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UNITED STATES
SECURITIES AND EXCHANGE
COMMISSION

Washington, D.C. 20549

FORM 10-K/A
AMENDMENT NO. 1 TO

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended March 30, 2002, or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the transition period from _____ to _____ Commission File No. 0-12719

GIGA-TRONICS INCORPORATED

(Exact name of registrant as specified in its charter)

California	94-2656341
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4650 Norris Canyon Road, San Ramon, CA	94583
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number: (925) 328-4650

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
None	None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, No par value

(Title of class)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

The aggregate market value of voting stock held by non-affiliates of the Registrant calculated on the closing average bid and asked prices as of May 16, 2002 was $11,733,699. For purposes of this determination only, directors and officers of the Registrant have been assumed to be affiliates. There were a total of 4,661,132 shares of the Registrant's Common Stock outstanding as of May 16, 2002.

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Explanatory Note. The Company is filing this amendment to revise the description of certain elements of its business in Item 1 of Part I under the captions “Sources and Availability of Raw Materials and Components,” “Patents and Licenses,” “Working Capital Position,” “Importance of Limited Number of Customers,” and “Competition,” and to provide information required by Item 201(d) of Regulation S-K concerning equity compensation plans in Item 12 of Part III.

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PART I

ITEM 1. BUSINESS

General

Giga-tronics Incorporated (Giga-tronics) includes operations of Giga-tronics Instrument division, ASCOR, Inc. (ASCOR), DYMATIX, which is a joint venture of Viking Semiconductor Equipment, Inc. (Viking) and Ultracision, Inc. (Ultracision), and Microsource, Inc. (Microsource).

Giga-tronics designs, manufactures and markets through its Giga-tronics Instrument division, a broad line of test and measurement equipment used in the development, test and maintenance of wireless communications products and systems, flight navigational equipment, electronic defense systems and automatic testing systems. These products are used primarily in the design, production, repair and maintenance of commercial telecommunications, radar, and electronic warfare.

Giga-tronics was incorporated on March 5, 1980, and its principal executive offices are located at 4650 Norris Canyon Road, San Ramon, California, and its telephone number at that location is (925) 328-4650.

Effective July 23, 1996, Giga-tronics acquired ASCOR. ASCOR, located in Fremont, California, designs, manufactures, and markets a line of switching and connecting devices that link together many specific purpose instruments that comprise a portion of automatic test systems. ASCOR offers a family of switching and interface test adapters as standard VXI configured products, as well as complete system integration services to the Automatic Test Equipment market.

Effective June 27, 1997, Giga-tronics completed a merger with Viking by issuing approximately 420,000 shares of the Company's common stock in exchange for all of the common stock of Viking. Viking, which is now located in Santa Clara, California, manufactures and markets a line of optical inspection equipment used to manufacture and test semiconductor devices. Products include die attachments, automatic die sorters, tape and reel equipment, and wafer inspection equipment.

Effective December 2, 1997, Giga-tronics completed a merger with Ultracision by issuing approximately 517,000 shares of the Company's common stock in exchange for all of the common stock of Ultracision. Ultracision is a manufacturer of automation equipment for the test and inspection of silicon wafers. Ultracision also produces a line of probers for the testing and inspection of silicon devices.

Effective May 18, 1998, Giga-tronics acquired Microsource. All the outstanding shares of Microsource were exchanged for $1,500,000 plus contingent payments based on earnings from Microsource from 1998 to 2000, which amounts were nominal. Microsource located in Santa Rosa, California develops and manufactures a broad line of YIG (Yttrium, Iron, Garnet) tuned oscillators, filters and microwave synthesizers, which are used by its customers in manufacturing a wide variety of microwave instruments or devices.

Giga-tronics intends to broaden its product lines and expand its market, both by internal development of new products and through the acquisition of other business entities. From time to time, the Company considers a variety of acquisition opportunities.

Industry Segments

The Company manufactures products used in test, measurement and handling. The Company operates primarily in four operating segments; Giga-tronics Instruments, ASCOR Inc., Microsource Inc. and DYMATIX (formerly the Semiconductor Equipment Group).

Products and Markets

Giga-tronics Instruments

The Giga-tronics Instrument segment produces signal sources, generators and sweepers, and power measurement instruments for use in the microwave and RF frequency range (10 kHz to 75 GHz). Within each product line are a number of different models and options allowing customers to select frequency range and specialized capabilities, features and functions. The end-user markets for these products can be divided into three broad segments: commercial telecommunications, radar and electronic warfare. This segment's instruments are used in the design, production, repair and maintenance and calibration of other manufacturers' products, from discrete components to complex systems.

ASCOR Inc.

The ASCOR Inc. segment produces switch modules, and interface adapters that operate with a bandwidth from direct current (DC) to 18 GHz. This segment's switch modules may be incorporated within its customer's automated test equipment. The end-user markets for these products are primarily related to electronic warfare, though the VXI architecture may become more accepted by the telecommunications market.

DYMATIX (formerly the Semiconductor Equipment Group)

The DYMATIX segment manufactures and markets a line of optical inspection equipment used in the testing of semiconductor devices. Products include die attachments, automatic die sorters, tape and reel equipment, and wafer inspection equipment. Further, DYMATIX manufacturers automation equipment for the test inspection and robotic handling of silicon wafers in addition to a line of probers for the testing and inspection of silicon devices.

Microsource Inc.

The Microsource segment develops and manufactures a broad line of YIG (Yttrium, Iron, Garnet) tuned oscillators, filters and microwave synthesizers, which are used by its customers in manufacturing a wide variety of microwave instruments or devices.

Sources and Availability of Raw Materials and Components

Substantially all of the components required by Giga-tronics to make its assemblies are available from more than one source. The Company occasionally uses sole source arrangements to obtain leading-edge technology, favorable pricing or supply terms, but not in any material volume. In the Company's opinion, the loss of any sole source arrangement it has would not be material to its operations.

Although extended delays in receipt of components from its suppliers could result in longer product delivery schedules for the Company, the Company believes that its protection against this possibility stems from its practice of dealing with well-established suppliers and maintaining good relationships with such suppliers.

Patents and Licenses

The Company's competitive position is largely dependent upon its ability to provide performance specifications for its instruments and systems that (a) easily, effectively and reliably meet customers' needs and (b) selectively surpass competitors' specifications in competing products. Patents may occasionally provide some short-term protection of proprietary designs. However, because of the rapid progress of technological development in the Company's industry, such protection is most often, although not always, short-lived. Therefore, although we occasionally pursue patent coverage, we place major emphasis on the development of new products with superior performance specifications and the upgrading of existing products toward this same end. This is reflected in a substantial allocation of budget to engineering costs.

The Company's products are based on its own designs, which in turn derive from its own engineering abilities. If the Company's new product engineering efforts fall behind, its competitive position weakens. Conversely, effective product development greatly enhances its competitive status.

The Company presently holds 22 patents. None of these is critical to the Company's ongoing business, and the Company does not actively maintain them.

The Company is not dependent on trademarks, licenses or franchises. We do utilize certain software licenses in some functional aspects to some of our products. Such licenses are readily available, non-exclusive and are obtained at either no cost or for a relatively small fee.

Seasonal Nature of Business

The business of the Company is not seasonal.

Working Capital Practices

The Company generally strives to maintain at least 60 days worth of inventory and generally sells to customers on 30 day payment terms. Typically, the Company receives payment terms of 30 days. The Company believes that these practices are consistent with typical industry practices.

Importance of Limited Number of Customers

Commercial business accounted for 83% of net sales in fiscal 2002, 89% in fiscal 2001, and 84% in fiscal 2000. The Company had been a leading supplier of microwave and radio frequency (RF) test instruments to various U.S. Government defense agencies, as well as to their prime contractors. Management anticipates sales to U.S. Government agencies will remain significant in fiscal 2003. Defense-related agencies accounted for 17% of net sales in fiscal 2002, 11% in fiscal 2001, and 16% in fiscal 2000. Prior to the current year, where the defense business has improved, sales to the defense industry in general, and direct sales to the United States and foreign government agencies in particular, have declined. Any decline of defense orders could have a negative effect on the business, operating results, financial condition and cash flows of Giga-tronics.

During 2002 and 2001, a Japanese distributor of the Company, Midoriya, accounted for 16% and 10% of the Company's consolidated sales. At year end, Midoriya had a negligible amount outstanding in accounts receivable while they composed about 11% of receivables at the fiscal year end of 2001.

During fiscal 2002 and 2001, the Instrument Division had two major customer concentrations. Midoriya, the Division's Japanese distributor, accounted for 30% of the Instrument Division's fiscal 2002 revenue and 22% of the Instrument Division's fiscal 2001 revenue. The U.S. Government defense agencies and their prime contractors made up 10% and 12% of the Instrument Divisions' 2002 and 2001 revenue, respectively.

During fiscal 2002 and 2001, ASCOR had three major customer concentrations. The U.S. Government defense agencies and their prime contractors made up 18% and 14% of ASCOR's fiscal 2002 and 2001 revenue, respectively. An automated test equipment manufacturer comprised 30% and 18% of ASCOR's fiscal 2002 and 2001 revenue, respectively. An international communications equipment company comprised 11% and 40% of ASCOR's fiscal 2002 and 2001 revenue, respectively.

During fiscal 2002 and 2001, DYMATiX had one major customer who is a manufacturer of mobile electronics and transportation components, and this customer accounted for 56% and 18% of DYMATiX's revenue in those years, respectively.

In fiscal 2002, Microsource derived 35% of its revenues from U.S. Government defense agencies and their prime contractors and another 35% from an electronic instrument manufacturer. In fiscal 2001, Microsource derived 32% of its revenue from the same electronic instrument manufacturer, 17% from an electronic component and instrument manufacturer and 14% from U.S. Government defense agencies and their prime contractors.

Other than U.S. government agencies and their defense contractors and Midoriya, no customer accounts for 10% or more of consolidated revenues of the Company and no customer who accounts for 10% or more of revenues of any one segment accounts for 10% or more of any other segment. Other than U.S. government agencies and their defense contractors and Midoriya, the Company has no customer the loss of which would, in management's opinion, have a material adverse effect on the Company and its subsidiaries as a whole.

The Company's products are largely capital investments for its customers, and the Company's belief is that its customers have economic cycles in which capital investment budgets for the kinds of products that the Company produces expand and contract. Accordingly, the Company expects that a major customer in one year will often not be a major customer in the following year. Accordingly, the Company's revenues and earnings will decline if the Company is unable to find new customers or increase its business with other existing customers to replace declining revenues from the previous year's major customers. A substantial decline in revenues from U.S. Government defense agencies and their prime contractors would also have a material adverse effect on the Company's revenues and results of operations unless replaced by revenues from the commercial sector.

Backlog of Orders

On March 30, 2002, the Company's backlog of unfilled orders was $21,387,000 compared to $39,964,000 at March 31, 2001. As of March 30, 2002, there were approximately $13,912,000 unfilled orders that were scheduled for shipment beyond a year, as compared to approximately $7,245,000 at March 31, 2001. Orders for the Company's products include program orders from both the U.S. Government and defense contractors, with extended delivery dates. Accordingly, the backlog of orders may vary substantially from quarter to quarter and the backlog entering any single quarter may not be indicative of sales for any period.

Backlog includes only those customer orders for which a delivery schedule has been agreed upon between the Company and the customer and, in the case of U.S. Government orders, for which funding has been appropriated.

Competition

Giga-tronics serves the broad market for electronic instrumentation with applications ranging from the design, test, calibration and maintenance of other electronic devices to providing sophisticated components for complex electronic systems to sub-systems capable of sorting and identifying high frequency communication signals. These applications cut across the commercial, industrial and military segments of the broad market. The Company has a variety of competitors. Several of its competitors are much larger than the Company and have greater resources and substantially broader product lines. Others are of comparable size with more limited product lines.

Competition from numerous existing companies is intense and potential new entrants are expected to increase. The Company's instrument, switch, oscillator and synthesizer products compete with Agilent, Anritsu, Racal, IFR and Rohde & Schwarz while the semiconductor equipment products compete with various other competitors. Many of these companies have substantially greater research and development, manufacturing, marketing, financial, technological, personnel and managerial resources than Giga-tronics. There can be no assurance that any products developed by these competitors will not gain greater market acceptance than any developed by Giga-tronics.

To compete effectively in this circumstance, the Company (a) places strong emphasis on maintaining a high degree of technical competence as it relates to the development of new products and the upgrading of existing products and (b) is highly selective in establishing technological objectives. The Company does not attempt to compete 'across the board', but selectively based upon its particular strengths and the competitors' perceived limitations.

Specification requirements of customers in this market vary widely. The Company is able to compete by offering products that meet a customer's particular specification requirements; by being able to offer certain product specifications at lower cost resulting from the Company's past production of products with those specifications; and by being able to offer certain product specifications at a higher quality level. All of these advantages are attributable to the Company's continuing investment in research and development and in highly trained engineering staff.

The customer's decision is most often based on the best match of his particular requirements and the supplier's operating specifications. In most cases, attracting and retaining customers does not require the Company to offer the best product with respect to each of the customer's requirements but rather to those few specifications that are most important to the customer.

Occasionally price is a competitive consideration. In that circumstance, the Company believes it has more flexibility in making pricing decisions than its larger and more structured competitors.

Sales and Marketing

Giga-tronics Instruments, ASCOR Inc., DYMATIX and Microsource Inc. market their products through various distributors and representatives to commercial and government customers, although not necessarily through the same distributors and representatives.

Product Development

Products of the type manufactured by Giga-tronics historically have had relatively long product life cycles. However, the electronics industry is subject to rapid technological changes at the component level. The future success of the Company is dependent on its ability to steadily incorporate advancements in component technologies into its new products.

Product development expense was approximately $7,001,000 in fiscal 2002, $5,087,000 in fiscal 2001, and $4,180,000 in fiscal 2000. Activities included the development of new products and the improvement of existing products. It is management's intention to maintain or increase expenditures for product development at levels required to sustain its competitive position. All of the Company's product development activities are internally funded and expensed as incurred.

Giga-tronics expects to continue to make significant investments in research and development. There can be no assurance that future technologies, processes or product developments will not render Giga-tronics' current product offerings obsolete or that Giga-tronics will be able to develop and introduce new products or enhancements to existing products, which satisfy customer needs, in a timely manner or achieve market acceptance. The failure to do so could adversely affect Giga-tronics' business.

Manufacturing

The assembly and testing of Giga-tronics Instrument's microwave, RF and power measurement products are done at its San Ramon facility. The assembly and testing of ASCOR's switching and connecting devices are done at its Fremont facility. The assembly and testing of the DYMATIX products are done at its Santa Clara facility. The assembly and testing of Microsource's line of YIG (Yttrium, Iron, Garnet) tuned oscillators, filters and microwave synthesizers are done at its Santa Rosa facility.

Environment

To the best of its knowledge, the Company is in compliance with all federal, state and local laws and regulations involving the protection of the environment.

Employees

As of March 30, 2002, Giga-tronics employed 219 individuals on a full time basis. Management believes that the future success of the Company depends on its ability to attract and retain skilled personnel. None of the Company's employees are represented by a labor union, and the Company considers its employee relations to be good.

Information about Foreign Operations

The Company sells to its international customers through a network of foreign technical sales representative organizations. Sales to foreign customers were approximately $17,105,000 in fiscal 2002, $22,072,000 in fiscal 2001, and $14,468,000 in fiscal 2000.

The Company closed its United Kingdom (UK) research & development facility as of March 30, 2002 for the Instruments division. The Company has no other foreign-based operations or material amounts of identifiable assets in foreign countries. Its gross margins on foreign and domestic sales are similar.

Certain Factors Which May Adversely Affect Future Operations Or An Investment In Giga-tronics

Business climate is volatile

Giga-tronics has a significant number of defense-related orders. If the defense market should soften, shipments in the current year could decrease more than current projected shipments with a concurrent decline in earnings. The Company's commercial product backlog has a number of risks and uncertainties such as the cancellation or deferral of orders, dispute over performance and our ability to collect amounts due under these orders. If this occurs, then shipments in the current year could decrease more than current projected shipments resulting in a decline in earnings. During fiscal 2002 and 2001, Midoriya, the Company's Japanese distributor accounted for a significant amount of the Company's commercial sales, while at year-end Giga-tronics' backlog from this customer was negligible.

Giga-tronics sales are substantially dependent on the wireless industry

Giga-tronics sells directly or indirectly to customers and equipment manufacturers in the wireless industry. Currently, this industry is undergoing dramatic and rapid change. As such, the business that Giga-tronics records could decrease or existing recorded backlog could be stretched or deferred resulting in less than projected shipments. These reduced shipments may have a material adverse effect on operations.

Giga-tronics' markets involve rapidly changing technology and standards

The market for electronics equipment is characterized by rapidly changing technology and evolving industry standards. Giga-tronics believes that its future success will depend in part upon its ability to develop and commercialize its existing products, and to develop new products and application and in part to develop, manufacture and successfully introduce new products and product lines with improved capabilities and to continue to enhance existing products. There can be no assurance that Giga-tronics will successfully complete the development of current or future products or that such products will achieve market acceptance.

Giga-tronics acquisitions may not be effectively integrated and their integration may be costly

As part of its business strategy, Giga-tronics intends to broaden its product lines and expand its markets, in part through the acquisition of other business entities. Giga-tronics is subject to various risks in connection with any future acquisitions. Such risks include, among other things, the difficulty of assimilating the operations and personnel of the acquired companies, the potential disruption of the Company's business, the inability of management to maximize the financial and strategic position of the Company by the successful incorporation of acquired technology and rights into its product offerings, the maintenance of uniform standards, controls, procedures and policies, and the potential loss of key employees of acquired companies. No assurance can be given that any acquisition by Giga-tronics will or will not occur, that if an acquisition does occur, that it will not materially harm the Company or that any such acquisition will be successful in enhancing the Company's business. The Company currently contemplates that future acquisitions may involve the issuance of additional shares of common stock. Any such issuance may result in dilution to all Giga-tronics shareholders, and sales of such shares in significant volume by the shareholders of acquired companies may depress the price of its common stock.

Giga-tronics' common stock price is volatile

The market price of the Company's common stock could be subject to significant fluctuations in response to variations in quarterly operating results, shortfalls in revenues or earning from levels expected by securities analysts and other factors such as announcements of technological innovations or new products by Giga-tronics or by competitors, government regulations or developments in patent or other proprietary rights. In addition, the NASDAQ National Market and other stock markets have experienced significant price fluctuations in recent periods. These fluctuations often have seemingly been unrelated to the operating performance of the specific companies whose stocks are traded. Broad market fluctuations, as well as general foreign and domestic economic conditions, may adversely affect the market price of the common stock.

Giga-tronics stock at any time has historically traded on thin volume on NASDAQ. Sales of a significant volume of stock could result in a depression of Giga-tronics share prices.

PART III

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDERS MATTERS

Information regarding security ownership of certain beneficial owners and management is set forth under the heading "Stock Ownership of Certain Beneficial Owners and Management" of its Proxy Statement for the 2002 Annual Meeting of Shareholders, incorporated herein by reference. This Proxy Statement is to be filed no later than 120 days after the close of the fiscal year ended March 30, 2002.

In addition to the information incorporated by reference, the following table provides information on options and other equity rights outstanding and available at March 30, 2002.

Equity Compensation Plan Information

Plan category	No. of securities to be issued upon exercise of outstanding option, warrants and rights (a)	Weighted average exercise price of outstanding option, warrants and rights (b)	No. of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by securities holders	551,174	$ 3.838	428,100
Equity compensation plans not approved by security holders	NA	NA	NA
Total	551,174	$ 3.838	428,100

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PART IV

ITEM 14 EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(b) Exhibits

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GIGA-TRONICS INCORPORATED

Dated: April 1, 2003

By /s/ GEORGE H. BRUNS, JR.

George H. Bruns, Jr.
Chairman of the Board and Chief Executive Officer

CERTIFICATIONS UNDER
SECTION 302 OF
THE SARBANES OXLEY ACT OF 2002

I, George H. Bruns, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of Giga-tronics Incorporated;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

Date: April 1, 2003

/s/ George H. Bruns, Jr.

George H. Bruns, Jr.
Chief Executive Officer

CERTIFICATIONS UNDER
SECTION 302 OF
THE SARBANES OXLEY ACT OF 2002

I, Mark H. Cosmez II, certify that:

1. I have reviewed this annual report on Form 10-K of Giga-tronics Incorporated;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

Date: April 1, 2003

/s/ Mark H. Cosmez II

Mark H. Cosmez II
Chief Financial Officer

Exhibit 21
Significant Subsidiaries:

Name	Jurisdiction of incorporation
ASCOR, Inc.	California
Microsource, Inc.	California
Viking Semiconductor Equipment, Inc.	California
Ultracision, Inc.	California