

FORM 4

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

OMB APPROVAL
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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

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

(Print or Type Responses)

1. Name and Address of Reporting Person* KISPERT JOHN H <small>(Last) (First) (Middle)</small> C/O KLA-TENCOR CORP., 160 RIO ROBLES <small>(Street)</small> SAN JOSE, CA 95134 <small>(City) (State) (Zip)</small>	2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] 3. Date of Earliest Transaction (Month/Day/Year) 08/21/2003 4. If Amendment, Date Original Filed(Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <small>Director _____ 10% Owner _____</small> <input checked="" type="checkbox"/> Officer (give title below) _____ Other (specify below) _____ Chief Financial Officer 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
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Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. 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	08/21/2003		M		535	A	\$ 10.63	6,812	D	
Common Stock	08/21/2003		S		535	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		2,000	A	\$ 10.63	8,277	D	
Common Stock	08/21/2003		S		2,000	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		18,790	A	\$ 33.75	25,067	D	
Common Stock	08/21/2003		S		18,790	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		5,370	A	\$ 44.6875	11,647	D	
Common Stock	08/21/2003		S		5,370	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		25,972	A	\$ 44.6875	32,249	D	
Common Stock	08/21/2003		S		25,972	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		11,000	A	\$ 26.25	17,277	D	
Common Stock	08/21/2003		S		11,000	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		9,333	A	\$ 32.75	15,610	D	
Common Stock	08/21/2003		S		9,333	D	\$ 56	6,277	D	
Common Stock	08/21/2003		M		22,000	A	\$ 29.31	28,277	D	
Common Stock	08/21/2003		S		22,000	D	\$ 56	6,277	D	

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

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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						Title
Non-Qualified Stock Option (right to buy)	\$ 10.63	08/21/2003		M		535		08/31/1999	08/31/2008	Common Stock	535	\$ 56	7,000	D	

Non-Qualified Stock Option (right to buy)	\$ 10.63	08/21/2003		M			2,000	08/31/1999	08/31/2008	Common Stock	2,000	\$ 56	5,000	D
Non-Qualified Stock Option (right to buy)	\$ 26.25	08/21/2003		M			11,000	11/10/2001	11/10/2010	Common Stock	11,000	\$ 56	9,000	D
Non-Qualified Stock Option (right to buy)	\$ 29.31	08/21/2003		M			22,000	10/02/2002	10/02/2011	Common Stock	22,000	\$ 56	38,000	D
Non-Qualified Stock Option (right to buy)	\$ 32.75	08/21/2003		M			9,333	04/04/2002	04/04/2011	Common Stock	9,333	\$ 56	10,667	D
Non-Qualified Stock Option (right to buy)	\$ 33.75	08/21/2003		M			18,790	10/27/2000	10/27/2009	Common Stock	18,790	\$ 56	1,875	D
Non-Qualified Stock Option (right to buy)	\$ 44.6875	08/21/2003		M			5,370	08/13/2000	08/11/2010	Common Stock	5,370	\$ 56	0	D
Non-Qualified Stock Option (right to buy)	\$ 44.6875	08/21/2003		M			25,972	08/13/2001	08/13/2010	Common Stock	25,972	\$ 56	8,658	D
Non-Qualified Stock Option (right to buy)	\$ 34.67							11/08/2003	01/28/2013	Common Stock	25,000		25,000	D
Non-Qualified Stock Option (right to buy)	\$ 37.05							11/08/2003	11/08/2012	Common Stock	12,500		12,500	D
Non-Qualified Stock Option (right to buy)	\$ 51.229							11/08/2003	07/30/2013	Common Stock	12,500		12,500	D

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other

KISPERT JOHN H C/O KLA-TENCOR CORP. 160 RIO ROBLES SAN JOSE, CA 95134			Chief Financial Officer	
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Signatures

John H Kispert		08/21/2003
<small>**Signature of Reporting Person</small>		<small>Date</small>

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).

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

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