

FORM 4

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

OMB APPROVAL
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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* TOMPKINS JON D			2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input type="checkbox"/> Officer (give title below) <input type="checkbox"/> 10% Owner <input type="checkbox"/> Other (specify below)		
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES			3. Date of Earliest Transaction (Month/Day/Year) 08/29/2005					
(Street) SAN JOSE, CA 95130			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		

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	08/29/2005		M		5,000	A	\$ 37.05	9,200	D	
Common Stock	08/29/2005		S		5,000	D	\$ 49.75	4,200	D	
Common Stock	08/29/2005		M		5,000	A	\$ 37.05	9,200	D	
Common Stock	08/29/2005		S		5,000	D	\$ 49.75	4,200	D	
Common Stock	08/29/2005		M		2,500	A	\$ 40.68	6,700	D	
Common Stock	08/29/2005		S		2,500	D	\$ 49.75	4,200	D	
Common Stock	08/29/2005		M		2,500	A	\$ 40.24	6,700	D	
Common Stock	08/29/2005		S		2,500	D	\$ 49.75	4,200	D	

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

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. SEC 1474 (9-02)

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		Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (right to buy)	\$ 37.05	08/29/2005		M		5,000	11/08/2002	11/08/2012	Common Stock	5,000	\$ 49.75	5,000	D	

Non-Qualified Stock Option (right to buy)	\$ 37.05	08/29/2005		M			5,000	11/08/2002	11/08/2012	Common Stock	5,000	\$ 49.75	0	D
Non-Qualified Stock Option (right to buy)	\$ 40.24	08/29/2005		M			2,500	05/11/2005	05/11/2015	Common Stock	2,500	\$ 49.75	0	D
Non-Qualified Stock Option (right to buy)	\$ 40.68	08/29/2005		M			2,500	10/18/2004	10/18/2014	Common Stock	2,500	\$ 49.75	0	D
Non-Qualified Stock Option (right to buy)	\$ 44.76							01/25/2005	01/25/2015	Common Stock	2,500		2,500	D
Non-Qualified Stock Option (right to buy)	\$ 51.35							08/02/2005	08/02/2012 ⁽¹⁾	Common Stock	2,500		2,500	D
Non-Qualified Stock Option (right to buy)	\$ 59.44							11/05/2003	11/05/2013	Common Stock	10,000		10,000	D

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
TOMPKINS JON D C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130	X			

Signatures

By: Stuart J. Nichols For: Jon D. Tompkins		08/29/2005
<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).
- (1) Option expiration date was reported incorrectly on the original Form 4.

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.