

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:
 [x] Preliminary Proxy Statement
 [] Confidential, for Use of the Commission Only (as permitted by
Rule 14a-6(e) (2))
 [] Definitive Proxy Statement
 [] Definitive Additional Materials
 [] Soliciting Material Pursuant to Section 240.14a-11(c) or Section 240.14a-12

KLA-TENCOR CORPORATION

(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 pr 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:

5) Total fee paid:

[] Fee previously paid.
 [] 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:

1

KLA-TENCOR CORPORATION
NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
NOVEMBER 18, 1997

To the Stockholders:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of
KLA-Tencor Corporation (the "Company"), a Delaware corporation, will be held on
November 18, 1997 at 11:30 a.m., local time, at the Company's offices located at
160 Rio Robles, San Jose, California 95134, for the following purposes:

1. To elect Class II directors to serve for a three year term and until
their successors are elected.
2. To approve an amendment to the 1981 Employee Stock Purchase Plan to
increase the number of shares of Common Stock reserved for issuance
thereunder by -- shares.
3. To approve implementation of the new 1997 Employee Stock Purchase Plan
and to reserve for issuance thereunder -- shares of the Common Stock of
the Company.
4. To ratify the appointment of Price Waterhouse as independent accountants
of the Company for its 1998 fiscal year.
5. To transact such other business as may properly come before the meeting
and any adjournments thereof.

The foregoing items of business are more fully described in the Proxy
Statement accompanying this Notice.

Only stockholders of record at the close of business on September 22, 1997 are entitled to notice of and to vote at the meeting.

Sincerely,

Larry W. Sonsini
Secretary

San Jose, California
October , 1997

YOUR VOTE IS IMPORTANT

All stockholders are cordially invited to attend the meeting in person, however, to assure your representation at the meeting, you are requested to complete, sign and date the enclosed proxy card as promptly as possible and return it in the enclosed envelope (to which no postage need be affixed if mailed in the United States). Any stockholder attending the meeting may vote in person even if he or she returned a proxy.

KLA-TENCOR CORPORATION

PROXY STATEMENT

INFORMATION CONCERNING SOLICITATION AND VOTING

GENERAL

The enclosed Proxy is solicited on behalf of KLA-Tencor Corporation (the "Company") for use at the Annual Meeting of Stockholders to be held on November 18, 1997 at 11:30 a.m., local time, or at any adjournment(s) thereof, for the purposes set forth herein and in the accompanying Notice of Annual Meeting of Stockholders. The Annual Meeting will be held at the Company's offices at 160 Rio Robles, San Jose, California 95134. The Company's principal executive offices are located at 160 Rio Robles, San Jose, California 95134 and its telephone number is (408) 875-4200.

These proxy solicitation materials were mailed on or about October 6, 1997 to all stockholders entitled to vote.

RECORD DATE

Stockholders of record at the close of business on September 22, 1997 are entitled to notice of and to vote at the meeting. As of the record date -- shares of the Company's Common Stock, \$0.001 par value, were issued and outstanding.

REVOCABILITY OF PROXIES

Any Proxy given pursuant to this solicitation may be revoked by the person giving it at any time before its use by delivering to the Company a written notice of revocation or a duly executed proxy bearing a later date or by attending the meeting and voting in person.

VOTING AND SOLICITATION

On all matters other than the election of directors, each share has one vote. See "ELECTION OF DIRECTORS -- REQUIRED VOTE."

The cost of soliciting proxies will be borne by the Company. The Company has retained the services of Skinner & Co. to aid in the solicitation of proxies from brokers, bank nominees and other institutional owners. The Company estimates that it will pay Skinner & Co. a fee not to exceed \$5,000 for its services and will reimburse it for certain out of pocket expenses estimated to be \$15,000. In addition, the Company may reimburse brokerage firms and other persons representing beneficial owners of shares for their expenses in forwarding solicitation material to such beneficial owners. Proxies may be solicited by certain of the Company's directors, officers and regular employees, without additional compensation, personally or by telephone or telegram.

DEADLINE FOR RECEIPT OF STOCKHOLDER PROPOSALS

Proposals of stockholders of the Company which are intended to be presented by such stockholders at the Company's 1998 Annual Meeting must be received by the Company no later than July 21, 1998 and be otherwise in compliance with applicable laws and regulations in order that such proposals may be included in the proxy statement and form of proxy relating to that meeting.

SECURITY OWNERSHIP

PRINCIPAL STOCKHOLDERS

As of June 30, 1997, the following persons were known to the Company to be beneficial owners of more than 5% of the Company's Common Stock:

<TABLE>
<CAPTION>

NAME AND ADDRESS	NUMBER OF SHARES OWNED	PERCENTAGE OF TOTAL (1)
<S> The Capital Group Companies, Inc.(2)..... 333 South Hope Street Los Angeles, CA 90071	5,082,300	<C> --
The Prudential Insurance Company of America(3)..... Prudential Plaza Newark, N.J. 07102	--	--

</TABLE>

- - - - -

(1) Based on -- outstanding shares of Common Stock as of June 30, 1997.

(2) --

(3) --

SECURITY OWNERSHIP OF MANAGEMENT

The following table sets forth the beneficial ownership of Common Stock of the Company as of June 30, 1997 (the most recent practicable date) by all directors and nominees (naming them), each of the named executive officers set forth in the Summary Compensation Table and by all directors and current executive officers as a group:

<TABLE>
<CAPTION>

NAME	AMOUNT OWNED	APPROXIMATE PERCENTAGE OWNED*
<S>	<C>	<C>
Kenneth Levy(1).....		%
Jon D. Tompkins(2).....		
Kenneth L. Schroeder(3).....		
James W. Bagley(4).....		
Edward W. Barnholt(5).....		
Leo J. Chamberlain(6).....		
Richard J. Elkus(7).....		
Dean O. Morton(8).....		
Yoshio Nishi(9).....		
Samuel Rubinovitz(10).....		
Dag Tellefsen(11).....		
Lida Urbanek(12).....		
Robert J. Boehlke(13).....		
Gary E. Dickerson(14).....		
Graham J. Siddall(15).....		
All directors and executive officers as a group (21 persons)(16).....		%

</TABLE>

- - - - -

* Based on -- outstanding shares of the Common Stock of the Company as of June 30, 1997.

** Less than 1%.

(1) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

(2) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

(3) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

(4) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

(5) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

(6) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

(7) Includes shares, options for which are presently exercisable or will

become exercisable within 60 days of September 22, 1997.

- (8) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (9) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (10) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (11) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (12) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (13) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (14) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (15) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.
- (16) Includes shares, options for which are presently exercisable or will become exercisable within 60 days of September 22, 1997.

PROPOSAL ONE

ELECTION OF DIRECTORS

NOMINEES

The Company has a classified board of twelve directors consisting of four Class I directors (Kenneth Levy, Samuel Rubinovitz, Jon D. Tompkins and Lida Urbanek), three Class II directors (Leo J. Chamberlain, Richard J. Elkus and Dag Tellefsen) and five Class III directors (James W. Bagley, Edward W. Barnholt, Dean O. Morton, Yoshio Nishi and Kenneth L. Schroeder) who will serve until the annual meetings of stockholders to be held in 1999, 1997 and 1998, respectively, or until their respective successors are duly elected and qualified. At each annual meeting of stockholders, directors are elected for a full term of three years to succeed those directors whose terms expire at the annual meeting.

The terms of the Class II directors will expire on the date of the upcoming annual meeting. Three persons are to be elected to Class II of the Board of Directors at the meeting. The nominees for election by the stockholders to these three positions are Leo J. Chamberlain, Richard J. Elkus and Dag Tellefsen. If elected, the nominees will serve as directors until the Company's annual meeting of stockholders in 2000, or until their successors are elected and qualified. In any of the nominees declines to serve or becomes unavailable for any reason, or if a vacancy occurs before the election, the Proxies may be voted for such substitute nominees as management may designate. The proxy holders have also been advised that in the event any of the nominees

shall not be available for election, a circumstance that is not currently expected, they may vote for the election of substitute nominees in accordance with their judgment. If additional persons are nominated for election as directors, the proxy holders intend to vote all proxies received by them in such a manner in accordance with cumulative voting as will assure the election of as many of the nominees as possible and, in such event, the specific nominees to be voted for will be determined by the proxy holders.

If a quorum is present and voting, the three nominees for Class II directors receiving the highest number of votes will be elected as Class II directors. Abstentions and shares held by brokers that are not present, but not voted because the brokers were prohibited from exercising discretionary authority, i.e., "broker non-votes," will be counted as present in determining if a quorum is present.

The following describes the name and age of each member of the Company's Board of Directors, the year in which each such member became a director of the Company and each such member's principal occupation. The principal occupation of each such member has been his principal occupation for the past five years unless otherwise noted.

<TABLE>
<CAPTION>

NAME OF DIRECTOR	AGE	POSITION	DIRECTOR SINCE
<S>	<C>	<C>	<C>

Kenneth Levy	55	Chairman of the Board	1975
Jon D. Tompkins	56	Chief Executive Officer	1997
Kenneth L. Schroeder	51	President and Chief Operating Officer	1991
James W. Bagley	58	Director	1997
Edward W. Barnholt	54	Director	1995
Leo J. Chamberlain	67	Director	1982
Richard J. Elkus	62	Director	1997
Dean O. Morton	64	Director	1997
Yoshio Nishi	57	Director	1989
Samuel Rubinovitz	67	Director	1990
Dag Tellefsen	55	Director	1978
Lida Urbanek	53	Director	1997

</TABLE>

There are no family relationships between or among any directors or executive officers of the Company.

Kenneth Levy is a co-founder of the Company and is Chairman of the Board. From 1975 until April 30, 1997 he was Chairman of the Board and Chief Executive Officer. Since May 1993 he has been a director of Ultratech Stepper, Inc., a manufacturer of photolithography equipment. He has been director of Network Peripherals, Inc., a supplier of high-performance client-server networking solutions since April. Since August 1995, he has been a director of Integrated Process Equipment Corporation, a manufacturer of semiconductor processing equipment for chemical, mechanical planarization (CMP) and cleaning of advanced integrated circuits. Since May 1997, he has been a director of Trikon Technologies, Inc.

Jon D. Tompkins has been Chief Executive Officer of the Company since April 30, 1997. From April 1991 until April 30, 1997 he was President and Chief Executive Officer of Tencor Instruments. He was director of Tencor Instruments from 1991 until 1993 when he was appointed Chairman of the Board. He serves on the boards of directors of Fusion Systems and Varian Corporation as well as SEMI/SEMATECH, a private research and development consortium of U.S. semiconductor equipment and materials companies.

Kenneth L. Schroeder has been President, Chief Operating Officer and Director of the Company since November 1991. From May 1990 to November 1991 he was President, Chief Operating Officer and Director of Genus Corporation, a manufacturer of thin film deposition and ion implant equipment. Since August 1995 he has been a Director of GaSonic International, a manufacturer of semiconductor processing equipment.

James W. Bagley has been a Director of the Company since April 30, 1997. He was a director of Tencor Instruments from June 1993 until April 30, 1997. He has been chief executive officer of Lam Research Corporation since August 1997. From May 1996 until August 1997 he was chairman of the board and chief

4

executive officer of OnTrak Systems, Inc. until its merger with Lam Research Corporation in August 1997. From until May 1996 he was Vice Chairman of Applied Materials, Inc., the largest supplier of wafer fabrication systems to the semiconductor industry. Prior to that he was with Texas Instruments Incorporated for more than 15 years. He serves on the boards of directors of Teradyne, Inc., Kulicke & Soffa Industries, Inc. and Extraction Systems, Inc.

Edward W. Barnholt has been a Director of the Company since 1995. Since October 1990 Mr. Barnholt has been general manager of the Test and Measurement Organization of Hewlett-Packard Company, a manufacturer of electronic and computer equipment. From 1988 to 1990 he was general manager of the Electronic Instruments Group of Hewlett-Packard. He was elected vice president of Hewlett-Packard in July 1988 and senior vice president in November 1993.

Leo J. Chamberlain has been a Director of the Company since 1982. He is a private investor. Since March 1989 he has been a director of Octel Communications Corporation, a manufacturer of high-performance voice processing systems.

Dean O. Morton has been a Director of the Company since April 30, 1997. From June 1993 until April 30, 1997 he was director of Tencor Instruments. In October 1992 Mr. Morton retired as Executive Vice President and Chief Operating Officer and as a director of Hewlett Packard Company, a manufacturer of electronic and computer equipment, where he held various positions from 1960 until his retirement. Mr. Morton is a director of ALZA Corporation, Centigram Communications Corporation, The Clorox Company and Raychem Corporation. Mr. Morton is also a director of the Metropolitan Series Fund and MetLife Portfolios, a trustee of the MetLife State Street and State Street Research funds and a director of the Kaiser Foundation Health Plan and Hospitals. Mr. Morton also serves on the Board of Associates, Harvard Business School and is a Trustee of the David and Lucille Packard Foundation.

Yoshio Nishi has been a Director since 1989. Since May 1995 he has been director of research and development and senior vice president of the Semiconductor Group of Texas Instruments Incorporated, a manufacturer of

integrated circuits and electronic equipment. From January 1986 to April 1995 he director of Silicon Process Laboratory for Hewlett-Packard Laboratories, a semiconductor technology research facility affiliated with Hewlett-Packard. Since April 1993 he has been a director of Silicon Valley Research, Inc., a software developer of integrated circuit place and route tools. Mr. Nishi has been a Consulting Professor in the Department of Electrical Engineering at Stanford University since 1986.

Samuel Rubinovitz has been a Director since 1990. He previously served as a Director of the Company from October 1979 to January 1989. From April 1989 to January 1994 he was executive vice president of EG&G, Inc., a diversified manufacturer of scientific instruments and electronic, optical and mechanical equipment. From April 1989 to April 1996 he was a director of EG&G, Inc. Since October 1984 he has been a director of Richardson Electronics, Inc., a manufacturer and distributor of electron tubes and semiconductors. Since September 1994 Mr. Rubinovitz has been a director of LTX Corporation, a manufacturer of semiconductor capital equipment. Since June 1985 he has been a director of Kronos, Inc., a manufacturer of electronic time keeping systems.

Dag Tellefsen has been a Director of the Company since 1978. He is the General Partner of the Investment Manager of Glenwood Ventures I and II, venture capital funds. Since January 1993 he has been a director of Iwerks Entertainment Corporation, a provider of not-at-home entertainment. Since September 1982 Mr. Tellefsen has been a director of Octel Communications Corporation.

Lida Urbanek has been a Director of the Company since April 30, 1997. She is a private investor. She was a director of Tencor Instruments from August 1991 until April 30, 1997. Mrs. Urbanek is the widow of Dr. Karl Urbanek, the founder of Tencor Instruments.

BOARD MEETINGS AND COMMITTEES

The Board of Directors of the Company held a total of seven meetings during the fiscal year ended June 30, 1997. The Board of Directors has an Audit Committee, a Compensation Committee and an Nominating Committee.

5

The Audit Committee, which consists of Mr. Morton, Mr. Rubinovitz and Mr. Tellefsen, held one meeting during the last fiscal year. The Audit Committee recommends engagement of the Company's independent accountants, and is primarily responsible for approving the services performed by the Company's independent accountants and for reviewing and evaluating the Company's accounting principles and its system of internal accounting controls. The Compensation Committee, which consists of Mr. Bagley, Mr. Chamberlain and Mrs. Urbanek, held two meetings during the last fiscal year. The Compensation Committee reviews and approves the Company's executive compensation policy and makes recommendations concerning the Company's employee benefit plans. The Nominating Committee, which consists of Mr. Barnholt, Mr. Levy and Mr. Tompkins held one meeting during the last fiscal year. The Nominating Committee is primarily responsible for identifying and evaluating the qualifications of all candidates for election to the Board of Directors. The Nominating Committee will consider nominations recommended by stockholders. Stockholders wishing to submit nominations must notify the Company of their intent to do so (and provide the Company with certain information set forth in the Company's bylaws on or before the date on which stockholder proposals to be included in the proxy statement for the stockholder meeting must be received by the Company.

During the fiscal year ended June 30, 1997, all incumbent Directors attended at least 75% of the aggregate number of meetings of the Board of Directors and meetings of the committees of the Board on which they served.

COMPENSATION OF DIRECTORS

Members of the Board of Directors who were not employees of the Company receive an annual fee of \$15,000 and \$1000 (\$500 if participation is by telephone) for each meeting they attend, plus expenses. Committee members receive \$500 (\$250 if participation is by telephone) per committee meeting they attend. The Company's Outside Directors Stock Option Plan (the "Director Plan") as adopted by the Board of Directors and approved by the stockholders, provides for the grant of an option to purchase 5,000 shares of Common Stock of the Company to each of the Company's non-employee directors on the date on which such person is elected a director. Thereafter, each non-employee director is automatically granted an option to purchase 5000 shares of Common Stock of the Company on the anniversary of such date. The Director Plan provides that the exercise price shall be equal to the fair market value of the Common Stock on the date of grant of the option. Options granted pursuant to the Director Plan have a term of ten years and commence vesting seven months after date of grant and then ratably over 54 months but only while the optionee is a director of the Company or within six months after death or within 30 days after the optionee ceases to serve as a director of the Company.

REQUIRED VOTE

Directors shall be elected by a plurality of the votes of the shares of the

Company's Common Stock entitled to vote and represented in person or by proxy at the Annual Meeting. Every stockholder voting for the election of directors may cumulate such stockholder's votes and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which the stockholder's shares are entitled, or may distribute the stockholder's votes on the same principle among as many candidates as the stockholder thinks fit, provided that votes cannot be cast for more than three candidates. However, no stockholder shall be entitled to cumulate votes unless the candidate's name has been placed in nomination prior to the voting and the stockholder, or any other stockholder, has given notice at the meeting prior to the voting of the intention to cumulate the stockholder's votes. The Company will exercise discretionary authority to cumulate votes in the event that additional persons are nominated at the Annual Meeting for election of directors.

While there is no definitive statutory or case law in Delaware as to the proper treatment of abstentions in the election of directors, the Company believes that abstentions should be counted for purposes of determining whether a quorum is present at the annual meeting for the transaction of business. In the absence of controlling precedent to the contrary, the Company intends to treat abstentions with respect to the election of directors in this manner. In a 1988 Delaware case, *Berlin v. Emerald Partners*, the Delaware Supreme Court

6

held that broker non-votes may be counted as present or represented for purposes of determining the presence or absence of a quorum for the transaction of business. Accordingly, the Company intends to treat broker non-votes with respect to the election of directors in this manner. Votes against, votes withheld and broker non-votes have no legal effect on the election of directors due to the fact that such elections are by a plurality.

MANAGEMENT RECOMMENDS A VOTE FOR THE NOMINEES LISTED ABOVE.

PROPOSAL TWO

AMENDMENT TO 1981 EMPLOYEE STOCK PURCHASE PLAN

AMENDMENT TO INCREASE THE NUMBER OF SHARES RESERVED FOR ISSUANCE UNDER THE 1981 EMPLOYEE STOCK PURCHASE PLAN

As of the date hereof 4,800,000 shares of the Company's Common Stock have been reserved for issuance under the Company's 1981 Employee Stock Purchase Plan (the "1981 Purchase Plan"). In September 1997, the Board of Directors adopted an amendment to the 1981 Purchase Plan, subject to stockholder approval, to increase the number of shares reserved for issuance thereunder by _____ shares, to a total of _____ shares. As of August 30, 1997 _____ shares of Common Stock had been issued under the 1981 Purchase Plan at an average price of \$ _____ per share and _____ shares remained available for purchase.

The Company is asking stockholders to approve a new, updated employee stock purchase plan (see Proposal 3) and intends to phase out the 1981 Purchase Plan over the two year period ending June 30, 1999. The increase in the reserve for issuance under the 1981 Purchase Plan will allow the Company to complete the phase out the 1981 Purchase Plan. The Company estimates that it will utilize a substantial portion of the _____ remaining available shares leaving an insufficient number of shares for issuance in the exercise periods between December 31, 1997 and throughout the phase out of the 1981 Purchase Plan in 1999.

The Board of Directors believes that it is in the best interests of the Company to provide employees with an opportunity to purchase Common Stock of the Company through payroll deductions. The Board of Directors believes that the shares remaining available for issuance pursuant to the 1981 Purchase Plan are insufficient for such purpose. Accordingly, at the Annual Meeting the stockholders are being requested to consider and to approve the amendment of the 1981 Purchase Plan to increase the number of shares reserved for issuance thereunder by _____ shares which is a sufficient number of shares to allow the Company to phase out the 1981 Purchase Plan over the next two years.

SUMMARY OF THE 1981 PURCHASE PLAN

The essential features of the 1981 Purchase Plan are outlined below.

Purpose

The purpose of the 1981 Purchase Plan is to provide employees of the Company with an opportunity to purchase Common Stock of the Company through payroll deductions.

Administration

The 1981 Purchase Plan is administered by the Board of Directors or a committee appointed by the Board, and is currently being administered by the Board of Directors. All questions of interpretation or application of the 1981 Purchase Plan are determined in the sole discretion of the Board of Directors or

its committee, and its decisions are final and binding upon all participants. Members of the Board of Directors who are eligible employees are permitted to participate in the 1981 Purchase Plan but may not vote on any matter affecting the administration of the 1981 Purchase Plan or the grant of any option pursuant to the 1981 Purchase Plan. No member of the Board of Directors who is eligible to participate in the 1981 Purchase Plan may be a member of the committee appointed to administer the 1981 Purchase Plan. No charges for administrative or other costs may be made against the payroll deductions of a participant in the 1981 Purchase

7

Plan. Members of the Board of Directors receive no additional compensation for their services in connection with the administration of the 1981 Purchase Plan.

Eligibility

Any person who is employed by the Company for at least 20 hours per week and more than five months in a calendar year is eligible to participate in the 1981 Purchase Plan. As of June 30, 1997, approximately employees were eligible to participate in the 1981 Purchase Plan and approximately of such eligible employees were participating.

Offering Dates

The 1981 Purchase Plan is implemented by consecutive 24-month offering periods. The offering periods commence July 1 and January 1 of each year. Each offering period is composed of four six-month exercise periods.

Eligible employees become participants in the 1981 Purchase Plan by delivering to the Company's stock administration department a subscription agreement authorizing payroll deductions. An eligible employee may participate in an offering period only if, as of the enrollment date of such offering period, such employee is not participating in any prior offering period which is continuing at the time of such proposed enrollment. An employee who becomes eligible to participate in the 1981 Purchase Plan after the commencement of an offering may not participate in the 1981 Purchase Plan until the commencement of the next offering period.

Purchase Price

The purchase price per share at which shares are sold under the 1981 Purchase Plan is the lower of 85% of the fair market value of a share of Common Stock on the date of commencement of the offering period or 85% of the fair market value of a share of Common Stock on the applicable exercise date within such offering period. The fair market value of the Common Stock on a given date shall be determined by the Board of Directors based upon the closing sales price as reported by the Nasdaq National Market on such date.

Payment of Purchase Price; Payroll Deductions

The purchase price of the shares is accumulated by payroll deductions during the offering period. The deductions may not exceed 10% of a participant's eligible compensation. A participant may institute decreases in the rate of payroll deductions at any time and such decreases are immediately effective. Increases in the rate of payroll deductions are effective as of the commencement of any exercise period within the offering period.

All payroll deductions are credited to the participant's account under the 1981 Purchase Plan; no interest accrues on the payroll deductions. All payroll deductions received or held by the Company may be used by the Company for any corporate purpose and such payroll deductions need not be segregated.

Purchase of Stock; Exercise of Option

At the beginning of each offering period, by executing a subscription agreement to participate in the 1981 Purchase Plan, each employee is in effect granted an option to purchase shares of Common Stock. The maximum number of shares placed under option to a participant in an offering period is determined by dividing the compensation which such participant has elected to have withheld during the exercise period by 85% of the fair market value of the Common Stock at the beginning of the offering period or on the applicable exercise date, whichever is lower; provided that such number shall not exceed 200% of the number of shares determined by dividing 10% of the employee's compensation to be accumulated over the offering period (determined as of the enrollment date) by 85% of the fair market value of a share of the Company's Common Stock on the enrollment date. Notwithstanding the foregoing, no employee may make aggregate purchases of stock of the Company under the 1981 Purchase Plan and any other employee stock purchase plans qualified as such under Section 423(b) of the Internal Revenue Code of 1986, as amended (the "Code") in excess of

8

\$25,000 (determined using the fair market value of the shares at the time the option is granted) during any calendar year.

Withdrawal

While each participant in the 1981 Purchase Plan is required to sign a subscription agreement authorizing payroll deductions, a participant may terminate his or her participation in the 1981 Purchase Plan at any time by signing and delivering to the Company a notice of withdrawal from the 1981 Purchase Plan. All of the participant's accumulated payroll deductions will be paid to the participant promptly after receipt of his or her notice of withdrawal and his or her participation in the current offering period will be automatically terminated, and no further payroll deductions for the purchase of shares will be made during the offering period. No resumption of payroll deductions will occur on behalf of such participant unless such participant re-enrolls in the 1981 Purchase Plan by delivering a new subscription agreement to the Company during the applicable open enrollment period preceding the commencement of a subsequent offering period. A participant's withdrawal from the 1981 Purchase Plan during an offering period does not have any effect upon such participant's eligibility to participate in subsequent offering periods under the 1981 Purchase Plan.

Termination of Employment

Termination of a participant's employment for any reason, including retirement or death, cancels his or her participation in the 1981 Purchase Plan immediately. In such event, the payroll deductions credited to the participant's account will be returned to such participant or, in the case of death, to the person or persons entitled thereto as specified by the employee in the subscription agreement.

Capital Changes

If any change is made in the capitalization of the Company, such as stock splits or stock dividends, which results in an increase or decrease in the number of shares of Common Stock outstanding without receipt of consideration by the Company, appropriate adjustments will be made by the Company in the number of shares subject to purchase and in the purchase price per share, subject to any required action by the stockholders of the Company. In the event of the proposed dissolution or liquidation of the Company, the offering period then in progress will terminate immediately unless otherwise provided by the Board of Directors. In the event of the proposed sale of all or substantially all of the assets of the Company or the merger of the Company with or into another corporation, each outstanding option shall be assumed or an equivalent option shall be substituted by the successor corporation, unless the Board of Directors determines, in its discretion, to accelerate the exercisability of all outstanding options under the 1981 Purchase Plan. The Board of Directors may also make provisions for adjusting the number of shares subject to the 1981 Purchase Plan and the purchase price per share if the Company effects one or more reorganizations, recapitalizations, rights offerings or other increases or reductions of shares of the Company's outstanding Common Stock.

Amendment and Termination of the 1981 Purchase Plan

The Board of Directors may at any time amend or terminate the 1981 Purchase Plan, except that such termination shall not affect options previously granted nor may any amendment make any change in an option granted prior thereto which adversely affects the rights of any participant. No amendment may be made to the 1981 Purchase Plan without prior approval of the stockholders of the Company if such amendment would increase the number of shares reserved under the 1981 Purchase Plan, permit payroll deductions at a rate in excess of 10% of a participant's compensation, modify the eligibility requirements or materially increase the benefits which may accrue to participants under the 1981 Purchase Plan.

Certain United States Federal Income Tax Information

The 1981 Purchase Plan, and the right of participants to make purchases thereunder, is intended to qualify under the provisions of Sections 421 and 423 of the Code. Under these provisions, no income will be taxable to a participant at the time of grant of the option or purchase of shares. Upon disposition of the shares,

the participant will generally be subject to tax and the amount of the tax will depend upon the holding period. If the shares have been held by the participant for more than two years after the offering date and more than one year after the exercise date, the lesser of: (a) the excess of the fair market value of the shares at the time of such disposition over the option price, or (b) the excess of the fair market value of the shares at the time the option was granted over the option price (which option price will be computed as of the grant date) will be treated as ordinary income, and any further gain will be treated as long-term capital gain. If the shares are disposed of before the expiration of these holding periods, the excess of the fair market value of the shares on the exercise date over the option price will be treated as ordinary income, and any further gain or any loss on such disposition will be long-term or short-term

capital gain or loss, depending on the holding period. Different rules may apply with respect to participants subject to Section 16(b) of the Securities Exchange Act of 1934, as amended. The Company is not entitled to a deduction for amounts taxed as ordinary income or capital gain to a participant except to the extent of ordinary income reported by participants upon disposition of shares prior to the expiration of the two holding periods described above.

The foregoing is only a summary of the effect of federal income taxation upon the participant and the Company with respect to the grant and exercise of options under the 1981 Purchase Plan, does not purport to be complete, and does not discuss the income tax laws of any municipality, state or foreign country in which a participant may reside. It is advisable that a participant contact his or her own tax advisor concerning the application of these tax laws.

STOCK PRICE

The closing price of a share of the Common Stock on the Nasdaq National Market on September 22, 1997 was \$.

PLAN BENEFITS

The Company cannot now determine the number of shares to be purchased in the future by the named executive officers, all current executive officers as a group or all employees (including current officers who are not executive officers) as a group. In the fiscal year ended June 30, 1997 however, the following shares of Common Stock were purchased by such persons pursuant to the 1981 Purchase Plan:

<TABLE>
<CAPTION>

NAME OR GROUP	NUMBER OF SHARES
<S>	<C>
Kenneth Levy.....	
Jon D. Tompkins(1).....	
Kenneth L. Schroeder.....	
Robert J. Boehlke.....	
Gary E. Dickerson.....	
Graham J. Siddall(2)	
All Current Executive Officers (12 persons -- as a group).....	
All employees (including current officers who are not executive officers).....	

</TABLE>

- - - - -

- (1) Includes shares purchased at July 31, 1997 pursuant to the Tencor Instruments Employee Stock Purchase Plan which was assumed by the Company as of April 30, 1997 in the Merger and was terminated effective July 31, 1997.
- (2) Includes shares purchased at July 31, 1997 pursuant to the Tencor Instruments Employee Stock Purchase Plan which was assumed by the Company as of April 30, 1997 in the Merger and was terminated effective July 31, 1997.

REQUIRED VOTE

Approval of the amendment to the 1981 Purchase Plan requires the affirmative vote of the holders of a majority of the shares of the Company's Common Stock represented and voting, in person or by proxy, and entitled to vote at the Annual Meeting. Votes against are counted for purposes of determining the presence or

absence of a quorum for the transaction of business. Votes against are also counted for purposes of determining the total number of votes required to pass the proposal and whether such number of votes has been obtained.

While there is no definitive statutory or case law in Delaware as to the proper treatment of abstentions in the counting of votes with respect to a proposal such as the amendment to the 1981 Purchase Plan, the Company believes that abstentions should be counted for purposes of determining both the presence or absence of a quorum for the transaction of business and the total number of shares present or represented and entitled to vote on the proposal. In the absence of controlling precedent to the contrary, the Company intends to treat abstentions on this proposal in this manner. In a 1988 Delaware case, *Berlin v. Emerald Partners*, the Delaware Supreme Court held that, while broker non-votes may be counted as present or represented for purposes of determining the presence or absence of a quorum for the transaction of business, broker non-votes may not be counted for purposes of determining the number of shares entitled to vote with respect to the particular proposal for which authorization to vote was withheld. Accordingly, broker non-votes with respect to this proposal will not be considered shares entitled to vote and will not be counted in determining whether this proposal passes.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE FOR THE AMENDMENT OF THE 1981 PURCHASE PLAN. THE EFFECT OF AN ABSTENTION IS THE SAME AS THAT OF A VOTE AGAINST THE AMENDMENT OF THE 1981 PURCHASE PLAN.

PROPOSAL THREE

APPROVAL OF THE 1997 EMPLOYEE STOCK PURCHASE PLAN AND RESERVATION OF SHARES OF THE COMPANY'S COMMON STOCK FOR ISSUANCE THEREUNDER

The Company's 1997 Employee Stock Purchase Plan (the "1997 Purchase Plan") was adopted by the Board of Directors in September 1997 and is intended to enable employees of the Company to purchase the Company's Common Stock through payroll deductions. The Board of Directors approved the 1997 Purchase Plan in conjunction with the Board's approval of the Company's systematic stock repurchase plan, whereby under certain circumstances the Company will repurchase its Common Stock in the open market. Employees of the Company, as they complete their respective Offering Periods (as defined in the 1981 Purchase Plan) under the 1981 Purchase Plan, will participate thereafter in the 1997 Purchase Plan. The Company has initially reserved shares of Common Stock for issuance under the 1997 Purchase Plan. In addition, the 1997 Purchase Plan will be replenished through the Company's purchase of its Common Stock in the open market.

At the Annual Meeting, the stockholders are being asked to approve the 1997 Purchase Plan and to approve reservation of -- shares for issuance thereunder.

SUMMARY OF THE 1997 PURCHASE PLAN

The essential features of the 1997 Purchase Plan are outlined below.

Purpose

The purpose of the 1997 Purchase Plan is to provide employees of the Company and its foreign subsidiaries designated by the Board of Directors of the Company with an opportunity to purchase Common Stock of the Company through payroll deductions.

Administration

The 1997 Purchase Plan shall be administered by the Board or a committee appointed by the Board. All questions of interpretation or application of the 1997 Purchase Plan are determined in the sole discretion of the Board, and its decisions are final and binding upon all participants. Members of the Board who are eligible employees are permitted to participate in the 1997 Purchase Plan, but may not purchase shares under the 1997 Purchase Plan until the Company's stockholders approve the 1997 Purchase Plan. Members of the Board will

11

receive no additional compensation for their services in connection with the administration of the 1997 Purchase Plan. All payroll deductions received or held by the Company may be used by the Company for any corporate purpose.

Eligibility

Any person who is employed by the Company or its subsidiaries for at least 20 hours per week and more than five months in a calendar year is eligible to participate in the 1997 Purchase Plan. As of [], 1997, approximately [] employees were eligible to participate in the 1981 Purchase Plan and would be eligible to participate in the New Purchase Plan and approximately [] of such eligible employees were participating in the Old Purchase Plan.

Offering Dates

The 1997 Purchase Plan is implemented by 24-month offering periods (each a "Offering Period"), commencing on January 1 and July 1 of each year. Each Offering Period is composed of four consecutive six-month purchase periods (each a "Purchase Period"). The Board has the power to alter the duration of the offering periods without stockholder approval.

Eligible employees become participants in the 1997 Purchase Plan by delivering to the Company a subscription agreement authorizing payroll deductions. An eligible employee may participate in an Offering Period only if, as of the enrollment date of such Offering Period, such employee is not participating in any prior Offering Period which is continuing at the time of such proposed enrollment. An employee who becomes eligible to participate in the 1997 Purchase Plan after the commencement of an Offering Period may not participate until the commencement of the next Offering Period.

Purchase Price

The purchase price per share at which shares are sold under the 1997 Purchase Plan shall not be less than 85% of the lesser of (a) the fair market value of the shares of Common Stock on the first day of such Offering Period,

and (b) the fair market value of the shares of Common Stock at the time of exercise of a participant's purchase right. The fair market value of the Common Stock on a given date shall be determined by the Board based on the closing price of the Company's Common Stock on such date as reported on the Nasdaq National Market.

Payment of Purchase Price; Payroll Deductions

The purchase price of the shares is accumulated by payroll deductions during the Offering Period. The deductions may not exceed 10% of a participant's eligible compensation. A participant may institute decreases in the rate of payroll deductions at any time and such decreases are immediately effective. Increases in the rate of payroll deductions are effective as of the commencement of the next Offering Period.

All payroll deductions are credited to the participant's account under the 1997 Purchase Plan; no interest accrues on the payroll deductions. All payroll deductions received or held by the Company may be used by the Company for any corporate purpose and such payroll deductions need not be segregated.

Purchase of Stock; Exercise of Option

At the beginning of each Offering Period, by executing a subscription agreement to participate in the 1997 Purchase Plan, each employee is in effect granted an option to purchase shares of Common Stock. The maximum number of shares placed under option to a participant in an Offering Period is determined by dividing \$20,000 by 85% of the fair market value of the Common Stock at the beginning of the Offering Period. Notwithstanding the foregoing, no employee may make aggregate purchases of stock of the Company and its subsidiaries under the 1997 Purchase Plan and any other employee stock purchase plans qualified as such under Section 423(b) of the Internal Revenue Code of 1986, as amended (the "Code") in excess of

12

\$25,000 (determined using the fair market value of the shares at the time the option is granted) during any calendar year.

Withdrawal

While each employee in the 1997 Purchase Plan is required to sign a subscription agreement authorizing payroll deductions to participate, a participant may terminate his or her participation in the 1997 Purchase Plan at any time by signing and delivering to the Company a notice of withdrawal from the 1997 Purchase Plan. All of the participant's accumulated payroll deductions will be paid to the participant promptly after receipt of his or her notice of withdrawal and his or her participation in the current Offering Period will be automatically terminated, and no further payroll deductions for the purchase of shares will be made during the Offering Period. No resumption of payroll deductions will occur on behalf of such participant unless such participant re-enrolls in the 1997 Purchase Plan by delivering a new subscription agreement to the Company during the applicable open enrollment period preceding the commencement of a subsequent Offering Period. A participant's withdrawal from the 1997 Purchase Plan during an Offering Period does not have any effect upon such participant's eligibility to participate in subsequent Offering Periods under the 1997 Purchase Plan.

A participant may also elect to withdraw only from an Offering Period by signing and delivering to the Company a notice specifying such. The withdrawal shall not result in a withdrawal from the 1997 Purchase Plan or any succeeding Offering Periods. A participant is prohibited from again participating in a particular Offering Period after such a withdrawal from such period.

Termination of Employment

Termination of a participant's employment for any reason, including retirement or death, cancels his or her participation in the 1997 Purchase Plan immediately. In such event, the payroll deductions credited to the participant's account will be returned to such participant or, in the case of death, to the participant's legal representative.

Capital Changes

If any change is made in the capitalization of the Company, such as stock splits or stock dividends, which results in an increase or decrease in the number of shares of Common Stock outstanding or in the event of any merger, sale or other reorganization, appropriate adjustments shall be made by the Company in the 1997 Purchase Plan's reserve and the number and class of shares subject to outstanding purchase options and in the purchase price per share. Notwithstanding such adjustment, if in a transaction the stockholders of the Company no longer retain at least a majority of the beneficial interest in the voting stock of the Company following such transaction ("Transfer of Control"), the Board may, in its sole discretion (a) provide that the purchase options become fully exercisable prior to the date of the Transfer of Control, or (b) provide that such successor entity assume the Company's obligations under the

1997 Purchase Plan. The Board of Directors may also make provisions for adjusting the number of shares subject to the 1997 Purchase Plan and the purchase price per share if the Company effects one or more reorganizations, recapitalizations, rights offerings or other increases or reductions of shares of the Company's outstanding Common Stock.

Amendment and Termination of the 1997 Purchase Plan

The Board of Directors may at any time amend or terminate the 1997 Purchase Plan, except that such termination shall not affect options previously granted nor may any amendment make any change in an option granted prior thereto which adversely affects the rights of any participant. No amendment may be made to the 1997 Purchase Plan without prior approval of the stockholders of the Company if such amendment would increase the number of shares reserved under the 1997 Purchase Plan or change the designation of corporations whose employees may be offered rights under the 1997 Purchase Plan.

13

Certain United States Federal Income Tax Information

The 1997 Purchase Plan and purchases thereunder, is intended to qualify under the provisions of Sections 421 and 423 of the Code. Under these provisions, no income will be taxable to a participant at the time of grant of the option or purchase of shares. Upon disposition of the shares, the participant will generally be subject to tax and the amount of the tax will depend upon the holding period. If the shares have been held by the participant for more than two years after the offering date and more than one year after the exercise date, the lesser of: (a) the excess of the fair market value of the shares at the time of such disposition over the option price, or (b) the excess of the fair market value of the shares at the time the option was granted over the option price (which option price will be computed as of the grant date) will be treated as ordinary income, and any further gain will be treated as long-term capital gain. If the shares are disposed of before the expiration of these holding periods, the excess of the fair market value of the shares on the exercise date over the option price will be treated as ordinary income, and any further gain or any loss on such disposition will be long-term or short-term capital gain or loss, depending on the holding period. Different rules may apply with respect to participants subject to Section 16(b) of the Securities Exchange Act of 1934, as amended. The Company is not entitled to a deduction for amounts taxed as ordinary income or capital gain to a participant except to the extent of ordinary income reported by participants upon disposition of shares prior to the expiration of the two holding periods described above.

The foregoing is only a summary of the effect of federal income taxation upon the participant and the Company with respect to the grant and exercise of options under the 1997 Purchase Plan, does not purport to be complete, and does not discuss the income tax laws of any municipality, state or foreign country in which a participant may reside. It is advisable that a participant contact his or her own tax advisor concerning the application of these tax laws.

STOCK PRICE

The closing price of a share of the Common Stock on the Nasdaq National Market on September 22, 1997 was \$.

PLAN BENEFITS

The Company cannot now determine the number of shares to be purchased in the future by the named executive officers, all current executive officers as a group or all employees (including current officers who are not executive officers) as a group.

REQUIRED VOTE

Approval of the amendment to the 1997 Purchase Plan requires the affirmative vote of the holders of a majority of the shares of the Company's Common Stock represented and voting, in person or by proxy, and entitled to vote at the Annual Meeting. Votes against are counted for purposes of determining the presence or absence of a quorum for the transaction of business. Votes against are also counted for purposes of determining the total number of votes required to pass the proposal and whether such number of votes has been obtained.

While there is no definitive statutory or case law in Delaware as to the proper treatment of abstentions in the counting of votes with respect to a proposal such as the amendment to the 1997 Purchase Plan, the Company believes that abstentions should be counted for purposes of determining both the presence or absence of a quorum for the transaction of business and the total number of shares present or represented and entitled to vote on the proposal. In the absence of controlling precedent to the contrary, the Company intends to treat abstentions on this proposal in this manner. In a 1988 Delaware case, *Berlin v. Emerald Partners*, the Delaware Supreme Court held that, while broker non-votes may be counted as present or represented for purposes of determining the presence or absence of a quorum for the transaction of business, broker non-votes may not be counted for purposes of determining the number of shares

Executive Vice President, 73,104	1996	\$221,346	\$172,500	\$ N/A	-0-	20,000	-0-	\$
Yield Management Group 43,456	1995	\$171,593	\$ 56,532	\$ N/A	-0-	60,000	-0-	\$
Graham J. Siddall(11)..... 1,500	1997	\$261,062	\$217,661(12)	\$ N/A	-0-	40,000	-0-	\$
Executive Vice President, 1,500	1996(8)	\$242,062	\$214,132(10)	\$ N/A	-0-	87,999	-0-	\$
Wafer Group 1,000	1995(8)	\$191,580	\$242,074(10)	\$ N/A	-0-	35,000	-0-	\$

</TABLE>

(1) The amounts paid during the fiscal year to the named executive officers were less than the lesser of (a) \$50,000 or (b) 10% of the executive officers total reported salary and bonus.

15

(2) The Company has not granted any restricted stock rights.

(3) The Company has not granted any stock appreciation rights.

(4) The Company does not have any Long Term Incentive Plans as that term is defined in the regulations.

(5) "All Other Compensation" is itemized as follows:

- In 1997, Mr. Levy received \$29,859 in cash profit sharing; \$31,271 in profit sharing was contributed by the Company to the 401(k) Plan; \$20,528 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1996, Mr. Levy received \$43,809 in cash profit sharing; \$24,484 in profit sharing was contributed by the Company to the 401(k) Plan; \$34,230 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1995, Mr. Levy received \$25,193 in cash profit sharing; \$31,374 in profit sharing was contributed by the Company to the 401(k) Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan.
- In 1997, Tencor contributed \$1,500 to the Tencor 401(k) plan on behalf of Mr. Tompkins. For 1996, the amount includes \$10,879 for forgiveness of principal and interest due under a loan made by Tencor in connection with Mr. Tompkins employment and which was being retired over a five year period ending in 1996 (the "Loan") and \$1,500 which was contributed by Tencor to its 401(k) plan on his behalf. For 1995, the amount includes \$11,582 for forgiveness of principal and interest due under the Loan and \$1,000 which was contributed by Tencor to its 401(k) plan on his behalf.
- In 1997, Mr. Schroeder received \$29,540 in cash profit sharing; \$13,129 in profit sharing was contributed by the Company to the 401(k) Plan; \$20,283 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1996, Mr. Schroeder received \$42,009 in cash profit sharing; \$24,330 in profit sharing was contributed by the Company to the 401(k) Plan; \$31,971 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1995, Mr. Schroeder received \$24,184 in cash profit sharing; \$30,118 in profit sharing was contributed by the Company to the 401(k) Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan.
- In 1997, Mr. Boehlke received \$19,442 in cash profit sharing; \$8,641 in profit sharing was contributed by the Company to the 401(k) Plan; \$13,328 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1996, Mr. Boehlke received \$30,350 in cash profit sharing; \$22,985 in profit sharing was contributed by the Company to the 401(k) Plan; \$17,690 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1995, Mr. Boehlke received \$20,474 in cash

profit sharing; \$25,440 in profit sharing was contributed by the Company to the 401(k) Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan.

- In 1997, Mr. Dickerson received \$19,546 in cash profit sharing; \$8,647 in profit sharing was contributed by the Company to the 401(k) Plan; \$13,464 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1996, Mr. Dickerson received \$27,605 in cash profit sharing; \$22,582 in

16

profit sharing was contributed by the Company to the 401(k) Plan; \$14,416 in profit sharing was contributed on his behalf to the Excess Profit Stock Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan. In 1995, Mr. Dickerson received \$15,489 in cash profit sharing; \$19,467 in profit sharing was contributed by the Company to the 401(k) Plan; \$1,000 was contributed by the Company as a matching contribution to the 401(k) Plan; \$7,500 was contributed by the Company to the Supplemental Executive Benefit Plan.

- In 1997, Tencor contributed \$1,500 to the Tencor 401(k) plan on behalf of Mr. Siddall. In 1996, Tencor contributed \$1,500 to the Tencor 401(k) plan on his behalf. In 1995, Tencor contributed \$1,000 to the Tencor 401(k) plan on his behalf.

- (6) Kenneth Levy was Chief Executive Officer until April 30, 1997 when as a result of the merger of Tencor Instruments ("Tencor") into a wholly-owned subsidiary of the Company (the "Merger") he became Chairman of the Board of Directors.
- (7) Jon D. Tompkins was previously President and Chief Executive Officer of Tencor. As a result of the Merger he became Chief Executive Officer of the Company effective April 30, 1997. The compensation described in this Summary Compensation Table reflects certain amounts which were paid during the period prior to the Merger when Tencor was an independent, publicly traded company. Tencor reported its results on a calendar year basis, while the Company reports its results based on a June 30 year end.
- (8) The amounts reported for 1996 and 1995 for Mr. Tompkins and Mr. Siddall are those amounts reported by Tencor in its proxy statements filed with the Securities and Exchange Commission for the years ended December 31, 1996 and December 31, 1995, respectively.
- (9) For Tencor's reporting year ended December 31, 1996, Mr. Tompkins was paid a bonus of \$381,562 which was comprised of \$168,188 paid in July 1996 and \$213,374 paid in January 1997. The bonus reported in the Summary Compensation Table of \$396,462 is comprised of this latter amount plus \$183,088 which was paid in July 1997 to reflect performance during the six months ended June 30, 1997.
- (10) The amounts reported for 1996 and 1995 for Mr. Tompkins and Mr. Siddall are those amounts reported by Tencor in its proxy statements filed with the Securities and Exchange Commission for the years ended December 31, 1996 and December 31, 1995, respectively.
- (11) Graham J. Siddall was previously Executive Vice President and Chief Operating Officer of Tencor. As a result of the Merger he became Executive Vice President of the Wafer Group of the Company effective April 30, 1997. The compensation described in this Summary Compensation Table reflects certain amounts which were paid during the period prior to the Merger when Tencor was an independent, publicly traded entity. Tencor reported its results on a calendar year basis, while the Company reports its results based on a June 30 year end.
- (12) For Tencor's reporting year ended December 31, 1996, Mr. Siddall was paid a bonus of \$214,131 which was comprised of \$100,913 paid in July 1996 and \$113,219 paid in January 1997. The bonus reported in the Summary Compensation Table of \$217,661 is comprised of this latter amount plus \$104,442 which was paid in July 1997 to reflect performance during the six months ended June 30, 1997.

STOCK OPTION GRANTS AND EXERCISES

The following tables set forth the stock options granted to the named executive officers under the Company's stock option plans and the options exercised by such named executive officers during the fiscal year ended June 30, 1997.

The Option/SAR Grant Table sets forth hypothetical gains or "option spreads" for the options at the end of their respective ten-year terms, as

calculated in accordance with the rules of the Securities and Exchange Commission. Each gain is based on an arbitrarily assumed annualized rate of compound appreciation of the market price at the date of grant of 5% and 10% from the date the option was granted to the end of the option term. Actual gains, if any, on option exercises are dependent on the future performance of the Company's Common Stock and overall market conditions.

17

OPTION/SAR(1) GRANTS IN LAST FISCAL YEAR
KLA-TENCOR CORPORATION 1982 STOCK OPTION PLAN(2)

<TABLE>
<CAPTION>

NAME	OPTIONS/SARS GRANTED (#)	INDIVIDUAL GRANTS			POTENTIAL REALIZABLE VALUE ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM	
		PERCENT OF TOTAL OPTIONS/SARS GRANTED TO EMPLOYEES IN FISCAL YEAR	EXERCISE OR BASE PRICE (\$/SHARE)	EXPIRATION DATE	5%	10%
					<C>	<C>
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Kenneth Levy.....	62,500	-- %	\$21.625	10/08/06	--	--
	100,000	-- %	\$44.50	04/30/07	--	--
Jon D. Tompkins.....	100,000	-- %	\$44.50	04/30/07	--	--
Kenneth L. Schroeder.....	62,500	-- %	\$21.625	10/08/07	--	--
	100,000	-- %	\$44.50	04/30/07	--	--
Robert J. Boehlke....	33,500	-- %	\$21.625	10/08/07	--	--
	40,000	-- %	\$44.50	04/30/07	--	--
Gary E. Dickerson....	42,500	-- %	\$21.625	10/08/07	--	--
	40,000	-- %	\$44.50	04/30/07	--	--
Graham J. Siddall....	40,000	-- %	\$44.50	04/30/07	--	--

(1) The Company has not granted any stock appreciation rights.

(2) The material terms of the grants (other than those set forth in the table) are: (a) The exercise price of the options is the fair market value of Common Stock as of the date of grant; (b) The options vest ; (c) To the extent unexercised, the options lapse after ten years; (d) The options are non-transferrable and are only exercisable during the period of employment of the optionee and for 30 days following termination of employment, subject to limited exceptions in the cases of certain terminations, death or permanent disability of the optionee.

AGGREGATED OPTION/SAR EXERCISES IN LAST FISCAL YEAR AND YEAR-END VALUE(1)

KLA-TENCOR CORPORATION 1982 STOCK OPTION PLAN

<TABLE>
<CAPTION>

NAME	NUMBER OF SHARES ACQUIRED ON EXERCISE	VALUE REALIZED	TOTAL NUMBER OF UNEXERCISED OPTIONS HELD AT FISCAL YEAR END		TOTAL VALUE(2) OF UNEXERCISED, IN-THE-MONEY OPTIONS HELD AT FISCAL YEAR END	
			EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
			<C>	<C>	<C>	<C>
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Kenneth Levy.....	-0-	-0-	224,943	265,557	\$ 9,782,156	\$ 5,340,782
Jon D. Tompkins.....	-0-	-0-	-0-	100,000	\$ -0-	\$ 425,000
Kenneth L. Schroeder.....	30,000	\$ 1,245,125	205,831	276,669	\$ 8,877,616	\$ 5,840,822
Robert J. Boehlke....	2,900	\$ 113,100	41,637	144,675	\$ 1,624,667	\$ 3,326,014
Gary E. Dickerson....	-0-	-0-	23,845	160,855	\$ 896,159	\$ 3,218,512
Graham J. Siddall....	-0-	-0-	-0-	40,000	-0-	\$ 170,000

(1) The Company has not granted any stock appreciation rights.

(2) Total value of vested options based on fair market value of Company's Common Stock of \$48.75 per share as of June 30, 1997.

18

AGGREGATED OPTION/SAR EXERCISES IN LAST FISCAL YEAR AND YEAR-END VALUE(1)

TENCOR INSTRUMENTS 1993 EQUITY INCENTIVE PLAN

<TABLE>
<CAPTION>

NAME	NUMBER OF SHARES ACQUIRED ON VALUE		TOTAL NUMBER OF UNEXERCISED OPTIONS HELD AT FISCAL YEAR END		TOTAL VALUE (2) OF UNEXERCISED, IN-THE-MONEY OPTIONS HELD AT FISCAL YEAR END	
	EXERCISE	REALIZED	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Kenneth Levy(3).....						
Jon D. Tompkins.....						
Kenneth L. Schroeder(3).....						
Robert J. Boehlke(3).....						
Gary E. Dickerson(3).....						
Graham J. Siddall						

</TABLE>

- (1) The Company has not granted any stock appreciation rights.
- (2) Total value of vested options based on fair market value of Company's Common Stock of \$ per share as of June 30, 1997.
- (3) Messrs. Levy, Schroeder, Boehlke and Dickerson have been executive officers of the Company and accordingly have never received options under the Tencor Option Plans. Accordingly, the information under this table is inapplicable to them.

REPORT OF THE COMPENSATION COMMITTEE ON EXECUTIVE COMPENSATION

Merger with Tencor Instruments

Effective April 30, 1997 the Company's wholly-owned subsidiary merged with Tencor Instruments ("Tencor"). In connection with the merger the Committee (as composed on April 28, 1997) reviewed a report prepared by external consultants and accompanying recommendations as to salary rationalization between the executives of each of the Company and Tencor who would now be managing the combined company (the "Merger Report"). The Committee recommended adjustments to executive compensation and certain option grants with vesting in the later years as an incentive to achieve a successful combination of the Company and Tencor.

The current composition of the Committee acknowledges the differences in compensation philosophy and method of application between Tencor and the Company. The Company's philosophy and methods were more comprehensive than those of Tencor. The Committee reviewed both the philosophy and methods and determined it would take a more simplified approach and provide for executive compensation to include base salary, incentive bonus and stock options. The Committee eliminated certain perquisites, including automobile allowances, financial planning allowances and Company matches to the deferred compensation plan. The Board of Directors of the combined Company unanimously ratified the actions of the previous Committee and Board of Directors (as composed at April 28, 1997) in making these adjustments in connection with the merger. This report of the Committee takes those changes into account. The Committee periodically reviews its approach to executive compensation and makes changes as appropriate.

Compensation Committee

The Committee is comprised of three of the independent, non-employee members of the Board of Directors, none of whom have interlocking relationships as defined by the Securities and Exchange Commission. The Committee is responsible for setting and administering the policies governing annual compensation of executive officers, considers their performance and makes recommendations regarding their cash compensation and stock options to the full Board of Directors.

Compensation Philosophy

The Committee of the Board of Directors establishes the overall executive compensation strategies of the Company and approves compensation elements for the chairman of the board, the chief executive officer and other executive officers. The goals of the Company's compensation policy are to attract, retain and reward executive officers who contribute to the overall success of the Company by offering compensation that is competitive in the industry, to motivate executive officers to achieve the Company's business objectives and to align the interests of executive officers with the long term interests of stockholders. The Company currently uses salary, a management incentive plan and stock options to meet these goals.

The compensation philosophy of the Committee is to provide a comprehensive

compensation package for each executive officer that is well suited to support accomplishment of the Company's business strategies, objectives and initiatives. For incentive-based compensation, the Committee considers the desirability of structuring such compensation arrangements so as to qualify for deductibility under Section 162(m) of the Internal Revenue Code. As the Committee applies this compensation philosophy in determining appropriate executive compensation levels and other compensation factors, the Committee reaches its decisions with a view towards the Company's overall financial performance.

Executive Officer Compensation

The Committee's approach is based upon a belief that a substantial portion of aggregate annual compensation for executive officers should be contingent upon the Company's performance and an individual's contribution to the Company's success. In addition, the Committee strives to align the interests of the Company's executive officers with the longterm interests of shareholders through stock option grants that can result in ownership of the Company's Common Stock. The Committee endeavors to structure each executive officer's overall compensation package to be consistent with this approach and to enable the Company to attract, retain and reward personnel who contribute to the success of the Company.

The Company provides its executive officers with a compensation package consisting of base salary, variable incentive pay and participation in benefit plans generally available to other employees. The Committee considers market information from published survey data provided to the Committee by the Company's human resources staff. The market data consists primarily of base salary and total cash compensation rates, as well as incentive bonus and stock programs of other companies considered by the Committee to be peers in the Company's industry.

Base Salary. Salaries for executive officers are set with reference to salaries for comparable positions among other companies in the Company's industry or in industries that employ individuals of similar background to the executive officer based on data provided by the Company's human resources staff.

Management Incentive Plan. Each year since fiscal 1979 the Company has adopted a management incentive plan (the "Incentive Plan") which provides for payments to officers and key employees based on the financial performance of the Company or the relevant business unit, and on the achievement of the person's individual performance objectives. The Incentive Plan is approved by the Committee and submitted to the Board of Directors for ratification. For fiscal 1997 the Incentive Plan set goals for profitability, achievement of measurable objectives aimed at strategic corporate goals and achievement of objectives relating to managing the ratio of assets to sales.

Long-term Incentives. Longer term incentives are provided through the Stock Option Plan and the Excess Profit Stock Plan, each of which reward executive officers through the growth in value of the Company's Common Stock. The Committee believes that employee equity ownership is highly motivating, provides a major incentive for employees to build stockholder value and serves to align the interests of employees with those of stockholders.

Grants of stock options to executive officers are based upon each executive officer's relative position, responsibilities, historical and expected contributions to the Company, and the executive officer's previous option grants, with primary weight given to the executive officer's relative rank and responsibilities. Stock

20

options are granted at market price on the date of grant and will provide value to the executive officers only when the price of the Company's Common Stock increases over the exercise price.

Approval of Fiscal Year 1998 Bonus Plan

The Committee approved the fiscal year 1998 bonus plan incentive formula which is based on two components of equal weight. The first is performance against certain financial objectives and the second is achievement of certain non-financial strategic objectives. The bonuses for the Chairman of the Board, the Chief Executive Officer, the President/Chief Operating Officer and the Chief Financial Officer are based on an average of the performance of those managers reporting to the executive officers utilizing a combination of the weighted average contribution made by each manager and a simple average of those contributions.

Chief Executive Officer Compensation

Kenneth Levy had been the Company's Chief Executive Officer prior to the merger and following the merger moved into the role of Chairman of the Board. Based on the recommendations in the Merger Report provided by the external consultants his base salary was increased to \$450,000. Jon D. Tompkins was the chief executive officer of Tencor prior to the merger and following the merger moved in the role of Chief Executive Officer of newly combined Company. His base

salary was set at \$450,000 also based on the recommendations in the Merger Report. Options to purchase 100,000 shares of the Common Stock of the Company were granted to each of Mr. Levy and Mr. Tompkins with 60% of such options vesting equally over the first four years and 40% vesting after five years. For fiscal 1997 a bonus of \$334,277 was paid to Mr. Levy and a bonus of \$396,462 was paid to Mr. Tompkins. These payments were primarily based on the overall performance of each of the Company and Tencor independently as well as the individual officers' performance with respect to certain objectives. In a year that showed some weakness as a result of a slowdown in the semiconductor industry, the Company successfully completed a billion dollar merger and continued its profitability with revenues of \$1.031 billion and earnings per share (excluding merger costs) of \$1.78.

MEMBERS OF THE COMPENSATION COMMITTEE
 James W. Bagley
 Leo J. Chamberlain
 Lida Urbanek

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The members of the Compensation Committee are set forth in the preceding section, and in the case of Mr. Chamberlain in Proposal One as well. There are no members of the Compensation Committee who were officers or employees of the Company or any of its subsidiaries during the fiscal year, formerly officers of the Company, or had any relationship otherwise requiring disclosure hereunder.

21

PERFORMANCE GRAPH

The stock price performance shown on the graph following is not necessarily indicative of future price performance.

COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN AMONG KLA-TENCOR CORPORATION, THE NASDAQ - US INDEX AND THE HAMBRECHT & QUIST TECHNOLOGY INDEX*

<TABLE>
 <CAPTION>

MEASUREMENT PERIOD (FISCAL YEAR COVERED)	KLA-TENCOR CORPORATION	THE NASDAQ-US INDEX	H&Q TECHNOLOGY INDEX
<S>	<C>	<C>	<C>
1992	100	100	100
1993	197.1	125.761	134.963
1994	428.5	126.969	137.415
1995	882.9	169.478	242.232
1996	531.4	217.594	282.378
1997	1114.3	264.602	359.293

</TABLE>

* Assumes \$100 invested on June 30, 1992. The Company's fiscal year end is June 30.

CERTAIN TRANSACTIONS

In connection with the merger between the Company and Tencor, certain management personnel (1) whose positions were eliminated and were not offered a position of significant responsibility or (2) who were offered positions of significant responsibility but chose not to take or keep such positions within specified time periods, received certain retention benefits. If the position was eliminated then the person was offered 12 months continued salary and applicable bonus for the next year and 24 months continued vesting of options granted prior to January 15, 1997 in exchange for providing certain agreed upon services. If the person the position was rejected then the person was offered up to 12 months continued salary and 12 months continued vesting of options granted prior to January 15, 1997 in exchange for providing certain agreed upon services. Salary continuation (and bonus where applicable) ceases upon the person going to work for any third party and all option vesting and salary continuation cease upon the person going to work for any competing company. Michael Morrissey, Elwood Spedden, William Turner, Christopher Stoddart, Michael Kahn and Seiji Yoshii, all former executive officers with either the Company or Tencor, received retention benefits in accordance with the above described employment arrangements entered into in connection with the merger.

In connection with the merger, the Company entered into identical employment arrangements with Kenneth Levy, Jon D. Tompkins and Kenneth L. Schroeder, all executive officers of the Company, pursuant

22

to which certain benefits would be paid if certain events took place between April 30, 1997 and May 1, 2002. The purpose of these arrangements was to retain the services of Messrs. Levy, Tompkins and Schroeder to ensure the smooth transition associated with the merger. The terms of those arrangements provided

that if he were to leave the Company without cause during the first 12 months following the merger then he would receive . If he were to leave after the second 12 months following the merger then he would receive . If he were to leave after the third 12 months and before May 1, 2002 following the merger then he would receive . If he were to leave for cause (defined as) at any time during the term of the agreement then he would receive . If he were terminated for cause then he would receive

COMPLIANCE WITH SECTION 16(A) OF THE SECURITIES EXCHANGE ACT OF 1934

Section 16(a) of the Exchange Act requires the Company's executive officers, directors, and persons who own more than ten percent of a registered class of the Company's equity securities to file reports of ownership and changes in ownership with the Securities and Exchange Commission (the "SEC") and the New York Stock Exchange. Executive officers, directors and greater than ten percent stockholders are required by SEC regulations to furnish the Company with copies of all Section 16(a) forms they file. Arthur P. Schnitzer, an executive officer of the Company, owned two shares of the common stock of Tencor and in connection with the merger, he received two shares of the Company's Common Stock. In filing his Form 4 for the month ended April 30, 1997 he failed to report the receipt of the two shares of the Company's Common Stock. He filed an amended Form 4 when he discovered the error.

OTHER MATTERS

The Company knows of no other matters to be submitted to the meeting. If any other matters properly come before the meeting, it is the intention of the persons named in the enclosed form of Proxy to vote the shares they represent as the Board of Directors may recommend.

THE BOARD OF DIRECTORS

October , 1997

23

DETACH HERE

/X/ Please mark votes as in this example.

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS OF THE COMPANY. THE BOARD OF DIRECTORS RECOMMENDS A VOTE FOR THE NOMINEES FOR DIRECTOR AND FOR PROPOSALS 2, 3 AND 4.

1. To elect Class II directors to serve for a three year term and until their successors are elected. Nominees: Leo J. Chamberlain, Richard J. Elkus and Dag Tellefsen

FOR	WITHELD
//	//
/ / _____	
For all nominees, except as noted above.	

2. To approve an amendment to the 1981 Employee Stock Purchase Plan to increase the number of shares of Common Stock reserved for issuance thereunder by _____ shares.

FOR	AGAINST	ABSTAIN
[]	[]	[]

3. To approve implementation of the new 1997 Employee Stock Purchase Plan to increase the number of shares of Common Stock reserved for issuance thereunder by _____ shares.

FOR	AGAINST	ABSTAIN
[]	[]	[]

4. To ratify the appointment of Price Waterhouse LLP as the Independent accountants of the Company for the fiscal year ending June 30, 1998.

FOR	AGAINST	ABSTAIN
[]	[]	[]

In their discretion, the proxy holders are authorized to vote on all such other matters as may properly come before the meeting or any adjournment thereof.

Please sign exactly as your name appears, date and return this Proxy promptly in the reply envelope provided. Please correct your address before returning this Proxy. Persons signing in a fiduciary capacity should so indicate. If shares are held by joint tenants or as community property, both should sign.

Signature: _____ Date: _____

Signature: _____ Date: _____
DETACH HERE

KLA-TENCOR CORPORATION

Proxy for 1997 Annual Meeting of Stockholders

P THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

R

O The undersigned, revoking all prior proxies, hereby appoints Kenneth
X Levy and Lisa C. Berry, and each of them, as Proxies with full power of sub-
Y stitution, to represent and vote as designated in this proxy any and all
shares of the common stock of KLA-Tencor Corporation (the "Company"), held or
owned by or standing in the name of the undersigned on the Company's books on
September 22, 1997, at the Annual Meeting of Stockholders of the Company to be
held at the principal executive offices of the Company at 160 Rio Robles, San
Jose, California 95134, at 11:30 a.m. local time on November 18, 1997, and any
continuation or adjournment thereof, with all powers the undersigned would
possess if personally present at the meeting.

The undersigned hereby directs and authorizes said proxies and each of
them, or their substitute or substitutes, to vote as specified with respect to
the proposals listed on the reverse side, or, if no specification is made, to
vote in favor thereof.

The undersigned hereby further confers upon said proxies, and each of
them, or their substitute or substitutes, discretionary authority to vote with
respect to all other matters that may properly come before the meeting or any
continuation or adjournment thereof.

The undersigned hereby acknowledges receipt of: (a) Notice of Annual
Meeting of Stockholders of the Company, (b) accompanying Proxy Statement, and
(c) Annual Report to Stockholders for the year ending June 30, 1997.

CONTINUED AND TO BE SIGNED ON REVERSE SIDE

SEE REVERSE SIDE