FORM 4

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

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

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[*]	2. Issuer Name **and** Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer
BARNHOLT EDWARD W	KLA TENCOR CORP [KLAC]	(Check all applicable)
		X_ Director ___ 10% Owner
(Last) (First) (Middle)	3. Date of Earliest Transaction (Month/Day/Year)	___ Officer (give title below) X_ Other (specify below)
C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE	11/06/2013	Chairman of the Board
(Street)	4. If Amendment, Date Original Filed(Month/Day/Year)	6. Individual or Joint/Group Filing(Check Applicable Line)
MILPITAS, CA 95035		X_ Form filed by One Reporting Person
(City) (State) (Zip)		___ 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 - Restricted Stock Units [(1)]	11/06/2013		A		2,784 [(2)]	A	$ 0	6,620	D	
Common Stock								3,809	D	
Common Stock								39,167	I	By Trust [(3)]

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				

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

Brian M. Martin as Attorney-in-Fact for Edward W. Barnholt	11/06/2013

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).

(1) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.

(2) Represents a grant of RSUs that, pursuant to KLA-Tencor's outside director compensation program, was automatically granted to the Reporting Person on the date of KLA-Tencor's annual meeting of stockholders with respect to the Reporting Person's service on the Board of Directors for the upcoming year. The RSUs will fully vest one year from date of grant and will be deliverable on such date.

(3) By The Barnholt Family Trust dated January 8, 1987, of which the Reporting Person is a trustee and beneficiary.

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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