



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 3030

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

June 2, 2010

VIA U.S. Mail and Facsimile

Mr. David A. Garrison  
Executive Vice President and Chief Financial Officer  
Arrhythmia Research Technology, Inc.  
25 Sawyer Passway  
Fitchburg, MA 01420

**Re: Arrhythmia Research Technology, Inc.**  
**Form 10-K for the fiscal year ended December 31, 2009**  
**Filed March 10, 2010**  
**File No. 001-09731**

Dear Mr. Garrison:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the fiscal year ended December 31, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation

Net Sales, page 13

1. We reference the table describing sales to significant customers on page F-18. We see that between 2008 and 2009 you lost one significant customer but gained another significant customer. Please tell us about the circumstances surrounding these events. In future filings, if material, please include a discussion of how the turnover of significant customers impacted your results of operations.

Selling and Marketing, page 14

2. To the extent that you attribute decreases in selling and marketing expenses to decreases in personnel, please revise future filings to provide an indication of the number of positions reduced.

General and Administrative Expenses, page 14

3. We reference your disclosure to the decrease in general and administrative expenses from 2008 to 2009 which appears to address only a portion of the year over year change. In future filings please discuss all material factors that contributed to significant changes in general and administrative expenses.

Other Income, page 14

4. We see that you attributed a portion of other income to the timing of import tax reimbursements. Please tell us how you account for the reimbursement of import taxes, including how it impacts your operations and how you considered that the amount should be recorded within operating income.

Liquidity and Capital Resources, page 15

5. We note that you hold silver in inventory and that it is highly susceptible to cost fluctuations. To the extent that it is material, please disclose in future filings the amount of silver held in inventory.

Critical Accounting Policies

Inventory and Inventory Reserves, page 17

6. We note you indicate inventory is valued at cost using the average cost assumption. However, we see on page F-8, you value inventory using both the average cost and first-in, first-out assumption. Please tell us which methodology you utilize to determine cost for inventory purposes and reconcile these two disclosures. Please refer to FASB ASC 330-10-30-9.

Asset Impairment - Goodwill, page 18

7. Please expand future filings to make more detailed and specific disclosure about how you identify and measure goodwill impairment. Clarify in expanded disclosure how you apply the requirements of FASB ASC 350-20-35. Disclose how you measure fair value for purposes of this exercise, including a description of the nature and extent of estimates and uncertainties that are inherent to that process. In addition, the revised disclosure should address the reporting unit concept and to disclose how you identified reporting units and how you allocated goodwill to those reporting units.

Asset Impairment – Long-Lived Asset, page 18

8. Regarding the disclosure related to the impairment of long-lived assets and intangible assets other than goodwill, please clarify how you perform the impairment testing, including how you assess the fair value of the underlying asset. We refer you to FASB ASC 360-10-35-17 through 35-35.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures, page 18

9. We note your disclosure regarding your officers' conclusions about the effectiveness of the Company's disclosure controls and procedures. While you are not required to include the definition of disclosure controls and procedures in your conclusion, when you do, all of the language that appears following the word "effective" in your conclusion must be consistent with and not modify the language that appears in the definition of "disclosure controls and procedures" set forth in Rule 13a-15(e) of the Exchange Act. Alternatively, you may remove that definition. Please apply in future filings.

Management's Report on Internal Control Over Financial Reporting, page 18

10. We see in the fourth paragraph of your disclosure that your CEO and CFO have evaluated “disclosure controls and procedures.” In future filings, please revise this to indicate management has evaluated “internal controls over financial reporting.” The term “disclosure controls and procedures” should not be used synonymously with “internal controls over financial reporting.”

Note 2. Accounting Policies, page F-8

11. We reference the disclosure on page 4 that you sell products to customers in Canada, Europe and the Pacific Rim. Please tell us how you account for foreign currency translations or transactions. In this regard, tell us why you have not included any accounting or disclosures related to foreign currency. Refer to FASB ASC 830.

Revenue Recognition, page F-8

12. We note the general statement regarding your revenue recognition policy. Please tell us your specific revenue recognition policy for all significant products and services. Details should be provided to the extent that policy differs among customers, channels and products. The policy should also address, where significant, customer acceptance, return policies, post shipment obligations, warranties, credits and discounts, rebates, price protection or similar privileges and how these impact revenue recognition. Refer to SAB 104. Future filings should include a more robust discussion of your revenue recognition policies within the financial statement footnotes and critical accounting policies should also be enhanced to discuss any judgments and uncertainties inherent in applying the revenue recognition policies.

Financing Customer Purchased Tooling, page F-8

13. Please tell us the accounting guidance you relied upon for utilizing the direct financing method of revenue recognition. Please explain in fuller detail the terms of the financing and how you apply the direct financing method. Please tell us why you believe that the direct financing method is the appropriate revenue recognition policy for the terms of the financing arrangement. Please also provide us an indication of the materiality of these types of arrangements to your financial statements.
14. Please revise future filings to disclose where the cost of the tool is recorded over the term of the purchasing program. Clarify if this amount is charged to cost of sales or another expense line item.

15. As a related matter, in future filings, critical accounting policies should also be enhanced to discuss any judgments and uncertainties inherent in applying the direct financing method.

Goodwill, page F-9

16. We note the disclosure that the annual impairment testing for goodwill is performed “during the first quarter of the fiscal year.” Please revise future filings to disclose the date on which you perform the goodwill impairment test each year.

Long-Lived Assets, page F-9

17. We see you have other intangible assets of \$95,887 and \$143,010 as of December 31, 2009 and 2008, respectively. Please revise future filings to include all of the disclosures required by FASB ASC 350-30-50.

Earnings per share data, page F-10

18. Please revise future filings to disclose securities (including those issuable pursuant to contingent stock agreements) that could potentially dilute basic EPS in the future that were not included in the computation of diluted EPS because to do so would have been anti-dilutive for the period(s) presented. Refer to FASB ASC 260-10-50-1(c).

Note 8. Commitments and Contingencies

Operating Leases, page F-15

19. Regarding the sale lease back transaction that occurred in December 2009, please tell us the basis for you accounting under FASB ASC 840-40-25 and 30. Tell us how you determined that this transaction qualified for sale lease-back accounting. In addition, show us how the deferred gain on sale of assets was calculated. In future filings, please disclose the term of the lease.

11. Industry and Geographic Segments, page F-18

20. Please tell us the nature of the two business segments and why they meet the requirements to be included as separate segments under FASB ASC 280-10-40-50-10. Future filings should also include disclosure of the nature of all reporting segments.
21. As a related matter, we note that within results of operations and throughout your filing you separately discuss the “Micron” and “MIT” divisions. Please tell us

how you considered that these were separate segments under FASB ASC 280-10-40-50-10.

22. Please revise future filings to disclose the nature and composition of the operating income (loss) attributed to “corporate.”

Exhibit 31.1 and 31.2

23. In future filings, please update the following certification disclosures:

- Throughout the certification, modify the term issuer or issuer’s to registrant or registrant’s;
- In paragraph 4(b), change the phrase “under my” to “under our”;
- In paragraph 4(c), change the phrase “on our” to “on such”; and
- In paragraph 5(a), after the phrase “All significant deficiencies”, insert the phrase “and material weaknesses”.

24. As a related matter, please confirm to us that there were no material weaknesses identified as of December 31, 2009 in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect your ability to record, process, summarize and report financial information.

\* \* \* \* \*

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Leigh Ann Schultz at (202) 551-3628 or me at (202) 551-3664 if you have questions regarding comments on the financial statements and related matters. In this regard, please do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676 with any other questions.

Sincerely,

Kristin Lochhead  
Accounting Reviewer