



Pletronics

Manufacturer of
High Quality Crystals & Oscillators

QUALITY MANUAL



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PROPRIETARY NOTE:

This Quality Manual is to be treated as confidential and must not be copied, reprinted or the contents divulged to a third party without the permission of Pletronics, Inc. Uncontrolled copies are current at the date of issue only, and will not be subject to revision control.

Revision History

Date	Description of Change
2/3/97	Initial Release of QM. This issue replaces and obsoletes QAL-MAN that was never fully implemented.
3/17/97	Updated per desktop audit #1 dated 2/26/97.
7/24/97	Updated Organization charts for clarity and more detail and updated random verbiage as needed to clarify requirements.
11/19/97	Added ISO 9001 registration & fixed QM 4.4.7 – 4.4.9 titles and added more glossary terms.
4/9/01	Initial release of QM-QMS01 formatted for ISO 9001:2000. This issue replaces and obsoletes QM 11/19/97 formatted for ISO 9001:1994. This release is a major change to the manual.
6/19/02	Updated Figure 1 process flow to add additional inputs and outputs from ENG, PUR, SLS and MFG and updated registration on sheet 3 from ISO9001:1994 to ISO9001:2000
4/25/03	Updated Figure 2, Organization chart and Figure 3, Responsibilities and Authorities to allow for new employees and job descriptions.
03/10/05	Updated scope (to remove Bekly), Figure 1 (processes and inputs/outputs), Figure 2 (org chart) and Figure 3 (Responsibilities and Authorities)
8/16/07	Updated Figure 1 inputs and outputs to current practices, updated BSI logo
10/28/10	Updated Quality Policy & updated registration to ISO9001:2008

SCOPE

Pletronics, Inc. and Bekly Corporation were actually two companies in one. Pletronics, Inc. was formed in 1979 and provides standard catalog and custom Crystals and Oscillators. The Bekly Corporation, formed in 1988, was a manufacturing subsidiary assembling oscillators for Pletronics, Inc. As of 1999, the oscillator manufacturing was moved to Pletronics, Inc. and the Bekly subsidiary was dissolved.

This document and the procedures referenced in Figure 4 make up the corporate quality manual for Pletronics, Inc. This manual describes the Quality Management System and is effective at all levels within Pletronics, Inc. It complies with the requirements of the international standard for quality, ISO 9001:2008.

Pletronics, Inc. is registered to ISO 9001:2008 through BSI, certificate FM 38119 with the following scope:

**Pletronics, Inc. designs, manufactures and tests
frequency control products.**



QUALITY POLICY

The Pletronics, Inc. quality policy is shown below. This policy is posted for all to see, and all personnel receive a copy of this policy with their employee handbook.

QUALITY POLICY

Our goal is to be responsive to the needs of our customers by supplying the highest possible quality products on time with the best possible pricing and value.

Pletronics, Inc. is committed to continuous quality improvement by enhancing production yields, reducing costs, increasing customer satisfaction and meeting our employees' expectations for training, safety and morale.

**Figure 2
Pletronics Process Owner Organization Chart**

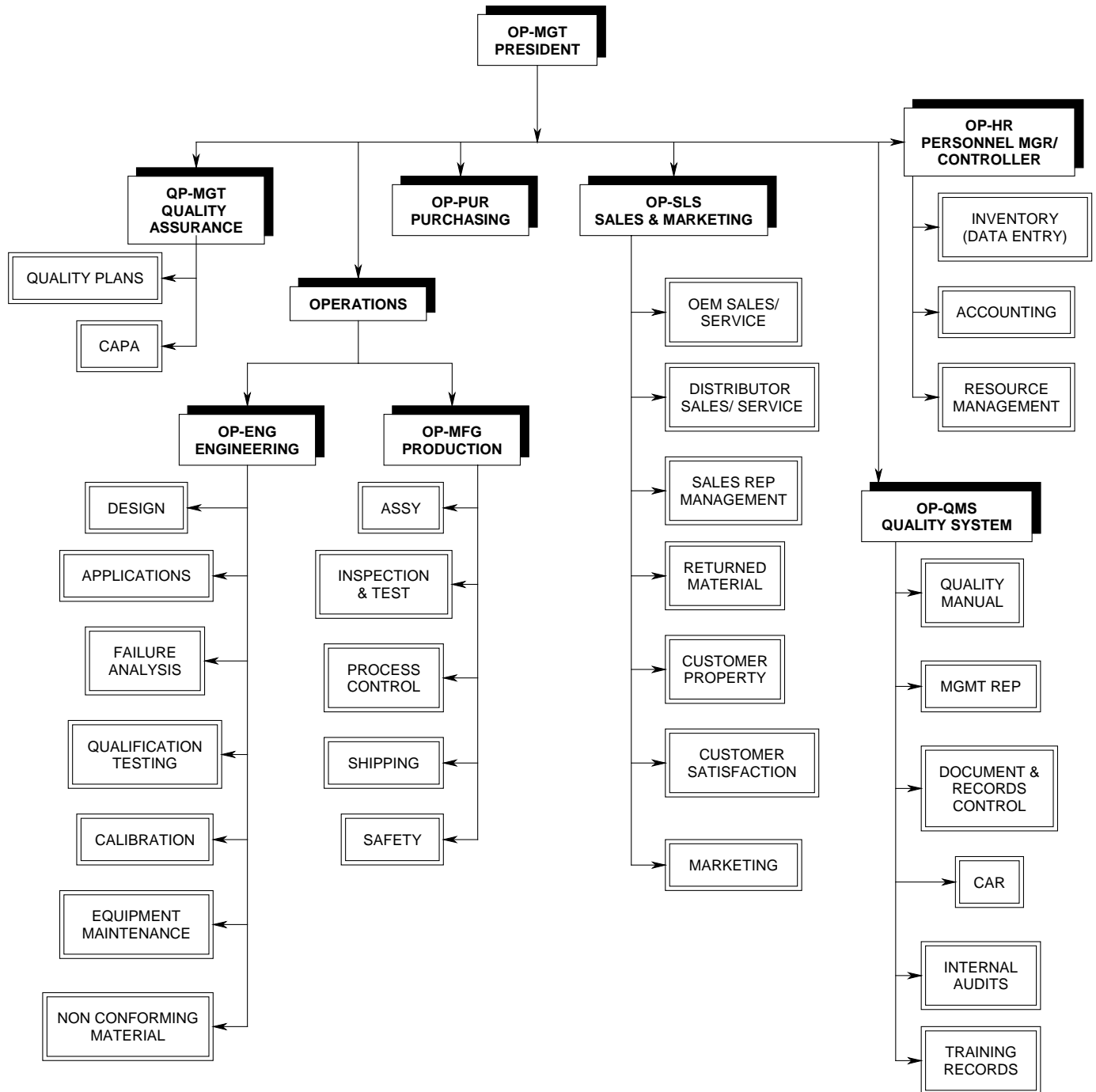


Figure 3
Pletronics Responsibilities & Authorities

Job Description	You have the Authority to:	Your Main Responsibilities of Quality Management System are:	Contribution to Quality - Promote customer satisfaction by:
President	Communicate requirements to all management	Define business niche, maintain Key supplier relationships, provide necessary resources	Making commitment to Quality Mgmt System (QMS)
Operations	Hold release of product until discrepancies resolved	Assist in defining & executing goals of President	Making commitment to QMS
QA, Production, Engineering & Sales Managers	Hold release of product until discrepancies resolved, Authorize Returns	Manage departmental processes, hire and train personnel	Making commitment to QMS
Personnel Manager	Define benefits	Manage hiring & benefit processes	Promoting good working environment
Quality System Manager	Work with Department Mgrs to improve processes	Customer advocate, mgmt rep, internal auditor, CAPA & training	Ensuring QMS is effectively maintained
Engineer (application, process & design)	Hold release of product until discrepancies resolved	Identify design, test, application and process flaws and solutions	Providing solutions to customer problems
Purchasing	Choose best approved source, determine optimum stock levels	Communicate customer requirements accurately to suppliers	Obtaining qualified product at best price and delivery possible
Office/ Bookkeeping	Hold shipments until credit discrepancies resolved	Customer service, Reports to reps & customers	Timely & accurate reporting
Production Control	Decide priorities & allocate resources for production	Work as liaison between Sales and Assembly (& R/S) to ensure customer requirements are met	Providing qualified product at best cost and delivery possible
Assembly, test and R&D technician	Stop work if problem exists, notify supervisor to explain problem & suggest solutions	Produce, test and inspect product per LT, workmanship standards and applicable WI	Providing qualified product at best cost and delivery possible
Shipping	Hold shipments until discrepancies resolved, notify Sales of any problems	Actualize customer requirements and ensure only properly tested product is shipped	Ensuring customer gets product that meets all requirements
Receiving	Work with Engineering to hold incoming stock until discrepancies resolved, notify Sales of any problems	Ensure all incoming product is tested to appropriate standards	Ensuring customer gets product that meets all requirements
Sales/ Customer Service	Change existing quotes/orders & hold shipments to meet customer requirements	Clarify customer requirements & ensure they are understood by all required personnel	Ensuring customer gets product that meets all requirements
Marketing	Suggest product line improvements, design input	Analyze trends in the marketplace	Expanding marketplace
Data Entry	Question inputs to ensure customer requirements are accurate	Translate customer requirements accurately	Maintaining Add-On accurately & timely

All personnel at Pletronics, Inc. are responsible to identify nonconformances and any other responsibilities as required by their supervisor.

Figure 4
Pletronics Operating Procedures

PROCEDURE	ISO 9001:2000 ELEMENT
QM-QMS01, OP-QMS03,OP-MGT01	4.1 General requirements
QM-QMS01	4.2.2 Quality Manual
OP-QMS02	4.2.3 Control of Documents
OP-QMS02	4.2.4 Control of Records
OP-MGT01	5.1 Management Commitment
OP-MGT01	5.2 Customer Focus
QM-QMS01	5.3 Quality Policy
OP-MGT01	5.4 Planning
OP-MGT01	5.5 Responsibility, authority & communication
OP-MGT01	5.6 Management Review
OP-HR01	6.1 Provision of Resources
OP-HR01	6.2 Human Resources
OP-HR01	6.3 Infrastructure
OP-HR01	6.4 Work Environment
OP-MFG01	7.1 Planning of product Realization
OP-SLS01	7.2 Customer -related processes
OP-ENG01	7.3 Design and Development
OP-PUR01	7.4 Purchasing
OP-PUR01	7.4.3 Verification of purchased product
OP-MFG01	7.5.1 Control of production
OP-MFG01	7.5.2 Validation of processes for production
OP-MFG01	7.5.3 Identification and traceability
OP-SLS01	7.5.4 Customer property
OP-MFG01	7.5.5 Preservation of product
OP-MFG01	7.6 Control of monitoring & measuring devices
OP-MGT01	8.1 General measurement
OP-SLS01	8.2.1 Customer satisfaction
OP-QMS03	8.2.2 Internal Audit
OP-QMS03	8.2.3 Monitoring & measurement of processes
OP-MFG01	8.2.4 Monitoring and measurement of product
OP-MFG01	8.3 Control of nonconforming product
OP-MGT01	8.4 Analysis of data
OP-MGT02	8.5 Improvement

Figure 5
Pletronics Common Abbreviations

ASSY	Assembly
AVL	Approved Vendor List
CA	Corrective Action
CAPA	Corrective Action/ Preventive Action
CAR	Corrective Action Request (from Internal Audit)
ENG	Engineering
FAR	Failure Analysis Report
GPS	Global Positioning System
ISO	International Standards Organization
MFG	Manufacturing
MGT	Management
MGR	Manager
MFR	Manufacturer
NIST	National Institute of Standard Technology
OJT	On the Job Training
OP	Operating Procedure
PO	Purchase Order
PUR	Purchasing
QM	Quality Manual
QMS	Quality Management System
QTY	Quantity
RFQ	Request for Quote
RMA	Return Material Authorization
SR	Sample Request
SMD	Surface Mount Device
SLS	Sales
SO	Sales Order
WI	Work Instruction
XTAL	Crystal