

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* COHEN AVI (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) 11/05/2003	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, Pattern Solutions Group		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	1,145	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)	08/31/1999	08/31/2008	Common Stock	47,313	\$ 10.63	D	
Non-Qualified Stock Option (right to buy)	04/30/1998	04/30/2007	Common Stock	7,500	\$ 22.25	D	
Non-Qualified Stock Option (right to buy)	11/10/2001	11/10/2010	Common Stock	8,750	\$ 26.25	D	
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)	04/04/2002	04/04/2011	Common Stock	8,750	\$ 32.75	D	
Non-Qualified Stock Option (right to buy)	10/27/2000	10/27/2009	Common Stock	24,000	\$ 33.75	D	
Non-Qualified Stock Option (right to buy)	11/08/2003	01/28/2013	Common Stock	12,500	\$ 34.67	D	
Non-Qualified Stock Option (right to buy)	11/08/2003	11/08/2012	Common Stock	6,250	\$ 37.05	D	
Non-Qualified Stock Option (right to buy)	08/13/2000	08/13/2010	Common Stock	17,500	\$ 44.6875	D	
Non-Qualified Stock Option (right to buy)	11/08/2003	07/30/2013	Common Stock	6,250	\$ 51.229	D	
Non-Qualified Stock Option (right to buy)	10/27/2004	10/27/2013	Common Stock	16,000	\$ 53.86	D	

Reporting Owners

Relationships	
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Reporting Owner Name / Address	Director	10% Owner	Officer	Other
COHEN AVI C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130			VP, Pattern Solutions Group	

Signatures

By: Stuart J. Nichols For: Avi Cohen		11/14/2003
Signature of Reporting Person		Date

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.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.