



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

Mail Stop 3030

November 30, 2009

Via Facsimile and U.S. Mail

Mr. Gregory R. Beecher
Chief Financial Officer
Teradyne, Inc.
600 Riverpark Drive
North Reading, Massachusetts 01864

Re: Teradyne, Inc.
Form 10-K for the Year Ended December 31, 2008
Filed March 2, 2009
Form 10-Q for the Quarter Ended October 4, 2009
Form 8-K filed on October 29, 2009
File No. 001-06462

Dear Mr. Beecher:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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 Year Ended December 31, 2008

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 20

1. It is unclear why you have not provided a detailed overview section in your MD&A. The overview in this section should be a balanced, executive-level discussion that identifies the most important themes or other significant matters with which management is concerned primarily in evaluating the company's financial condition and operating results. You should discuss material business opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused, and the actions they are taking in response to them. For further guidance on the content and purpose of the "Overview," see Commission Guidance Regarding Managements Discussion and Analysis of Financial Condition and Results of Operations Interpretive Release No. 33-8350 (December 19, 2003) on our website. Please tell us how you intend to address this issue in future filings.

-Results of Operations, page 25

2. We note from page 29 and from page 30 within your October 4, 2009 Form 10-Q that you recognized \$29.4 million and \$23.7 million of provision for inventory obsolescence during the year ended December 31, 2008 and the nine months ended October 4, 2009, respectively. Please tell us and revise your future filings to disclose in more detail the nature of your inventory obsolescence charge(s), including a discussion of the significant factors that have contributed to the inventory obsolescence and the impact of your inventory obsolescence charges on your historical and future results of operations.

Retirement Plans, page 36

3. We note your disclosure on page 37 regarding the losses under the pension plan as well as your disclosures under Note N of your financial statements. It is unclear why you have not included risk factor disclosure regarding these issues. Please provide us your analysis or include appropriate risk factor disclosure in future filings.

Item 8. Financial Statements and Supplementary Data, page 42

Note. B. Accounting Policies, page 47

-Revenue Recognition, page 47

4. We note here and within your balance sheet that you present deferred revenue and customer advances. Given the significance of these balances, please revise future filings to clearly disclose the nature of the deferred revenue and customer advances balance. Clarify the relationship, if any, between the balances presented on the balance sheet and the “deferred profit” discussed in this footnote.

Note J. Goodwill and Intangible Assets, page 66

5. We note that you experienced a worsening of your demand outlook for your products during the fourth quarter of fiscal 2008 and that you wrote off all of your goodwill in the period. Please tell us and revise future filings to provide additional disclosure of how you evaluated your goodwill for impairment. Discuss the valuation methodologies you utilized in this analysis. As a significant amount of the goodwill that was impaired arose from acquisitions in January and November 2008, discuss the factors that contributed to the rapid decline in the value of the goodwill.
6. You state that in light of the worsening demand outlook for your products, you conducted recoverability tests of your long-lived assets in accordance with Topic 360 of the FASB Accounting Standards Codification and that you determined that no impairment of your long-lived assets existed as of December 31, 2008. Please tell us and revise your future filings to explain in more detail how you evaluated your long-lived assets for impairment at December 31, 2008. Please specifically address the following:
 - Discuss the valuation methodologies you utilized.
 - Discuss any changes in valuation methodologies from prior valuations and explain why management believes any new valuation methodologies are more appropriate.
 - Clarify if the valuation methodologies used for the intangible assets arising from the Nextest Systems Corporation and Eagle Test Systems acquisitions were consistent with those utilized in the initial purchase price allocations.
 - Discuss how the projections utilized for the long-lived asset evaluation compared with projections utilized in your goodwill impairment evaluation.
 - In light of the significant deterioration in your demand outlook that led to write-off of all of your goodwill, including that which arose from your acquisitions in January and November 2008, provide additional analysis to help readers understand why you do

not believe this worsening demand outlook results in impairment to your long-lived assets.

Note M. Restructuring and Other, Net, page 72

7. We note your disclosures here, on pages 31-33 and within your October 4, 2009 Form 10-Q. Specifically, you state that you have implemented restructuring activities across all segments in 2009, 2008, 2007 and 2006. Please revise future filings to address the following:
- For each restructuring activity, include a detailed description of the exit or disposal activities, including the facts and circumstances leading to the expected activities, consistent with 420-10-50-1 of the FASB Accounting Standard Codification. To the extent it is not readily apparent to an investor, discuss how each initiative qualifies as an exit activity in accordance with 420-10-15-4 of the FASB Accounting Standard Codification.
 - Provide the disclosures required by paragraph 420-10-50-1 of the FASB Accounting Standard Codification and SAB Topic 5.P.4. for each restructuring activity for all reporting periods presented until the activities are completed.

Item 10: Directors, Executive Officers and Corporate Governance, page 99

Related Party Transactions, page 40

8. In future filings, please disclose your procedures for review, approval, or ratification of your related party transactions. Refer to Item 404(b) or Regulation S-K.

Form 10-Q for the Quarter Ended October 4, 2009

Note E. Debt, page 11

9. We note you entered into a convertible note hedge transaction with a strike price equal to the initial conversion price of the \$190 million notes that you issued during the nine months ended October 4, 2009 and that you paid \$64.6 million for these convertible note hedges. We further note that you accounted for these instruments as equity transactions. Please tell us and revise your future filings to explain in more detail why you are accounting for these transactions as equity. Within your discussion, cite the accounting literature relied upon and how you applied the accounting literature to your situation.

Note G. Stock-Based Compensation, page 14

10. We note that you granted stock options to employees during the nine months ended October 4, 2009. We further note that you utilize the Black-Scholes option pricing model

to determine the fair value of these stock options. Please revise future filings to explain how you determined the assumptions utilized in the model including the volatility, risk free interest rate, expected life, etc. Refer to the guidance in 718-10-50-2 of the FASB Accounting Standard Codification.

Item 2: Management's Discussion and Analysis of Financial Condition and Results of Operations, page 24

11. We note that you present \$127 million and \$58 million of deferred revenue and customer advances within your balance sheet as of October 4, 2009 and December 31, 2008, respectively. Please tell us and revise your future filings to explain why this line item has increased significantly within your balance sheet from December 31, 2008 to October 4, 2009. Refer to the guidance in Item 303 of Regulation S-K.

Form 8-K Filed on October 29, 2009

12. We note that you have provided a forward-looking non-GAAP financial measure of non-GAAP net loss for the fourth quarter of fiscal 2009. However, we do not see where you have provided a reconciliation of this forward-looking non-GAAP financial measure with the corresponding forward-looking GAAP financial measure as required by Regulation G or otherwise provided the disclosures required by Regulation G for forward-looking non-GAAP financial measures. Please revise future filings to comply by providing reconciling information that is available without unreasonable effort. As applicable, include clear disclosure of why any forward-looking GAAP information is not accessible. Identify such information that is unavailable and disclose its probable significance. Refer to the guidance in Regulation G.
13. We note that you present a GAAP to Non-GAAP Earnings Reconciliation that appears to take the form of a modified income statement. The current presentation format appears to present multiple non-GAAP measures, including non-GAAP gross margin, non-GAAP loss/income from operations, non-GAAP net income, non-GAAP net loss/income per share (basic) and non-GAAP net loss/income per share (diluted). Further, we note you present multiple financial ratios that are based on these non-GAAP figures. However, we do not see where you have provided the disclosures required by Item 10(e) for each non-GAAP measure presented. Please revise future filings to provide separate disclosure for each non-GAAP measure or ratio that describes why management believes presentation of the non-GAAP measure or ratio provides useful information investors and how management uses the non-GAAP measure or ratio. Please provide us with a sample of your proposed disclosure to be included in future filings.
14. In addition, we note that you present "revenue" in the GAAP to Non-GAAP Earnings Reconciliation table, but it is not clear how the revenues relate to the non-GAAP financial measures. Please explain to us why you believe repeating the revenue totals

here provides useful information to investors. Alternatively, revise the non-GAAP presentation in future filings to remove the revenue totals.

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 that keys your responses to our comment 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;
- 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 Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Gabriel Eckstein, Staff Attorney, at (202) 551-3286, or Jay Mumford, Reviewing Attorney, at (202) 551-3637 if you have questions on any other comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief