

FORM 4

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

OMB APPROVAL

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 hours per response... 0.5

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 * YARBRO STAN (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES (Street) SAN JOSE, CA 95130 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] 3. Date of Earliest Transaction (Month/Day/Year) 10/26/2004 4. If Amendment, Date Original Filed(Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) ___ Director ___ 10% Owner <input checked="" type="checkbox"/> Officer (give title below) ___ Other (specify below) <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> Group VP, Field Operations </div> 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person ___ 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	10/26/2004		M		334	A	\$ 33.75	966	D	
Common Stock	10/26/2004		S		334	D	\$ 43.80	632	D	
Common Stock	10/26/2004		M		2,042	A	\$ 26.25	2,674	D	
Common Stock	10/26/2004		S		2,042	D	\$ 43.80	632	D	
Common Stock	10/26/2004		M		600	A	\$ 32.75	1,232	D	
Common Stock	10/26/2004		S		600	D	\$ 43.78	632	D	
Common Stock	10/26/2004		M		68	A	\$ 32.75	700	D	
Common Stock	10/26/2004		S		68	D	\$ 43.79	632	D	
Common Stock	10/26/2004		M		600	A	\$ 32.75	1,232	D	
Common Stock	10/26/2004		S		600	D	\$ 43.80	632	D	
Common Stock	10/26/2004		M		774	A	\$ 32.75	1,406	D	
Common Stock	10/26/2004		S		774	D	\$ 43.81	632	D	
Common Stock	10/26/2004		M		4,926	A	\$ 29.31	5,558	D	
Common Stock	10/26/2004		S		4,926	D	\$ 43.81	632	D	
Common Stock	10/26/2004		M		324	A	\$ 29.31	956	D	
Common Stock	10/26/2004		S		324	D	\$ 43.80	632	D	
Common Stock	10/26/2004		M		300	A	\$ 37.05	932	D	
Common Stock	10/26/2004		S		300	D	\$ 43.77	632	D	

Common Stock	10/26/2004		M		2,233	A	\$ 37.05	2,865		D	
Common Stock	10/26/2004		S		2,233	D	\$ 43.79	632		D	
Common Stock	10/26/2004		M		700	A	\$ 37.05	1,332		D	
Common Stock	10/26/2004		S		700	D	\$ 43.80	632		D	
Common Stock	10/26/2004		M		600	A	\$ 37.05	1,232		D	
Common Stock	10/26/2004		S		600	D	\$ 43.81	632		D	
Common Stock	10/26/2004		M		398	A	\$ 34.67	1,030		D	
Common Stock	10/26/2004		S		398	D	\$ 43.76	632		D	
Common Stock	10/26/2004		M		2,867	A	\$ 34.67	3,499		D	
Common Stock	10/26/2004		S		2,867	D	\$ 43.77	632		D	
Common Stock	10/26/2004		M		3,902	A	\$ 34.67	4,534		D	
Common Stock	10/26/2004		S		3,902	D	\$ 43.78	632		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)				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					

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
YARBRO STAN C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130			Group VP, Field Operations	

Signatures

By: Stuart J. Nichols For: Stan K. Yarbro	10/26/2004
**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).

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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