

FORM 4

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

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden hours per response...	0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person * KISPERT JOHN H	2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Chief Financial Officer
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES	3. Date of Earliest Transaction (Month/Day/Year) 08/08/2007	
(Street) SAN JOSE, CA 95134	4. If Amendment, Date Original Filed(Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person
(City) (State) (Zip)	Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned	

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock (restricted stock units) (1)	08/08/2007	08/08/2007	A		62,500 (1)	A	\$ 0	160,833	D	
Common Stock								7,840 (2)	I	By trust

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1474 (9-02)
Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
KISPERT JOHN H C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95134			Chief Financial Officer	

Signatures

/s/ Brian Martin, Attorney in fact for John Kispert	08/10/2007
Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

On September 19, 2006, the Reporting Person was granted a restricted stock unit covering up to 62,500 shares of the Issuer's Common Stock which are subject to both performance-vesting and service-vesting requirements. Following the completion of the Issuer's audited financial statements for the 2007 fiscal year, the Issuer's Board of Directors determined on August 8, 2007 the level at which the performance goals were attained, and based on that assessment, determined that the number of shares subject to the restricted stock units is 62,500. The Reporting Person will vest in 50% of the restricted stock units upon his completion of two years of service with the Issuer measured from September 19, 2006 and will vest in the remaining 50% upon his completion of an additional two years of service thereafter. The shares of common stock will be issued as the restricted stock units vest.

(1) Includes 133 shares acquired under the Employee Stock Purchase Plan ("ESPP") on February 1, 2007 and 466 shares acquired under the ESPP on June 29, 2007.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

Limited Power of Attorney - Securities Law Compliance

This statement confirms that the undersigned, as an officer, director or beneficial owner of more than 10% of any class of any equity security of KLA-Tencor Corporation (the "Corporation"), hereby appoints Brian Martin the undersigned's true and lawful attorney-in-fact and agent to complete and execute such Forms 144, Forms 3, 4 and 5 and other forms (including any amendments thereto) as such attorney shall in his or her discretion determine to be required to advisable pursuant to Rule 144 promulgated under the Securities Act of 1933 (as amended), Section 16 of the Securities Exchange Act of 1934 (as amended) and the rules and regulations promulgated thereunder, or any successor laws and regulations, as a consequence of the undersigned's ownership, acquisition or disposition of securities of the Corporation, and to do all acts necessary in order to file such forms with the Securities and Exchange Commission, any securities exchange or national association, the Corporation and such other person or agency as the attorney shall deem appropriate. The undersigned hereby ratifies and confirms all that said attorney-in-fact and agent shall do or cause to be done by virtue hereof. The authority of Brian Martin under this Limited Power of Attorney shall continue until the undersigned's ownership of or transactions in securities of the Corporation, unless earlier revoked in writing. The undersigned acknowledges that Brian Martin is not assuming any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934 (as amended) or Rule 144 promulgated under the Securities Act of 1933 (as amended).

This Limited Power of Attorney is executed at Milpitas, California as of the date set forth below.

/s/ John Kispert

Signature

John Kispert

Print Name

Dated:08/10/2007

Witness:
/s/ Kerry Bird

Signature
Kerry Bird

Print Name

Dated: 08/10/2007