

SPECTRA SYSTEMS CORPORATION
321 South Main Street
Providence, Rhode Island 02903
United States of America

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON DECEMBER 17, 2012

Dear Spectra Systems Corporation Stockholder:

Notice is hereby given that the Annual Meeting of Stockholders of Spectra Systems Corporation, a Delaware corporation (the “Company”), will be held at The Westin Providence Hotel, One West Exchange Street, in Providence, Rhode Island, United States of America on Monday, December 17, 2012 at 9:30 a.m. Eastern Standard Time for the following purposes:

1. To elect seven directors named in the Proxy Statement to serve until the next Annual Meeting of Stockholders and until their successors are duly elected and qualified;
2. To ratify the appointment of Miller Wachman LLP as the Company’s independent auditors for the fiscal year ending December 31, 2012; and
3. To transact such other business as may properly come before the Annual Meeting or any adjournments thereof.

Information relating to the above matters is set forth in the attached Proxy Statement. You can also access the Company’s latest Annual Report and its Interim Results for the period ended June 30, 2012 on the Company’s investor relations website at *ir.spsy.com*.

If you are a record holder of common stock at the close of business on November 5, 2012, the record date fixed by the Board of Directors, then you are entitled to receive notice of and vote at the Annual Meeting and any adjournments thereof.

If you plan to attend the meeting, please notify the Company in advance by contacting the Company as instructed in note 2 on page 10 of the accompanying Proxy Statement. In person attendance is limited to stockholders of record as of November 5, 2012. Personal identification will be required to attend the meeting. If your shares are not registered in your own name, before entering the Annual Meeting you must also provide evidence of your stock ownership as of November 5, 2012. You can obtain this evidence from your bank or brokerage firm, typically in the form of your most recent monthly bank or brokerage statement.

Whether or not you plan to attend the meeting, please take the time to vote by promptly submitting your proxy by completing, signing, dating and returning the enclosed Form of Proxy in the enclosed postage pre-paid envelope provided for your convenience. Please return your completed Form of Proxy to Computershare Investor

Services (Jersey) Limited, The Pavilions, Bridgwater Road, Bristol BS99 6ZY, United Kingdom, no later than 9:30 a.m. Eastern Standard Time (2:30 p.m. Greenwich Mean Time) on Saturday, December 15, 2012. You may also attend the Annual Meeting in person and vote at the Annual Meeting. You may revoke your proxy at any time before the vote is taken by following the instructions in the Proxy Statement.

If you hold your shares through Depository Interests, rather than submitting a proxy, please complete, sign, date and return the enclosed Form of Instruction in the enclosed postage pre-paid envelope provided for your convenience. Computershare Investor Services PLC, as Depository will then vote your shares in accordance with your instructions. Please return your completed Form of Instruction to Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol BS99 6ZY, United Kingdom no later than 12 noon Eastern Standard Time (5:00 p.m. Greenwich Mean Time) on Friday, December 14, 2012. You may also attend the Annual Meeting in person and vote at the Annual Meeting. You may revoke your instructions before the vote is taken by following the instructions in the Explanatory Notes Section of the Form of Instruction.

As a stockholder, your vote is very important and the Company's Board of Directors strongly encourages you to exercise your right to vote.

Your cooperation is greatly appreciated.

By Order of the Board of Directors

Douglas A, Anderson, Chief Financial Officer and Secretary

November 13, 2012

SPECTRA SYSTEMS CORPORATION
321 South Main Street
Providence, Rhode Island 02903
United States of America

PROXY STATEMENT

INFORMATION CONCERNING SOLICITATION AND VOTING

General

This Proxy Statement is furnished by the Board of Directors of Spectra Systems Corporation (the "Company") in connection with the solicitation of proxies for use at the Annual Meeting of Stockholders to be held at The Westin Providence Hotel, One West Exchange Street, in Providence, Rhode Island, United States of America on Monday, December 17, 2012, at 9:30 a.m. Eastern Standard Time and at any adjournments thereof (the "Annual Meeting") for the purposes set forth below and in the Notice of Annual Meeting. This Proxy Statement and the accompanying Form of Proxy and Form of Instruction are first being mailed to stockholders on or about November 13, 2012.

Only stockholders of record at the close of business on November 5, 2012 (the "Record Date") are entitled to notice of, and to vote at, the Annual Meeting. As of the close of business on such date 45,251,370 shares of the Company's common stock (Ordinary Shares) (the "Common Stock"), were outstanding and eligible to vote.

Quorum for the Transaction of Business.

No action may be taken on any matter to be acted upon at the meeting unless a quorum is present with respect to that matter. For each matter to be acted upon at the meeting, a quorum consists of the presence in person, or by duly executed proxy, of the holders of a majority of the outstanding shares of Common Stock entitled to vote. Abstentions and broker non-votes (described below) are counted as present for the purposes of determining a quorum.

Voting Procedures and Proxies

Each share of Common Stock is entitled to one vote on each matter submitted to the stockholders. We are asking each stockholder to execute the enclosed Form of Proxy to appoint our representative as your proxy in connection with voting on matters set forth in this Proxy Statement at the Annual Meeting. To be effective, a duly completed Form of Proxy must be received by Computershare Investor Services (Jersey) Limited, The Pavilions, Bridgwater Road, Bristol BS99 6ZY, United Kingdom, no later than 9:30 a.m. Eastern Standard Time (2:30 p.m. Greenwich Mean Time) on Saturday, December 15, 2012. Any stockholder giving a proxy may revoke it at any time before it is voted at the Annual Meeting by delivering to the Secretary of the Company a written notice of revocation or duly executed proxy bearing a later date or by appearing at the Annual Meeting and revoking his or her proxy and voting in person.

If your shares of Common Stock are held by a bank, broker or other holder of record, you are the beneficial owner of those shares rather than the stockholder of record. If you are a beneficial owner, your bank, broker or other holder of record will forward the proxy materials to you. As a beneficial owner, you have the right to direct the voting of your shares by following the voting instructions provided with the proxy materials forwarded by your bank, broker or other holder of record.

Nominees of beneficial owners such as banks, brokers and other holders of record do not have discretionary authority to vote shares without instructions from beneficial owners and cannot vote those shares for the election of directors (Item 1). A broker non-vote occurs when a bank, broker or other holder of record cannot vote shares on a particular proposal because of a lack of discretionary authority and voting instruction. Banks, brokers and other holders of record do have discretionary authority to vote shares without instructions from beneficial owners in connection with certain routine proposals, such as the ratification of the appointment of the Company's independent auditors (Item 2). **All stockholders holding shares through a bank, broker or other holder of record are urged to provide voting instructions to such parties to ensure that their shares are voted at the Annual Meeting.**

Depositary Interests – Form of Instruction

If you hold your shares of Common Stock through Depositary Interests, instead of filling out and returning a Form of Proxy, please complete and return the enclosed Form of Instruction. Computershare Investor Services PLC, as Depositary, will then vote your shares in accordance with your instructions. To be effective, a duly completed Form of Instruction must be received by Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol BS99 6ZY, United Kingdom, no later than 12 noon Eastern Standard Time (5 p.m. Greenwich Mean Time) on Friday, December 14, 2012. Computershare will only vote shares in accordance with your specific instructions. You must provide specific directions as to how you wish your votes to be cast or the Form of Instruction will be rejected and your vote will not be cast. You may also attend the Annual Meeting in person and vote at the Annual Meeting. You may revoke your instructions before the vote is taken by following the instructions in the Explanatory Notes Section of the Form of Instruction. **All stockholders holding shares through Depositary Interests are urged to provide voting instructions to Computershare using the Form of Instruction so that their shares are voted at the Annual Meeting.**

Vote Required

The election of directors (Item 1) shall be determined by plurality vote, which means that the nominees receiving the highest number of votes will be elected. The ratification of the appointment of the Company's independent auditors for the fiscal year ending December 31, 2012 (Item 2) requires the affirmative vote of a majority of the shares present in person or represented by proxy at the Annual Meeting and entitled to vote, and in connection with this Item 2, an abstention has the effect of a vote "Against".

An automated system administered by the Company's registrar, Computershare Investor Services (Jersey) Limited, shall tabulate the votes cast.

(Item 1)

ELECTION OF DIRECTORS

The Board of Directors currently consists of seven directors. All of the current directors have been nominated for re-election this year to hold office until the 2013 Annual Meeting of Stockholders and until their successors are duly elected and qualified or until their earlier death, resignation or removal. The Board of Directors believes that each of these nominees will be able to serve as director if elected. Each proxy will be voted in accordance with the instructions given by the stockholder, however if no instructions are given, the proxies will be voted **FOR** all nominees named below. The election of directors shall be determined by a plurality of the votes cast. For more information about the nominees and the Board of Directors, please refer to the Corporate Governance section of the Annual Report available on the Company's website at *ir.spsy.com*.

Biographical summaries of each of the nominees are set forth below. Data with respect to the number of shares of the Common Stock beneficially owned by the nominee directors as of December 31, 2011 is specified directly below each nominee's biographical summary. All such information has been furnished to the Company by the nominees.

BJ Penn
Non-executive Chairman

Mr. Penn was Acting Secretary of the US Navy from March to May 2009, having previously been Assistant Secretary of the Navy (Installations and Environment) from March 2005. He was also director, Industrial Base Assessments from October 2001 to March 2005, with responsibility for the overall health of the US defense industrial base. He commenced his career as a naval aviator, having received his B.S. from Purdue University, West Lafayette and his M.S. from the George Washington University, Washington, D.C. Mr. Penn has been a member of the Board of Directors since June 2010 and became Chairman of the Board of Directors on 7 June 2011.

Number of shares of Common Stock owned as of December 31, 2011: 0.

Dr. Nabil M. Lawandy
President and Chief Executive Officer

Dr. Lawandy is the founder, President, and Chief Executive Officer of the Company. From 1981 to 1999, Dr. Lawandy was a tenured full professor of Engineering and Physics at Brown University in Providence, Rhode Island. He holds a B.A. in Physics, and an M.Sc. and Ph.D. in Chemistry, each from The Johns Hopkins University. He has authored over 170 reviewed scientific papers and is an inventor on 52 United States and 27 foreign issued patents. He has also received a Presidential Young Investigator award, an Alfred P. Sloan Fellowship, a Rolex Award for Enterprise and a Samuel Slater Award for Innovation.

Number of shares of Common Stock owned as of December 31, 2011: 1,758,540.

Roland Puton
Non-executive Director

Mr. Puton has been a member of the Board of Directors since 1997. He served as the President and Chief Executive Officer of Rolex Watch USA Inc. from 1984 until his retirement in 2000. He holds a degree in business administration from the Swiss Business School. Mr. Puton was a member of the Board of Directors of the American Watch Association and the Fifth Avenue Association. He is a member of the Canadian Twenty-Four Karat Club and is an Honorary Director of the Explorers Club. Also, Mr. Puton is a member of the American Alpine Club, a board member of the American Swiss Foundation, and a member of the Advisory Council of the Swiss Society of New York.

Number of shares of Common Stock owned as of December 31, 2011: 314,514.

Martin Jaskel
Non-executive Director

Mr. Jaskel, a British citizen, is a director of European American Capital Limited, a specialist investment bank advising clients on a global basis on debt and equity capital issues, foreign exchange and trade finance issues. Prior to joining the bank, Mr. Jaskel founded MSJ Associates Limited, a consultancy in capital markets and held a consultancy position with KPMG Corporate Finance. His background was as a partner in W. Greenwell & Co., U.K. Stockbrokers, director of Global Marketing, NatWest Treasury and managing director, Global Trade and Banking Services, NatWest Markets. He has extensive experience as a non-executive director of both private and listed companies. Mr. Jaskel has been a member of the Board of Directors since 2007.

Number of shares of Common Stock owned as of December 31, 2011: 9,960.

Jeffrey Donohue
Non-executive Director

Jeffrey Donohue is Corporate Counsel for Novartis Institutes for BioMedical Research, Inc. ("NIBRI"), the research arm of the global healthcare products company Novartis. Mr. Donohue has provided legal guidance on NIBRI's strategic acquisitions, licensing agreements, academic and government-backed consortia, and drug discovery collaborations. Mr. Donohue also is an Adjunct Professor at Boston University School of Law, where he teaches advanced courses on licensing and intellectual property transactions. Before joining NIBRI, Mr. Donohue served as Corporate Counsel at Vertex Pharmaceuticals Incorporated, a pharmaceutical company based in Cambridge, Massachusetts. Mr. Donohue started his legal career at Kirkpatrick & Lockhart LLP (now K&L Gates), where he spent seven years advising clients on corporate governance, mergers and acquisitions, and securities matters. Mr. Donohue obtained his J.D. from Boston University and a B.A. from Brandeis University. Mr. Donohue joined the Board of Directors on 13 February 2012.

Number of shares of Common Stock owned as of December 31, 2011: 0.

Donald Stanford
Non-executive Director

Mr. Stanford, who was until 2001 the Chief Technical Officer of GTECH Corporation, is an Adjunct Professor of Computer Science and Engineering at Brown University. He holds a B.A. in International Relations and an M.S. in Computer Science and Applied Mathematics, both from Brown University. Over 30 years, he has held every technical leadership position, including Vice President of Advanced Development and Chief Technology Officer. Mr. Stanford serves on several other boards including Times Squared Academy Charter School and the Business Innovation Factory. Mr. Stanford is a member of the Rhode Island Science and Technology Advisory Council. He is also an Adjunct in the School of Engineering at Brown University and is an instructor in the Program in Innovation, Management and Entrepreneurship (PRIME). He serves on the Brown advisory councils to the President and the School of Engineering. In 1999 Mr. Stanford received the Black Engineer of the Year Award for Professional Achievement. In 1999 he also received the Honorable Thurgood Marshall award for community service from the NAACP. In 2002 he received the Brown Graduate School's Distinguished Graduate award and the Rhode Island Professional Engineer's award for Community Service.

Number of shares of Common Stock owned as of December 31, 2011: 0.

Dr. Oussama Salam
Non-executive Director

Dr. Salam is the Chairman of the Hala Salaam Maksoud Foundation. He received a B.Sc. in Civil Engineering from Loughborough University of Technology in 1968, a M.S. in Traffic and Transportation Engineering from the Department of Civil Engineering, Ohio State University in 1969, and a Ph.D. in the Finite Elements Method from the Department of Civil Engineering, Ohio State University in 1974. He served as Director General of the construction department of International Center for Commerce & Contracting, a leading construction company in Saudi Arabia from September 1978 until December 2000. In 1990 he co-founded Pillar BV, a venture capital business-consulting firm based in Paris, and remained a partner until September of 1999. He also co-founded WorldCare Limited, a leading company in the emerging field of global eHealth, and served on its Board of Directors from 1993 until June 1998. Dr. Salam is involved in the business development of these companies in Europe and the Middle East. Currently he lives in Beirut, Lebanon.

Number of shares of Common Stock owned as of December 31, 2011: 3,555,886.

Composition of the Board of Directors and Committees of the Board

The current Board of Directors comprises one executive director, Nabil M. Lawandy, and six independent non-executive directors, BJ Penn, as Chairman, Jeffrey Donohue, Martin Jaskel, Roland Puton, Oussama Salam and Donald Stanford. The Board of Directors usually meets at least every three months to closely monitor the progress of the Company towards the achievement of budgets, targets and strategic objectives.

The Board of Directors also operates three committees: the Audit Committee; the Compensation Committee; and the Government Security Committee.

The Audit Committee comprises Martin Jaskel, as Chairman, and Roland Puton. It has primary responsibility for monitoring the quality of internal controls and ensuring that the financial performance of the Company is properly measured and reported on. It receives and reviews reports from the Company's management and auditors relating to the interim and annual accounts and the accounting and internal control systems in use throughout the Company.

The Compensation Committee comprises Roland Puton, as Chairman, Martin Jaskel, Oussama Salam and Donald Stanford. Among other duties, the Compensation Committee reviews the performance of the Chief Executive Officer and approves his compensation level. The committee also establishes and obtains Board of Director approval of compensation, incentive compensation plans and equity-based plans for executive officers. The committee also makes recommendations to the Board of Directors on proposals for the granting of shares options and other equity incentives pursuant to any share options scheme or equity incentive scheme in operation from time to time.

The Government Security Committee comprises BJ Penn, as Chairman, and Nabil M. Lawandy. It is responsible for ensuring the implementation within the Company of all procedures, organizational matters and other aspects pertaining to the security and safeguarding of information, including the exercise of appropriate oversight and monitoring of operations to ensure that protective measures are effectively maintained and implemented.

Recommendation of the Board of Directors

The Board of Directors unanimously recommends a vote **FOR** each of the nominees listed above to the Board of Directors of the Company.

(Item 2)

RATIFICATION OF INDEPENDENT AUDITORS

The Audit Committee has appointed the firm of Miller Wachman LLP to serve as the independent auditors of the Company during the fiscal year ending December 31, 2012 and is recommending that the stockholders ratify this appointment. Although stockholder ratification is not required by the Company's organizational documents, or applicable law, the Board of Directors is submitting the selection of Miller Wachman LLP for ratification by stockholders as a matter of good corporate practice. Each proxy will be voted in accordance with the instructions given by the stockholders, however if no instructions are given, the proxies will be voted **FOR** approval of ratification of the appointment of the Company's auditors as specified below.

In the event the stockholders fail to ratify the appointment, the Audit Committee will reconsider its selection. Even if the selection is ratified, the Audit Committee, in its discretion, may direct the appointment of a different independent auditing firm at any time during the year if the Audit Committee believes that such a change would be in the best interests of the Company and the stockholders.

Recommendation of the Board of Directors

The Board of Directors unanimously recommends a vote **FOR** the ratification of Miller Wachman LLP to serve as the Company's independent auditors for the fiscal year ending December 31, 2012.

Other Matters

The stockholders are asked to consider and act upon such other business, if any, as may properly come before the Annual Meeting.

Notes and Information

(1) The documents noted at (i), (ii) and (iii) below are available for inspection during normal business hours at the Company's registered office on any business day and will be available at the place where the Annual Meeting is being held from 15 minutes prior to and during the meeting:

- i. Copies of the directors' letters of appointment;
- ii. Copies of the Company's Certificate of Incorporation and by-laws as currently in effect; and
- iii. A complete list of the stockholders entitled to vote at the Annual Meeting, showing the number of shares registered in the name of each stockholder and the address of each stockholder.

(2) Stockholders intending to attend the Annual Meeting are asked to notify the Company that they will be attending the meeting at least 72 hours in advance of the Annual Meeting by emailing or writing to the Company using the email or post address below:

info@spsy.com

Spectra Systems Corporation
Attention: Annual Meeting Planning
321 South Main Street
Providence, Rhode Island 02903
United States of America

(3) To be admitted to the meeting, each stockholder must bring identification and be able to confirm their name and address as it appears on the stock register.

(4) Only holders of Common Stock on the stock register at and as of the close of business on the Record Date shall be entitled to attend and/or vote at the Annual Meeting. Such stockholders can vote in respect of the number of shares registered in their names at that time, but any subsequent changes to the stock register shall be disregarded in determining rights to attend and vote. All votes will be tabulated by Computershare Investor Services (Jersey) Limited, who will separately tabulate affirmative and negative votes and abstentions. Broker non-votes and a stockholder who is present in person or by proxy and who abstains from taking any of the stockholder action described in this Proxy Statement will be included in the number of stockholders present at the Annual Meeting for the purpose of determining the presence of a quorum. Abstentions will not be counted in any of proposals because they are not considered votes cast.

(5) Any stockholder entitled to attend and vote at the Annual Meeting is entitled to appoint one or more proxies (who need not be stockholders of the Company) to attend, and vote in the place of the stockholder. Completion and return of a Form of Proxy or Form of Instruction as applicable will not preclude a stockholder from attending and voting at the meeting in person, should he or she subsequently decide to do so. A Form of Proxy or Form of Instruction, as applicable, which may be used to make such appointment and give proxy instructions is enclosed.

To be effective, a duly completed Form of Proxy, together with any power of attorney or other authority under which it is signed or a notarially certified copy of such power or authority, must reach Computershare Investor Services (Jersey) Limited, The Pavilions, Bridgwater Road, Bristol, BS99 6ZY, United Kingdom by 9:30 a.m. Eastern Standard Time (2:30 p.m. Greenwich Mean Time) on Saturday, December 15, 2012 (or not less than 48 hours before the time fixed for any adjourned meeting).

To be effective, a duly completed Form of Instruction, together with any power of attorney or other authority under which it is signed or a notarially certified copy of such power or authority, must reach Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol, BS99 6ZY, United Kingdom by 12 noon Eastern Standard Time (5 p.m. Greenwich Mean Time) on Friday, December 14, 2012.

(6) If two or more valid but differing appointments of a proxy are received in respect of the same share for use at the same meeting, the one which is last received (regardless of its date or the date of its signature) shall be treated as replacing and revoking the others as regards that share; if the Company is unable to determine which was last received, none of them shall be treated as valid in respect of that share.

(7) A stockholder must inform the Company in writing of any termination of the authority of a proxy.

(8) Any corporation which is a stockholder can appoint one or more corporate representatives who may exercise on its behalf all of its powers as a stockholder provided that, if it is appointing more than one corporate representative, it does not do so in relation to the same shares.

(9) At, or as soon as practicable following the Annual Meeting, the results of the voting at the meeting and the number of abstentions, votes cast for and against and the number of votes withheld in respect of each resolution will be announced publicly and placed on the Company's website (www.ir.spsy.com).

(10) A copy of this Notice of the Annual Meeting of Stockholders and Proxy Statement together with the Company's Annual Report for 2011 and Interim Results for the six months ended June 30, 2012 can be found at the Company's website (www.ir.spsy.com).

(11) The Company's by-laws contain an advance notice provision which regulates a stockholder's ability to submit nominations of directors and other proposals at the Company's Annual Meetings. In addition to the other requirements set forth in the Company's by-laws, in order to be considered timely for possible inclusion at the Company's next Annual Meeting in 2013, notice of a stockholder proposal containing the information specified in the Company's by-laws must be received at the principal executive offices of the Company not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the 2012 Annual Meeting, *provided, however*, that in the event that the date of the 2013 Annual Meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the 2012 Annual Meeting, notice by the stockholder to be timely must be delivered not earlier than the close of business on the 120th day prior to the 2013 Annual Meeting and not later than the close of business on the later of the 90th day prior to the 2013 Annual Meeting or the 10th day following the day on which public announcement of the date of the 2013 Annual Meeting is first made. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for the giving of a stockholder's notice as described above.

The submission of a stockholder proposal does not guarantee that it will be included in the Company's Proxy Statement.

The Company reserves the right to reject, rule out of order or take other appropriate action with respect to any proposal that does not comply with these and other applicable requirements.

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