



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

April 12, 2012

Via E-mail

Mr. Mark P. de Raad
Executive Vice President and Chief Financial Officer
Masimo Corporation
40 Parker
Irvine, California 92618

RE: **Masimo Corporation**
Form 10-K for Fiscal Year Ended December 31, 2011
Filed February 17, 2012
Form 8-K Dated February 14, 2012
Filed February 14, 2012
File No. 001-33642

Dear Mr. de Raad:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2011

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 52

Critical Accounting Estimates, page 59

Inventory/Reserves for Excess or Obsolete Inventory, page 59

1. We see disclosures herein that you maintain a *general inventory reserve* based on your estimate of future limitations on your ability to utilize the inventory on hand. In light of the referenced disclosures, please tell us how your inventory valuation policies comply with the guidance at SAB Topic 5 (BB).

Form 8-K Dated and Filed February 14, 2012

Item 2.02 and Item 9.01

Exhibit 99.1

2. We see that in this exhibit you disclose non-GAAP financial measures, including "adjusted net income" and "adjusted EPS" as well as a percentage increase in rainbow revenues excluding the U.S. military order. However, we do not see where you provided the disclosures required by Item 10(e)(1)(i) of Regulation S-K. With a view towards revised disclosure in future filings, please provide us with a revised Item 2.02 of your Form 8-K and a discussion of your results that complies with Item 10(e)(1)(i) of Regulation S-K. All reconciliations presented should be sufficiently detailed to allow a reader to understand the nature of the reconciling items. In addition, please confirm that in future periods you will comply with the requirements of Regulation G whenever you publicly disclose material information that includes a non-GAAP financial measure.

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comments, please provide a written 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.

You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or Jay Webb, Reviewing Accountant, at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3212 with any other questions.

Sincerely,

/s/ Jay Webb “for”

Jeffrey Jaramillo
Accounting Branch Chief

cc: Jeff Hartlin, corporate counsel