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SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant /x/
Filed by a Party other than the Registrant / /

Check the appropriate box:

- // Preliminary Proxy Statement
- // **Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- /x/ Definitive Proxy Statement
- // Definitive Additional Materials
- // Soliciting Material Pursuant to §240.14a-12

Electro Scientific Industries, Inc.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- /x/ No fee required
- // Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

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// Fee paid previously with preliminary materials.

// Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:



Notice of Annual Meeting of Shareholders

To the Shareholders of Electro Scientific Industries, Inc.:

The Annual Meeting of Shareholders of Electro Scientific Industries, Inc. (ESI) will be held at ESI's offices, 14100 NW Science Park Drive, Portland, Oregon, on Friday, September 21, 2001 at 1:00 p.m. Pacific time, for the following purposes:

1. Electing three directors for a term of three years.
2. Voting on the selection of independent auditors for the Company.
3. Transacting any other business that properly comes before the meeting.

Only shareholders of record at the close of business on August 1, 2001 will be entitled to vote at the annual meeting.

You are requested to date and sign the enclosed proxy and return it by mail. You may attend the meeting in person even though you have sent in your proxy; retention of the proxy is not necessary for admission to or identification at the meeting.

By Order of the Board of Directors

Joseph L. Reinhart
Vice President and Corporate Secretary

Portland, Oregon
August 15, 2001

**ELECTRO SCIENTIFIC INDUSTRIES, INC.
PROXY STATEMENT**

The mailing address of the principal executive offices of the Company is 13900 NW Science Park Drive, Portland, Oregon 97229-5497. The approximate date this proxy statement and the accompanying proxy forms are first being mailed to shareholders is August 15, 2001.

SOLICITATION AND REVOCABILITY OF PROXY

The enclosed proxy is solicited on behalf of the Board of Directors of Electro Scientific Industries, Inc., an Oregon corporation, for use at the Annual Meeting of Shareholders to be held on September 21, 2001. The Company will bear the cost of preparing and mailing the proxy, proxy statement and any other material furnished to the shareholders by the Company in connection with the annual meeting. Proxies will be solicited by use of the mails, and officers and employees of the Company may, without additional compensation, also solicit proxies by telephone or personal contact. Copies of solicitation materials will be furnished to fiduciaries, custodians and brokerage houses for forwarding to beneficial owners of the stock held in their names.

Any person giving a proxy in the form accompanying this proxy statement has the power to revoke it at any time before its exercise. The proxy may be revoked by filing an instrument of revocation or a duly executed proxy bearing a later date with the Corporate Secretary of the Company. The proxy may also be revoked by affirmatively electing to vote in person while in attendance at the meeting. However, a shareholder who attends the meeting need not revoke the proxy and vote in person unless he or she wishes to do so. All valid, unrevoked proxies will be voted at the Annual Meeting in accordance with the instructions given.

VOTING SECURITIES AND PRINCIPAL SHAREHOLDERS

The Common Stock is the only outstanding authorized voting security of the Company. The record date for determining holders of Common Stock entitled to vote at the Annual Meeting is August 1, 2001. On that date there were 27,229,589 shares of Common Stock outstanding, entitled to one vote per share. The Common Stock does not have cumulative voting rights.

The following table shows ownership of the Common Stock of the Company on June 2, 2001 by each person who, to the knowledge of the Company, owned beneficially more than 5 percent of the Common Stock.

Name and Address of Beneficial Owner	Amount and Nature of Beneficial Ownership(1)	Approximate Percent
J & W Seligman & Co., Incorporated 100 Park Avenue, New York, NY 10017	3,106,365(2)	11.50%
Capital Group International, Inc. 11100 Santa Monica Blvd., Los Angeles, CA 90025	2,715,700(3)	10.10%
EQSF Advisers, Inc. 767 Third Avenue, New York, NY 10017	2,236,000(4)	8.30%
Franklin Resources, Inc. 777 Mariners Island Boulevard, San Mateo, CA 94404	1,916,686(5)	7.10%

- (1) Shares are held directly with sole investment and voting power unless otherwise indicated.
- (2) Based solely on information provided as of February 1, 2001 in a Schedule 13G filed by the shareholder.
- (3) Based solely on information provided as of January 31, 2001 in a Schedule 13G filed by the shareholder.
- (4) Based solely on information provided as of May 10, 2001 in a Schedule 13G filed by the shareholder.
- (5) Based solely on information provided as of February 12, 2001 in a Schedule 13G filed by the shareholder.

The following table, which was prepared on the basis of information furnished by the persons described, shows ownership of the Company's Common Stock as of June 2, 2001 by each Director, each Executive Officer named in the Summary Compensation Table, and by all Directors and Executive Officers as a group.

Name of Beneficial Owner	Amount and Nature of Beneficial Ownership(1)	Approximate Percent
David F. Bolender	91,380(2)	*
Bradford S. Cooley	20,150(3)	*
James T. Dooley	25,470(4)	*
Larry L. Hansen	42,974(5)	*
Gary M. Kapral	7,980(6)	*
John R. Kurdock	72,954(7)	*
W. Arthur Porter	12,000(8)	*
Joseph L. Reinhart	56,085(9)	*
Vernon B. Ryles, Jr.	23,000(5)	*
Gerald F. Taylor	9,000(10)	*
Keith L. Thomson	23,800(5)	*
Jon D. Tompkins	9,000(10)	*
Donald R. VanLuvanee	436,351(11)	1.6%
16 Directors and executive officers as a group	883,606(12)	3.2%

* Less than 1 percent.

- (1) Shares are held directly with sole investment and voting power unless otherwise indicated. Includes shares awarded as performance-based restricted stock that are subject to forfeiture in certain circumstances.
- (2) Includes 36,100 shares owned by Mr. Bolender's wife, as to which he disclaims beneficial ownership, and includes 12,000 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (3) Includes 17,900 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (4) Includes 25,470 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (5) Includes 23,000 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (6) Includes 7,500 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (7) Includes 57,410 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (8) Includes 12,000 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (9) Includes 312 shares and 962 shares held for the benefit of Mr. Reinhart's son and daughter, respectively. Includes 39,440 shares subject to stock options exercisable within 60 days of June 2, 2001.
- (10) Includes 9,000 shares subject to stock options exercisable within 60 days of June 2, 2001.

(11) Includes 355,570 shares subject to stock options exercisable within 60 days of June 2, 2001.

(12) Includes 651,990 shares subject to stock options exercisable within 60 days of June 2, 2001.

PROPOSAL 1: ELECTION OF DIRECTORS

Pursuant to the Company's Bylaws, the Board of Directors is divided into three classes, and the term of office of one class expires each year. The terms of Larry L. Hansen, Vernon B. Ryles, Jr. and Donald R. VanLuvanee expire in 2001. Mr. Hansen, Mr. Ryles and Mr. VanLuvanee are nominees for re-election. Under Oregon law, if a quorum of shareholders is present at the 2001 Annual Meeting, the three nominees for election as Directors who receive the greatest number of votes cast at the meeting will be elected Directors. Abstentions and broker non-votes will have no effect on the results of the vote. Unless otherwise instructed, proxy holders will vote the proxies they receive for Mr. Hansen, Mr. Ryles and Mr. VanLuvanee. If any of the nominees for Director at the 2001 Annual Meeting becomes unavailable for election for any reason (none being known), the proxy holders will have discretionary authority to vote pursuant to the proxy for a substitute or substitutes.

The following table briefly describes the Company's nominees for Directors and the Directors whose terms will continue. Except as otherwise noted, each has held his principal occupation for at least five years.

Name, Age, Principal Occupation, and Other Directorships	Director Since	Term Expires
Nominees		
<i>Larry L. Hansen, 72</i> , retired in 1992 from the position of Executive Vice President of Tylan General Inc., a manufacturer of high technology components for industrial processes located in San Diego, California. Prior to December 1988, he was Executive Vice President and a director of Varian Associates, Inc., an electronics manufacturer located in Palo Alto California. Mr. Hansen is also a director of Signal Technology Corp. and Micrel, Inc. Mr. Hansen is a member of the Compensation Committee of the Board of Directors.	1986	2001
<i>Vernon B. Ryles, Jr., 63</i> , is President and CEO of Poppers Supply Co., a manufacturer of popcorn snacks and jobber/distributor of recreational food and equipment. In addition, Mr. Ryles is on the Board of Directors of Northwest Pipe and Casing, a manufacturer of steel pipe. He is a director and former Board Chairman of the National Association of Concessionaires and on the Advisory Council of the Oregon State University Agricultural Trade and Marketing Program. Mr. Ryles is a member of the Compensation Committee of the Board of Directors.	1995	2001
<i>Donald R. VanLuvanee, 57</i> , has served as President and CEO of ESI since July 1992. From 1991 to July 1992, Mr. VanLuvanee was President, Chief Executive Officer, and a director at Mechanical Technology Incorporated, a supplier of contract research and development services and a manufacturer of technologically advanced equipment. Mr. VanLuvanee is also a director of FEI Company, which designs, manufactures and markets focused ion beam workstations, and Micro Component Technology, Inc., a leading manufacturer of automated test handling equipment.	1992	2001
Directors Whose Terms Continue		
<i>David F. Bolender, 69</i> , retired in July 1999 as CEO of Protocol Systems, Inc., a manufacturer of vital sign monitoring equipment for the medical industry. Mr. Bolender retired in 1991 from the position of President of the Electric Operations Group of PacifiCorp, a diversified public utility located in Portland, Oregon. In January 1992, Mr. Bolender became Chairman of the Board of ESI. Mr. Bolender is also a director of Benson Industries, Inc. and Golden Northwest Aluminum, Inc. Mr. Bolender is a member of the Audit Committee of the Board of Directors.	1988	2003
<i>W. Arthur Porter, 60</i> , has served as the Dean of the College of Engineering at the University of Oklahoma since July 1998. He was formerly the President of the Houston Advanced Research Center. Dr. Porter is a director of Stewart Information Services Corporation, Medici Medical Group Inc., Bookham, Inc. and Critical Technologies. Dr. Porter, formerly Chairman of the Board of Directors, serves as Chairman of the Audit Committee of the Board of Directors.	1980	2002
<i>Gerald F. Taylor, 61</i> , retired in 1998 as Senior Vice President and CFO of Applied Materials, Inc., a manufacturer of semi-conductor equipment. He is also a director of Lithia Motors Inc. Mr. Taylor is a member of the Audit Committee of the Board of Directors.	1998	2002

Keith L. Thomson, 62, retired as Vice President of Intel Corporation and Oregon Site Manager in 1998. Mr. Thomson joined Intel in 1969 and moved to Intel's Oregon operation in 1978. Prior to that he worked for Lockheed Missiles and Space Corporation, and the Semiconductor Division of Fairchild Camera and Instruments. Mr. Thomson was elected to the Board of Directors in 1994 and is the Chairman of the Compensation Committee of the Board of Directors. 1994 2003

Jon D. Tompkins, 61, retired as CEO of KLA-Tencor Corporation, a manufacturer of semiconductor equipment, in 1998 and retired as Chairman of the Board of Directors of KLA-Tencor in June 1999. He remains a member of the Board of Directors of KLA-Tencor. In addition, Mr. Tompkins is on the Board of Directors of Cymer, Inc., and Credence Systems. Mr. Tompkins is a member of the Compensation Committee of the Board of Directors. 1998 2003

BOARD COMPENSATION

The Board of Directors met four times during the last fiscal year. Each director attended at least 75 percent of the aggregate of the meetings of the Board of Directors and the committees of which he was a member. Each director who is not an employee of the Company received an annual retainer of \$10,000, plus \$1,000 for each board meeting attended, \$500 for each committee meeting attended and \$500 for each telephone meeting when formal business is conducted. The annual retainer for fiscal year 2002 has been increased to \$18,000. Non-employee directors are also automatically granted an option for 6,000 shares of Common Stock on July 31 of each year, with an option price equal to the closing market price on the date of grant, a ten-year term and a four-year vesting schedule.

BOARD COMMITTEES

The Board of Directors has standing Audit and Compensation Committees. All of the members of the Audit Committee are "independent directors" within the meaning of Rule 4200(a)(14) of the National Association of Securities Dealers' listing standards. The Compensation Committee makes recommendations to the Board of Directors concerning officers' compensation and has been delegated authority to grant options and other awards under the Company's stock option plans and stock incentive plan. It met four times in fiscal year 2001. The Audit Committee meets with management and with representatives of ESI's outside auditing firm, Arthur Andersen LLP, including meetings without the presence of management. The Audit Committee met four times in fiscal year 2001 to review the scope, timing and fees for the annual audit and the results of the audit.

Shareholders who wish to submit names for consideration for Board membership should do so in writing addressed to the Board of Directors, c/o Chairman of the Board, Electro Scientific Industries, Inc., 13900 NW Science Park Drive, Portland, Oregon 97229-5497.

EXECUTIVE COMPENSATION

The following table shows, as to the Chief Executive Officer and each of the next four most highly compensated executive officers of the Company, information concerning compensation paid for services to the Company in all capacities during the fiscal year ended June 2, 2001, as well as total compensation paid to each such individual for the Company's two previous fiscal years (if such person was the Chief Executive Officer or an executive officer, as the case may be, during any part of such fiscal year):

I. Summary Compensation Table

Name & Principal Position	Fiscal Year	Annual Compensation			Long-Term Compensation		
		Salary	Bonus	Other Annual Compensation	Awards	Payouts	All Other Compensation(2)
					Options Granted(1) (#)	LTIP payouts (\$)	
Donald R. VanLuvanee Chief Executive Officer and President	2001	\$ 391,540	\$ 1,250,000(3)	—	138,000	\$ 439,475	\$ 5,100
	2000	\$ 383,333	\$ 569,000	—	475,000	\$ 181,640	\$ 4,612
	1999	\$ 359,666	\$ 200,000	—	106,600	—	\$ 4,000
John R. Kurdock Vice President	2001	\$ 245,417	\$ 374,500	—	29,000	\$ 225,875	\$ 5,412
	2000	\$ 226,250	\$ 175,545	—	38,000	—	\$ 4,581
	1999	\$ 202,500	\$ 35,000	—	33,800	—	\$ 4,000
James T. Dooley(4) Vice President & Chief Financial Officer	2001	\$ 204,167(5)	\$ 385,300	—	54,000	—	\$ 6,213
	2000	—	—	—	—	—	—
	1999	—	—	—	—	—	—
Joseph L. Reinhart Vice President	2001	\$ 196,533	\$ 274,700	—	29,000	\$ 137,238	\$ 5,287
	2000	\$ 176,666	\$ 110,390	—	38,000	\$ 74,040	\$ 4,544
	1999	\$ 146,667	\$ 40,795	—	33,800	—	\$ 3,667
Bradford S. Cooley(6) Vice President	2001	\$ 200,625	\$ 253,500	—	24,000	—	\$ 5,015
	2000	\$ 172,500	\$ 110,390	—	32,000	—	\$ 4,441
	1999	\$ 143,000	\$ 33,322	—	19,800	—	\$ 3,575

Gary M. Kapral(7)	2001	\$ 229,166	\$ 204,700	\$ 488,776(8)	29,000	— \$	6,875
Vice President	2000	\$ 9,375	—	—	30,000	— \$	281
	1999	—	—	—	—	—	—

- 1) Reflects adjustment for 2-1 stock split payable on February 24, 2000.
- 2) Except as otherwise indicated, represents 401(k) matching contributions made by the Company.
- 3) Fiscal year 2001 bonus to be paid September, 2001.
- 4) Mr. Dooley became an executive officer of the Company on June 23, 2000. The table does not include compensation paid by the Company or its subsidiaries during prior years.
- 5) Excludes loan of \$370,000 by the Company to Mr. Dooley of which \$60,000 was outstanding as of June 2, 2001.
- 6) Mr. Cooley is the Company's Vice President/Chief Technology Officer. As of January 25, 2001, he was no longer an executive officer.
- 7) Mr. Kapral joined the Company as an executive officer on May 16, 2000. The table does not include compensation paid by the Company or its subsidiaries during prior years.
- 8) In connection with Mr. Kapral joining the Company as Vice President, the Company made payments on his behalf related to the relocation of Mr. Kapral and his family from North Carolina to Oregon. The amounts include relocation expenses, interest and tax payments for his home in North Carolina.

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II. Options Table

The following table sets forth details regarding stock options granted to the named executive officers in fiscal year 2001. In addition, there are shown the hypothetical gains or "option spreads" that would exist for the respective options, assuming rates of annual compound stock appreciation of 5% and 10% from the date the options were granted over the full option term.

Name	Option Grants in Last Fiscal Year				Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term	
	Options Granted(1) (#)	% of Total Options Granted to Employees in Fiscal Year	Exercise Price (\$/Sh)	Expiration Date(2)	5%	10%
Donald R. VanLuvanee	138,000	9.78%	\$ 27.00	4/5/2011	\$ 2,342,450	\$ 5,935,761
John R. Kurdock	29,000	2.04%	\$ 27.00	4/5/2011	\$ 492,254	\$ 1,247,370
James T. Dooley	25,000	1.76%	\$ 44.69	6/22/2010	\$ 702,357	\$ 1,779,772
	29,000	2.04%	\$ 27.00	4/5/2011	\$ 492,254	\$ 1,247,370
Joseph L. Reinhart	29,000	2.04%	\$ 27.00	4/5/2011	\$ 492,254	\$ 1,247,370
Bradford S. Cooley	24,000	1.69%	\$ 27.00	4/5/2011	\$ 407,382	\$ 1,032,306
Gary M. Kapral	29,000	2.04%	\$ 27.00	4/5/2011	\$ 492,254	\$ 1,247,370

- 1) All options become exercisable for 25 percent of the shares covered by the option on each of the first four anniversaries of the grant date. The grant dates for the options shown in the table above were June 23, 2000 and April 6, 2001. All options become fully exercisable upon termination of the optionee's employment within one year after a "change in control" of the Company as defined in the 2000 Stock Option Incentive Plan. Unless the transaction is approved by the Board of Directors, a "change in control" generally includes (a) the acquisition by any person of 20 percent or more of the Company's Common Stock and (b) the election of a new majority of the Company's directors without the approval of the incumbent directors.
- 2) Options expire prior to this date (i) if the optionee's employment is terminated for any reason (other than death or disability), in which case options vested but unexercised at the date of termination may be exercised at any time prior to the expiration date of the options or the expiration of three months after the date of termination, whichever is the shorter period, or (ii) if employment terminates because of death or disability, in which case options vested but unexercised at the date of termination may be exercised at any time prior to the expiration date of the options or the expiration of 12 months after the date of termination, whichever is the shorter period. If employment (or service as a director, as applicable) is terminated by death of the optionee, the options generally may be exercised by persons to whom the optionee's rights pass by will or the laws of descent or distribution. Remaining vested but unexercised options terminate at the end of the earliest of the above described periods, as applicable.

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III. Option Exercises and Fiscal Year-End Option Value Table

The following table sets forth information with respect to the named executive officers concerning options exercised and the status of exercisable and unexercisable options held as of June 2, 2001.

Name	Options Exercised During Year Ended June 2, 2001		Number of Unexercised Options at June 2, 2001		Value of Unexercised In-the-Money Options at June 2, 2001(1)	
	Shares Acquired on Exercise	Value Realized	Exercisable	Unexercisable	Exercisable	Unexercisable
Donald R. VanLuvanee	—	\$ 0	355,570	561,000	\$ 7,000,059	\$ 4,934,230
John R. Kurdock	—	\$ 0	57,410	77,450	\$ 1,011,048	\$ 654,766
James T. Dooley	—	\$ 0	19,200	63,050	\$ 437,009	\$ 347,016
Joseph L. Reinhart	3,240	\$ 48,437	39,440	75,100	\$ 624,297	\$ 607,581
Bradford S. Cooley	9,744	\$ 217,070	17,900	58,650	\$ 179,140	\$ 431,969
Gary M. Kapral	—	\$ 0	7,500	51,500	\$ 0	\$ 289,130

1) Options are "in-the-money" at the fiscal year-end if the fair market value of the underlying securities on such date exceeds the exercise price of the option. The amounts set forth represent the difference between the fair market value of the securities underlying the options on June 2, 2001 based on the closing sale price of \$36.97 per share of Common Stock on that date (as reported on the Nasdaq National Market) and the exercise price of the options, multiplied by the applicable number of shares.

IV. Severance Agreements

In July 1991, the Board of Directors approved the Company's entry into severance agreements with the Company's corporate officers. These agreements generally provide for the payment upon termination of employment by the Company without cause or by the employee for "good reason" (as defined in the severance agreement) within two years following a change of control of the Company of an amount equal to three times the employee's annual salary and three years continued coverage under life, accident and health plans. The benefit is capped as necessary to prevent any portion of the benefit from being subject to excise tax. Each employee is obligated under the severance agreement to remain in the employ of the Company for a period of 270 days following a "potential change in control" (as defined in the severance agreements). All corporate officers of the Company, including its executive officers, have executed severance agreements.

COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION

The Compensation Committee of the Board of Directors makes recommendations to the Board regarding the general compensation policies for ESI, including salaries and incentives for executive officers. The Committee also has general authority to make option grants and other awards under the Company's 2000 Stock Option Incentive Plan, the 2000 Stock Option Plan and 1996 Stock Incentive Plan. The Committee is composed of four directors.

The Compensation Committee's executive compensation recommendations and actions during the 2001 fiscal year were in three areas: (1) compensation adjustments for the chief executive and other executive officers of the Company; (2) the key employee cash incentive bonus program; and (3) the key employee long term incentive program.

The Compensation Committee policies for compensation of executive officers are designed to fairly compensate the Company's executives and to provide incentives for the officers to manage and operate the Company for long term success. The Compensation Committee recommends, and the Board of Directors determines, based on that recommendation, compensation for the Chief Executive Officer. The Compensation Committee also recommends compensation levels for the remaining executive officers of the Company based on the recommendations of the Chief Executive Officer.

The total compensation of the executive officers takes into account several factors, including competitive compensation in the electronics industry, individual experience and performance, and the performance of the Company. The Committee does not assign a specific weight to these factors. The Company operates in marketplaces which are global, cyclical and subject to technology shifts. The Committee's evaluations of individual performance considers each individual's contribution toward achieving the Company's corporate objectives. The objectives include: (1) adequate return on, and efficient use of, invested capital and (2) generating positive earnings throughout the entire range of business conditions.

The methodology used in determining salary, cash incentive bonus and long-term incentive grants is as follows:

Target compensation for each executive is set annually by the Compensation Committee. These targets are based on the results of periodic salary surveys of comparable-sized companies in the electronics industries conducted by the Company's independent compensation consultants and on the level of individual responsibility and job complexity. The Company's target is to pay executives within the competitive range based on the surveys.

Base salaries are determined annually for each executive officer with reference to the target level for the individual. Salary increases are given when warranted by individual performance and when base salary levels are relatively low as compared to companies that compete with the Company for executive talent to keep base salaries competitive.

The Chief Executive Officer's base salary since September 2000 is \$415,000, representing an increase of \$25,000 from the prior year and a level at approximately the median of salary survey data.

Cash incentives in the form of cash bonuses are paid at the discretion of the Compensation Committee to executive officers who the

Committee determines have made substantial contributions to the profits of the Company in the preceding fiscal year. At the beginning of each fiscal year, the Board of Directors approves the business plan for the year, including sales and pre-tax profit goals. At the same time, the Board of Directors approves a target bonus percentage for executive officers if the established goals are met. If the goals are met, the Compensation Committee determines the extent to which an executive officer will be awarded the target bonus. Factors considered include individual performance, responsibility and contribution to profits. The amount of bonus for the Chief Executive Officer for fiscal year 2001 was \$1,250,000.

The Company uses stock options and performance-based restricted stock grants to reward senior management and to link executive compensation to shareholder interests reflected in increases in share value. By using a combination of annual options and restricted stock awards, the Company intends to provide a potential level of incentive compensation to executive officers equal to competitive levels as determined by the Company's compensation consultant, without excessive shareholder dilution. In determining the size of option grants and restricted stock awards, the Compensation Committee takes into account the executive's position and job responsibilities. All options are granted at an exercise price equal to the fair market value of the shares on the date of grant, and vest in 25 percent annual increments during the four year period following the date of grant. The number of options granted to executive officers in fiscal year 2001 was 391,000, including 138,000 to Donald R. VanLuvanee.

Deductibility of Compensation. Section 162(m) of the Internal Revenue Code of 1986 limits to \$1,000,000 per person the amount that the Company may deduct for compensation paid to any of its most highly compensated officers in any year. Qualifying compensation for deductibility under Section 162(m) is one of many factors the Compensation Committee considers in determining executive compensation arrangements. Substantially all of the options granted under the Company's 1989 Stock Option Plan and 2000 Stock Option Incentive Plan are intended to qualify as Incentive Stock Options. The Company receives no tax deduction from the exercise of an Incentive Stock Option unless the optionee disposes of the acquired shares before satisfying the holding periods. Under IRS regulations, the \$1,000,000 cap on deductibility applies to compensation recognized by an optionee upon such an early disposition, as well as compensation recognized upon the exercise of a Nonstatutory Stock Option, unless the option meets certain requirements. It is the Company's policy generally to grant options that meet the requirements of the IRS regulations so that any such compensation recognized by an optionee will be fully deductible by the Company for tax purposes. The Committee believes that the grant of Incentive Stock Options, despite the general nondeductibility, benefits the Company by encouraging the long-term ownership of Company stock by officers and other employees. Performance-based restricted stock awards are also intended to be granted in compliance with the IRS regulations so that any compensation recognized on vesting of such awards will be fully deductible.

By the Compensation Committee: Keith L. Thomson, Chairman; Larry L. Hansen, Vernon B. Ryles, Jr., and Jon D. Tompkins.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The Compensation Committee consists of Directors Keith L. Thomson, Larry L. Hansen, Vernon B. Ryles, Jr., and Jon D. Tompkins. No Compensation Committee member is or has been an employee of the Company.

AUDIT COMMITTEE MATTERS

Pursuant to authority delegated to it by the Board of Directors, the Audit Committee of the Board of Directors has approved and adopted an Audit Committee Charter, a copy of which is attached to this Proxy Statement as Appendix A.

Report of the Audit Committee

In connection with the Company's audited financial statements for the year ended June 2, 2001, the Audit Committee (1) reviewed and discussed the audited financial statements with management; (2) discussed with the independent auditors the matters required to be discussed by Statement on Auditing Standards No. 61; and (3) received the written disclosures and the letter from the independent auditors required by Independence Standards Board Standard No. 1 and discussed with the independent auditors the independent auditors' independence. Based upon these reviews and discussions, the Audit Committee has recommended to the Board of Directors, and the Board of

Directors has approved, that the Company's audited financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended June 2, 2001 for filing with the Securities and Exchange Commission.

By the Audit Committee: W. Arthur Porter, Chairman; David F. Bolender, and Gerald F. Taylor.

Principal Accounting Firm Fees

The Company incurred the following fees for services performed by the Company's principal accounting firm, Arthur Andersen LLP, in fiscal 2001.

Audit Fees	\$	158,000(1)
Financial Information Systems Design and Implementation Fees	\$	0
All Other Fees(2), (3)	\$	269,000
Total	\$	427,000

(1)

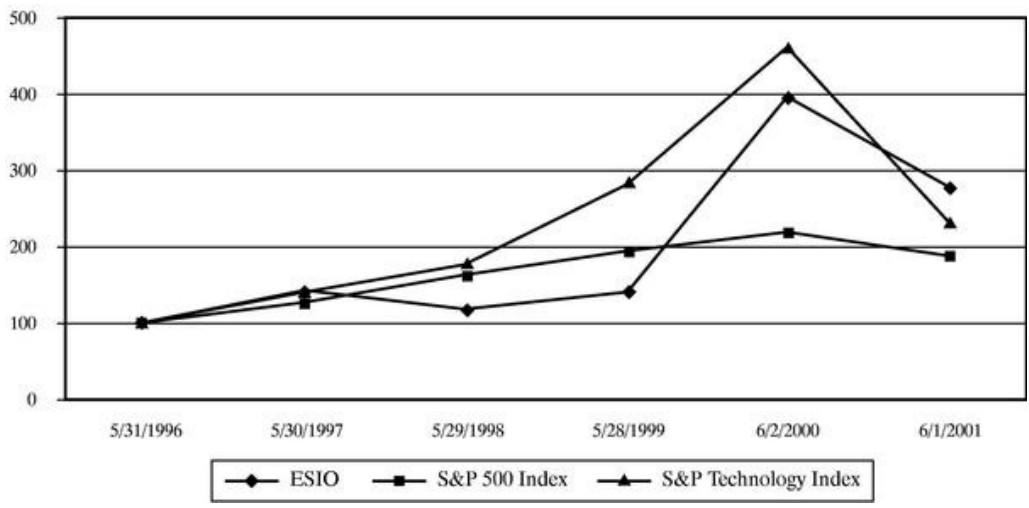
Fees for the audit of the Company's annual financial statements for the fiscal year ended June 2, 2001 and the reviews of the financial statements included in the Company's Forms 10-Q for the fiscal year ended June 2, 2001 are \$158,000, of which an aggregate amount of \$51,000 has been billed through June 2, 2001.

- (2) Represents the aggregate fees billed for all other services rendered by Arthur Andersen LLP for the fiscal year ended June 2, 2001. Includes tax fees of \$97,000 and international consulting fees of \$172,000.
- (3) The Audit Committee has considered whether the provision of the services covered by these fees is compatible with maintaining the principal accountant's independence.

PROPOSAL 2: APPROVAL OF SELECTION OF AUDITORS

The Board of Directors has selected Arthur Andersen LLP as the Company's independent auditors for the fiscal year ending June 1, 2002 and is submitting the selection to shareholders for approval. Arthur Andersen LLP are independent certified public accountants and have audited the accounts of the Company and its subsidiaries since 1983. Proxies will be voted in accordance with the instructions specified in the proxy form. If no instructions are given, proxies will be voted for approval of Arthur Andersen LLP as independent auditors. Representatives of Arthur Andersen LLP are expected to be present at the Annual Meeting, will be given the opportunity to make a statement if they desire to do so, and will be available to respond to appropriate questions.

PERFORMANCE GRAPH
Indexed Stock Price Performance



Assumes that \$100.00 was invested on May 31, 1996 in Electro Scientific Industries, Inc. (ESIO) Common Stock, the S&P 500 Index and the S&P Technology Index, and that all dividends were reinvested. (adjusted for 2-1 stock split payable on February 24, 2000).

Historical stock price performance should not be relied upon as indicative of future stock price performance.

	ESIO	Index	S&P 500	Index	S&P Technology	Index
5/31/96	\$ 13.25	100.00	669.12	100.00	465.73	100.00
5/30/97	\$ 19.00	143.40	848.28	126.78	653.99	140.42
5/29/98	\$ 15.75	118.87	1090.82	163.02	825.86	177.33
5/28/99	\$ 18.75	141.51	1301.84	194.56	1311.57	281.62
6/2/00	\$ 52.69	397.65	1477.26	220.78	2156.00	462.93
6/1/01	\$ 36.97	279.02	1260.67	188.41	1074.96	230.81

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934 requires the Company's executive officers, directors and persons who own more than ten percent of the Common Stock to file reports of ownership and changes in ownership with the Securities and Exchange Commission ("SEC"). Executive officers, directors and beneficial owners of more than ten percent of the Common Stock are required by SEC regulations to furnish the Company with copies of all Section 16(a) forms they file. Based solely on a review of the copies of such forms received by the Company and on written representations from certain reporting persons that they have complied with the relevant filing requirements, the Company believes that its executive officers and directors have complied with all applicable Section 16(a) filing requirements for transactions during fiscal 2001.

DISCRETIONARY AUTHORITY

Although the Notice of Annual Meeting of Shareholders provides for transaction of any other business that properly comes before the meeting,

the Board of Directors has no knowledge of any matters to be presented at the meeting other than the matters described in this proxy statement. The

enclosed proxy, however, gives discretionary authority to the proxy holders to vote in accordance with their judgment if any other matters are presented.

For this year's annual meeting of shareholders, if notice of a shareholder proposal to be raised at the annual meeting of shareholders is received at the principal executive offices of the Company after June 25, 2001, proxy voting on that proposal when and if raised at the annual meeting will be subject to the discretionary voting authority of the designated proxy holders. For the 2002 annual meeting of shareholders, if notice of a shareholder proposal to be raised at the meeting is received at the principal executive offices of the company after July 1, 2002, proxy voting on that proposal when and if raised at the annual meeting will be subject to the discretionary voting authority of the designated proxy holders.

SHAREHOLDER PROPOSALS

Any shareholder proposal to be considered at the Company's 2002 annual meeting must be received at the principal executive offices of the Company between April 17, 2002 and May 17, 2002. In addition, any shareholder proposal to be considered for inclusion in proxy materials for the Company's 2002 annual meeting must be received at the principal executive offices of the Company no later than April 17, 2002. A shareholder proposal must include the information specified in the Company's Bylaws, and a copy of the relevant provisions of the Bylaws will be provided to any shareholder upon written request to the Company's Secretary.

By Order of the Board of Directors

Joseph L. Reinhart
Vice President and Corporate Secretary

Portland, Oregon
August 15, 2001

APPENDIX A

ELECTRO SCIENTIFIC INDUSTRIES, INC. AUDIT COMMITTEE OF THE BOARD OF DIRECTORS CHARTER

I. Overall Purpose

The primary purpose of the Audit Committee is to assist the Board of Directors in achieving its oversight responsibilities in the following areas:

- Overseeing that management has maintained the reliability and integrity of the accounting policies and financial reporting and disclosure practices of the Company;
- Overseeing that management has established and maintained processes to assure that an adequate system of internal control over key business risks is functioning within the Company;
- Overseeing that management has established and maintained processes to assure compliance by the Company with all applicable laws, regulations and Company policies.

II. Composition

The Audit Committee shall be comprised of three or more directors as determined by the Board, each of whom shall be independent directors, and free from any relationship that, in the opinion of the Board, would interfere with the exercise of his or her independent judgment as a member of the Committee. All members of the Committee shall have a working familiarity with basic finance and accounting practices, and at least one member of the Committee shall have accounting or related financial management expertise.

The members of the Committee shall be elected by the Board at the annual organizational meeting of the Board or until their successors shall be duly elected and qualified. Unless a Chair is elected by the full Board, the members of the Committee may designate a Chair by majority vote of the full Committee membership.

III. Meetings

The Committee shall meet at least four times annually, or more frequently as circumstances dictate. As part of its job to foster open communication, the Committee should meet at least annually with management and the independent accountants in separate executive sessions to discuss any matters that the Committee or each of these groups believe should be discussed privately. In addition, the Committee or at least its Chair should meet (telephonically or in person) with the independent accountants and management quarterly to review the Corporation's financials.

IV. Activities

In fulfilling its overall purpose, the audit committee shall annually schedule and carry out the following activities. The five broad areas of activities include:

- General
- Reporting
- Independent Accountants
- Key Risks and Controls
- Ethical and Legal Standards

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ACTIVITIES

Area: GENERAL

1. Determine that each Committee member is independent and free from any relationships that would interfere with the exercise of his or her judgment as a member of the Committee. Definition of independence would exclude directors who:
 - A director who is an employee or has been an employee during the past three years.
 - A director who is employed as an executive of another corporation where any of the company's executives serve on that corporation's compensation committee.
 - A director who is an Immediate Family member (as defined) of an individual who has been an executive officer of the company or its affiliates during the past three years.
 - A director who accepts compensation in excess of \$60,000 from the company or any of its affiliates during the previous fiscal year, other than compensation for board service, benefits under a tax-qualified retirement plan, or non-discretionary compensation.
 - A director who is a partner in, a controlling shareholder or executive officer of any for-profit business organization to which the corporation made or received payments in any of the past three years that exceed 5% of the company's or business organizations consolidated gross revenues for that year, or \$200,000, whichever is greater. Payments resulting solely from investments in the company's securities need not be considered for this purpose.
2. Determine that all Committee members are "financially literate" and at least one member has financial management experience, as defined by the full board.
3. Review and update this Charter periodically, at least annually, as conditions dictate. Full board approval is required for adoption and significant changes to the charter.
4. Submit the minutes of all meetings of the audit committee to, or discuss the matters discussed at each meeting with the full Board of Directors.
5. The audit committee shall have the power to conduct or authorize investigations into any matters within the committee's scope of responsibilities. The committee shall be empowered to retain independent counsel, accountants, or others to assist it in the conduct of any investigation.

Area: REPORTING

- 1.

Review the organization's annual financial statements and any reports or other financial information submitted to any governmental body, or the public, including any certification, report, opinion, or review rendered by the independent accountants.

2. Review with management and the Company's independent public accountants the applicability and impact of any new pronouncements issued by FASB or other applicable regulatory agencies.
3. Disclose in the annual proxy statement whether the Committee has satisfied its responsibilities in compliance with this charter. Specifically, the report would require audit committees to state that they have reviewed and discussed the financial statements with management, discussed the items required by SAS 61 (including the quality of reporting) with independent auditors, and indicate that the audit committee has received the written report from auditors required by ISB 1 regarding auditors' independence. Finally, the report would require audit committee's to recommend to the Board of Directors that the audited financial statements be included in the Annual Report on Form 10-K for filing with the Commission.

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4. Publish the written charter in the annual report at least every three years or in the next proxy statement after a significant amendment.
5. Meet with (telephonic or in person) financial management and the independent accountants following the completion of the independent accountants SAS #71 interim financial review and prior to the form 10Q filing/release of earnings.

Area: INDEPENDENT ACCOUNTANTS

1. Review and approve the selection of the independent accountants. It should be clear to the independent accountants that they are ultimately accountable to the board of directors and the audit committee as representatives of the shareholders
2. Review with the independent accountants the scope of their examinations of the books and records of the Company and its subsidiaries and direct the special attention of the auditors to specific matters or areas deemed by the Committee or the auditors to be of special significance; and authorizing the auditors to perform such supplemental reviews or audits as the Committee may deem desirable.
3. On an annual basis, receive a formal written statement from the independent auditors as to all significant relationships the accountants have with the Corporation to determine the accountants' independence.
4. Review with management and the independent auditor their qualitative judgments about the appropriateness, not just the acceptability, of accounting principles and financial disclosure practices used or proposed and, particularly, about the degree of aggressiveness or conservatism of its accounting principles and underlying estimates.
5. Review with management and the independent accountants at the completion of their audit:
 - The existence of any fraud or illegal acts that the auditor may have become aware of;
 - Any significant deficiencies in the design or operation of internal controls noted during the audit;
 - Selection of and changes in significant accounting policies or their application;
 - Process used by management in making significant accounting judgments or estimates
 - Significant audit adjustments
 - Review by the auditors of other information in the audited financial statements.
 - Disagreements with management
 - Consultation, if any, with other auditors on significant accounting matters
 - Serious difficulties encountered during the audit

6. Consider recommendations from the independent accountants regarding internal controls, information technology controls and security and other matters relating to the Company and its subsidiaries and reviewing the correction of controls or processes deemed to be needing improvement.
7. Provide sufficient opportunity for the independent auditors to meet with the members of the audit committee without members of management present. Among the items to be discussed in these meetings are the independent auditors' evaluation of the corporation's financial, accounting, and auditing personnel, and the cooperation that the independent auditors received during the course of the audit.

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Area: KEY RISKS AND CONTROLS

1. Inquire of management, the independent auditor [and the Director of Internal Audit] about significant risks or exposures and assess the steps management has taken to minimize such risks.
2. Review accounting and financial human resources and succession planning.

Area: ETHICAL AND LEGAL STANDARDS

1. Review and approve updates periodically to the Corporations Code of Conduct and ensure that management has established a system to enforce this Code.
2. Review results of management's monitoring of the Corporation's compliance with the organization's Code of Conduct.
3. Review, with the organization's counsel, legal compliance matters including corporate securities trading policies.
4. Perform any other activities consistent with this Charter, the Corporation's By-laws and governing law, as the Committee or the Board deems necessary or appropriate.

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ELECTRO SCIENTIFIC INDUSTRIES, INC.

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned shareholder of Electro Scientific Industries, Inc., an Oregon corporation (the "Company"), hereby appoints David F. Bolender, Donald R. VanLuvanee and Joseph L. Reinhart, and each of them, with full power of substitution in each, as proxies to cast all votes which the undersigned shareholder is entitled to cast at the Annual Meeting of Shareholders (the "Annual Meeting") to be held at 1:00 p.m. on Friday, September 21, 2001 at the Company's executive offices located at 14100 NW Science Park Drive, Portland, Oregon, and any adjournments or postponements thereof upon the following matters.

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED IN THE MANNER DIRECTED HEREIN BY THE UNDERSIGNED SHAREHOLDER. UNLESS DIRECTION IS GIVEN, THIS PROXY WILL BE VOTED "FOR" THE ELECTION OF THE NOMINEES LISTED IN PROPOSAL 1, "FOR" PROPOSAL 2 AND IN ACCORDANCE WITH THE RECOMMENDATIONS OF A MAJORITY OF THE BOARD OF DIRECTORS AS TO OTHER MATTERS. The undersigned hereby acknowledges receipt of the Company's Proxy Statement and hereby revokes any proxy or proxies previously given.

(continued and to be signed on other side)

/^\ FOLD AND DETACH HERE /^\

Please mark
your votes as
indicated in
this example

/x/

FOR the
nominees
listed to the
left (except as
indicated to
the contrary)

WITHHOLD
AUTHORITY to vote
for all nominees
listed to the left

FOR AGAINST ABSTAIN

1. Election of three directors, three-year terms: // // 2. Voting on the selection of independent auditors for the company. // // //

NOMINEES:

01 Larry L. Hansen
02 Vernon B. Ryles, Jr.
03 Donald R. VanLuvanee

Instruction: To withhold authority to vote for any nominee write that nominee's name(s) in this space:

3. In their discretion, the proxies are authorized to vote upon such other matters as may properly come before the meeting or any adjournments or postponements thereof.

PLEASE SIGN, DATE AND RETURN THIS PROXY CARD TODAY, USING THE ENCLOSED ENVELOPE.

Please sign below exactly as your name appears on this Proxy Card. If shares are registered in more than one name, all such persons should sign. A corporation should sign in its full corporate name by a duly authorized officer, stating his/her title. Trustees, guardians, executors and administrators should sign in their official capacity giving their full title as such. If a partnership, please sign in the partnership name by authorized persons.

If you receive more than one Proxy Card, please sign and return all such cards in the accompanying envelope.

Typed or Printed names:

Authorized Signature:

Title or authority, if applicable:

Date:

/\ FOLD AND DETACH HERE /\

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