacement specification is received, a *Specification Updated Sheet* needs to be placed over the existing cover sheet, and the updating specification is treated as a new specification. If a copy is made of a spec. for any reason, it needs to be logged into the *Specification Copy Log Sheet* attached to the master spec.

2.3.5.4 Specifications are NOT to leave document control area. Controlled procedures are permitted in the lab, but must be issued to the receiving location in the *Procedure Control Log.* **Only procedures signed in red ink are authorized procedures.** Copies are not controlled and are not valid procedures.

2.3.5.5 If a procedure must be altered or changes must be made, all changes are to be written in **RED INK**, dated and signed by procedure author or engineer.

2.3.5.6 Any verbal instructions other than those documented in any specification need to be in the form of an official update or needs to be documented on the customer's Certificate of Compliance.

2.4 Procedure for **Control of Test & Measuring Equipment**:

2.4.1 ***Purpose*:**
To define the procedure used to maintain the accuracy of test and measuring equipment. In accordance with MIL-STD-45622A.

2.4.2 ***Scope:***
This procedure applies to all equipment employed during testing, monitoring or measurements made at Spica Technologies. All equipment used at Spica Technologies is calibrated by a calibration service that meets Spica's requirements.

2.4.3 ***References:***

Document Number	*Title*
CAL01	Calibration Log Book

2.4.4 ***Definitions:***
Removed from service; Indicating unit or item is to be removed from accessible areas to ensure it is not used.

2.4.5 ***Procedure:***

2.4.5.1 When a new product is introduced into production, it is verified calibrated and placed into the calibration log book. Its certification is placed into the log book as well and a sticker of calibration is either confirmed or created. The equipment can then be placed onto the test floor.

2.4.5.2 During usage of calibrated equipment, each item must be verified accurate and or Calibrated prior to each use. Tamper-resistant seals must be verified intact or unit must be removed from service.

2.4.5.3 At the 1st day (or next working day) of each month, the calibration log is reviewed to Identify any equipment that may require calibration in the *next* month. If any equipment shows that an upcoming calibration is required, arrangements are made and it is marked for calibration, calibration sticker removed and equipment is *removed from service*.

2.4.5.4 If a unit requires calibration, it must be sent to a pre-approved service for re-calibration. Each service used by Spica Technologies must meet either the requirements (adapted from MIL-STD-45662A) or be ISO registered. No calibrations other than NIST/NBS or DoD will be accepted.

2.4.5.5 Quality Officer has authority to remove any or all equipment for calibration or Verification.

2.4.5.6 In the event an extension of calibration is required to complete a test, a temporary extension will be permitted provided unit is verified (against calibrated unit) for use within required range to complete test. An indication of this condition will be required by affixing a label next to calibration sticker stating: "calibrated for (test# <or> WO#) only", date of extension and initials of extender. Submit a calibration extended form to Quality to be included into calibration log book.

2.4.5.7 To reduce the possibility of an "Out of tolerance condition," Power Meters are to be verified periodically against other meters located in the laboratory.

2.4.5.8 In the event that an Out of tolerance condition is detected: A) The percent of deviation that has occurred is determined. B) All test results of the last period are to be reviewed by engineering and quality to verify test results remain in specification. If not, customers are notified for either retesting or data adjustment based on observed deviation.

2.4.5.9 If any unit is found to be out of tolerance, corrective action to repair instrument will begin. Customers are to be notified if error exceeds 150% or manufacturer's tolerance specification or renders test data out of limits. In-house Corrective Action form to be supplied to customer upon request.

2.4.5.10 Incoming calibration reports must contain the following: identification of the instrument, identification of the calibration source and report number, date of the calibration, calibration assigned value(s) with statement of uncertainties, and relevant conditions.

2.4.5.11 All MT&E equipment will be handled appropriately. In the event equipment is subjected to adverse conditions or mishandled, a report is filed, physical inspection & verification are performed using similar instrument to verify unit does not require adjustment.

2.4.5.12 Equipment must be used and stored as per manufacturer's tolerances, or +25° C. +/- 10 degrees, whichever is greater.

2.5 Procedure for **Control of Document and Data Confidentiality**

2.4.1 ***Purpose*:**
To define the procedure used to maintain confidentiality of customer information and data.

2.4.2 ***Scope:***
This procedure applies to all data generated by Spica Technologies for any customer or internally generated data for company use.

2.4.3 ***References:***

Document Number	*Title*
Conf. 1	Confidentiality Agreement
Customer Supplied Documents	
NISPOM	

2.4.6 ***Definitions:***
Confidentiality requires that data generated, handled, logged or shared with Spica Technologies by any customer be maintained within Spica Technologies and may not be released to other customers, or to public domain without prior consent of the data owner (customer).

2.4.7 ***Procedure:***

2.4.7.1 All classified, confidential data will be maintained in the appropriate classified log book. Data will be handled in accordance with the NISPOM and subsequent direction by the facility security officer (FSO).

2.4.7.2 All non classified data will be maintained either in laboratory notebooks or on the traveler provided with each device under test (DUT). Laboratory notebooks will be marked as “proprietary”.

2.4.7.3 Data will only be disclosed to the company or representatives of the company for which the data was generated. This is defined by the corporate name on the attached purchase order.

2.4.7.4 Should a customer request that data be forwarded to another party not specifically called out on the purchase order, written permission to forward the data must be received either by electronic mail or in fax form. A customer may request that a blanket disclosure be made in cases where multiple data sets can be shared.

2.5 Procedure for **Contract Review**

2.5.1 ***Purpose*:**

To define the procedure used for reviewing contracts for ability to perform, and that required equipment is in house to perform such contract.

2.5.2 ***Procedure***

This procedure applies to all purchase orders and contracts accepted. It also applies to all change orders.

2.5.3 ***References*:**

None

2.5.1 ***Definitions:***

Contract is defined as a purchase order or other documentation intending to place an order with Spica Technologies.

2.5.2 ***Procedure:***

2.5.2.1 All purchase orders will be checked against list of standard wavelengths. Any questions will be addressed either to chief engineer or corporate executive to assure work can be performed in scope and delivery as required by contract.

3.1 Procedure for **Receiving Parts**

3.1.1 ***Purpose:***
To define a procedure to receive parts into Spica Technologies, Inc.

3.1.2 ***Scope:***
This procedure applies to all employees receiving and/or handling parts upon entrance to the building.

3.1.3 ***References:***

Document Number	*Title*
QMI-015	Job Traveler Testing Requirement Worksheet

3.1.4 ***Definitions:***
This section is not applicable.

3.1.5 ***Procedure:***

3.1.6 Inspect outside of packaging. If there is any damage, it needs to be documented.

3.1.7 Inspect inside of packaging. Note any damage as above.

3.1.8 Remove packing slip and Purchase Order, along with any other accompanying paperwork, and enter information into workorder database using "New Workorder" option.

3.1.9 Enter test information from test information sheet (provided from the customer, sales or engineering, and confirmed to meet customer's current specification revision or signed waiver on file.) Confirm the information contained on the test information sheet matches the information contained in the Purchase Order.

3.1.10 Print information onto appropriate form.
Green for Damage Test (cert, threshold)
Yellow for Optical Density testing
Blue for any other test.

3.1.11 When information is printed on traveler, place customer's optics and traveler into clear bag to be tested.

3.1.12 Place parts in box on "to be tested" shelf, according to wavelength. If part is MIS specification or other requiring N2 storage, place parts in appropriate storage.

3.2 Procedure for **Part Handling, Inspection & Cleaning**

3.2.1 ***Purpose:***
To define a procedure for part handling, cleaning and inspection.

3.2.2 ***Scope:***
This procedure applies to all employees cleaning, inspecting or handling parts.

3.2.3 ***References:***
Document Number *Title*
(This document makes no references to other documents)

3.2.4 ***Definitions:***
This section is not applicable.

3.2.5 ***Procedure:***

3.2.5.1 Put on latex gloves to protect part from contamination.

3.2.5.2 Inspect the part's packaging for any obvious damage, prior to opening. Note any damage on appropriate form.

3.2.5.3 Carefully open customer's package and remove part. Using 10X magnification, check part thoroughly, noting any damage on traveler.

3.2.5.4 Clean part as per instructions by customer (based on substrate material).

3.2.5.5 Test part.

3.2.5.6 After testing has been completed, re-clean part if noted on traveler. If part fails testing, it is to be immediately removed from testing, placed into it's packaging (if individual) and a red REJECTED sticker placed on the package. If part does not have individual packaging, the sticker is to be placed on part, if possible. Traveler is to be noted in BOLD letters that part FAILS.

3.2.5.7 Re-package part in customer's packaging, provided it has not been damaged. If re-packaging is required, do so as requested on traveler.

3.2.5.8 Complete information on traveler and return to "tested" shelf.

4.0 Internal Documentation on Corrective Action.

4.1 ***Purpose:*** Once non-conforming items have been noticed they are identified by location, associated documents, or specific markings to prevent their inadvertent use. All non-conforming items and customer complaints are subject to review and rectification by nominated personnel. The type and extent of non-conformity is documented in order to establish trends and identify possible areas for improvement.

The corrective action required to prevent recurrence is evaluated, documented, and its effective implementation is monitored. All rectification is subsequently re-inspected to ensure complete customer satisfaction.

All employees are encouraged to suggest improvements in methods, materials, suppliers, and sub-contractors. The Company has established procedures for review of all activities in order to identify and evaluate all possible improvements in methods/ materials and its procedures.

4.2 ***References:***

4.3

Document Number	*Title*
QMI-016	Corrective Action Form

5.0 Index of **Referenced Documents**

QMI#	**Description**
QMI-011	Controlled Document Cover Sheet
QMI-012	Controlled Document Copy Log
QMI-013	Specification Updated Cover Sheet
QMI-014	Controlled Document List
QMI-015	Job Traveler Testing Requirements Worksheet
QMI-016	Corrective Action Form

6.0 Document Change History

1.0	08/01/98	Original Release
1.1	09/22/98	Format changes, Content added.
1.2	10/01/98	Content added.
1.3	11/16/00	Revised Format, adjusted content.
1.4	06/18/04	Revised Format.
1.5	08/03/06	Revised Format, Content added.
1.6	10/13/07	Revised Format, Content added.