UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE 13G/A

(Amendment No. 1)*

Under the Securities Exchange Act of 1934

Nova Measuring Instruments Ltd.

(Name of Issuer)
Ordinary Shares, Par Value NIS 0.01

(Title of Class of Securities)

M7516K 10 3

(CUSIP NUMBER)

December 31, 2006

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- o Rule 13d-1(b)
- O Rule 13d-1(c)
- x Rule 13d-1(d)

CUSIP No. M7516K 10 3 SCHEDULE 13G/A

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1.	NAME OF REPORTING PERSONS: DR. MOSHE FINAROV I.R.S. IDENTIFICATION NOS. NOT APPLICABLE				
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) O (b) X				
3.	SEC Use Only				
4.	CITIZENSHIP or PLACE OF ORGANIZATION Israel				
NUMB	BER OF ARES ICIALLY ED BY ACH PRTING IN WITH	5.	SOLE VOTING POWER 891,066 ⁽¹⁾		
SHA BENEFI OWNI		6.	SHARED VOTING POWER		
REPOI		7.	SOLE DISPOSITIVE POWER 891,066 (1)		
		8.	SHARED DISPOSITIVE POWER		
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 891,066 ⁽¹⁾				
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o				
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.1% ⁽²⁾				
12.	TYPE OF REPORTING PERSON IN				

		CUSIP No. M7516K 10 3	SCHEDULE 13G/A	
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Item 1(a). Name of Issuer:

Nova Measuring Instruments Ltd.

Item 1(b). Address of Issuer's Principal Executive Offices:

Weizmann Scientific Park

P.O. Box 266 Rehovot 76100

Israel

Item 2(a). Name of Person Filing:

Dr. Moshe Finarov

Item 2(b). Address of Principal Business Office or, if None, Residence:

c/o Nova Measuring Instruments Ltd. Weizmann Scientific Park P.O. Box 266

Rehovot 76100

Israel

Item 2(c). Citizenship:

Israel.

Item 2(d). Title of Class of Securities:

Ordinary Shares, par value NIS 0.01 per share

Item 2(e). CUSIP Number:

M7516K 10 3

- Item 3. If this statement is filed pursuant to Rule 13d-1(b), or 13d-2(b) or (c), check whether the person filing is a: Not Applicable
 - (a) Broker or dealer registered under Section 15 of the Exchange Act;
 - (b) O Bank as defined in Section 3(a)(6) of the Exchange Act;
 - (c) O Insurance Company as defined in Section 3(a)(19) of the Exchange Act;
 - (d) O Investment Company registered under Section 8 of the Investment Company Exchange Act;
 - (e) O Investment Adviser in accordance with Rule 13d-1(b)(1)(ii)(E);

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Employee Benefit Plan or Endowment Fund in accordance with Rule 13d-1(b)(1)(ii)(F);

	(g)	o	Parent Holding Company or Control Person in accordance with Rule 13d-1(b)(1)(ii)(G);			
	(h)	o	Saving Association as defined in Section 3(b) of The Federal Deposit Insurance Act;			
	(i)	o	Church Plan that is excluded from the definition of an Investment Company under Section 3(c)(14) of the Investment Company Act;			
	(j)	o	Group, in accordance with Rule 13d-1(b)(1)(ii)(J).			
Item 4.	Ownership.					
	(a) Amount beneficially owned: 891,066 ⁽¹⁾					
	(b) Percent of Class: 5.1% ⁽²⁾					
	(c) Number of shares as to which such person has:					
		(i)	Sole power to vote or direct the vote: 891,066 ⁽¹⁾			
		(ii)	Shared power to vote or to direct the vote: 0			
		(iii)	Sole power to dispose or direct the disposition of: 891,066 ⁽¹⁾			
		(iv)	Shared power to dispose or to direct the disposition of: 0			
Item 5.	Ownership of Five Percent or Less of a Class.					
	Not A	pplicabl	le.			
Item 6.	Ownership of More than Five Percent on Behalf of Another Person.		More than Five Percent on Behalf of Another Person.			
	Not A	pplicabl	le.			
Item 7.	Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Company.		and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding			
	Not A	pplicabl	le.			
Item 8.	Identification and Classification of Members of the Group.					
	Not A	pplicabl	le.			
Item 9.	Notice of Dissolution of Group.					
	Not A	pplicabl	le.			
Item 10.	Certifi	cation.				
	Not Applicable.					

(f)

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

February 13, 2007

(Date)

/s/ Dr. Moshe Finarov

(Signature)

Dr. Moshe Finarov

(Name/Title)

- (1) Includes options which are immediately exercisable or exercisable within 60 days of December 31, 2006 to purchase additional 244,125 Ordinary Shares.
- The issuer has advised the Reporting Person that as of December 31, 2006 there were 17,104,523 outstanding Ordinary Shares of the issuer. The Reporting Person s Ownership percentage is based on that amount.

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