

August 21, 2007

Mail Stop 6010

By U.S. Mail and facsimile to (978) 370-2290

Michael A. Bradley
President and Chief Executive Officer
Teradyne, Inc.
600 Riverpark Drive
North Reading, Massachusetts 01864

**Re: Teradyne, Inc.
Definitive 14A
Filed April 13, 2007
File No. 001-06462**

Dear Mr. Bradley:

We have limited our review of your definitive proxy statement to your executive compensation and other related disclosure and have the following comments. Our review of your filing is part of the Division's focused review of executive compensation disclosure.

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 filings. 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 me at the telephone number listed at the end of this letter.

In some comments we have asked you to provide us with additional information so we may better understand your disclosure. Please do so within the time frame set forth below. You should comply with the remaining comments in all future filings, as applicable. Please confirm in writing that you will do so and also explain to us how you intend to comply. Please understand that after our review of all of your responses, we may raise additional comments.

If you disagree with any of these comments, 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.

Equity Compensation, page 21

1. In connection with your discussion of the various elements, you provide some description of how company performance affects compensation levels, but little discussion of individual performance and relative contributions even though your disclosure suggests these are factors in determining compensation. For example, you state that the company's equity compensation plan for executive officers is designed to, among other things, motivate and reward individual performance and that equity awards are granted to executive officers based upon each officer's relative contribution, performance, and responsibility within the company. You also state that in setting the annual model compensation of the executive officers, the compensation committee reviews benchmark compensation from peer companies and considers the performance of each executive officer with regard to, among other factors, leadership goals and the operation or activity for which the officer has responsibility. Expand your disclosure to provide an analysis of how individual performance and these other considerations contributed to actual 2006 compensation and 2007 equity grants and incentive targets for the named executive officers.

Change in Control Agreements, page 22

2. You state here and on page 31 that the change in control agreements are designed to promote stability and continuity of senior management and that the changes described on page 31 were made because the compensation committee believes that it is important that the executive team help the board of directors evaluate any potential business transaction independent of their own personal circumstances. Supplement your disclosure to provide an analysis of why you structured and designed the new change in control agreements in the specific manner described on page 31 and how the terms of such agreements serve to accomplish your stated goals. Also discuss us how each of these elements fit into your overall compensation objectives and affect decisions regarding other elements. See Item 402(b)(1)(vi) or Regulation S-K.

Review of the 2006 and 2007 Compensation Decisions, page 23

3. Disclose the various performance criteria, objectives, targets and goals considered in awarding the variable compensation payouts and equity awards discussed on pages 21, 23 and 24 for your fiscal year ending 2006 and 2007. To the extent you believe that disclosure of these criteria, objectives, targets and goals is not required because it would result in competitive harm such that you may omit this information under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation for such conclusion. Please also disclose how difficult it would be for the named executive officers or how likely it will be for you to achieve the undisclosed target levels or other factors. General

- statements regarding the level of difficulty or ease associated with achieving performance goals are not sufficient. In discussing how difficult it will be for an executive or how likely it will be for you to achieve the target levels or other factors, please provide as much detail as necessary without providing information that would result in competitive harm. Please provide analysis of the factors considered by the compensation committee prior to the awarding of the variable compensation payouts and equity awards and not merely rely on statements such as those on page 23 that the “achievement of these goals at the target level required aggressive performance from both the executive officers and the company.”
4. You state that after considering the company’s performance with respect to various factors, such as profitability, cash flow, market share, and research and development initiatives, you approved a variable compensation payout for 2006. You also state that in January 2006, each executive officer received grants which consisted of both time-based restricted stock units and performance-based restricted stock units and that the number of actual performance-based restricted stock units allowed to vest over a two year period was determined in January 2007 after an assessment based on the same factors as the 2006 variable compensation plan in order to provide “consistent and objective criteria for all performance-based compensation.” Such disclosure appears to provide little, if any analysis, as to how actual compensation of these two elements for each named executive officer was determined. Discuss in greater detail the various factors considered and how the you determined the maximum and actual payouts for each of these elements of compensation, for both 2006 and 2007. For example, were the various company performance measures weighted and if so how? Did you rely on a formula? Even with the use of “consistent and objective” criteria, does the compensation committee, or the independent members of the board, in the case of your chief executive officer, have any discretion in determining such awards and payouts? See Item 402(b)(1)(v) and 402(b)(2)(vi) and (vii) of Regulation S-K.
 5. You state that each January, either the compensation committee, or the independent members of the board in the case of the chief executive officer, sets a “model compensation” for each executive officer that generally targets a range within the median of the peer company data. You also state that the base salary plus the payout of performance-based variable compensation for the executive officers ranged from 9% to 13% above the model compensation, depending on the executive officer. Disclose the percentile of market represented by the actual model compensation paid for your 2006 fiscal year. For example, was such compensation still within the median of the peer company data or did it represent a higher percentile?

2006 Equity Award, page 24

6. Supplement your disclosure to explain your rationale for awarding restricted stock units in late 2005 and early 2006 with only a 2 year vesting period given your intent to award grants in 2007 and thereafter with a four year vesting period. For example, was there a particular circumstance in 2006 that the compensation committee considered in granting this shorter vesting period?
7. Discuss the basis for allocating compensation between time-based and performance-based restricted stock units. See Item 402(b)(2)(iii) of Regulation S-K.
8. You state that the 2006 grants for the named executive officers, consisting of time-based and performance-based restricted stock units, were benchmarked to equity grants of peer companies and were comparable to the market median position. With respect to the performance-based portion of the grant, disclose whether you are referring to the target grants awarded in January 2006 or the number of performance based restricted units that the compensation committee determined in January 2007 would be actually allowed to vest over a two year period. If the former, also disclose how such grants, adjusted following the January 2007 determination, compared to the market of peer-related companies. Were the actual numbers still comparable to the market median position?
9. You disclose in the third paragraph of this section that the chief executive officer received a restricted stock unit grant in January 2006 valued at \$1,650,000 *at target performance*, of which \$550,000 consisted of performance-based restricted stock units. Supplement this disclosure to briefly explain the mechanics of performance-based restricted stock units. For example, clarify that a restricted stock unit award at target performance is not the maximum amount a named executive officer can receive. Also, so that investors can easily compare each named executive officer's actual award to the original target and maximum award, consider adding columns to the table on page 24 that list the equity value of performance-based restricted stock units at the target level of performance; the maximum equity value of each officer's performance-based restricted stock units; and the percentage above the target award represented by the actual number of performance-based restricted stock units allowed to vest.

2007 Equity Award, page 24

10. You state that based on maintaining comparable competitive positioning within the benchmark of peer companies, 2007 RSU grant values at target for executive officers increased an average of 9% over 2006 RSU grant values at target. Identify the comparable competitive positioning you wish to achieve. For

example, are you targeting the median of the benchmark? Are you comparing your grants to the 2006 grants or the 2007 grants of comparable companies?

Summary Compensation Table, page 26

11. The Compensation Discussion and Analysis should be sufficiently precise to identify material differences in compensation policies with respect to individual named executive officers. Refer to Section II.B.1. of Commission Release No. 33-8732A. We note the disparity between your chief executive officer's compensation and that of the other named executive officers. For example, we refer you to the salary, stock awards and non-equity incentive plan compensation of and the targeted payouts of non-equity and equity incentive awards granted to your chief executive officer as compared to the same elements of compensation of your other named executive officers awards. Please provide a more detailed discussion of how and why your chief executive officer's compensation differs from that of the other named executive officers.

Outstanding Equity Awards at Fiscal Year-End, page 28

12. Disclose by footnote the vesting dates of options and shares of stock at fiscal-year end. See Instruction 2 to Instructions to Item 402(f)(2) of Regulation S-K.

Pension Benefits Table, page 29

13. Present more clearly the disclosure in the first three whole paragraphs on page 29. See Section VI of Commission Release 33-8732A. Please consider rewriting this section so that readers may more readily understand how Mr. Bradley's credit towards retirement income is calculated.

Please respond to our comments by September 21, 2007, or tell us by that time when you will provide us with a response.

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.

Michael A. Bradley
Teradyne, Inc.
August 21, 2007
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When you respond 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 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 connection with our review of your filing or in response to comments.

Please contact me at (202) 551-3444 with any questions.

Sincerely,

Perry J. Hindin
Special Counsel