QMS Scope:

The QMS policies in this manual, records listed in the Table of Records, and the documents outlined in the Document Distribution List, conform to ISO 9001:2015 standards for quality management systems. These documents describe the quality management system deployed at American Circuits, Inc. and supports its processes at the following location

- 10100 Sardis Crossing Drive, Charlotte, NC 28270circuit board design, fabrication, assembly, testing, and wire harnesses

The intent of this QMS is to address and account for all internal and external issues and interested parties ACI has deemed relevant to the goals outlined in the quality policy and objectives stated in this document.

Non-Applicable:

ISO 9001:2015 clause 8.5.1f: Validation of Processes for Production and Service Provision
All products are built to customer specifications and are tested, as required, prior to shipment to the customer. We do not manufacture any products that cannot be tested.

American Circuits Inc. – Quality Policy

American Circuits, Inc. continually strives to meet or exceed customer requirements. We have the goals of minimal internal defects, minimal returns, and on time delivery, with an emphasis on continual improvement.

American Circuits Inc. – Quality Objectives

American Circuits, Inc. tracks the following data in order to achieve customer value and satisfaction through a process of continual improvement.

1. On-time delivery
2. Minimal Internal Defects
3. Minimal Customer returns

American Circuits Inc. – Risk Management

The top management of American Circuits, Inc. regularly performs risk and opportunity assessments against the company's strategic direction, considering all interest parties and related internal and external factors. These assessments are captured in the COTO-Risk Register Log and Management Review.

Management Review Meetings are held at least twice a year. See Also: ACI To-Do List for discussions in addition to Management Review.

Control of Documents and Records Procedure

Purpose:

The purpose of this procedure is to ensure control of essential documents for the successful operation of the quality management system.

Definitions:

Maintained Document: Information which provides insight into what an organization does. Maintained Documents include: process flows, guidelines, procedures, policies, and forms.
Document Revision History: Describes revisions to the document and who revised the document by date. The Document Owner and overseeing Manager's name or initials indicate their review and approval of said document.
Document Distribution List: List of all current quality system documents, their revision date and distribution status.
Form: Blank template intended to store information and later be used as a record. Forms need a revision level, but revision history can be assessed by viewing previous records using the same form.
Record: Retained Document established to provide evidence of conformity to requirements and of the effective operation of the quality management system.
Table of Records: List of all quality system records. The Table of Records defines how records are identified, stored, protected, and retrieved as well as the length of retention and final disposition of American Circuits' records.

Procedure:

1. The Process Owner and Management has the responsibility and authority for reviewing and approving quality management system documents for adequacy prior to issue, as well as for their updates and re-approvals. He or she is responsible for the notification of changes as necessary. Notification of changes can be done verbally.

2. Server access is restricted by password and permissions. Authorized personnel, those who may edit QMS documents, are controlled by these passwords and permissions. Any and all changes are submitted to the Management Representative for approval and issuance.

3. Revision changes to controlled documents are identified in the Document Revision History.

4. A Document Distribution List, indicating current revision dates and locations of quality system documents, is maintained on the server.

5. The current revision level of controlled documents is identified by letter(s). Relevant versions of documents available at point of use are found on the Document Distribution List. Any printed copies of documents not identified for distribution on the Document Distribution List are considered reference only.

6. **All employees are responsible for ensuring that documents remain legible and in good condition.**

7. The identification and distribution of external documents is the responsibility of the recipient of the document.

8. To prevent unintended use all obsolete documents are identified or destroyed / trashed.

9. Records will be maintained in accordance with the Table of Records.

10. Any customer requirements will take precedence over the following Table of Records.

American Circuits Table of Records

Standard	Record Identification	Record Owner	Storage Location	Protection	Indexed By	Minimum Retention	Disposition Method
9.2, 9.1.3, 10.2, 10.3	Audit Notes, Results, and Actions	Edwin Larmore	ACI Server	Backup & Password	Date	5 Years	Archived
9.2	Internal Audit Plan and Record	Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	Archived
7.1.5	Calibration Records	Praful Gondha	Accounting Server	Access Restricted Backup & Password	Serial Number	5 years	Archived
10.2	Closed and Completed Corrective Actions	Edwin Larmore	ACI Server	Backup & Password	Numerical	Continuous	Archived
10.2	Corrective Action Tracking Report	Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	Archived
10.3	Closed and Completed Preventive Actions	Edwin Larmore	ACI Server	Backup & Password	Numerical	Continuous	Archived
10.3	Preventive Action Tracking Report	Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	Archived
7.1.2, 7.2	Employee Competencies	Ket Gondha	ACI Server	Backup & Password	Alphabetical	Continuous	Archived
7.1.2, 7.2	Training Records	Max Johnson	ACI Server	Backup & Password	By Employee	5 Years	Archived
7.1.4	Hyster Propane Gas Forklift Checklist	Max Johnson	Appropriate Forklift	Access Restricted	Forklift and Location	3 Years	Destroyed
7.1.4	Monthly Fire Extinguisher Inspection Logs	Max Johnson	Individual Fire Extinguishers	By Inspection Agency	Name	Until Replaced by Inspection Agency	Destroyed
7.1.4	Yale Propane Gas Forklift Checklist	Max Johnson	Appropriate Forklift	Access Restricted	Forklift and Location	3 Years	Destroyed
7.1.3	Quarterly ESD Audit	Edwin Larmore	Server	Backup & Password	Alphabetical	5 years	Archived
4, 5, 7.1, 7.1.3, 7.1.4, 7.1.6, 9, 10	Management Review Minutes and Actions	Max Johnson	ACI Server	Backup & Password	Date	5 Years	Archived
4, 6, 7	COTO-Risk Register	Max Johnson	ACI Server	Backup & Password	Date	Continuous	None

6.1, 6.3	ACI To-Do List	Tony Streletsky	ACI Server	Backup & Password	Date	Continuous	Archived.
7.1.3	Maintenance Logs	Kris Valerio	Equipment Binder	Access Restricted	Equipment and Location	2 Years	Archived
7.1.3	Preventative Maintenance logs	Kris Valerio	Equipment Binder; Server	Access Restricted	Equipment & location	5 Years	Archived
8.4	Supplier Evaluations	Tony Streletsky	ACI Server	Backup & Password	Alphabetical	5 Years	Archived
8.1	Completed Credit Reference Requests	Praful Gondha	Credit Folder Sales Folders	Access Restricted	Alphabetical	Continuous	None
5.1, 9.1.2	Customer Feedback	Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	None
8.1, 8.6, 10	Master Inspection and Test Report	Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	None
8.7	Nonconforming Materials Log	Edwin Larmore	ACI Server (Master Inspection Report)	Backup & Password	Alphabetical	Continuous	None
5.1	On Time Delivery, Returns, and Voids Report	Praful Gondha/ Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	None
7.1.4	Thermometer Verification	Edwin Larmore	ACI Server	Backup & Password	Alphabetical	Continuous	None
8.2.4, 8.3.2, 8.3.4, 8.5.3, 8.5	Product Sales Folders	Praful Gondha	Accounting	Access Restricted	Alphabetical by customer then Numerically	Subject to purge after 5 years	None
7.2.2, 7.2.3	Engineering Change Orders	Abhishek Patel	ACI Server	Backup & Password	By job number	Continuous	None
8.5.2	Production Records	Praful Gondha	Accounting	Access Restricted	Alphabetical by customer then Numerically	Continuous	None
8.5.2	Purchasing Records	Tony Streletsky	Product Folders, Purchasing, Server, Supplier Websites	Access Restricted	By job number	Subject to purge after 5 years	Destroyed
8.5.1f	N/A						
8.5.5	Product Photos	Abhishek Patel	Server & Product Folders	Backup & Password, Access	Numerical	Subject to purge after 5 years, or	None

				Restricted		sooner if obsolete	
8.4.2, 8.4.3	Parts Return Log	Tony Streletsky	ACI Server	Backup & Password	Alphabetical	Continuous	None
8.5.3	Customer Property Log	Abhishek Patel	ACI Server	Backup & Password	Alphabetical	Continuous	None
7.5 8.5.5	UPS Pickup Summary	Kris Valerio	Shipping	N/A	Date	0-14 days	Trash

Nonconforming Materials Procedure

Purpose:

To control defective or nonconforming materials throughout the manufacturing process, by identification and segregation, so that these materials are not processed or shipped as good parts and are available for proper disposition.

Definitions:

Defective or Nonconforming Material: Any material that does not meet our specifications or the quality requirements of our customers and is deemed defective and not easily repairable.
Nonconforming Material Area: Designated location to segregate nonconforming materials until disposition – returned to vendor, trashed, approved for limited or partial use, etc.

Procedure:

1. Normal process scrap generated during manufacturing is kept separate from good materials to avoid unintended use. This is accomplished by placing the scrap in specified places or trash bins when identified or at the end of each work order or series of similar work orders processed together.

2. Nonconforming raw materials, work in process, or finished goods are kept separate from good materials to avoid unintentional use. This is accomplished by identifying or segregating the material. Depending on the nature of the nonconformity, materials may be identified with a large ‘X’ written in permanent marker, scrapped, tagged with a red tag or zip tie, or placed in the Nonconforming Material Area. Tags need to have the job or part number and nonconformity written on them. This may be done any time during the manufacturing process.

3. Nonconforming work in progress, subsequent actions, and final disposition will be tracked using the Master Inspection Report. Materials may be scrapped immediately at the discretion of the Production Supervisor. Vendor supplied materials found to be defective will be tagged and tracked using the Incoming Material Inspection Report.

4. Nonconforming Material may be placed in the Nonconforming Materials Area even if not otherwise identified. Any unidentified materials are identified prior to disposition. Overflow nonconforming materials may be held outside normally identified Nonconforming Material areas until disposition is resolved.

5. Materials that are defective, but easily repairable are immediately returned to production personnel for repair. Once repaired the materials are re-inspected prior to release.

6. If the defective material originated from a supplier, Quality Control will prepare samples of the defective material that show the defect and retain the material until the supplier is notified and provides instruction for disposition.

7. Management may determine that the defective material can be used under certain circumstances. In situations where the finished or work in process product does not conform to the customer's requirements:
    a. Sales may request approval from the customer for a deviation.
    b. The product may be reworked and re-verified by inspection & documented on the WO.
    c. Management may preclude its original use and allocate it to another application.

Corrective Action Procedure

Purpose:

To ensure an effective methodology for requesting and implementing corrective action investigations for product or process problems arising from ourselves or from our suppliers. These problems may be identified using internal data or by customer returns.

Definitions:

Corrective Action: Any action or steps taken to avoid recurrence of conditions causing defective or non-conforming material. As an ordinary work initiative expected as part of everyone's job, troubleshooting take place daily throughout the company without a formal Corrective/Preventive Action Report.
Defective or Nonconforming Material: Any material that does not meet our specifications or the quality requirements of our customers and is deemed defective and not easily repairable.
Corrective Action Request (CAR): A form that addresses a problem regarding an internal product or process and provides an outline for collecting information, determining the root cause, documenting corrective or preventive actions to be taken, and tracking effectiveness of the action.
Supplier Corrective Action Request (SCAR): CAR form used to address problems with a supplier's product or process and provide an outline for collecting information, determining the root cause, documenting corrective or preventive actions to be taken, and tracking effectiveness of the action.
Corrective Action Tracking Report: A form listing CARs and SCARs initiated by the form number.
Same Type Defect: Defects of the same general nature or involving the same process. An example might be solder bridging or insufficient solder in the case of hand soldering OR bridging or insufficient solder in the case of a process like wave soldering.
Completed: CAR has been investigated and corrective action implemented.
Closed: Effectiveness Check has been performed on the corrective action and discussed during Management Review.

Procedure:

1. Corrective Actions may arise from employee observations, product nonconformance, external/internal audits, customer complaints, and customer returns, pending management review. Criteria are subject to review and adjustments made accordingly.

2. Inspection results are reviewed immediately after inspection to determine the need for the issuance of a CAR or SCAR. The review consists of at least two members of management. The need for Corrective Action is determined by the severity, probability of recurrence, production volume, cost per unit, the cost of impact, and/or management direction.

3. Employee observations are voiced to management and reviewed at that time. The review consists of at least two members of management. The need for Corrective Action is determined by the severity, probability of recurrence, production volume, cost per unit, the cost of impact, and/or management direction.

4. External/internal audit findings will be reviewed by at least two members of management. If necessary, a CAR or SCAR will be issued to address the nonconformities.

5. Material or processes currently under investigation are not subject to issuance of a CAR or SCAR which involves the same defect that caused the investigation.

6. Corrective Actions are assigned an identification number and tracked by the Corrective Action Tracking Report. Customer returns that are found to be defective will also generate a CAR or SCAR. All pertinent information may be attached to the CAR or SCAR.

7. CARs and SCARs will use the same form with fields being completed as applicable. If a field does not apply “n/a” will be assigned to the field.

8. Corrective Actions may be issued as a hard copy, fax, or email.

9. The person assigned to the investigation completes the CAR, including the causes of the nonconformity and is responsible for implementation of the corrective actions. In the case of a SCAR, the supplier may assign a representative to investigate.

10. Completed CARs and completed faxed SCARs will be scanned and kept as a digital record. Completed SCARs, received by email, will be kept as a digital record and the original email will be saved.

11. A CAR or SCAR can be closed only after the Effectiveness Check has been completed and is approved during the Management Review Meeting.

12. Management will review completed CARs and SCARs during the Management Review Meeting. Management will approve the results or establish a follow up if it is deemed necessary.

13. Once a CAR or SCAR has been reviewed and approved, Quality Control will close it in the Corrective Action Tracking Report.

14. Records of CARs and the Corrective Action Tracking Report are stored according to the Table of Records.

Preventive Action Procedure

Purpose:

To ensure an effective methodology for requesting and implementing preventive action for potential product or process problems or improvements.

Definitions:

Preventive Action: Any action or steps taken to prevent occurrence of conditions or actions that may cause potential product or process problems.
Defective or Nonconforming Material: Any material that does not meet our specifications or the quality requirements of our customers and is deemed defective and not easily repairable.
Preventive Action Request (PAR): A form that identifies a potential problem regarding product or process and provides an outline for collecting information, determining of the root cause, documenting preventive actions to be taken, and tracking effectiveness of the action.
Preventive Action Tracking Report: A form listing PARs initiated by the form number.
Completed: PAR has been investigated and corrective action implemented.
Closed: Effectiveness check has been performed on the preventive action and discussed during Management Review.

Procedure:

1. Preventive Actions may arise from employee, vendor, or customer observations concerning a product or processes used to produce products.

2. Management reviews each request for a Preventive Action investigation for approval based on the probability of occurrence, cost impact, product integrity, and management direction. The need for action will be determined pending the result of the review. If no action is to be taken, a detailed note will be made in the 'Action Plan' section of the PAR form.

3. If management approves the PAR, Quality Control assigns it an identification number and records it in the Preventive Action Tracking Report. All pertinent information may be attached to the PAR.

4. PARs will be issued as a hard copy and assigned to personnel to investigate. Completed PARs will be scanned for digital retention upon completion.

5. The person assigned to the investigation completes the PAR, including the conditions that may lead to potential nonconformity, and is responsible to implement the preventative actions.

6. The PAR and CAR procedure and forms are very similar and use similar forms. "N/A" will be used to indicate when a field does not apply.

7. Completed PARs will be returned to QC for retention until the next Management Review Meeting.

8. Management will review completed PARs during the Management Review Meeting and will approve the results or establish a follow up if it is deemed necessary. A PAR will remain open while any follow-up investigation takes place.

9. A PAR is able to be closed only after the Effectiveness Check has been completed and is approved during the Management Review Meeting. The Effectiveness Check, in this situation, is based on occurrence of conditions that may lead to the problem instead of the occurrence of the problem itself.

10. Once a PAR has been reviewed and approved, Quality Control will close the PAR in the Preventive Action Tracking Report and scan the completed form for digital retention.

11. Records of PARs and the Preventive Action Tracking Report are stored according to the Table of Records.

Internal Audit Procedure

Purpose:

To define how American Circuits, Inc. plans, conducts, reports, and maintains records of internal audits to determine whether the quality management system conforms to the requirements of the ISO 9001:2015 standard and the quality management system requirements established by American Circuits, Inc.

Definitions:

Audit Plan: Plan laid out prior to an internal audit that contains areas of concentration and scope for the audit to be performed.
Post Audit Action Plan: A record of the nonconformities (NCs) and opportunities for improvements (OFIs) from any external or internal audit. The associated CARs or PARs can be tracked using this record.

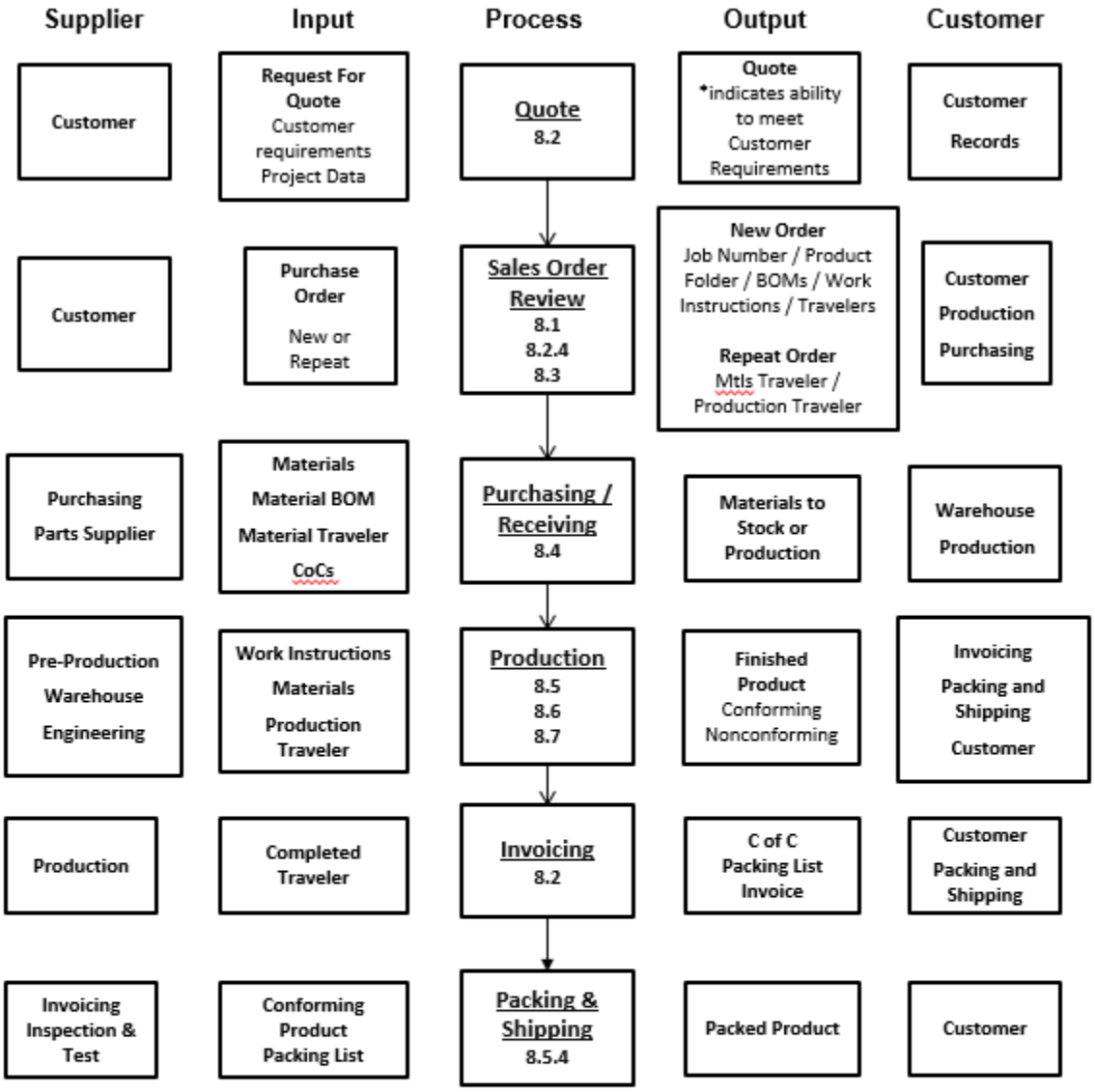
Procedure:

1. The audit team is responsible for planning internal audits.
    a. Internal audits are conducted according to the Internal Audit Plan and Record.
    b. The Management Representative determines the scope of the audit based on the status, importance of process, corrective/preventative actions and results from prior audits.
        i. The Management Representative selects and assigns auditors to areas not involving their own work.
        ii. The Management Representative and the auditors define the criteria for the audit and prepare a list of questions for those criteria.
        iii. The Management Representative notifies the auditors and those being audited of the upcoming audit.
2. While conducting the audit, the audit team:
    a. Reviews documentation
    b. Follows the audit plan
    c. Conducts interviews
    d. Records findings
    e. Communicates findings to the auditee

Management responsible for the area being audited ensures that actions are taken without undue delay to eliminate detected nonconformities and their causes. This is accomplished using the CAR procedure.

3. When reporting the results, the audit team:
    a. Provides a summary including detected nonconformities and opportunities for improvement to be included in a Management Review Meeting.
    b. NCs and OFIs will be discussed at the Management Review.

4. Audit notes, findings, completed process audit forms, and Post Audit Action Plans are maintained according to the Table of Records.



Support Processes

Control of Documents and Records 7.5	Management Review 4, 5, 7.1, 9, 10	Monitoring and Measurement 8.6-9.2.2	Improvement 10
Design and Development 7.3	Risk and Opportunity Management 4, 6, 7	Training 7.1.6, 7.2, 7.3	

Document Revision History

Revision Level	Revision Date	Revised By	Approved By	Description
A	05/10/12	EFL	Osborne	Original Release
B	05/17/12	EFL	Osborne	See red line version for change details
C	06/11/12	EFL	Osborne	See red line version for change details
D	07/06/12	EFL	Osborne	See red line version for change details
E	08/09/12	EFL	Osborne	See red line version for change details
F	09/05/12	EFL	Osborne	See red line version for change details
G	09/18/12	EFL	Osborne	See red line version for change details
H	08/19/13	EFL	EFL	See red line version for change details
I	03/13/14	EFL	EFL	See red line version for change details
J	04/11/14	EFL	EFL	See red line version for change details
K	06/06/14	EFL	EFL	See red line version for change details
L	08/06/14	EFL	EFL	See red line version for change details
M	07/27/15	EFL	EFL	See red line version for change details
N	08/01/16	EFL	EFL	See red line version for change details
O	05/30/17	EFL	M. Johnson	See red line version for change details
P	08/01/17	EFL	M. Johnson	See red line version for change details
Q	04/07/18	EFL	M. Johnson	See red line version for change details
R	01/12/19	EFL	M. Johnson	See red line version for change details
S	02/14/24	EFL	M. Johnson	See red line version for change details