

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 * BARNHOLT EDWARD W		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 type="checkbox"/> Officer (give title below) <input checked="" type="checkbox"/> Other (specify below) Chairman of the Board	
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 10/29/2013		
C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE					
(Street)			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
MILPITAS, CA 95035					
(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)	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	10/29/2013		M		5,000	A	\$ 59.44	8,809	D	
Common Stock	10/29/2013		S		5,000	D	\$ 64.85	3,809	D	
Common Stock	10/29/2013		M		5,000	A	\$ 59.44	8,809	D	
Common Stock	10/29/2013		S		5,000	D	\$ 64.85	3,809	D	
Common Stock	10/29/2013		M		2,500	A	\$ 44.76	6,309	D	
Common Stock	10/29/2013		S		2,500	D	\$ 64.85	3,809	D	
Common Stock	10/29/2013		M		2,500	A	\$ 40.24	6,309	D	
Common Stock	10/29/2013		S		2,500	D	\$ 64.85	3,809	D	
Common Stock	10/29/2013		M		1,875	A	\$ 55.88	5,684	D	
Common Stock	10/29/2013		S		1,875	D	\$ 64.85	3,809	D	
Common Stock	10/29/2013		M		1,875	A	\$ 56.79	5,684	D	
Common Stock	10/29/2013		S		1,875	D	\$ 64.85	3,809	D	
Common Stock	10/29/2013		M		1,875	A	\$ 52.84	5,684	D	
Common Stock	10/29/2013		S		1,875	D	\$ 64.85	3,809	D	
Common Stock								39,167	I	By Trust (1)
Common Stock - Restricted Stock Units (2)								3,836	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	Amount or Number of Shares				
Non-Qualified Stock Option (Right to Buy)	\$ 59.44	10/29/2013		M			5,000	(3)	11/05/2013	Common Stock	5,000	\$ 0	0	D	
Non-Qualified Stock Option (Right to Buy)	\$ 59.44	10/29/2013		M			5,000	(3)	11/05/2013	Common Stock	5,000	\$ 0	0	D	
Non-Qualified Stock Option (Right to Buy)	\$ 44.76	10/29/2013		M			2,500	(4)	01/25/2015	Common Stock	2,500	\$ 0	0	D	
Non-Qualified Stock Option (Right to buy)	\$ 40.24	10/29/2013		M			2,500	(5)	05/11/2015	Common Stock	2,500	\$ 0	0	D	
Non-Qualified Stock Option (Right to Buy)	\$ 55.88	10/29/2013		M			1,875	(6)	05/01/2014	Common Stock	1,875	\$ 0	0	D	
Non-Qualified Stock Option (Right to Buy)	\$ 56.79	10/29/2013		M			1,875	(7)	07/31/2014	Common Stock	1,875	\$ 0	0	D	
Non-Qualified Stock Option (Right to buy)	\$ 52.84	10/29/2013		M			1,875	(8)	10/30/2014	Common Stock	1,875	\$ 0	0	D	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
BARNHOLT EDWARD W C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035	X			Chairman of the Board

Signatures

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) By The Barnholt Family Trust dated January 8, 1987, of which the Reporting Person is a trustee and beneficiary.
- (2) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.
- (3) Represents a stock option granted on November 5, 2003, granting the Reporting Person the right to purchase up to 5,000 shares of KLA-Tencor common stock. All of the shares subject to this stock option vested immediately and were exercisable on November 5, 2003.
- (4) Represents a stock option granted on January 25, 2005, granting the Reporting Person the right to purchase up to 2,500 shares of KLA-Tencor common stock. All of the shares subject to this stock option vested immediately and were exercisable on January 25, 2005.
- (5) Represents a stock option granted on May 11, 2005, granting the Reporting Person the right to purchase up to 2,500 shares of KLA-Tencor common stock. All of the shares subject to this stock option vested immediately and were exercisable on May 11, 2005.
- (6) Represents a stock option granted on May 1, 2007, granting the Reporting Person the right to purchase up to 1,875 shares of KLA-Tencor common stock. All of the shares subject to this stock option vested immediately and were exercisable on May 1, 2007.
- (7) Represents a stock option granted on July 31, 2007, granting the Reporting Person the right to purchase up to 1,875 shares of KLA-Tencor common stock. All of the shares subject to this stock option vested immediately and were exercisable on July 31, 2007.
- (8) Represents a stock option granted on October 30, 2007, granting the Reporting Person the right to purchase up to 1,875 shares of KLA-Tencor common stock. All of the shares subject to this stock option vested immediately and were exercisable on October 30, 2007.

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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