KLA TENCOR CORP

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subject to

Form 4

September 19, 2005

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB 3235-0287 Number:

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2005

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Section 16. Form 4 or Form 5 obligations may continue.

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

See Instruction

1. Name and Address of Reporting Person KISPERT JOHN H	2. Issuer Name and Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer		
	KLA TENCOR CORP [KLAC]	(Check all applicable)		
(Last) (First) (Middle)	3. Date of Earliest Transaction	•		
C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES	(Month/Day/Year) 09/15/2005	Director 10% Owner _X Officer (give title Other (specify below) Chief Financial Officer		
(Street)	4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check		
	Filed(Month/Day/Year)	Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting		

SAN JOSE, CA 95130

(State)

(Zip)

(City)

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Table I - Non-Derivative	Securities Acquired	l Dienocod of or	· Ranaficially Awnad

Person

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. Securit or Dispos (Instr. 3,	ed of		5. Amount of Securities Beneficially Owned Following	6. Ownership Form: Direct (D) or Indirect	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code V	Amount	(A) or (D)	Price	Reported Transaction(s) (Instr. 3 and 4)	(I) (Instr. 4)	
Common Stock	09/15/2005		M	1,000	À	\$ 10.63	1,000	D	
Common Stock	09/15/2005		S	1,000	D	\$ 50.5089	0	D	
Common Stock	09/15/2005		M	299	A	\$ 10.63	299	D	
Common Stock	09/15/2005		S	299	D	\$ 50.5089	0	D	
Common Stock	09/15/2005		M	2,534	A	\$ 10.63	2,534	D	
Common Stock	09/15/2005		S	2,534	D	\$ 50.5089	0	D	

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Common Stock	09/15/2005	M	1,167	A	\$ 10.63	1,167	D	
Common Stock	09/15/2005	S	1,167	D	\$ 50.5089	0	D	
Common Stock	09/15/2005	M	1,875	A	\$ 33.75	1,875	D	
Common Stock	09/15/2005	S	1,875	D	\$ 50.5089	0	D	
Common Stock	09/15/2005	M	8,000	A	\$ 26.25	8,000	D	
Common Stock	09/15/2005	S	8,000	D	\$ 50.5089	0	D	
Common Stock	09/15/2005	M	8,000	A	\$ 32.75	8,000	D	
Common Stock	09/15/2005	S	8,000	D	\$ 50.5089	0	D	
Common Stock	09/15/2005	M	24,000	A	\$ 29.31	24,000	D	
Common Stock	09/15/2005	S	24,000	D	\$ 50.5089	0	D	
Common Stock	09/15/2005	M	6,875	A	\$ 37.05	6,875	D	
Common Stock	09/15/2005	S	6,875	D	\$ 50.5089	0	D	
Common Stock	09/15/2005	M	13,750	A	\$ 34.67	13,750	D	
Common Stock	09/15/2005	S	13,750	D	\$ 50.5089	0	D	
Common Stock						6,681	I	by Trust
Common Stock-Restricted Stock Units (1)						48,333	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		3. Transaction Date		4.	5. Number of	6. Date Exercisable and	7. Title and Amor
Derivative	Conversion ((Month/Day/Year)	Execution Date, if	Transaction	onDerivative	Expiration Date	Underlying Secur
Security	or Exercise		any	Code	Securities	(Month/Day/Year)	(Instr. 3 and 4)
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Acquired (A)		
	Derivative				or Disposed of		
	Security				(D)		
					(Instr. 3, 4,		
					and 5)		
				C + V	(A) (D)		TP:41
				Code V	(A) (D)		Title

(9-02)

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						Date Exercisable	Expiration Date		Am or Nui of S
S	Non-Qualified tock Option right to buy)	\$ 10.63	09/15/2005	М	1,000	08/31/1999	08/31/2008	Common Stock	1,
S	Non-Qualified tock Option right to buy)	\$ 10.63	09/15/2005	M	299	08/31/1999	08/31/2008	Common Stock	2
S	Non-Qualified tock Option right to buy)	\$ 10.63	09/15/2005	M	2,534	08/31/1999	08/31/2008	Common Stock	2,
S	Non-Qualified tock Option right to buy)	\$ 10.63	09/15/2005	M	1,167	08/31/2002	08/31/2008	Common Stock	1,
S	Non-Qualified tock Option right to buy)	\$ 26.25	09/15/2005	M	8,000	11/10/2001	11/10/2010	Common Stock	8,
S	Non-Qualified tock Option right to buy)	\$ 29.31	09/15/2005	M	24,000	10/02/2002	10/02/2011	Common Stock	24
S	Non-Qualified tock Option right to buy)	\$ 32.75	09/15/2005	M	8,000	04/04/2002	04/04/2011	Common Stock	8,
S	Non-Qualified tock Option right to buy)	\$ 33.75	09/15/2005	M	1,875	10/27/2000	10/27/2009	Common Stock	1,
S	Non-Qualified tock Option right to buy)	\$ 34.67	09/15/2005	M	13,750	11/08/2003	01/28/2013	Common Stock	13
S	Non-Qualified tock Option right to buy)	\$ 37.05	09/15/2005	M	6,875	11/08/2003	11/08/2012	Common Stock	6,
S	Non-Qualified tock Option right to buy)	\$ 40.66				10/27/2004	08/02/2014	Common Stock	11
S	Non-Qualified tock Option right to buy)	\$ 41.79				09/21/2005	09/21/2014	Common Stock	75
S	Non-Qualified tock Option right to buy)	\$ 44.6875				08/13/2001	08/13/2010	Common Stock	8,
N	Non-Qualified	\$ 45.16				10/27/2004	04/26/2014	Common	18

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Stock Option (right to buy)				Stock	
Non-Qualified Stock Option (right to buy)	\$ 51.229	11/08/2003	07/30/2013	Common Stock	12
Non-Qualified Stock Option (right to buy)	\$ 53.86	10/27/2004	10/27/2013	Common Stock	30
Non-Qualified Stock Option (right to buy)	\$ 58.1	10/27/2004	01/27/2014	Common Stock	15

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

KISPERT JOHN H C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130

Chief Financial Officer

Signatures

By: Stuart J. Nichols For: John H. Kispert 09/19/2005

**Signature of Reporting Person 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 represents a contingent right to receive one share of KLAC common stock.

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