

ELECTRO SCIENTIFIC INDUSTRIES INC

Filed by
**NIERENBERG INVESTMENT MANAGEMENT
COMPANY, INC.**

FORM SC 13D/A (Amended Statement of Beneficial Ownership)

Filed 02/06/17

Address	13900 NW SCIENCE PARK DR PORTLAND, OR 97229
Telephone	5036414141
CIK	0000726514
Symbol	ESIO
SIC Code	3690 - Miscellaneous Electrical Machinery, Equipment,
Industry	Electrical Components & Equipment
Sector	Industrials
Fiscal Year	03/28

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

SCHEDULE 13D
Under the Securities Exchange Act of 1934
(Amendment No. 19)

ELECTRO SCIENTIFIC INDUSTRIES INC. (ESIO)
(Name of Issuer)

Common Stock
(Title of Class of Securities)
285229100
(CUSIP Number)

David Nierenberg
The D3 Family Funds
19605 NE 8th Street
Camas, WA 98607
(360) 604-8600

With a copy to:

Christopher P. Davis
Kleinberg, Kaplan, Wolff & Cohen, P.C.
551 Fifth Avenue
New York, NY 10176
(212) 986-6000

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

February 2, 2017
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only) The D3 Family Fund, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) <div style="float: right;"> (a) <input checked="" type="checkbox"/> [X] (b) <input type="checkbox"/> [] </div>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions) WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Washington	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 447,173 common shares (1.38%)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 447,173
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON For the reporting person listed on this page, 447,173; for all reporting persons as a group, 1,608,442 shares (4.95%)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) For the reporting person listed on this page, 1.38%; for all reporting persons as a group 4.95%	
14	TYPE OF REPORTING PERSON (See Instructions) PN	

1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only) The D3 Family Bulldog Fund, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) <div style="float: right;"> (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> </div>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions) WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Washington	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,079,870 common shares (3.33%)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,079,870
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON For the reporting person listed on this page, 1,079,870; for all reporting persons as a group, 1,608,442 shares (4.95%)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) For the reporting person listed on this page, 3.33%; for all reporting persons as a group, 4.95%	
14	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSONS The DIII Offshore Fund, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) (a) <input checked="" type="checkbox"/> [X] (b) <input type="checkbox"/> []	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions) WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Bahamas	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 81,399 common shares (0.25%)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 81,399
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON For the reporting person listed on this page, 81,399; for all reporting persons as a group, 1,608,442 shares (4.95%)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) For the reporting person listed on this page, 0.25%; for all reporting persons as a group, 4.95%	
14	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSONS Nierenberg Investment Management Company, Inc.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Washington	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,608,442 common shares (4.95%)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,608,442
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON For the reporting person listed on this page, 1,608,442; for all reporting persons as a group, 1,608,442 shares (4.95%)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) For the reporting person listed on this page, 4.95%; for all reporting persons as a group 4.95%	
14	TYPE OF REPORTING PERSON CO	

1	NAME OF REPORTING PERSONS Nierenberg Investment Management Offshore, Inc.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) (a) <input checked="" type="checkbox"/> [X] (b) <input type="checkbox"/> []	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Bahamas	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 81,399 common shares (0.25%)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 81,399 common shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON For the reporting person listed on this page, 81,399; for all reporting persons as a group, 1,608,442 shares (4.95%)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) For the reporting person listed on this page, 0.25%; for all reporting persons as a group, 4.95%	
14	TYPE OF REPORTING PERSON CO	

1	NAME OF REPORTING PERSONS David Nierenberg	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) (a) <input checked="" type="checkbox"/> [X] (b) <input type="checkbox"/> []	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,608,442 common shares (4.95%)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,608,442
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON For the reporting person listed on this page, 1,608,442; for all reporting persons as a group, 1,608,442 shares (4.95%)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) For the reporting person listed on this page, 4.95%; for all reporting persons as a group, 4.95%	
14	TYPE OF REPORTING PERSON IN	

This Amendment No. 19 to Schedule 13D (this "Amendment") amends the below-indicated Items from the Schedule 13D with respect to the shares of common stock (the "Common Stock") of Electro Scientific Industries Inc. (the "Issuer" or "ESIO") previously filed by or on behalf of the Reporting Persons (as defined below), as previously amended (collectively the "Schedule 13D"), by supplementing such Items with the information below.

The names of the persons filing this Amendment (collectively, the "Reporting Persons") are: The D3 Family Fund, L.P. (the "Family Fund"), The D3 Family Bulldog Fund, L.P. (the "Bulldog Fund"), The DIII Offshore Fund, L.P. (the "Offshore Fund"), Nierenberg Investment Management Company, Inc. ("NIMCO"), Nierenberg Investment Management Offshore, Inc. ("NIMO") and David Nierenberg ("Mr. Nierenberg").

Item 5. Interest in Securities of the Issuer.

(a) The aggregate percentage of Shares reported owned by each person named herein is based upon 32,464,117 Shares outstanding as of November 4, 2016, which is the total number of Shares outstanding as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 9, 2016.

As of the close of business on the date hereof, the Family Fund individually beneficially owned 447,173 Shares, constituting approximately 1.7% of all of the outstanding Shares.

As of the close of business on the date hereof, the Bulldog Fund individually beneficially owned 1,079,870 Shares, constituting approximately 3.33% of all of the outstanding Shares.

As of the close of business on the date hereof, the Offshore Fund individually beneficially owned 81,399 Shares, constituting approximately 0.25% of all of the outstanding Shares.

By virtue of its relationships with each of the Family Fund, the Bulldog Fund and the Offshore Fund discussed in further detail in Item 2, NIMCO may be deemed to be the beneficial owner of the 1,608,442 Shares, beneficially owned in the aggregate by the Family Fund, the Bulldog Fund and the Offshore Fund, constituting approximately 4.95% of all of the outstanding Shares.

By virtue of his relationship with NIMCO and NIMO discussed in further detail in Item 2, Mr. Nierenberg may be deemed to be the beneficial owner of the 1,608,442 Shares beneficially owned by NIMCO and NIMO, constituting approximately 4.95% of all of the outstanding Shares.

The Reporting Persons, in the aggregate, beneficially own 1,608,442 Shares, constituting approximately 4.95% of the outstanding Shares.

(b) The Family Fund, NIMCO and Mr. Nierenberg have shared power (i) to vote or direct the vote of, and (ii) to dispose or direct the disposition of, the 447,173 shares of Common Stock held by the Family Fund.

The Bulldog Fund, NIMCO and Mr. Nierenberg have shared power (i) to vote or direct the vote of, and (ii) to dispose or direct the disposition of, the 1,079,870 shares of Common Stock held by the Bulldog Fund.

The Offshore Fund, NIMO and Mr. Nierenberg have shared power (i) to vote or direct the vote of, and (ii) to dispose or direct the disposition of, the 81,399 shares of Common Stock held by the Offshore Fund.

(c) During the past sixty (60) days the following sales of shares of Common Stock were made by the Reporting Persons named below in open market transactions:

Portfolio	Trade Date	QTY	Price
D3 Family Bulldog Fund, LP	2/2/2017	28,344	7.09
D3 Family Fund, LP	2/2/2017	11,737	7.09
DIII Offshore Fund, LP	2/2/2017	2,137	7.09

No other transactions with respect to the Common Stock that are required to be reported on Schedule 13D were effected by any of the Reporting Person during the past sixty (60) days.

(e) The Reporting Persons ceased to be beneficial owners of more than five percent of the Common Stock on February 2, 2017.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, each of the undersigned certifies that the information set forth in the Statement is true, complete and correct.

D3 Family Fund, L.P., D3 Family Bulldog Fund, L.P.

By: Nierenberg Investment Management Company, Inc.

Its: General Partner

By: /s/ David Nierenberg
David Nierenberg, President

February 6, 2017

DIII Offshore Fund, L.P.

By: Nierenberg Investment Management Offshore, Inc.

Its: General Partner

By: /s/ David Nierenberg
David Nierenberg, President

February 6, 2017

Nierenberg Investment Management
Company, Inc.

By: /s/ David Nierenberg
David Nierenberg, President

February 6, 2017

Nierenberg Investment Management
Offshore, Inc.

By: /s/ David Nierenberg
David Nierenberg, President

February 6, 2017

/s/ David Nierenberg
David Nierenberg

February 6, 2017