UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE 13G/A

(Amendment No. 2)*

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 103

(CUSIP NUMBER)

December 31, 2007

(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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SEC Use C	Only		
CITIZENS Israel	SHIP or PI	LACE OF ORGANIZATION	
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TING WITH	7.	SOLE DISPOSITIVE POWER 895,827 (1)	
	8.	SHARED DISPOSITIVE POWER	
AGGREG. 895,827 ⁽¹⁾		OUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
СНЕСК В	OX IF TH	IE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES	
О			
PERCENT	OF CLA	SS REPRESENTED BY AMOUNT IN ROW (9)	
4.57% ⁽²⁾ (c	alculated	excluding from outstanding shares all shares owned by Issuer as Treasury shares)	
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CUSIP No. M7516K 10 3	SCHEDULE 13G/A
COSH 100. W/510K 10 5	SCHEDULE 130/A

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 103

- 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) $_{
 m O}$ 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);
 - (f) 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;

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- (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) Oroup, in accordance with Rule 13d-1(b)(1)(ii)(J).

Item 4. Ownership.

- (a) Amount beneficially owned: 895,827 (1)
- (b) Percent of Class: 4.57%⁽²⁾ (calculated excluding from outstanding shares all shares owned by Issuer as treasury shares)
- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or direct the vote: 895,827 (1)
 - (ii) Shared power to vote or to direct the vote: 0
 - (iii) Sole power to dispose or direct the disposition of: 895,827 (1)
 - (iv) Shared power to dispose or to direct the disposition of: 0
- Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5 percent of the class of securities, check the following X

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not Applicable.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.

Not Applicable.

Item 8. Identification and Classification of Members of the Group.

Not Applicable.

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certification.

Not Applicable.

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 14, 2008

(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, 2007 to purchase additional 248,886 Ordinary Shares.

(2) The issuer has advised the Reporting Person that as of December 31, 2007 there were 19,369,418 outstanding Ordinary Shares of the issuer, of which 2,229 Ordinary Shares are held by Issuer as treasury shares. The Reporting Person s Ownership percentage is based on that amount.

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