

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* LEVY KENNETH <small>(Last) (First) (Middle)</small> C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES <small>(Street)</small> SAN JOSE, CA 95130 <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) 12/15/2004 4. If Amendment, Date Original Filed(Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Chairman of the Board 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	12/15/2004		M		25,000	A	\$ 10.81	25,762	D	
Common Stock	12/15/2004		S		25,000	D	\$ 46.9809	762	D	
Common Stock								1,719,375	I	by Levy Fam. Trust (1)

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		Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (right to buy)	\$ 10.81	12/15/2004		M		25,000	10/07/1997	10/08/2006	Common Stock	25,000	\$ 46.9809	75,000	D	
Non-Qualified Stock Option (right to buy)	\$ 10.63						08/31/1999	08/31/2008	Common Stock	204,272		204,272	D	
Non-Qualified Stock Option (right to buy)	\$ 16.97						10/23/1999	10/23/2008	Common Stock	220,728		220,728	D	

Non-Qualified Stock Option (right to buy)	\$ 26.25							11/10/2001	11/10/2010	Common Stock	18,951		18,951	D	
Non-Qualified Stock Option (right to buy)	\$ 29.31							10/02/2002	10/02/2011	Common Stock	28,425		28,425	D	
Non-Qualified Stock Option (right to buy)	\$ 32.75							04/04/2002	04/04/2011	Common Stock	18,951		18,951	D	
Non-Qualified Stock Option (right to buy)	\$ 33.75							10/27/2000	10/27/2009	Common Stock	90,000		90,000	D	
Non-Qualified Stock Option (right to buy)	\$ 34.67							11/08/2003	01/28/2013	Common Stock	15,724		15,724	D	
Non-Qualified Stock Option (right to buy)	\$ 37.05							11/08/2003	11/08/2012	Common Stock	7,863		7,863	D	
Non-Qualified Stock Option (right to buy)	\$ 40.66							10/27/2004	08/02/2014	Common Stock	4,500		4,500	D	
Non-Qualified Stock Option (right to buy)	\$ 41.79							09/21/2005	09/21/2014	Common Stock	50,000		50,000	D	
Non-Qualified Stock Option (right to buy)	\$ 44.6875							08/13/2000	08/13/2010	Common Stock	37,901		37,901	D	
Non-Qualified Stock Option (right to buy)	\$ 45.16							10/27/2004	04/26/2014	Common Stock	7,500		7,500	D	
Non-Qualified Stock Option (right to buy)	\$ 51.229							11/08/2003	07/30/2013	Common Stock	7,863		7,863	D	

Non-Qualified Stock Option (right to buy)	\$ 53.86							10/27/2004	10/27/2013	Common Stock	12,000		12,000	D
Non-Qualified Stock Option (right to buy)	\$ 58.10							10/27/2004	01/27/2014	Common Stock	6,000		6,000	D

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
LEVY KENNETH C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130	X		Chairman of the Board	

Signatures

By: Stuart J. Nichols For: Kenneth Levy		12/15/2004
<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) Due to an administrative error, the number of securities beneficially owned by the reporting person 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.

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