

Delaware

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The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "SPECTRA SYSTEMS CORPORATION", FILED IN THIS OFFICE ON THE TWENTY-SEVENTH DAY OF JULY, A.D. 2007, AT 10:45 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

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Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 5879796

DATE: 07-27-07

TENTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

SPECTRA SYSTEMS CORPORATION

*(adopted pursuant to §§ 242 and 245 of the General Corporation Law
of the State of Delaware)*

The Certificate of Incorporation of Spectra Systems Corporation (the "Corporation") was filed with the Secretary of the State of Delaware on July 3, 1996 under the name of Spectra Acquisition Corporation. The Certificate of Incorporation has been amended prior to the date hereof, including, *inter alia*, by Certificate of Amendment filed with said Secretary on August 27, 1996 changing its name from Spectra Acquisition Corporation to Spectra Science Corporation and by Certificate of Amendment filed with said Secretary on July 12, 2001 changing its name from Spectra Science Corporation to Spectra Systems Corporation.

FIRST: The name of the corporation (hereinafter called the "Corporation") is Spectra Systems Corporation.

SECOND: The address, including street, number, city and county, of the registered office of the Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808, in the County of New Castle, and the name of the registered agent of the Corporation in the State of Delaware at such address is Corporation Service Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have the authority to issue is *142,882,178* shares consisting of *125,000,000* shares of Common Stock, \$0.01 par value per share (the "Common Stock"), *15,882,178* shares of Preferred Stock, \$0.01 par value per share, with the rights and preferences set forth in this Amended and Restated Certificate of Incorporation (the "Designated Preferred Stock"), and *2,000,000* shares of undesignated Preferred Stock, \$0.01 par value per share (the "Undesignated Preferred Stock"). As used herein, the term "Preferred Stock" used without reference to Designated Preferred or any series of the Designated Preferred Stock, shall mean the Designated Preferred Stock and any other series of Preferred Stock that may be established from time to time by the Board of Directors in accordance herewith, share for share alike and without distinction as to series, except as otherwise expressly provided or as the context otherwise requires.

A. Common Stock.

1. Voting Rights. The holders of shares of Common Stock shall be entitled to one vote for each share so held with respect to all matters voted on by the shareholders of the Corporation, subject in all cases to Paragraph B(5) of this Article Fourth.

*State of Delaware
Secretary of State
Division of Corporations
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2. Liquidation Rights. Subject to the prior and superior right of the Preferred Stock, upon any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Corporation, after payment shall have been made to the holders of the Preferred Stock of the full amount to which they are entitled, the holders of Common Stock shall be entitled to receive that portion of the remaining funds to be distributed. Such funds shall be paid to the holders of Common Stock on the basis of the number of shares of Common Stock held by each of them.

3. Dividends. Dividends may be paid on the Common Stock as and when declared by the Board of Directors; *provided, however*, that no cash dividends may be declared or paid on the Common Stock unless dividends shall first have been declared and paid with respect to the Preferred Stock, as provided in Paragraph B(3) of this Article Fourth.

B. Preferred Stock.

1. Designation.

- 4,167,000 shares of the Preferred Stock of the Corporation are hereby designated as "Series A Convertible Preferred Stock" and are hereinafter referred to as the "Series A Preferred";
- 1,700,000 shares of the Preferred Stock of the Corporation are hereby designated as "Series B Convertible Preferred Stock" and are hereinafter referred to as the "Series B Preferred";
- 2,000,000 shares of the Preferred Stock are hereby designated as "Series B-1 Convertible Preferred Stock" and are hereinafter referred to as "Series B-1 Preferred";
- 600,000 shares of the Preferred Stock are hereby designated as "Series B-2 Convertible Preferred Stock" and are hereinafter referred to as "Series B-2 Preferred";
- 150,000 shares of the Preferred Stock are hereby designated as "Series B-3 Convertible Preferred Stock" and are hereinafter referred to as "Series B-3 Preferred";
- 100,000 shares of the Preferred Stock are hereby designated as "Series B-4 Convertible Preferred Stock" and are hereinafter referred to as "Series B-4 Preferred";
- 100,000 shares of the Preferred Stock are hereby designated as "Series B-5 Convertible Preferred Stock" and are hereinafter referred to as "Series B-5 Preferred";
- 1,777,778 shares of the Preferred Stock of the Corporation are hereby designated as "Series C Convertible Preferred Stock" and are hereinafter referred to as the "Series C Preferred";
- 2,362,400 shares of the Preferred Stock of the Corporation are hereby designated as "Series D Convertible Preferred Stock" and are hereinafter referred to as the "Series D Preferred"; and

- 2,925,000 shares are hereby designated "Series E-1 Convertible Preferred Stock" and are hereinafter referred to as the "Series E-1 Preferred".

As used herein, the term "Designated Preferred Stock" used without reference to Series A Preferred, Series B Preferred, Series B-1 Preferred, Series B-2 Preferred, Series B-3 Preferred, Series B-4 Preferred, Series B-5 Preferred, Series C Preferred, Series D Preferred, or Series E-1 Preferred, means the Series A Preferred, the Series B Preferred, the Series B-1 Preferred, the Series B-2 Preferred, the Series B-3 Preferred, the Series B-4 Preferred, the Series B-5 Preferred, the Series C Preferred, the Series D Preferred, and the Series E-1 Preferred, share for share alike and without distinction as to series, except as otherwise expressly provided or as the context otherwise requires.

2. Voting. Except as may be otherwise provided herein or by law, the Preferred Stock shall vote with the Common Stock as a single class on all actions to be taken by the stockholders of the Corporation. Each share of Designated Preferred Stock shall entitle the holder thereof to such number of votes per share on each such action as shall equal the number of whole shares of Common Stock into which each such share of Designated Preferred Stock is convertible.

3. Dividends. During any fiscal year of the Corporation, no dividends (other than dividends or distributions payable solely in shares of Common Stock of the Corporation) shall be paid or declared, and no other distribution shall be made on or with respect to the Common Stock of the Corporation unless and until dividends with respect to the Designated Preferred Stock shall have been paid, or declared and set aside for payment, during such fiscal year in an amount which the holders of Designated Preferred Stock would have received if they had converted their Designated Preferred Stock into Common Stock immediately prior to the record date for such dividend or distribution. During any fiscal year of the Corporation, no dividends (other than dividends or distributions payable solely in shares of Common Stock of the Corporation) shall be paid or declared and no other distribution shall be made, on or with respect to any series of Designated Preferred Stock unless and until equal dividends (determined with respect to the Designated Preferred Stock on the basis of the number of shares of Common Stock into which a share of such series of Designated Preferred Stock then is convertible) with respect to the other series of Designated Preferred Stock and the Common Stock shall have been paid, or declared and set aside for payment.

4. Liquidation. Upon any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, liquidation of the assets of the Corporation shall be accomplished as follows:

4(A). Before any distribution or payment is made upon any other capital stock of the Corporation,

- holders of the Series E-1 Preferred shall first be entitled to receive \$5.50 per share of Series E-1 Preferred from the assets of the Corporation, which amounts shall be subject to equitable adjustment whenever there shall occur a stock dividend, stock split, combination, reorganization, recapitalization, reclassification, or other similar event (collectively, an "Equity Adjustment") with respect to the Series E-1 Preferred (the "Series E-1 Liquidation Preference"), and, after payment in full of the Series E-1 Liquidation Preference to all holders of Series E-1 Preferred,

- holders of the Series C Preferred and the Series D Preferred shall then be entitled to receive \$2.25 per share of Series C Preferred and \$5.00 per share of Series D Preferred (on a *pari passu* basis), from the assets of the Corporation, which amounts shall be subject to equitable adjustment whenever there shall occur an Equity Adjustment with respect to the Series C Preferred or the Series D Preferred as applicable (the amount to be received by holders of Series C Preferred is referred to as the “Series C Liquidation Preference Payment” and the amount to be received by holders of Series D Preferred is referred to as the “Series D Liquidation Preference Payment”), and, after payment of all preferential amounts to be paid to the holders of Series C Preferred and Series D Preferred to all holders of Series C Preferred and Series D Preferred,
- holders of the Series B-1 Preferred, the Series B-2 Preferred, the Series B-3 Preferred, the Series B-4 Preferred, and the Series B-5 Preferred shall then be entitled to receive \$2.75 per share in the case of the Series B-1 Preferred, \$2.50 per share in the case of the Series B-2 Preferred, \$2.00 per share in the case of the Series B-3 Preferred, \$1.25 per share in the case of the Series B-4 Preferred, and \$1.00 per share in the case of the Series B-5 Preferred on a *pari passu* basis, subject to equitable adjustment whenever there shall occur an Equitable Adjustment with respect to the Series B-1 Preferred, the Series B-2 Preferred, the Series B-3 Preferred, the Series B-4 Preferred, or the Series B-5 Preferred (the amount to be received is referred to as the “Series B-1 Preferred Liquidation Amount”, “Series B-2 Preferred Liquidation Amount”, “Series B-3 Preferred Liquidation Amount”, “Series B-4 Preferred Liquidation Amount”, and “Series B-5 Preferred Liquidation Amount”, respectively) and, after payment in full of the Series B-1 Liquidation Amount, the Series B-2 Liquidation Amount, the Series B-3 Liquidation Amount, the Series B-4 Liquidation Amount, and the Series B-5 Liquidation Amount to all holders of Series B-1 Preferred, to all holders of Series B-2 Preferred, to all holders of Series B-3 Preferred, to all holders of Series B-4 Preferred, and to all holders of Series B-5 Preferred (the “Series B-1 Liquidation Preference Payment”, the “Series B-2 Liquidation Preference Payment”, the “Series B-3 Liquidation Preference Payment”, the “Series B-4 Liquidation Preference Payment”, and the “Series B-5 Liquidation Preference Payment”),
- holders of the Series B Preferred shall then be entitled to receive \$1.50 per share of Series B Preferred from the assets of the Corporation, which amount shall be subject to equitable adjustment whenever there shall occur an Equity Adjustment with respect to the Series B Preferred (the “Series B Liquidation Preference Payment”), and after payment of all preferential amounts to be paid to all holders of Series B Preferred, and

- holders of the Series A Preferred shall then be entitled to receive \$1.00 per share of Series A Preferred from the assets of the Corporation, which amount shall be subject to equitable adjustment whenever there shall occur an Equity Adjustment with respect to the Series A Preferred (the “Series A Liquidation Preference Payment”).

The Series E-1 Liquidation Preference, the Series D Liquidation Preference, the Series C Liquidation Preference, the Series B-1 Liquidation Preference, the Series B-2 Liquidation Preference, the Series B-3 Liquidation Preference, the Series B-4 Liquidation Preference, the Series B-5 Liquidation Preference, the Series B Liquidation Preference, and the Series A Liquidation Preference are each separately referred to as a “Designated Preferred Stock Liquidation Preference” and are collectively referred to as the “Designated Preferred Stock Liquidation Preferences”. For the purpose of clarity, the Series E-1 Liquidation Preference is intended to be senior in preference to the Series D Liquidation Preference and Series C Liquidation Preference (the Series D Liquidation Preference and Series C Liquidation Preference being *pari passu* as between themselves), which are senior in preference to the Series B-1 Liquidation Preference, the Series B-2 Liquidation Preference, the Series B-3 Liquidation Preference, the Series B-4 Liquidation Preference, and the Series B-5 Liquidation Preference (being *pari passu* as between themselves), which are senior in preference to the Series B Liquidation Preference, which is senior in preference to the Series A Liquidation Preference.

4(B). Upon any such liquidation, dissolution or winding up of the Corporation, if the assets of the Corporation available for distribution to its stockholders shall be insufficient to permit the payment in full of a Designated Preferred Stock Liquidation Preference, the assets shall be the assets remaining after payment of such amount shall be paid ratably to the holders of such series of Designated Preferred Stock. Any assets of the Corporation available for distribution after payment in full of the Designated Preferred Stock Liquidation Preferences shall be paid to the holders of Common Stock in proportion to the number of shares of Common Stock held by each such holder.

4(C). Written notice of any liquidation, dissolution or winding up, stating a payment date and the place where payments shall be made, shall be given by mail, postage prepaid (or by facsimile to non-United States residents), not less than 30 days prior to the payment date stated therein to the holders of record of Designated Preferred Stock, such notice to be addressed to each such holder at its address as shown by the records of the Corporation. By the affirmative vote of at least 51% of the Designated Preferred Stock then outstanding, voting as a single class, a consolidation or merger of the Corporation into or with any other entity which results in the holders of the capital stock of the Corporation immediately prior to such consolidation or merger holding less than 50% of the voting stock of the surviving entity, and the sale or transfer by the Corporation of all or substantially all of its assets, shall each be deemed to be a liquidation, dissolution or winding up of the Corporation within the meaning of the provisions of this Paragraph 4.

5. Restrictions. The Corporation will not alter the powers, preferences or rights of any series of Designated Preferred Stock so as to affect them adversely without

the approval of the holders of at least 51% of the then outstanding shares of that series, voting as a separate class, either in writing or by ballot at a duly called meeting. At any time when shares of Designated Preferred Stock are outstanding, and in addition to any other vote required by law, the Corporation will not, without the approval of the holders of at least 51% of the then outstanding shares of Designated Preferred Stock, voting as a single class, either in writing or by ballot at a duly called meeting:

5(A). authorize or create a series or class of stock, or any other security having equity features, senior to or on parity with any series of the Designated Preferred Stock as to dividends or in liquidation;

5(B). increase the authorized number of shares of any series of Designated Preferred Stock, or alter the powers, preferences or rights of the holders of shares of any series of Designated Preferred Stock so as to affect them adversely;

5(C). declare or pay any dividend or distribution on any capital stock;

5(D). take any action that would result in the merger or consolidation of the Corporation with or into any other entity, or the sale, lease or other disposition of all or substantially all of the property and assets of the Corporation;

5(E). create, incur, or assume any indebtedness in excess of \$1,000,000 individually or in the aggregate, or pledge any assets with a value in excess of such amount, or enter into any contract or commitments to do any of the foregoing;

5(F). apply any of its assets to the redemption, retirement, purchase or acquisition, directly or indirectly (including through a subsidiary), or otherwise, of any shares of the Corporation's capital stock (other than redemptions of Series E Preferred as set forth herein); or

5(G). amend, alter or repeal any of the foregoing provisions of this Paragraph 5,

provided, however, that nothing in this Section 5 shall restrict rights and preferences granted to shares of currently undesignated Preferred Stock in accordance with the provisions of this Amended and Restated Certificate of Incorporation.

6. Conversions. The holders of shares of Designated Preferred Stock shall have the following conversion rights:

6(A). Right to Convert. Subject to the terms and conditions of this Paragraph 6, the holder of any share or shares of Designated Preferred Stock shall have the right, at its option at any time (except that upon any liquidation of the Corporation the right of conversion shall terminate at the close of business on the business day fixed for payment of the amount distributable on the Designated Preferred Stock), to convert any such shares into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Conversion Value (as hereinafter defined)

by the Conversion Price (as hereinafter defined) in effect at the time of conversion.

The "Conversion Value" shall equal at any time the sum of **(a)** the product obtained by multiplying the number of shares of Designated Preferred Stock to be converted by:

- \$5.50 with respect to the Series E-1 Preferred;
- \$5.00 with respect to the Series D Preferred;
- \$2.25 with respect to the Series C Preferred;
- \$2.75 with respect to the Series B-1 Preferred;
- \$2.50 with respect to the Series B-2 Preferred;
- \$2.00 with respect to the Series B-3 Preferred;
- \$1.25 with respect to the Series B-4 Preferred;
- \$1.00, with respect to the Series B-5 Preferred;
- \$1.50 with respect to the Series B Preferred; and
- \$1.00 with respect to the Series A Preferred,

in all cases, with all such dollar amounts to be adjusted appropriately in the event of any stock dividend, stock split, combination or similar event affecting the Designated Preferred Stock; and **(b)** the amount of all accrued but unpaid dividends on the shares of Designated Preferred Stock, if any, surrendered for conversion to the date upon which the conversion is deemed to be effective.

The "Conversion Price" shall be

- \$5.50 per share of Series E-1 Preferred;
- \$5.00 per share of Series D Preferred;
- \$2.25 per share of Series C Preferred;
- \$2.75 per share of Series B-1 Preferred;
- \$2.50 per share of Series B-2 Preferred;
- \$2.00 per share of Series B-3 Preferred;
- \$1.25 per share of Series B-4 Preferred;
- \$1.00 per share of Series B-5 Preferred;
- \$1.50 per share of Series B Preferred; and
- \$1.00 per share of Series A Preferred,

subject to adjustment as hereinafter provided.

Notwithstanding the foregoing, in the event that prior to December 31, 2007, the Corporation completes a public offering of its Common Stock, generating gross proceeds of at least \$5,000,000, the "Conversion Price" shall be \$1.00 per share for all shares of Designated Preferred Stock.

The rights of conversion referenced above shall be exercised by the holder thereof giving written notice that the holder elects to convert a stated number of shares of Designated Preferred Stock into Common Stock and by surrender of a certificate or certificates for the shares so to be converted to the Corporation at its principal office (or such other office or agency of the Corporation as the Corporation may designate by notice in writing to the holders of the Designated Preferred Stock) at any time during its usual business hours, together with a statement of the name or names (with address and taxpayer identification number) in which the certificate or certificates for shares of Common Stock shall be issued.

6(B). Issuance of Certificates; Time Conversion Effected. Promptly after the receipt of the written notice referred to in Subparagraph 6(A) and surrender of the certificate or certificates for the share or shares of Preferred Stock to be converted, the Corporation shall issue and deliver to the holder a certificate or certificates, registered in such name or names as such holder may direct, for the number of whole shares of Common Stock issuable upon the conversion of such share or shares of Designated Preferred Stock. To the extent permitted by law, such conversion shall be deemed to have been effected and the Conversion Price shall be determined, as of the close of business on the date on which such written notice shall have been received by the Corporation and the certificate or certificates for such share or shares shall have been surrendered as aforesaid, and at such time the rights of the holder of such share or shares of Designated Preferred Stock shall cease, and the person or persons in whose name or names any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become the holder or holders of record of the shares represented thereby.

6(C). Fractional Shares; Dividends; Partial Conversion. No fractional shares shall be issued upon conversion of Preferred Stock into Common Stock. If any fractional share of Common Stock would, except for the provisions of the foregoing sentence, be delivered upon such conversion, the Corporation, in lieu of delivering such fractional share, shall pay to the holder surrendering the Designated Preferred Stock for conversion an amount in cash equal to the greater of (a) the current market price of such fractional share as determined in good faith by the Board of Directors of the Corporation, and (b) the *pro rata* amount of the Conversion Price of such fractional share. No payment or adjustment shall be made upon any conversion on account of any cash dividends on the Common Stock issued upon such conversion, the record date for which dividends is prior to the date such conversion is deemed to be effective as provided in Subparagraph 6(B). In case the number of shares of Preferred Stock represented by the certificate or certificates surrendered pursuant to Subparagraph 6(A) exceeds the number of shares converted, the Corporation shall, upon such conversion, execute and deliver to the holder, at the expense of the Corporation, a new certificate or certificates for the number of shares of Preferred Stock represented by the certificate or certificates surrendered which are not to be converted.

6(D). Adjustment of Conversion Price Upon Issuance of Common Stock. Except as provided in Subparagraph 6(E), if and whenever the Corporation shall issue or sell or is, in accordance with Subparagraphs 6(D)(1) through 6(D)(6), deemed to have issued or sold any shares of Common Stock for a consideration per share less than the Conversion Price for the applicable Designated Preferred Stock, in effect immediately prior to the time of such issuance or sale, then, forthwith upon such issuance or sale, the Conversion Price applicable to the series of Designated Preferred Stock subject to this adjustment shall be reduced to an amount equal to the quotient obtained by dividing:

(i) an amount equal to the sum of (x) the number of shares of all Common Stock issued and outstanding or deemed in accordance with Subparagraph 6(D)(1) through 6(D)(6) hereof to be issued and outstanding immediately prior to such issuance or sale (with each share of Preferred Stock being deemed for such purpose to be equal to the number of shares of Common Stock, including fractions of a share, into which such share is convertible immediately prior to such issuance or sale) multiplied by the Conversion Price for the series of Preferred Stock subject to this adjustment in effect immediately prior to the time of such issuance or sale, plus (y) the aggregate consideration received by the Corporation for such issuance or sale, by

(ii) the total number of shares of Common Stock issued and outstanding or deemed in accordance with Subparagraph 6(D)(1) through 6(D)(6) hereof to be issued and outstanding immediately after such issuance or sale (with each share of Preferred Stock being deemed for such purpose to be equal to the number of shares of Common Stock, including fractions of a share, into which such share is convertible immediately prior to such issuance or sale).

If the Conversion Price of more than one series of Designated Preferred Stock is being adjusted at the same time pursuant to the foregoing, the adjustment for each series shall be undertaken without giving effect to the adjustment made with respect to the other series.

For purposes of this Subparagraph 6(D), the following Subparagraphs 6(D)(1) to 6(D)(6) shall also be applicable:

6(D)(1). In case at any time the Corporation shall in any manner grant (whether directly or by assumption in a merger or otherwise) any warrants or other rights to subscribe for or to purchase, or any options for the purchase of, Common Stock or any stock or security convertible into or exchangeable for Common Stock (such warrants, rights or options being called "Options" and such convertible or exchangeable stock or securities being called "Convertible Securities") whether or not such Options or the right to convert or exchange any such Convertible Securities are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such Options or upon the conversion or exchange of such Convertible Securities (determined by dividing (i) the total amount, if any, received or receivable by the Corporation as consideration for the granting of such

Options, plus the minimum aggregate amount of additional consideration payable to the Corporation upon the exercise of all such Options, plus, in the case of such Options which relate to Convertible Securities, the minimum aggregate amount of additional consideration, if any, payable upon the issuance or sale of such Convertible Securities and upon the conversion or exchange thereof, by (ii) the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon the conversion or exchange of all such Convertible Securities issuable upon the exercise of such Options) shall be less than the Conversion Price in effect and applicable to a series of Designated Preferred Stock immediately prior to the time of the granting of such Options, then the shares of Common Stock issuable upon the exercise of such Options or upon conversion or exchange of such Convertible Securities issuable upon the exercise of such Options shall be deemed to have been issued for such price per share as of the date of granting of such Options or the issuance of such Convertible Securities and thereafter shall be deemed to be outstanding. Except as otherwise provided in Subparagraph 6(D)(3), no adjustment of the Conversion Price for any such series of Designated Preferred Stock shall be made thereafter upon the actual issuance of such Common Stock or of such Convertible Securities upon exercise of such Options or upon the actual issuance of such Common Stock upon conversion or exchange of such Convertible Securities.

6(D)(2). Issuance of Convertible Securities. In case the Corporation shall in any manner issue (whether directly or by assumption in a merger or otherwise) or sell any Convertible Securities, whether or not the rights to exchange or convert any such Convertible Securities are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange (determined by dividing (i) the total amount received or receivable by the Corporation as consideration for the issuance or sale of such Convertible Securities, plus the minimum aggregate amount of additional consideration, if any, payable to the Corporation upon the conversion or exchange thereof, by (ii) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of all such Convertible Securities) shall be less than the Conversion Price in effect and applicable to a series of Designated Preferred Stock immediately prior to the time of such issuance or sale, then the shares of Common Stock issuable upon conversion or exchange of such Convertible Securities shall be deemed to have been issued for such price per share as of the date of the issuance or sale of such Convertible Securities and thereafter shall be deemed to be outstanding. Except as otherwise provided in Subparagraph 6(D)(3), no further adjustment of the Conversion Price for any such series of Designated Preferred Stock shall be made thereafter upon the actual issuance of such Common Stock upon conversion or exchange of such Convertible Securities. If any such issuance or sale of such Convertible Securities is made upon exercise of any options to purchase any such Convertible Securities for which adjustments of the Conversion Price for any series of Designated Preferred Stock have been or are to be made pursuant to other provisions of this Subparagraph 6(D),

no further adjustment of such Conversion Price shall be made by reason of such issuance or sale.

6(D)(3). Change in Option Price or Conversion Rate.

Upon the happening of any of the following events, namely, if the purchase price provided for in any Option referred to in Subparagraph 6(D)(1), the additional consideration, if any, payable upon the conversion or exchange of any Convertible Securities referred to in Subparagraph 6(D)(1) or 6(D)(2), or the rate at which Convertible Securities referred to in subparagraph 6(D)(1) or 6(D)(2) are convertible into or exchangeable for Common Stock shall change at any time (including, but not limited to, changes under or by reason of provisions designed to protect against dilution), the Conversion Price for each series of Designated Preferred Stock in effect at the time of such event shall forthwith be readjusted to the Conversion Price for such series of Designated Preferred Stock which would have been in effect at such time had such Options or Convertible Securities still outstanding provided for such changed purchase price, additional consideration or conversion rate, as the case may be, at the time initially granted, issued or sold, but only if as a result of such adjustment, such Conversion Price then in effect hereunder is thereby reduced. On the expiration of any such Options without exercise of any thereof or the termination of any such right to convert or exchange such Convertible Securities without conversion or exchange of any thereof, the Conversion Price for such series of Designated Preferred Stock then in effect hereunder shall forthwith be increased to the Conversion Price which would have been in effect at the time of such expiration or termination had such Option or Convertible Securities never been issued.

6(D)(4). Consideration for Stock.

In case any shares of Common Stock, Options or Convertible Securities shall be issued or sold for cash, the consideration received therefor shall be deemed to be the amount received by the Corporation therefor, without deduction therefrom of any expenses incurred or any underwriting commissions or concessions paid or allowed by the Corporation in connection therewith. In case any shares of Common Stock, Options or Convertible Securities shall be issued or sold for a consideration other than cash, the amount of the consideration other than cash received by the Corporation shall be deemed to be the fair value of such consideration as determined in good faith by the Board of Directors of the Corporation, without deduction therefrom of any expenses incurred or any underwriting commissions or concessions paid or allowed by the Corporation in connection therewith. In case any Options shall be issued in connection with the issuance and sale of other securities of the Corporation, together comprising one integral transaction in which no specific consideration is allocated to such Options by the parties thereto, such Options shall be deemed to have been issued for such consideration as determined in good faith by the Board of Directors of the Corporation.

6(D)(5).

Record Date. In case the Corporation shall take a record of the holders of its Common Stock for the purpose of entitling them (a) to receive a dividend or other distribution payable in Common

Stock, Options or Convertible Securities, or **(b)** to subscribe for or purchase Common Stock, Options or Convertible Securities, then such record date shall be deemed to be the date of the issuance or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

6(D)(6). Treasury Shares. The disposition of any shares owned or held by or for the account of the Corporation shall be considered an issuance or sale of Common Stock for the purposes of this Subparagraph 6(D).

6(E). Certain Issuances Excepted. Anything herein to the contrary notwithstanding, the Corporation shall not be required to make any adjustment of the Conversion Price for any series of Designated Preferred Stock upon issuance of **(1)** Common Stock upon the conversion of any shares of Preferred Stock; **(2)** Options granted to employees and other eligible participants, and shares issued upon the exercise thereof, under compensatory plans or agreements approved by at least a majority of the Board of Directors; **(3)** Options or Convertible Securities which are outstanding as of July 15, 2002, and shares of Common Stock issued upon the conversion or exercise of such Options or Convertible Securities; **(4)** Options to purchase shares of the Corporation's Common Stock with an exercise price of \$5.50 per share issued **(i)** pursuant to the Recapitalization Agreement, dated March 1, 2003, by and among the Corporation and the holders of the Corporation's Series E Preferred Stock; or **(ii)** pursuant to the Corporation's Series E-1 Preferred Stock offering, which was commenced on or about June 6, 2003, as amended, and shares of Common Stock issued upon the conversion or exercise of such Options or Convertible Securities; or **(5)** shares of Preferred Stock issued upon the exercise of Options pursuant to the Discount Warrant Offering as approved by the Board of Directors of the Corporation on July 19, 2004 and outstanding on such date; provided that such Options are exercised on or prior to January 31, 2005; or **(6)** Common Stock or Convertible Securities issued as part of the consideration involving an acquisition by the Corporation of another entity or a substantial amount of assets in a transaction not in the ordinary course of business; or involving a merger of the Corporation with a nonaffiliated entity.

6(F). Subdivision or Combination of Common Stock. In case the Corporation shall at any time subdivide (by any stock split, stock dividend or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Conversion Price for each series of Designated Preferred Stock in effect immediately prior to such subdivision shall be proportionately reduced, and, conversely, in case the outstanding shares of Common Stock shall be combined into a smaller number of shares, the Conversion Price for each series of Designated Preferred Stock in effect immediately prior to such combination shall be proportionately increased.

6(G). Reorganization or Reclassification. If any capital reorganization or reclassification of the capital stock of the Corporation shall be effected in such a way that holders of Common Stock shall be entitled to receive stock, securities or assets with respect to or in exchange for Common Stock,

then, as a condition of such reorganization or reclassification, lawful and adequate provisions shall be made whereby each holder of shares of Designated Preferred Stock shall thereupon have the right to receive, upon the basis and upon the terms and conditions specified herein and in lieu of the shares of Common Stock immediately theretofore receivable upon the conversion of such shares of Designated Preferred Stock, such shares of stock, securities or assets as may be issued or payable with respect to or in exchange for a number of outstanding shares of such Common Stock equal to the number of shares of such Common Stock receivable upon such conversion had such reorganization or reclassification not taken place, and in any such case appropriate provision shall be made with respect to the rights and interests of such holder to the end that the provisions hereof (including without limitation provisions for adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as may be, in relation to any shares of stock, securities or assets thereafter deliverable upon the exercise of such conversion rights.

6(H). Notice of Adjustment. Upon any adjustment of the Conversion Price for any series of Designated Preferred Stock, the Corporation shall give written notice thereof, by first class mail, postage prepaid or by facsimile, addressed to each holder of shares of Designated Preferred Stock at the address of such holder as shown on the books of the Corporation, which notice shall state the Conversion Price for the series of Designated Preferred Stock resulting from such adjustment, setting forth in reasonable detail the calculation upon which such adjustment is based.

6(I). Other Notices. In case at any time:

(i) the Corporation shall declare any dividend upon its Common Stock payable in cash or stock or make any other distribution to the holders of its Common Stock;

(ii) the Corporation shall offer for subscription *pro rata* to the holders of its Common Stock any additional shares of stock of any class, or other rights;

(iii) there shall be any capital reorganization or reclassification of the capital stock of the Corporation, or a consolidation or merger of the Corporation with or into, or a sale of all or substantially all its assets to, another entity or entities; or

(iv) there shall be a voluntary or involuntary dissolution, liquidation or winding up of the Corporation; then, in any one or more of said cases, the Corporation shall give, by first class mail, postage prepaid, or by facsimile, addressed to each holder of any shares of Preferred Stock at the address of such holder as shown on the books of the Corporation, (i) at least 10 days' prior written notice of the date on which the books of the Corporation shall close or a record shall be taken for such dividend, distribution or subscription rights or for determining rights to vote in respect of any such reorganization, reclassification, consolidation, merger, sale, dissolution, liquidation or winding up and (ii) in the case of any such reorganization, reclassification, consolidation, merger, sale, dissolution, liquidation or winding up, at least 20 days' prior

written notice of the date when the same shall take place. Such notice in accordance with the foregoing clause shall also specify **(a)** in the case of any such dividend, distribution or subscription rights, the date on which the holders of Common Stock shall be entitled thereto, and **(b)** the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon any such reorganization, reclassification, consolidation, merger, sale, dissolution, liquidation or winding up, as the case may be.

6(J). Stock to be Reserved. The Corporation will at all times reserve and keep available out of its authorized Common Stock, solely for the purpose of issuance upon the conversion of Preferred Stock as herein provided, such number of shares of Common Stock as shall then be issuable upon the conversion of all outstanding shares of Designated Preferred Stock. The Corporation covenants that all shares of Common Stock which shall be so issued shall be duly and validly issued and fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof, and, without limiting the generality of the foregoing, the Corporation covenants that it will from time to time take all such action as may be requisite to ensure that the par value per share of the Common Stock is at all times equal to or less than the Conversion Price for each series of Designated Preferred Stock in effect at the time. The Corporation will take all such action as may be necessary to ensure that all such shares of Common Stock may be so issued without violation of any applicable law or regulation, or of any requirement of any national securities exchange upon which the Common Stock may be listed or any national securities association which may provide quotations of the sale prices of the Common Stock.

6(K). No Reissuance of Preferred Stock. Shares of Designated Preferred Stock which are converted into shares of Common Stock as provided herein shall not be reissued, and shall be cancelled; the authorized shares of the Corporation shall be reduced accordingly.

6(L). Issuance Tax. The issuance of certificates for shares of Common Stock upon conversion of Designated Preferred Stock shall be made without charge to the holders thereof for any issuance tax in respect thereof, provided that the Corporation shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than that of the holder of the Designated Preferred Stock which is being converted.

6(M). Closing of Books. The Corporation will at no time close its transfer books against the transfer of any Designated Preferred Stock or of any shares of Common Stock issued or issuable upon the conversion of any shares of Designated Preferred Stock in any manner which interferes with the timely conversion of such Preferred Stock, except as may otherwise be required to comply with applicable securities laws.

6(N). Definition of Common Stock. As used in this Paragraph 6, the term "Common Stock" shall mean and include the Corporation's authorized Common Stock, \$0.01 par value, as constituted on the date of filing of this Amended and Restated Certificate of Incorporation, and shall also include any

capital stock of any class of the Corporation thereafter authorized which shall neither be limited to a fixed sum or percentage of par value in respect of the rights of the holders thereof to participate in dividends nor entitled to a preference in the distribution of assets upon the voluntary or involuntary liquidation, dissolution or winding up of the Corporation; *provided* that the shares of Common Stock receivable upon conversion of shares of Preferred Stock shall include only shares designated as Common Stock of the Corporation on the date of filing of this instrument, or in case of any reorganization or reclassification of the outstanding shares thereof, the stock, securities or assets provided for in Subparagraph 6(G).

6(O). Automatic Conversion. All outstanding shares of Designated Preferred Stock shall convert automatically to shares of Common Stock according to the provisions of Subparagraph 6(A) immediately prior to a public offering of the Company's Common Stock within or outside the United States which raises gross proceeds of at least \$5,000,000.

7. Amendments. No provision of these terms of the Designated Preferred Stock may be amended or waived without the written consent or affirmative vote of the holders of at least 51% of the then outstanding shares of Designated Preferred Stock.

C. Undesignated Preferred Stock.

The Board of Directors of the Corporation is hereby expressly vested with the power to issue one or more series of the Undesignated Preferred Stock of the Corporation from time to time and by resolution to designate the powers, designations, preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions of any class of stock or any series of such class of stock to the extent not inconsistent with the provisions of this Article Fourth or in conflict with the powers, designations, preferences or relative, participating, optional or other special rights, or the qualifications, limitations or restrictions of any other class or series of such class fixed by resolution of the Board of Directors and set forth in a certificate of designation filed with the Secretary of State of Delaware.

FIFTH: The Corporation is to have perpetual existence.

SIXTH: Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this corporation under the provisions of Section 291 Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provision of Section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if

sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

SEVENTH: The business and affairs of the corporation shall be managed by or under the direction of its Board of Directors. In furtherance, and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors is expressly authorized to:

- adopt, amend, alter, change or repeal the By-laws of the Corporation; *provided*, however, that no By-laws hereafter adopted shall invalidate any prior act of the directors that would have been valid if such new by-laws had not been adopted; and *provided further* that any such adoption, amendment, alteration, change or repeal shall not;
- determine the rights, powers, duties, rules and procedures that affect the power of the Board of Directors to manage and direct the business and affairs of the corporation, including the power to designate and empower committees of the Board of Directors, to elect, appoint and empower the officers and other agents of the corporation, and to determine the time and place of, and the notice requirements for, Board meetings, as well as quorum and voting requirements for, and the manner of taking, Board action; and
- exercise all such powers and do all such acts as may be exercised or done by the corporation, subject to the provisions of the laws of the State of Delaware, this Amended and Restated Certificate of Incorporation and the By-laws of the Corporation.

The number of directors constituting the Board of Directors shall be as specified in the By-laws of the Corporation.

If any vacancies occur in the Board of Directors, or if any new directorships are created, they may be filled only by the affirmative vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. Each director so chosen shall hold office until the end of the term set for the director whose death, removal or resignation caused such vacancy and until his successor is duly elected and shall qualify. If there are no directors in office, any officer or stockholder may call a special meeting of stockholders in accordance with the provisions of this Amended and Restated Certificate of Incorporation or the By-laws, at which meeting such vacancies shall be filled.

Except as otherwise provided by law or the corporation's by-laws, any director or the entire Board of Directors may be removed (i) with or without cause by the affirmative vote of the holders of a majority of the then-outstanding shares of capital stock of the Corporation then entitled to vote at an election of directors or (ii) for cause by the affirmative vote of two-thirds of the remaining directors.

Any director may resign at any time by giving written notice to the Board of Directors, the Chairman of the Board, if any, or the President or Secretary of the corporation. Unless otherwise specified in such written notice, a resignation shall take

effect on delivery thereof to the Board of Directors or the designated officer. It shall not be necessary for a resignation to be accepted before it becomes effective.

No director of the Corporation shall have any personal liability to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided, however, that the foregoing shall not eliminate or limit the liability of a director of the Corporation **(i)** for any breach of such director's duty of loyalty to the Corporation or its stockholders, **(ii)** for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, **(iii)** under Section 174 of the General Corporation Law of the State of Delaware, or **(iv)** for any transactions from which the director derived an improper personal benefit.

EIGHTH: The Corporation may, to the fullest extent permitted by Section 145 of the General Corporation Law of the State of Delaware, as the same may be amended and supplemented, indemnify any and all persons whom it shall have the power to indemnify under said section from and against any and all of the expenses, liabilities or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any By-law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

NINTH: From time to time any of the provisions of this Amended and Restated Certificate of Incorporation may be amended, altered or repealed, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said laws, except that any amendment shall be made by the holders of at a majority of the outstanding shares of the capital stock of the Corporation entitled to vote therefor, and all rights at any time conferred upon the stockholders of the Corporation by this certificate of incorporation are granted subject to the provisions of this Article Ninth.

Spectra Systems Corporation has caused this Amended and Restated Certificate of Incorporation to be executed and acknowledged by Nabil M. Lawandy, its President, this July 27, 2007.

SPECTRA SYSTEMS CORPORATION

By: /s/ Nabil M. Lawandy
Nabil M. Lawandy, President
