

INITIAL STATEMENT OF 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* Hall Jeffrey (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES (Street) SAN JOSE, CA 95130 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 07/27/2004	3. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]		
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) VP, Corporate Finance		5. 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		

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	981	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

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Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Non-Qualified Stock Option (right to buy)	10/02/2002	10/02/2011	Common Stock	22,500	\$ 29.31	D	
Non-Qualified Stock Option (right to buy)	11/08/2003	01/28/2013	Common Stock	5,500	\$ 34.67	D	
Non-Qualified Stock Option (right to buy)	11/08/2003	11/08/2012	Common Stock	3,250	\$ 37.05	D	
Non-Qualified Stock Option (right to buy)	10/26/2004	04/26/2014	Common Stock	3,250	\$ 45.16	D	
Non-Qualified Stock Option (right to buy)	05/30/2002	07/10/2011	Common Stock	35,811	\$ 46.67	D	
Non-Qualified Stock Option (right to buy)	11/08/2003	07/30/2013	Common Stock	3,250	\$ 51.229	D	
Non-Qualified Stock Option (right to buy)	10/27/2004	10/27/2013	Common Stock	5,200	\$ 53.86	D	
Non-Qualified Stock Option (right to buy)	10/27/2004	01/27/2014	Common Stock	2,600	\$ 58.1	D	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Hall Jeffrey C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130			VP, Corporate Finance	

Signatures

By: Stuart J. Nichols For: Jeffrey Hall		08/03/2004
<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 5(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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