LRAD Corp
Form 10-K
December 21, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF

THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 30, 2018

Commission File Number 0-24248

LRAD CORPORATION

(Exact name of registrant as specified in its charter)

DELAWARE **(State or other jurisdiction of** **Incorporation or organization)**	**87-0361799** **(I.R.S. Employer** **Identification No.)**
16262 West Bernardo Drive, **San Diego, California** **(Address of principal executive offices)**	**92127** **(Zip Code)**

Registrant’s telephone number, including area code: (858) 676-1112

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class	**Name of exchange on which registered**
Common stock, $.00001 par value per share	NASDAQ Capital Market

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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 whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). 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.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by a check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting common stock held by nonaffiliates of the registrant as of March 31, 2018 (the last business day of the registrant's most recently completed second fiscal quarter) was $56,315,500 based upon the closing price of the shares on the NASDAQ Capital Market on that date. This calculation does not reflect a determination that such persons are affiliates for any other purpose.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date:

33,186,989 shares of common stock, par value $0.00001 per share, as of December 13, 2018.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant’s definitive proxy statement filed with the Commission pursuant to Regulation 14A in connection with the registrant’s 2019 Annual Meeting of Stockholders, to be filed subsequent to the date of this report, are incorporated by reference into Part III of this report. The definitive proxy statement will be filed with the Commission not later than 120 days after the conclusion of the registrant’s fiscal year ended September 30, 2018.

TABLE OF CONTENTS

PART I

Forward Looking Statements

This Annual Report on Form 10-K contains forward-looking statements relating to future events or the future performance of our company. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the only means of identifying forward-looking statements. Such statements are predictions and actual events or results may differ materially. In evaluating such statements, you should specifically consider various factors identified in this report, including the matters set forth below in "Item 1A. Risk Factors" of this Annual Report on Form 10-K, which could cause actual results to differ materially from those indicated by such forward-looking statements.

For purposes of this Annual Report, the terms "we," "us," "our" and the "Company" refer to LRAD Corporation and its consolidated subsidiary.

Item 1. Business.

Overview

LRAD® Corporation is a leading innovator and manufacturer of acoustic communication systems that project audible voice messages, tones, and warning sirens over distance. By broadcasting audible voice messages with exceptional clarity and only where needed, we offer novel sound applications that conventional bullhorns, loudspeakers, public address and emergency warning systems cannot achieve. With the January 2018 acquisition of Genasys Holding S.L. ("Genasys") (see Note 4, Acquisition, to our consolidated financial statements), we combined our advanced mass notification voice broadcast systems with Genasys' location-based mass messaging solutions. Using our proprietary technologies, we have developed two product lines:

- Acoustic Hailing Devices ("AHDs"), which project audible voice and tone broadcasts with exceptional intelligibility in a 30° beam from close range up to 5,500 meters, and;
-

Genasys™ Mass Notification (“MN”), which include systems that project 60° - 360° audible voice broadcasts with industry-leading vocal clarity from close range to over 14 square kilometers from a single installation, and geospatial, mass messaging mobile alert solutions that are compatible with major emergency warning protocols.

We have sold our Long Range Acoustic Device® (“LRAD”) systems and Genasys solutions in 72 countries and pioneered a worldwide market for AHDs and revolutionized the mass notification industry with advanced voice broadcast systems. We continue to develop new communication innovations and believe we have established significant competitive advantages in our principal markets.

Technology and Products

Our LRAD systems are a technological breakthrough in broadcasting audible, highly intelligible voice messages and tones over long distances and high ambient noise using minimal power. Our LRAD products were initially developed for the U.S. Navy to fill a capability gap identified after the October 2000 attack on the USS Cole. LRAD systems are deployed by the U.S. Army, Navy, Air Force, Marine Corps, and Coast Guard, as well as international military services, and maritime, public safety and commercial security organizations around the globe. We have redesigned and enhanced our LRAD systems with improved voice intelligibility, output, and durability. The rugged construction of our systems enables us to meet stringent military specifications. Our AHDs are designed to enable users to safely hail and warn, inform and direct, prevent misunderstandings, determine intent, establish large safety zones, resolve uncertain situations, and potentially save lives.

Our AHD product line provides a complete range of solutions from handheld, portable devices to permanently installed, remotely operated systems. We continue to add new models to meet specific customer requirements and to expand into new markets. We have also added various features and accessories, including wireless capability, record on-the-fly microphones, integrated and remote electronics packages, and amplifiers.

Building on the success of our AHDs, we designed and developed our multidirectional mass notifications product line. Unlike most siren-based systems, our Genasys mass notification systems broadcast both emergency warning sirens and highly intelligible voice messages with uniform 60° - 360° coverage over local and wide areas. We believe our ability to shape the broadcast coverage area, our industry-leading speech intelligibility, and our multiple system activation and control options enable us to successfully compete in the large and growing mass notification market.

We continue to enhance our acoustic communication technologies and product lines to provide a complete range of systems and accessories. Our patented XL driver technology, which generates higher audio output in a smaller and lighter form factor, is being incorporated into our AHD and mass notifications systems. To date, we have incorporated our XL driver technology into the 450XL, LRAD 1950XL, LRAD 950RXL, DS-60XL, 360XL, and 360XL-MID. We plan to incorporate our XL driver technology into other AHDs and mass notification systems. We're enhancing our system design and manufacturing capabilities to improve the durability and performance of our products. Our systems have been competitively selected over other commercially available systems by the U.S. Department of Defense and numerous foreign militaries. Our product lines include the following:

LRAD AHD Systems:

- **LRAD 100X**—a self-contained, battery powered, portable AHD designed for use in a variety of mass notification, law enforcement, and public safety applications—is ideally suited for shorter-range perimeter security and communication.

- **LRAD 300X**—a lightweight, mid-range AHD developed for small vessels, and manned or unmanned vehicles and aircraft—is available with both fully integrated and remotely operated electronics.

- **LRAD 450XL**—the loudest long range AHD for its size and weight—uses our patented technology to provide more output in a smaller form factor with the same high level of clarity and intelligibility consistent with all our LRAD systems. The LRAD 450XL was designed to provide an effective communication solution for small vessels, military and law enforcement vehicles, and helicopters.

- **LRAD 500X**—selected by the U.S. Navy for many of its vessels, and the U.S. Army for a variety of missions, including transportation security and military law enforcement —is lightweight and can be easily transported to provide security personnel long-range communication and a highly effective hailing and warning capability. A helicopter-mounted version, the LRAD 500X-MMT air-to-ground communication system, is being used by the U.S. State Department and the Air National Guard.

- **LRAD 500RX**—engineered and designed on a proprietary pan and tilt system to provide remotely controlled communication, security, and first response—is a lighter, more compact version of our LRAD 1000RX.

- **LRAD 950RXL**—selected for the U.S. Navy's multi-year contract for Situational Awareness Systems on Military Sealift Command ships and other U.S. Navy vessels—combines the remotely operated pan and tilt system of the LRAD 500RX with our enhanced XL driver technology.

- **LRAD 1000Xi**—selected by the U.S. Navy as its AHD for larger vessels for shipboard defense— can be manually operated to provide long distance hailing and warning and highly intelligible voice communications. This system is available in both fully integrated and remotely operated electronics. Every U.S. Navy surface combatant is equipped with either the LRAD 500X, LRAD 1000X, or LRAD 1000Xi.

- **LRAD 1000RX**—our solution for remotely controlled communication, security, and first response for ports, oil & gas platforms, utility installations, and other critical infrastructure enables—system operators to detect and communicate with a security threat over extended distances and initiate a remote first response. The LRAD 1000RX features an LRAD 1000X emitter head, integrated camera, high-intensity searchlight, and our proprietary, robust, and Internet protocol-addressable full pan and tilt drive system for precise aiming and tracking. The LRAD 1000RX can also be integrated with radar to provide automated threat alerts. Because of its automated capabilities, the LRAD 1000RX is intended to reduce manpower requirements and false alarms, while providing a highly effective, cost-efficient, remote response security solution.

- **LRAD 1950XL**—our largest AHD that incorporates our patented XL driver technology - features military-tested construction, low power requirements, and a rugged, easily transportable aluminum tripod for rapid deployment. Broadcasting highly intelligible voice communications that can be clearly heard and understood over distances of up to 5,000 meters, the LRAD 1950XL is designed primarily for defense, border, and critical infrastructure security applications.

- **LRAD 2000X**—designed to meet the requirements of larger security applications—is our largest AHD. Broadcasting highly intelligible voice communications over distances of up to 5,500 meters, the LRAD 2000X unit is designed primarily for perimeter and border security applications.

- **LRAD SOUND SHIELD®**— a vehicle mounted speaker system that secures to armored, VIP, government or corporate vehicles and delivers voice communications and warning tones in a 360° radius of up to 100 meters. Using optimized driver and waveguide technology, the SOUND SHIELD is designed to safely and effectively warn and ward off security threats.

We continue to augment our AHD product line by using our proprietary technology to develop louder, longer distance systems in smaller form factors, as well as incorporating customer and market-specific enhancements.

LRAD Genasys MN Systems:

Using our new cloud/site-based Genasys Command and Control software ("CCS"), we recently integrated our mass notification voice broadcast systems with Genasys' mass messaging solutions. Genasys CCS is compatible with external inputs, sensors, and major emergency warning protocols, and controls mass notification voice broadcast systems and geospatial mobile alerts. LRAD mass notification solutions feature industry-leading vocal intelligibility, and activation and control options.

- **DS-60X/DS-60XL**—a mounted horn system for areas that require 60° - 360° mass notification coverage. The DS-60XL has the same form factor as the LRAD DS-60X, uses our patented XL driver technology, and has a 60°, 900-meter range. When configured in a 360° ring array, the broadcast coverage area extends to 2.5 square kilometers. Each DS-60XL horn in the ring array can be operated independently, providing customizable mass notification area coverage.

- **360X/360XL**—provides 360° coverage and is targeted for broad market applications including tsunami, hurricane, tornado, and severe weather warnings, government, campus, and industrial public address and emergency notification, and military base mass notification and public address.

- **360XL-MID**—designed for urban areas, small campuses, industrial sites, and government & defense facilities, the 360XL-MID can be installed on existing infrastructure or mounted on a tripod. Available in one and two emitter configurations, the 360XL-MID is powered and controlled by the Company's Compact Control Cabinet ("CCC"). Genasys CCS connects to the CCC over a TCP/IP network to activate recorded messages and warning tones and enables live voice streaming to one or several systems. The CCC features flexible LRAD mass notification system command and control via TCP/IP, WiFi, Fiber, GPRS/GSM, or L-Band satellite.

- **360XL-MID Mobile Kit**—comprises two XL driver powered emitters, ruggedized carrying case power amplifier, hardened control module, all-weather push-to-talk mic, tripod, and other accessories. The kit provides a self-contained solution for operations requiring advanced mobile mass notification. Rapidly deployable, the 360XL-MID Mobile Kit is designed for defense, homeland security, law enforcement, and public safety mass notification applications.

- **360XT**— fully self-contained and self-powered, the 360XT mobile mass notification system delivers highly intelligible voice and emergency warning tone broadcasts with uniform 360° coverage over an 850-meter coverage radius from a rapidly deployable, telescoping 30-foot pneumatic mast. The 360XT is integrated and mounted on a ruggedized trailer featuring securely mounted, lockable electronics and equipment enclosures containing the amplifier modules and pneumatic systems.

- **SoundSaber®-X**—is the next generation of SoundSaber mass notification line array speakers. The SoundSaber-X ("SS-X") features a new lightweight, rugged, and highly efficient driver technology that provides exceptional vocal intelligibility while utilizing 66% less power to generate 16dB more in audio output than the previous generation SS400. The SS-X is designed to alleviate reflection and echoing, to provide uniform acoustic coverage with wide audio dispersion along the short axis and narrow dispersion along the long axis, and ensure broadcasts are clearly heard and understood in high ambient noise environments. The thin form factor of the SS-X provides unobtrusive installation for many types of mass notification and public address applications.

We believe the integration of mass messaging solutions and Genasys' software development capabilities enable the Company to enhance existing product offerings and provide business growth opportunities in new markets.

Strategy

LRAD has developed a global market and increasing demand for directed, long-range voice broadcast systems in several business segments. We have a strong brand in these markets and a reputation for producing quality products that feature industry-leading broadcast coverage and vocal intelligibility. We are building on our AHD leadership position by offering an increasing variety of directional and multidirectional voice broadcast systems and accessories for an expanding range of applications. In executing our strategy, we use direct sales to governments, militaries, large end-users, and system integrators. We have built a worldwide distribution channel consisting of partners and resellers that have significant expertise and experience selling integrated communication solutions into our various target markets. As our primary sales opportunities are with domestic and international military and government departments and agencies, we are subject to each customer's unique budget cycle, which leads to long selling cycles and uneven revenue flow, complicating our product planning.

In fiscal 2019, we plan to continue our pursuit of business opportunities around the world with the support of business development consultants, and key representatives and resellers. We plan to grow our revenues through increased direct sales to domestic and international militaries, and to large commercial and defense-related companies that desire to integrate our communication technologies into their product offerings. This includes building on fiscal 2018 domestic defense sales by pursuing further U.S. military opportunities. We also plan to pursue mass notification, government, law enforcement, fire rescue, homeland and international security, private and commercial security, border security, maritime security, and wildlife preservation and control business opportunities.

With the acquisition of Genasys, we plan to expand our presence and increase our market share in the global mass notification market. In addition to the recent completion of our Genasys CCS, we intend to obtain qualifying certifications and launch other solutions that will enable our mass notification systems to access and compete in further mass notification applications. While the mass notification market is more mature with established manufacturers and suppliers, we believe that our advanced technology and superior solutions provide opportunities to penetrate and succeed in this large, expanding market. We also plan to expand and strengthen domestic and international sales channels by adding key mass notification partners, distributors, and dealers.

Our research and development strategy is to continue innovating voice broadcast systems and accessories, and mobile alert solutions to meet the needs of our target markets. Our mass notification product line includes emitters and speaker arrays in different sizes, as well as various configurations of amplifiers, mounts, power sources, and software. We developed and patented our XL driver technology, which generates higher audio output in smaller, lighter form factors. We have incorporated our XL driver technology into the LRAD 450XL, LRAD 1950XL, LRAD 950RXL, DS-60XL, 360XL, and 360XL-MID. We plan to incorporate our XL driver technology into other AHDs and mass notification systems. We’re enhancing our system design and manufacturing capabilities to improve the durability and performance of our products. Our mass notification systems represent a much more complex, integrated offering. We are pursuing certain certifications, which are often required when bidding on government and mass notification opportunities. In addition to the recent completion of our Genasys CCS, we intend to invest engineering resources for other solutions that will enhance our mass notification systems and enable us to compete for larger mass notification business opportunities. We are also configuring alternative solutions to achieve lower price points to meet the needs of certain customers or applications. We also engage in ongoing value engineering to reduce the cost and simplify the manufacturing of our products.

We intend to continue operating with financial discipline in order to create value for our shareholders. We are focused on growing top line revenue by successfully entering new markets and expanding our market share in the global mass notification market, which we believe will translate into increased net profit growth.

Manufacturing and Suppliers

Manufacturing. We believe maintaining quality manufacturing capacity is essential to the performance of our products and the growth of our business. Our technologies are different from mass-produced designs, and our manufacturing and assembly involves unique processes and materials. We contract with third-party suppliers to produce various components and sub-assemblies. At the end of fiscal year 2018, the Company moved to a new facility with expanded engineering and manufacturing capacity to support current and expected business growth. In our facility, we complete the final assembly, test and ship our products. We have refined our internal processes to improve how we design, test, and qualify products. We continue to implement rigorous manufacturing and quality processes to track production and field failures. We also perform third-party testing and certification of our products to ensure that they meet rigorous military and commercial specifications. We have developed custom manufacturing equipment used to automate the production of key sub-assemblies, reducing the labor component and permitting higher volume production. We implement design and component changes periodically to reduce our product costs and improve product reliability and manufacturability.

Suppliers. We minimize inventories and maximize the efficiency of our supply chain by having a large number of components and sub-assemblies produced by outside suppliers mostly located within 50 miles of our facility. We also purchase several key components and sub-assemblies from foreign suppliers. Consequently, we are subject to the impact economic conditions can have on such suppliers and the fluctuations of foreign currency exchange rates, which could impact our lead times and product costs. We have developed strong relationships with a number of our key suppliers. If these suppliers should experience quality problems or part shortages, our production schedules could be significantly delayed or our costs significantly increased.

Sales and Marketing

We market and sell products and services through our sales force based in California, Colorado, Florida, Minnesota, Texas, Wisconsin, and Spain as well as through full-time business consultants in Germany and Thailand. Our corporate and administrative offices are located in San Diego, California.

We sell directly to governments, militaries, large end-users, and defense-related companies. We use independent representatives on a commission basis to assist in our direct sales efforts. We also use a channel distribution model, in which we sell our products directly to independent resellers and system integrators around the world, who then sell our products (or our products integrated with other systems) to end-user customers. We are focusing our internal business development resources on building relationships with defense integrators and other large direct customers. In addition, we utilize part-time consultants with expertise in various U.S. government and defense sectors to advise us on procedures and budgetary policies in an effort to be successful in these areas.

We have a global reputation for providing high quality, innovative voice broadcast systems and mobile alert solutions that have made LRAD an internationally recognized product brand. We actively promote our brands and products through our website, trade shows, and advertising. We intend to increase the use of our trademarks throughout our product distribution chain and believe growing brand awareness will assist in expanding our business. We believe our reputation for technological expertise, quality products, and strong service and support provide us competitive advantages.

Customer Concentration

For the fiscal year ended September 30, 2018, we had one customer accounting for 20% of revenues, with no other single customer accounting for more than 10% of revenues. For the fiscal year ended September 30, 2017, we had one customer accounting for 15% of revenues, with no other single customer accounting for more than 10% of revenues.

Our revenues to date have relied on a few major customers. The loss of any customer could have a materially adverse effect on our financial condition, results of operations and cash flows. We have made progress diversifying our revenues and expect to continue to do so in future periods.

Backlog

Our order backlog for products that are deliverable in the next 12 months was approximately $23,646,910 at September 30, 2018, compared to $11,943,259 at September 30, 2017. The amount of backlog at any point in time is dependent upon scheduled delivery dates to our customers and product lead times. Our backlog orders are supported by firm purchase orders.

Warranties

We generally warrant our products to be free from material and workmanship defects for a period up to one year from the date of purchase. The warranty is generally a limited warranty, and in some instances imposes certain shipping costs on the customer. We generally provide direct warranty service, but at times we may establish warranty service through third parties.

We also provide repair and maintenance agreements and extended warranty contracts at market rates, with terms ranging from one year to several years, as an additional source of revenue and to provide increased customer satisfaction.

Competition

Our technologies and products compete with those of other companies. Commercial and government audio industry markets are fragmented and include numerous manufacturers with audio products that vary widely in price, quality, and distribution channels. Present and potential competitors have, or may have, substantially greater resources to devote to product development. We believe we compete primarily on the originality of our products, the uniqueness of our technology and designs, and our responsiveness to customers and the ability to meet their needs. We believe the quality, durability, and superior performance of our products, which have been developed by incorporating feedback from our customers, and our desire to provide the highest quality products, also provide us competitive advantages.

Our AHD product line features the leading voice broadcast systems for military and commercial applications. Our AHD competitors include Ultra Electronics/USSI, IML Sound Commander, and others. We do not believe these competitors have achieved significant global market penetration in the AHD market to date. We believe our AHD product line has demonstrated acceptance, has performed extremely well in harsh environments, and can continue to compete on the basis of technical features, performance, ease of use, quality and cost. As we continue to grow this market, future competitors may enter, which could impact our competitiveness.

In the mature and established mass notification market, we compete against several domestic and international competitors, including Everbridge, OnSolve, Whelen Engineering Company Inc., Hoermann, and others. We believe our ability to shape the broadcast coverage area from 60° - 360°, our industry-leading voice broadcast intelligibility, our multiple system activation and control options, including satellite, TCP/IP, fiber, Wi-Fi, digital or analog radio, Ethernet or hard wire, give us competitive advantages against these established organizations. We believe the addition of Genasys geospatially controlled, mass messaging mobile alerts, and our Genasys CCS with its ease of integration with external sensors and inputs, and compatibility with major emergency warning protocols also provide competitive advantages. We believe the domestic and international markets for mass notification systems are substantial and growing.

Seasonality

Because our sales are primarily to domestic and international government departments or agencies, our selling cycles tend to be long and difficult to forecast. We have not experienced any significant seasonality trends to date, but we may experience increased seasonality in the future.

Government Regulation

We are subject to a variety of government laws and regulations that apply to companies engaged in international operations, including, among others, the Foreign Corrupt Practices Act, U.S. Department of Commerce export controls, local government regulations and procurement policies and practices (including regulations relating to import-export control, investments, exchange controls and repatriation of earnings). We maintain controls and procedures to comply with laws and regulations associated with our international operations. If we are unable to remain compliant with such laws and regulations, our business may be adversely affected.

Our products are produced to comply with standard product safety requirements for sale in the U.S. and similar requirements for sale in Europe and Canada. We expect to meet the electrical and other regulatory requirements for electronic systems or components we sell throughout the world.

Financial Information about Segments and Geographic Areas

Financial information regarding our segments and the geographic areas in which we operate is contained in Note 17, Segment Information, and Note 18, Major Customers, to our consolidated financial statements. Suppliers and Related Information.

Intellectual Property Rights and Proprietary Information

We operate in an industry where innovation, investment in new ideas, and protection of resulting intellectual property rights are important drivers of success. We rely on a variety of intellectual property protections for our products and technologies, including patent, trademark and trade secret laws, and contractual obligations. We pursue a policy of vigorously enforcing our intellectual property rights.

In addition to such factors as innovation, technological expertise, and experienced personnel, we believe strong product offerings that are continually upgraded and enhanced will keep us competitive, and we will seek patent protection on important technological improvements that we make. We have an ongoing policy of filing patent applications to seek protection for novel features of our products and technologies. Prior to the filing and granting of patents, our policy is to disclose key features to patent counsel and maintain these features as trade secrets prior to product introduction. Patent applications may not result in issued patents covering all-important claims and could be denied in their entirety. We also file for trade name and trademark protection when appropriate. We are the owner of federally registered trademarks, including LRAD®, LONG RANGE ACOUSTIC DEVICE®, LRAD-X®, LRAD-RX®, SOUNDSABER®, ONE VOICE®, and SOUND SHIELD®. Many of our registered trademarks have earned worldwide brand recognition.

Our policy is to enter into nondisclosure agreements with each employee and consultant or third party to whom any of our proprietary information is disclosed. These agreements prohibit the disclosure of confidential information to others, both during and subsequent to employment, or the duration of the working relationship. These agreements may not prevent disclosure of confidential information or provide adequate remedies for any breach.

Research and Development

The sound reproduction market is subject to rapid changes in technology and design with frequent improvements and new product introductions, as well as customized solutions for specific customer applications. We believe our future success will depend on our ability to enhance and improve existing technologies and to introduce new technologies and products on a competitive basis that meet the needs of our customers. Accordingly, we are continuing to engage in significant research and new product development activities.

For the fiscal years ended September 30, 2018 and 2017, we spent approximately \$3.5 million and \$2.5 million, respectively, on company-sponsored research and development. Future levels of research and development expenditures will vary depending on the timing of further new product development and the availability of funds to carry on additional research and development on currently owned technologies or in other areas.

Executive Officers

The current executive officers of LRAD Corporation and their ages and business experience are set forth below.

Richard S. Danforth, age 59, was appointed Chief Executive Officer in August 2016. Mr. Danforth formed the strategic business consulting firm, RsD Aero, Ltd., in 2014, which provided consulting services for the Defense, Aerospace, Space and Transportation sectors, with an emphasis on M&A and Transatlantic trade. He served at DRS Technologies as Group President of DRS Integrated Defense Systems & Service (2013 – 2014); Chief Executive Officer, President and Board Member of DRS Defense Solutions (2008 – 2012); President, Command Control & Communication (2005 – 2008); President, Navy Electronics & Intelligence Systems (2004 – 2005); and Executive Vice President, Electronics Systems Group (2002 – 2004). He began his career at Raytheon in 1982 and held various manufacturing, quality assurance and program manager positions until 1996. Mr. Danforth was then appointed Vice President of Operations for Raytheon Aircraft Company (1996 – 2000). In 2000, he was named Senior Vice President of Raytheon Aircraft Company’s Commercial Aircraft Business division, where he led a staff of 370 sales, marketing and customer service personnel. Mr. Danforth holds a Bachelor of Science in Industrial Technology from the University of Massachusetts Lowell and a Masters in Engineering Management from Western New England College.

Dennis D. Klahn, age 60, was appointed Interim Chief Financial Officer in August 2017 and promoted to Chief Financial Officer in September 2017. Mr. Klahn has more than 30 years of accounting, finance and operations experience, which includes serving as Controller or CFO at publicly traded companies. He was most recently a Group Controller at Teledyne RD Instruments, a subsidiary of Teledyne Technologies Incorporated, between 2011 and August 2017. Prior to that role, he served as Controller or CFO at several companies including, ISE Corporation, Overland Storage, Inc., Anacomp, Inc., and International Lottery & Totalizator Systems, Inc. Mr. Klahn began his career as a Staff Accountant at Coopers & Lybrand after receiving his B.A. in Accounting from St. Ambrose University.

Executive officers serve at the discretion of the board of directors.

Employees

At September 30, 2018, we employed a total of 75 people. Of such employees, 14 were in research and development, 32 were in production, quality assurance and materials control, 13 were in general and administrative and 16 were in sales and marketing. We contract technical and production personnel from time to time on an as needed basis and use outside consultants for various services. In addition, we have an extensive worldwide network of independent representatives and resellers who actively market and sell our products. We have not experienced any work stoppages, are not a party to a collective bargaining agreement and we consider our relations with our employees to be favorable.

Available Information

Our shares of common stock trade on the NASDAQ Capital Market under the symbol “LRAD.” Our address is 16262 West Bernardo Drive, San Diego, California, 92127, our telephone number is 858-676-1112, and our website is located at www.LRAD.com. We make available, free of charge through our website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, reports filed by our directors, executive officers and certain significant shareholders pursuant to Section 16 of the Securities Exchange Act, and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act of 1934, as soon as reasonably practical after the reports are electronically filed with or furnished to the Securities and Exchange Commission (“SEC”). The information on our website is not incorporated by reference into this report nor is it part of this report.

Item 1A. Risk Factors.

An investment in our company involves a high degree of risk. In addition to the other information included in this report, you should carefully consider the following risk factors in evaluating an investment in our company. You should consider these matters in conjunction with the other information included or incorporated by reference in this report. Our results of operations or financial condition could be seriously harmed, and the trading price of our common stock may decline due to any of these or other risks.

General economic and political conditions may adversely affect our business, operating results and financial condition

Our operations and performance depend significantly on worldwide economic and political conditions and their impact on levels of capital investment and government spending. Global economic and political uncertainties and foreign currency rate fluctuations could adversely influence demand for our products leading to reduced levels of investments, reductions in government spending and budgets and changes in spending priorities and behavior.

We may need additional capital for growth.

We may need additional capital to support our growth. While we expect to generate these funds from operations, we may not be able to do so. Principal factors that could affect the availability of our internally generated funds include:

- failure of sales to government, military and commercial markets to meet planned projections;
- government spending levels impacting sales of our products;
- political uncertainty;
- foreign currency fluctuations;
- working capital requirements to support business growth;
- our ability to control spending;

- introduction of new competing technologies;
- product mix and effect on margins; and
- acceptance of our existing and future products in existing and new markets.

Should we require additional funds, general market conditions or the then-current market price of our common stock may not support capital raising transactions and any such financing may require advance approval of our stockholders under the rules of the NASDAQ Stock Market. Our ability to obtain financing may be further constrained by prevailing economic conditions. We may be required to reduce costs, including the scaling back of research and development into new products, which could have a negative impact on our ability to compete and to innovate. If we raise additional funds by selling additional shares of our capital stock or securities convertible into or exercisable for common stock (assuming we are able to obtain additional financing), the ownership interest of our stockholders will be diluted, which could have a material negative impact on the market value of our common stock.

We have historically had a high concentration of revenues from a limited number of customers. We expect to continue to be dependent on a limited number of customers.

In fiscal year 2018, we had one customer that accounted for 20% of revenues and no other customers accounted for more than 10% of revenues. Historically, our revenues have been dependent upon a limited number of customers and we expect that we will continue to have some significant customers in future years. We do not have long-term purchase commitments with these or other significant customers, and our customers have the right to cease doing business with us at any time. Military contracts that we have been awarded have terms of indefinite delivery/indefinite quantity during the term of the contract, so there are no guaranteed purchases on these contracts. No assurance can be given that these or other customers will continue to do business with us or that they will maintain their historical levels of business. If our relationship with any material customer were to cease, then our revenues would decline and negatively impact our results of operations. Any such decline could result in us increasing our accumulated deficit and a need to raise additional capital to fund our operations. If our expectations regarding future sales are inaccurate, we may be unable to reduce costs in a timely manner to adjust for sales shortfalls.

Disruption and fluctuations in financial and currency markets could have a negative effect on our business.

Financial markets in the U.S., Europe and Asia have experienced extreme volatility and uncertainty in recent years. Governments have taken unprecedented actions intended to address these market conditions. It is difficult to assess the extent to which these conditions have impacted our business, and the affect this has had on certain of our customers and suppliers. These economic developments affect businesses such as ours in a number of ways. The tightening of credit in financial markets adversely affects the ability of commercial customers to finance purchases and operations and could result in a decrease in orders and spending for our products as well as create supplier disruptions.

Reductions in tax revenues, rating downgrades and other economic developments could also reduce future government spending on our products. There can be no assurance that there will not be a further volatility and uncertainty in financial markets, which can then lead to challenges in the operation of our business. We are unable to predict the likely effects that negative economic conditions will have on our business and financial condition.

We purchase a number of key components and sub-assemblies from foreign suppliers. Consequently, we are subject to the impact economic conditions can have on such suppliers and fluctuations in foreign currency exchange rates. Increases in our cost of purchasing these items could negatively impact our financial results if we are not able to pass these increased costs on to our customers.

We have current government contracts and our future growth is dependent, in large part, on continued sales to U.S. and international governments and businesses that sell to governments.

In fiscal year 2018, direct and indirect sales to the U.S. government accounted for approximately 49% of our total net sales, compared to 15% of our total net sales in fiscal year 2017 and 31% in fiscal year 2016. Changes in defense spending could have an adverse effect on our current and future revenues. Sales of our products to U.S. government agencies and organizations are subject to the overall U.S. government budget and congressional appropriation decisions and processes which are driven by numerous factors, including geo-political events and macroeconomic conditions, and are beyond our control. Even awards granted may not result in orders due to spending constraints. Similar issues apply to sales to international governments. We have no assurance that military interest in communication devices to minimize unnecessary force will continue or will provide future growth opportunities for our business.

We must expand our customer base in order to grow our business.

To grow our business, in addition to continuing to obtain additional orders from our existing customers, we must develop relationships with new customers and obtain and fulfill orders from new customers. We are competing against a number of large competitors in the mass notification market, and we need to establish our omnidirectional products as a viable competitor in this market to allow us to win awards against these competitors, increase our customer base and gain market share. We cannot guarantee that we will be able to increase our customer base. Further, even if we do obtain new customers, we cannot guarantee that those customers will purchase from us enough quantities of our product or at product prices that will enable us to recover our costs in acquiring those customers and fulfilling those orders. Whether we will be able to sell more of our products will depend on a number of factors, including:

- our ability to design and manufacture reliable products that have the features that are required by our customers;
- the global economy;
- our ability to expand relationships with existing customers and to develop relationships with new customers that will lead to additional orders for our products;

- our ability to develop and expand new markets for directed sound products; and

- our ability to develop international product distribution directly or through strategic partners.

We may not be able to successfully integrate the Genasys businesses or any other businesses that we may acquire in the future, and we may not be able to realize anticipated cost savings, revenue enhancements, or other synergies from such acquisitions.

On January 18, 2018, we acquired all of the issued and outstanding shares of capital stock of Genasys. Our ability to successfully implement our business plan and achieve targeted financial results and other benefits including, among other things, greater market presence and development, and enhancements to our product portfolio and customer base, is dependent on our ability to successfully integrate the Genasys business and other businesses we may acquire in the future. We may not realize the intended benefits of the Genasys acquisition or the acquisition of other businesses in the future, as rapidly as, or to the extent, anticipated by our management. There can be no assurance that we will be able to successfully integrate the Genasys business or any other acquired businesses, products or technologies without substantial expenses, delays or other operational or financial problems. Acquisitions, including the acquisition of Genasys, involve a number of risks, some or all which could have a material adverse effect on our acquired businesses, products or technologies. Furthermore, there can be no assurance that the Genasys business or any other acquired business, product, or technology will be profitable or achieve anticipated revenues and income. Our failure to manage our acquisition and integration strategy successfully could have a material adverse effect on our business, results of operations and financial condition. The process of integrating an acquired business involves risks, including but not limited to:

- demands on management related to changes in the size and possible locations of our businesses and employees;

- diversion of management's attention from the management of daily operations;

- difficulties in the assimilation of different corporate cultures, employees and business practices;

- difficulties in conforming the acquired businesses' accounting policies to ours;
- retaining the loyalty and business of the employees or customers of acquired businesses;
- retaining employees that may be vital to the integration of acquired businesses or to the future prospects of the combined businesses;
- difficulties and unanticipated expenses related to the integration of departments, information technology systems, including accounting systems, technologies, books and records, and procedures, and maintaining uniform standards, such as internal accounting controls, procedures, and policies;
- costs and expenses associated with any undisclosed or potential liabilities;
- the use of more cash or other financial resources on integration and implementation activities than we expect; and
- our ability to avoid labor disruptions in connection with any integration, particularly in connection with any headcount reduction.

Failure to successfully integrate the Genasys business or any other acquired businesses in the future may result in reduced levels of anticipated revenue, earnings, or operating efficiency than might have been achieved if we had not acquired such businesses.

In addition, the acquisition of Genasys did and any future acquisitions could result in the incurrence of additional debt and related interest expense, contingent liabilities, and amortization expenses related to intangible assets, which could have a material adverse effect on our financial condition, operating results, and cash flow.

The growth of our LRAD product revenues is dependent on continued acceptance of our products by government, military and developing force protection and emergency response agencies. If these agencies do not purchase our LRAD products, our revenues will be adversely affected.

Although our LRAD products are designed for use by both government and commercial customers, the government market represents a significant revenue opportunity for our products. Revenues from government agencies, including military, force protection and emergency response agencies, fluctuate each year depending on available funding and demand from our government customers. While acceptance of our products has been increasing, there are many more prospective customers within this market that could provide future growth for us, as well as international government markets which often follow the lead of the U.S. Furthermore, the force protection and emergency response market is itself an emerging market that is changing rapidly. If our LRAD products are not widely accepted by the government, military and the developing force protection and emergency response markets, we may not be able to identify other markets, and we may fail to achieve our sales projections.

Perceptions that long-range hailing devices are unsafe or may be used in an abusive manner may hurt sales of our LRAD products, which could cause our revenues to decline.

Potential customers for our LRAD products, including government, military and force protection and emergency response agencies, may be influenced by claims or perceptions that long-range hailing devices are unsafe or may be used in an abusive manner. These claims or perceptions, while unsubstantiated, could reduce our product sales.

A significant portion of our revenue is derived from our core product category.

We are dependent on our core directional product category to generate our revenues. While we have expanded our product offering to include omnidirectional products, no assurance can be given that our core directional products will continue to have market acceptance or that they will maintain their historical levels of sales. The loss or reduction of sales of this product category could have a material adverse effect on our business, results of operations, financial condition and liquidity.

We may not be successful in penetrating the mass notification market.

The mass notification market is substantial in size and is projecting growth over the next five years to help provide public safety and communication during natural disasters and emergency situations. There are a number of large, credible companies already established in this market. We believe the clear, intelligible voice capability of our LRAD products, and our unique design and durability make our product offerings very competitive in this market. We have added selling resources to focus on this market and we have invested and plan to invest additional resources in tooling and software development to become successful in this market. However, we are competing in a market with established competitors that have greater resources and presence in this global market.

Our margins could be impacted as we expand into the mass notification market.

Our sales strategy for fiscal year 2019 and beyond is to increase our market share of the growing mass notification market with our omnidirectional products. A number of large companies compete in this market and dominate the market share. We believe we have a strong product that can successfully compete against these larger players, but we expect to confront pricing pressures, given this highly competitive environment, which may negatively impact our overall margins.

We may incur significant and unpredictable warranty costs.

Our products are substantially different from proven, mass produced sound transducer designs and are often employed in harsh environments. We may incur substantial and unpredictable warranty costs from post-production product or component failures. We generally warrant our products to be free from defects in materials and workmanship for a period up to one year from the date of purchase. We also sell extended repair and maintenance contracts with terms ranging from one to several years, which provide repair and maintenance services after expiration of the original limited warranty. At September 30, 2018, we had a warranty reserve of $99,216. While our warranty experience with our LRAD product line has been favorable, as we build more complexity into the product, and as we expand our supplier base, issues could arise that could affect future warranty costs, which could adversely affect our financial position, results of operations and business prospects.

System disruptions and security threats to our computer networks, including breach of our or our customers' confidential information, could have a material adverse effect on our business and our reputation.

Our computer systems as well as those of our service providers are vulnerable to interruption, malfunction or damage due to events beyond our control, including malicious human acts committed by foreign or domestic persons, natural disasters, and network and communications failures. We periodically perform vulnerability self-assessments and engage service providers to perform independent vulnerability assessments and penetration tests. However, despite network security measures, our servers and the servers at our service providers are potentially vulnerable to physical or electronic unauthorized access, computer hackers, computer viruses, malicious code, organized cyber attacks and other security problems and system disruptions. Increasing socioeconomic and political instability in some countries has heightened these risks. Despite the precautions we and our service providers have taken, our systems may still be vulnerable to these threats. A user who circumvents security measures could misappropriate proprietary information or cause interruptions or malfunctions in operations.

Additionally, the confidential information that we collect subjects us to additional risks and costs that could harm our business and our reputation. We collect, retain and use personal information of our employees, including personally identifiable information, tax return information, financial data, bank account information and other data. Although we employ various network and business security measures to limit access to and use of such personal information, we cannot guarantee that a third party will not circumvent such security measures, resulting in the breach, loss or theft of the personal information of our employees. Possession and use of personal information in our operations also subjects us to legislative and regulatory burdens that could restrict our use of personal information and require notification of data breaches. A violation of any laws or regulations relating to the collection, retention or use of personal information could also result in the imposition of fines or lawsuits against us.

Sustained or repeated system failures or security breaches that interrupt our ability to process information in a timely manner or that result in a breach of proprietary or personal information could have a material adverse effect on our operations and our reputation. Although we maintain insurance in respect of these types of events, available insurance proceeds may not be adequate to compensate us for damages sustained due to these events.

We could incur additional charges for excess and obsolete inventory.

While we strive to effectively manage our inventory, rapidly changing technology, and uneven customer demand may result in short product cycles and the value of our inventory may be adversely affected by changes in technology that affect our ability to sell the products in our inventory. If we do not effectively forecast and manage our inventory, we may need to write off inventory as excess or obsolete, which in turn can adversely affect cost of sales and gross profit.

We have previously experienced, and may in the future experience, reductions in sales of older generation products as customers delay or defer purchases in anticipation of new product introductions. We have established reserves for slow moving or obsolete inventory of $397,051 at September 30, 2018. The reserves we have established for potential losses due to obsolete inventory may, however, prove to be inadequate and may give rise to additional charges for obsolete or excess inventory.

We do not have the ability to accurately predict future operating results. Our quarterly and annual revenues are likely to fluctuate significantly due to many factors, most of which are beyond our control and could result in our failure to achieve our revenue expectations.

We expect our proprietary directed and omnidirectional acoustic products and technologies will be the source of substantially all our revenues for at least the near future. Revenues from these products and technologies are expected to vary significantly due to a number of factors, many of which are beyond our control. Any one or more of the factors listed below or other factors could cause us to fail to achieve our revenue expectations. These factors include:

- our ability to develop and supply sound reproduction components to customers, distributors or original equipment manufacturers ("OEMs") or to license our technologies;
- market acceptance of and changes in demand for our products or products of our customers;
- gains or losses of significant customers, distributors or strategic relationships;
- unpredictable volume and timing of customer orders;
- delays in funding approval by U.S. and foreign government and military customers;
- the availability, pricing and timeliness of delivery of components for our products and OEM products;
- fluctuations in the availability of manufacturing capacity or manufacturing yields and related manufacturing costs;
- the timing of new technological advances, product announcements or introductions by us, by OEMs or licensees and by our competitors;
- production delays by customers, distributors, OEMs, or by us or our suppliers;
- increased competition in this market;
- the conditions of other industries, such as military and commercial industries, into which our technologies may be sold;

- general electronics industry conditions, including changes in demand and associated effects on inventory and inventory practices;

- general economic conditions that could affect the timing of customer orders and capital spending and result in order cancellations or rescheduling; and

- general political conditions in this country and in various other parts of the world that could affect spending for the products that we offer.

Some or all of these factors could adversely affect demand for our products or technologies, and therefore adversely affect our future operating results.

Most of our operating expenses are relatively fixed in the short term. We may be unable to rapidly adjust spending to compensate for any unexpected sales shortfalls, which could harm our quarterly operating results. We do not have the ability to predict future operating results with any certainty.

Many potential competitors who have greater resources and experience than we do may develop products and technologies that make ours obsolete or inferior.

Technological competition from larger, more established electronic and loudspeaker manufacturers is expected to increase. Most of the companies with which we expect to compete have substantially greater capital resources, research and development staffs, marketing and distribution programs and facilities, and many of them have substantially greater experience in the production and marketing of products. In addition, one or more of our competitors may have developed or may succeed in developing technologies and products that are more effective than any of ours, rendering our technology and products obsolete or noncompetitive.

Adverse resolution of disputes, litigation and claims may harm our business, operating results or financial condition.

We may become a party to other litigation, disputes and claims in the normal course of our business. Litigation is by its nature uncertain and unpredictable and there can be no assurance that the ultimate resolution of such claims will not exceed the amounts accrued for such claims, if any. Litigation can be expensive, lengthy, and disruptive to normal business operations. An unfavorable resolution of a legal matter could have a material adverse effect on our business, operating results, or financial condition.

Our competitive position will be seriously damaged if we cannot protect intellectual property rights and trade secrets in our technology.

We rely on a combination of contracts, trademarks and trade secret laws to establish and protect our proprietary rights in our technology. However, we may not be able to prevent misappropriation of our intellectual property, and our competitors may be able to independently develop competing technologies, or the agreements we enter into may not be enforceable. A competitor may independently develop or patent technologies that are substantially equivalent to, or superior to, our technology. If this happens, our competitive position could be significantly harmed.

We may face personal injury and other liability claims that harm our reputation and adversely affect our operating results and financial condition.

While our products have been engineered to reduce the risk of damage to human hearing or human health, we could be exposed to claims of hearing damage if the product is not properly operated. A person injured in connection with the use of our products may bring legal action against us to recover damages on the basis of theories including personal injury, negligent design, dangerous product or inadequate warning. We may also be subject to lawsuits involving allegations of misuse of our products. Our product liability insurance coverage may be insufficient to pay all such claims. Product liability insurance may also become too costly for us or may become unavailable for us in the future. We may not have sufficient resources to satisfy any product liability claims not covered by insurance which would materially and adversely affect our operating results and financial condition. Significant litigation could also result in negative publicity and a diversion of management's attention and resources.

Our international operations could be harmed by factors including political instability, natural disasters, fluctuations in currency exchange rates, and changes in regulations that govern international transactions.

We sell our products worldwide. In fiscal years 2018 and 2017, revenues outside of the U.S. accounted for approximately 44% and 64% of net revenues, respectively. The risks inherent in international trade may reduce our international sales and harm our business and the businesses of our customers and our suppliers. These risks include:

- changes in tariff regulations;
- political instability, war, terrorism and other political risks;
- foreign currency exchange rate fluctuations;
- establishing and maintaining relationships with local distributors and dealers;
- lengthy shipping times and accounts receivable payment cycles;
- import and export control and licensing requirements;
- compliance with a variety of U.S. laws, including the Foreign Corrupt Practices Act, by us or key subcontractors;

- compliance with a variety of foreign laws and regulations, including unexpected changes in taxation and regulatory requirements;
- greater difficulty in safeguarding intellectual property than in the U.S.; and
- difficulty in staffing and managing geographically diverse operations.

These and other risks may preclude or curtail international sales or increase the relative price of our products compared to those manufactured in other countries, reducing the demand for our products. Failure to comply with U.S. and foreign governmental laws and regulations applicable to international business, such as the Foreign Corrupt Practices Act or U.S. export control regulations, could have an adverse impact on our business with the U.S. and foreign governments.

Current environmental laws, or laws enacted in the future, may harm our business.

Our operations are subject to environmental regulation in areas in which we conduct business. Our product design and procurement operations must comply with new and future requirements relating to the materials composition of our products, including restrictions on lead, cadmium and other substances. We do not expect that the impact of these environmental laws and other similar legislation adopted in the U.S. and other countries will have a substantial unfavorable impact on our business. However, the costs and timing of costs under environmental laws are difficult to predict.

Errors or defects contained in our products, failure to comply with applicable safety standards or a product recall could result in delayed shipments or rejection of our products, damage to our reputation and expose us to regulatory or other legal action.

Any defects or errors in the operation of our products may result in delays in their introduction. In addition, errors or defects may be uncovered after commercial shipments have begun, which could result in the rejection of our products by our customers, damage to our reputation, lost sales, diverted development resources and increased customer service and support costs and warranty claims, any of which could harm our business. Third parties could sustain injuries from our products, and we may be subject to claims or lawsuits resulting from such injuries. There is a risk that these claims or liabilities may exceed, or fall outside the scope of, our insurance coverage. We may also be unable to obtain adequate liability insurance in the future. Because we are a smaller company, a product recall would be particularly harmful to us because we have limited financial and administrative resources to effectively manage a product recall and it would detract management’s attention from implementing our core business strategies. A significant product defect or product recall could materially and adversely affect our brand image, causing a decline in our sales, and could reduce or deplete our financial resources.

Costs associated with our multi-year maintenance contract with a foreign military customer could be higher than expected.

We are obligated under a seven-year repair and maintenance agreement with a foreign military customer to service $12.1 million of product sold in the quarter ended March 31, 2011. We have contracted with a third party service provider to administer the required services under the terms of the maintenance agreement. The revenue from the maintenance agreement with our customer is fixed and paid annually upon completion of each year of service for the seven-year period through March 2019. It is possible that the cost to repair and maintain the products and the cost to contract with our third party service provider could exceed the revenue generated by the maintenance agreement.

We rely on outside manufacturers and suppliers to provide a large number of components and sub-assemblies incorporated in our products.

Our products have a large number of components and sub-assemblies produced by outside suppliers. In addition, for certain of these items, we qualify only a single source, which can magnify the risk of shortages and decrease our ability to negotiate with our suppliers on the basis of price. If shortages occur, or if we experience quality problems with suppliers, then our production schedules could be significantly delayed or costs significantly increased, which would have a material adverse effect on our business, liquidity, results of operation and financial position.

Although we assemble our products internally, we have some sub-assemblies and components produced by third party manufacturers. We may be required to outsource manufacturing if sales of our products increase significantly. We may be unable to obtain acceptable manufacturing sources on a timely basis. In addition, from time to time we may change manufacturers and any new manufacturer engaged by us may not perform as expected. An extended interruption in the supply of our products could result in a substantial loss of sales. Furthermore, any actual or perceived degradation of product quality as a result of our reliance on third party manufacturers may have an adverse effect on sales or result in increased warranty costs, product returns and buybacks. Failure to maintain quality manufacturing could reduce future revenues, adversely affecting our financial condition and results of operations.

We derive revenue from government contracts and subcontracts, which are often non-standard, may involve competitive bidding, may be subject to cancellation with or without penalty and may produce volatility in earnings and revenue.

Our sales to government customers have involved, and are expected in the future to involve, providing products and services under contracts or subcontracts with U.S. federal, state, local and foreign government agencies. Obtaining contracts and subcontracts from government agencies is challenging, and contracts often include provisions that are not standard in private commercial transactions. For example, government contracts may:

- include provisions that allow the government agency to terminate the contract without penalty under some circumstances;
- be subject to purchasing decisions of agencies that are subject to political influence;
- contain onerous procurement procedures; and
- be subject to cancellation if government funding becomes unavailable.

Securing government contracts can be a protracted process involving competitive bidding. In many cases, unsuccessful bidders may challenge contract awards, which can lead to increased costs, delays and possible loss of the contract for the winning bidder.

Our success is dependent on the performance of our executive team, and the cooperation, performance and retention of our executive officers and key employees.

Our business and operations are substantially dependent on the performance of our current executive team including our Chief Executive Officer and our Chief Financial Officer. We do not maintain "key person" life insurance on any of our executive officers. The loss of one or several key employees could seriously harm our business. We cannot assure that employees will not leave and subsequently compete against us.

We are also dependent on our ability to retain and motivate high quality personnel, especially sales and skilled engineering personnel. Competition for such personnel is intense, and we may not be able to attract, assimilate or retain other highly qualified managerial, sales and technical personnel in the future. The inability to attract and retain the necessary managerial, sales and technical personnel could cause our business, operating results or financial condition to suffer.

Our disclosure controls and procedures may not prevent or detect all acts of fraud.

Our disclosure controls and procedures are designed to reasonably assure that information required to be disclosed in reports filed or submitted under the Securities Exchange Act is accumulated and communicated to management and is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Our management expects that our disclosure controls and procedures and internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, they cannot provide absolute assurance that all control issues and instances of fraud, if any, within our company have been prevented or detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by an unauthorized override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and we cannot assure that any design will succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and not be detected.

Failure to maintain an effective system of internal control over financial reporting could harm stockholder and business confidence in our financial reporting, our ability to obtain financing and other aspects of our business.

Maintaining an effective system of internal control over financial reporting is necessary for us to provide reliable financial reports. Section 404 of the Sarbanes-Oxley Act of 2002 and the related rules and regulations promulgated by the SEC require us to include in our Form 10-K a report by management regarding the effectiveness of our internal control over financial reporting. The report includes, among other things, an assessment of the effectiveness of our internal control over financial reporting as of the end of the respective fiscal year, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management. While our management has concluded that our internal control over financial reporting was effective as of September 30, 2018, it is possible that material weaknesses will be identified in the future. In addition, components of our internal control over financial reporting may require improvement from time to time. If management is unable to assert that our internal control over financial reporting is effective in any future period, investors may lose confidence in the accuracy and completeness of our financial reports, which could have an adverse effect on the Company's stock price.

Our common stock could be delisted from the Nasdaq Stock Market.

Nasdaq's continued listing standards for our common stock require, among other things, that (i) we maintain a closing bid price for our common stock of at least $1.00, and (ii) we maintain: (A) stockholders' equity of $2.5 million; (B) market value of listed securities of $35 million; or (C) net income from continuing operations of $500,000 in the most recently completed fiscal year or in two of the last three most recently completed fiscal years. Any failures to satisfy any continued listing requirements could lead to the receipt of a deficiency notice from Nasdaq and ultimately to a delisting from trading of our common stock. If our common stock were delisted from Nasdaq, among other things, this could result in a number of negative implications, including reduced liquidity in our common stock as a result of the loss of market efficiencies associated with Nasdaq and the loss of federal preemption of state securities laws as well as the potential loss of confidence by suppliers, customers and employees, institutional investor interest, fewer business development opportunities, greater difficulty in obtaining financing and breaches of certain contractual obligations.

Sales of common stock issuable on the exercise of outstanding options, may depress the price of our common stock.

As of September 30, 2018, we had outstanding options granted to our employees and directors to purchase 3,394,858 shares of our common stock. At September 30, 2018, the exercise prices for the options ranged from $0.93 to $3.17 per share. The issuance of shares of common stock upon the exercise of outstanding options could cause substantial dilution to holders of our common stock, and the sale of those shares in the market could cause the market price of our common stock to decline. The potential dilution from these shares could negatively affect the terms on which we could obtain equity financing.

We may issue preferred stock in the future, and the terms of the preferred stock may reduce the value of your common stock.

We are authorized to issue up to 5,000,000 shares of preferred stock in one or more series. Our board of directors may determine the terms of future preferred stock offerings without further action by our stockholders. If we issue additional preferred stock, it could affect the rights or reduce the value of our common stock. In particular, specific rights granted to future holders of preferred stock could be used to restrict our ability to merge with or sell our assets to a third party. These terms may include voting rights, preferences as to dividends and liquidation, conversion and redemption rights, and sinking fund provisions.

Our stock price is volatile and may continue to be volatile in the future.

The market price of our common stock has fluctuated significantly to date. In the future, the market price of our common stock could be subject to significant fluctuations due to general market conditions and in response to quarter-to-quarter variations in:

- our anticipated or actual operating results;

- developments concerning our sound reproduction technologies;

- technological innovations or setbacks by us or our competitors;
- announcements of merger or acquisition transactions;
- changes in personnel within our company; and
- other events or factors and general economic and market conditions.

The stock market in recent years has experienced extreme price and volume fluctuations that have affected the market price of many technology companies, and that have often been unrelated or disproportionate to the operating performance of companies.

Changes in laws or regulations or the manner of their interpretation or enforcement could adversely impact our financial performance and restrict our ability to operate our business or execute our strategies.

New laws, regulations and standards, or changes in existing laws or regulations or the manner of their interpretation or enforcement, could increase our cost of doing business and restrict our ability to operate our business or execute our strategies. This includes, among other things, compliance costs and enforcement under the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd Frank Act"), XBRL interactive SEC filings, new SEC regulations and NASDAQ Stock Market rules. For example, under Section 1502 of the Dodd-Frank Act, the SEC has adopted additional disclosure requirements related to the source of certain "conflict minerals" for issuers for which such "conflict minerals" are necessary to the functionality or production of a product manufactured, or contracted to be manufactured, by that issuer. The metals covered by the rules include tin, tantalum, tungsten and gold, commonly referred to as "3TG." Our suppliers may use some or all of these materials in their production processes. The rules require us to conduct a reasonable country of origin inquiry to determine if we know or have reason to believe any of the minerals used in the production process may have originated from the Democratic Republic of the Congo or an adjoining country. If we are not able to determine the minerals did not originate from a covered country or conclude that there is no reason to believe that the minerals used in the production process may have originated in a covered country, we would be required to perform supply chain due diligence on members of our supply chain. Global supply chains can have multiple layers, thus the costs of complying with these new requirements could be substantial. These new requirements may also reduce the number of suppliers who provide conflict free metals, and may affect our ability to obtain products in sufficient quantities or at competitive prices. Compliance costs and the unavailability of raw materials could have a material adverse effect on our results of operations.

We continually evaluate and monitor developments with respect to new and proposed rules and cannot predict or estimate the amount of the additional costs we may incur or the timing of such costs. These new or changed laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties

Our executive offices, sales, research and development and production facilities are located at 16262 West Bernardo Drive, San Diego, California. The lease of 54,766 square feet commenced July 1, 2018 and expires August 31, 2028. The aggregate monthly payments, with abatements, average $36,146 per month for the first fourteen months, and are $74,460, $76,694, $78,994, $81,364, $83,805, $86,319, $88,909, $91,576 and $94,324 per month for the second through tenth years of the lease, plus other certain costs and charges as specified in the lease agreement, including the Company’s proportionate share of the building operating expenses and real estate taxes.

Item 3. Legal Proceedings

We may at times be involved in litigation in the ordinary course of business. We will also, from time to time, when appropriate in management’s estimation, record adequate reserves in our financial statements for pending litigation.

Item 4. Mine Safety Disclosure

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock is traded and quoted on the NASDAQ Capital Market under the symbol "LRAD." The market for our common stock has often been sporadic and limited.

The following table sets forth the high and low reported sales prices for our common stock for the fiscal years ended September 30, 2017 and 2018:

	Sales Prices	
	High	**Low**
Fiscal Year Ending September 30, 2017		
First Quarter	$1.95	$1.58
Second Quarter	$1.85	$1.43
Third Quarter	$1.95	$1.30
Fourth Quarter	$2.25	$1.46
Fiscal Year Ending September 30, 2018		
First Quarter	$2.58	$1.86
Second Quarter	$2.55	$1.94
Third Quarter	$2.67	$1.94
Fourth Quarter	$3.58	$2.52

The above quotations reflect inter-dealer prices, without retail markup, markdown or commission and may not represent actual transactions.

Holders

We had 33,186,989 shares issued and outstanding held by 943 holders of record of our common stock at December 13, 2018.

Dividends

There were no dividends declared and paid during the years ended September 30, 2018 and 2017. The declaration of future cash dividends, if any, will be at the discretion of the Board of Directors and will depend on the Company's earnings, if any, capital requirements and financial position, general economic conditions and other pertinent conditions. It is our present intention not to pay any cash dividends in the near future.

Equity Compensation Plan Information

The information required by this item is incorporated by reference to the information set forth in Item 12 of this Annual Report on Form 10-K.

Recent Sales of Unregistered Securities

No securities were sold within the past three years that were not registered under the Securities Act and not previously reported.

Issuer Purchases of Equity Securities

The Board of Directors approved a share buyback program in 2015 under which the Company was authorized to repurchase up to $4 million of its outstanding common shares. In December 2017, the Board of Directors extended the program through December 31, 2018. During the year ended September 30, 2018, 286,746 shares were repurchased for $725,445 under these programs. No shares were repurchased during the 2017 fiscal year. At September 30, 2018, all repurchased shares were retired.

In December 2018, the Board of Directors approved a new share buyback program beginning January 1, 2019, under which the Company was authorized to repurchase up to $5 million of its outstanding common shares. The previous program will expire on December 31, 2018.

The following table discloses the stock repurchases during the quarter ended September 30, 2108.

Period	**Total number of shares purchased**	**Average price paid per share**	**Total number of shares purchased as part of publicly announced programs**	**Maximum dollar value of shares that may yet be purchased under the program**
July 1, 2018- July 31, 2018	-	$ -	-	$3,394,403
August 1, 2018 - August 31, 2018	-	-	-	3,394,403
September 1, 2018 - September 30, 2018	75,420	2.99	75,420	3,169,240
	75,420	$ 2.99	75,420	$3,169,240

Item 6. Selected Financial Data

Information requested by this Item is not included as we are electing scaled disclosure requirements available to Smaller Reporting Companies.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The discussion and analysis set forth below should be read in conjunction with the information presented in other sections of this Annual Report on Form 10-K, including "Item 1. Business," "Item 1A. Risk Factors," and "Item 8. Financial Statements and Supplementary Data." This discussion contains forward-looking statements which are based on our current expectations and industry experience, as well as our perception of historical trends, current market conditions, current economic data, expected future developments and other factors that we believe are appropriate under the circumstances. These statements involve risks and uncertainties that could cause actual results to differ materially from those suggested in the forward-looking statements.

Overview

LRAD® Corporation is a leading innovator and manufacturer of acoustic communication systems that project audible voice messages, tones, and warning sirens over distance. By broadcasting audible voice messages with exceptional clarity and only where needed, we offer novel sound applications that conventional bullhorns, loudspeakers, public address, and emergency warning systems cannot achieve. With the January 2018 acquisition of Genasys Holding S.L, we combined our advanced mass notification voice broadcast systems with Genasys' location-based mass messaging solutions. Using our proprietary technologies, we have developed two product lines:

- Acoustic Hailing Devices, which project audible voice and tone broadcasts with exceptional intelligibility in a 30° beam from close range up to 5,500 meters, and;
- Genasys™ Mass Notification, which include systems that project 60° - 360° audible voice broadcasts with industry-leading vocal clarity from close range to over 14 square kilometers from a single installation and geospatial, mass messaging mobile alert solutions that are compatible with major emergency warning protocols.

We have sold our AHDs and Genasys solutions into 72 countries and pioneered a worldwide market for AHDs and advanced mass notification solutions. We continue to develop new communication innovations and believe we have established significant competitive advantages in our principal markets.

Recent Developments

In the fiscal year ended September 30, 2018, we accomplished the following:

Announced our largest domestic order to date, an $11.0 million U.S. Army Program of Record order that is part of a larger AHD requirement.

Received $5.4 million in AHD orders from Southeast Asia for public safety, law enforcement, defense, border, and maritime security applications.

Announced $5.3 million in other U.S. Military and Government AHD, spares, and accessories orders for the Army, Navy, Air Force, Marine Corps, and State Department.

Received $3.4 million in AHD orders from the Asia Pacific and another international region for public safety, law enforcement, and defense applications.

Announced $2.5 million in mass notification orders for 360-XT systems integrated with a gas detection alarm and LRAD's solar-powered option, and a Federal Emergency Management Agency ("FEMA") funded critical infrastructure project.

Acquired Genasys Holding, S.L. ("Genasys"), a leading software provider of advanced location-based mass messaging solutions for emergency warning systems and workforce management.

Addressed critical wildfire mass notification issues in the western U.S. and Canada by detailing LRAD systems' use in northern California, southwestern Colorado, and Colombia for fire rescue and emergency warning.

Moved into a facility with expanded engineering and manufacturing capacity to support current and expected future business growth.

Business Outlook

Our product line-up continues to gain worldwide awareness and recognition through media exposure, trade shows, product demonstrations, and word of mouth as a result of positive responses and increased acceptance of our products. We believe we have a solid global brand, technology, and product foundation with our AHD and mass notification systems product lines, which we have expanded over the years to serve new markets and customers for greater business growth. We believe that we have strong market opportunities for our AHD and mass notification product offerings throughout the world in the homeland security and defense sectors as a result of increasing threats to government, commerce, law enforcement, borders, and critical infrastructure. Our directional and multidirectional product offerings also have many applications within the fire rescue, public safety, maritime, asset protection, and wildlife control and preservation business segments. We intend to expand our domestic and international mass notification business, particularly in the U.S., Middle East, Europe, and Asia where we believe there are greater market opportunities for our multidirectional mass notification systems and mass messaging solutions. In fiscal year 2018, we increased our global selling network, which consists of marketing and business development personnel, as well as relationships with key integrators and sales representatives within the U.S. and around the world. In addition, we utilize part-time consultants with expertise in various U.S. government and defense areas, to advise us on procedures and budgetary policies in an effort to be successful in these areas. However, we may continue to face challenges in fiscal 2019 due to budget uncertainties and continuing economic and geopolitical conditions in some international regions and the U.S. We anticipate continued U.S. Military spending uncertainty due to possible defense budget delays. We're pursuing large business opportunities, but it is difficult to anticipate how long it will take to close these opportunities, or if they will ultimately come to fruition. It is also difficult to determine whether our Genasys MN solutions will be accepted in the mass notification market, which includes a number of competitors.

Our products have varying gross margins, and therefore product sales mix materially affects gross profit. In addition, the margins differ based on the channel of trade through which the products are sold. We implement product updates and changes, including raw material and component changes that may impact product costs. We also have increased competition in the mass notification market, where there are a number of established companies that we expect will create pricing pressure on our mass notification product line and mobile alert solutions. We do not believe that historical gross profit margins should be relied upon as an indicator of future gross profit margins.

During fiscal year 2018, we had approximately 12 full-time business development and marketing personnel at the Company, which includes five business consultants. In addition, we utilize various part-time sales consultants with experience and knowledge in various government and defense areas to assist with specific markets we are pursuing. We exhibit at domestic and international trade shows, attend industry events, and hold LRAD system demonstrations. Also, commission expense will fluctuate based on the level of commissionable sales incurred.

Research and development ("R&D") expenses vary period to period due to the timing of projects, and the timing, extent and use of outside consulting, design and development firms. Our R&D expenses were primarily for in-house development; however, we continue to supplement our in-house development with third-party services, such as product testing and certification.

Critical Accounting Policies and Estimates

We have identified the policies below as critical to our business operations and to understanding our results of operations. Our accounting policies are more fully described in our consolidated financial statements and related notes located in "Item 8. Financial Statements and Supplementary Data." The impact and any associated risks related to these policies on our business operations are discussed in "Item 1A. Risk Factors" and throughout "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" when such policies affect our reported and expected financial results.

The methods, estimates and judgments we use in applying our accounting policies, in conformity with generally accepted accounting principles in the U.S., have a significant impact on the results we report in our financial statements. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. These estimates affect the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

Revenue Recognition.

We derive our revenue from the sale of products to customers, contracts, license fees, other services and freight. The Company sells its products through its direct sales force and through authorized resellers and system integrators. The Company recognizes revenue for goods including software when all the significant risks and rewards have been transferred to the customer, no continuing managerial involvement usually associated with ownership of the goods is retained, no effective control over the goods sold is retained, the amount of revenue can be measured reliably, it is probable that the economic benefits associated with the transactions will flow to the Company and the costs incurred or to be incurred in respect of the transaction can be measured reliably. Software license revenue, maintenance and/or software development service fees may be bundled in one arrangement or may be sold separately.

Product Revenue

The Company sells its products to customers, including resellers and system integrators, and revenue from such transactions is recognized in the periods that products are shipped (free on board (“FOB”) shipping point) or received by customers (FOB destination), when the fee is fixed or determinable, when collection of resulting receivables is reasonably assured, and when there are no remaining obligations. Most revenues to resellers and system integrators are based on firm commitments from the end user, and as a result, resellers and system integrators carry little or no inventory. Our customers do not have the right to return product unless the product is found to be defective.

Perpetual licensed software

The sale and/or license of software products is deemed to have occurred when a customer either has taken possession of or has the ability to take immediate possession of the software and the software key. Perpetual software licenses can include one year maintenance and support services. The Company sells these maintenance services also on a stand-alone basis and is therefore capable of determining their fair value. On this basis, the amount of the embedded maintenance is separated from the fee for the perpetual license and is recognized on a straight-line basis over the period to which they relate.

Time-based licensed software

The time-based license agreements include the use of a software license for a fixed term, generally one-year, and maintenance and support services during the same period. The Company does not sell time-based licenses without maintenance and support services and therefore revenues for the entire arrangements are recognized on a straight-line basis over the term.

Warranty, maintenance and services

We also offer extended warranty, maintenance and other services. Extended warranty and maintenance contracts are offered with terms ranging from one to several years, which provide repair and maintenance services after expiration of the original one-year warranty term. Revenues from separately priced extended warranty and maintenance contracts are recognized on a straight-line basis, over the contract period, and classified as contract and other revenues. Revenue from other services such as training or installation is recognized when the service is completed.

Multiple element arrangements

The Company has entered into a number of multiple element arrangements, such as when selling a product or perpetual licenses that may include maintenance and support (included in price of perpetual licenses) and time-based licenses (that include embedded maintenance and support, both of which may be sold with software development services, training, and other product sales). In some cases, the Company delivers software development services bundled with the sale of the software. In multiple element arrangements, the Company uses either the stand-alone selling price or vendor specific objective evidence to determine the fair value of each element within the arrangement, including software and software-related services such as maintenance and support. In general, elements in such arrangements are also sold on a stand-alone basis and stand-alone selling prices are available.

Revenue is allocated to each deliverable based on the fair value of each individual element and is recognized when the revenue recognition criteria described above are met, except for time-based licenses which are not unbundled. When software development services are performed and are considered essential to the functionality of the software, the Company recognizes revenue from the software development services on a stage of completion basis, and the revenue from the software when the related development services have been completed.

Share-Based Compensation. We account for share-based compensation in accordance with the provisions of Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) 718, “Compensation—Stock Compensation” (“ASC 718”) using the modified prospective method which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors based on estimated fair values. ASC 718 requires the use of subjective assumptions, including expected stock price volatility and the estimated term of each award. We estimate the fair value of stock options granted using the Black-Scholes option-pricing model, which is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. This model also utilizes the fair value of our common stock and requires that, at the date of grant, we use the expected term of the share-based award, the expected volatility of the price of our common stock over the expected term, the risk free interest rate and the expected dividend yield of our common stock to determine the estimated fair value. We determine the amount of share-based compensation expense based on awards that we ultimately expect to vest, reduced for estimated forfeitures. ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Allowance for doubtful accounts. Our products are sold to customers in many different markets and geographic locations. We estimate our bad debt reserve on a case-by-case basis due to a limited number of customers. We base these estimates on many factors including customer credit worthiness, past transaction history with the customer, current economic industry trends and changes in customer payment terms. Our judgments and estimates regarding collectability of accounts receivable have an impact on our financial statements.

Valuation of Inventory. Our inventory is comprised of raw materials, assemblies and finished products. We must periodically make judgments and estimates regarding the future utility and carrying value of our inventory. The carrying value of our inventory is periodically reviewed and impairments, if any, are recognized when the expected future benefit from our inventory is less than its carrying value.

Valuation of Intangible Assets. Intangible assets consist of technology, customer relationships, trade name portfolio and non-compete agreements acquired in the acquisition of Genasys, and patents and trademarks that are amortized over their estimated useful lives. We must make judgments and estimates regarding the future utility and carrying value of intangible assets. The carrying values of such assets are periodically reviewed and impairments, if any, are recognized when the expected future benefit to be derived from an individual intangible asset is less than its carrying value. This generally occurs when certain assets are no longer consistent with our business strategy and whose expected future value has decreased.

Accrued Expenses. We establish a warranty reserve based on anticipated warranty claims at the time product revenue is recognized. This reserve requires us to make estimates regarding the amount and costs of warranty repairs we expect to make over a period of time. Factors affecting warranty reserve levels include the number of units sold, anticipated cost of warranty repairs, and anticipated rates of warranty claims. Warranty expense is recorded in cost of revenues. We evaluate the adequacy of this reserve each reporting period.

We use the recognition criteria of ASC 450-20, “Loss Contingencies” to estimate the amount of bonuses when it becomes probable a bonus liability will be incurred and we recognize expense ratably over the service period. We accrue bonus expense each quarter based on estimated year-end results, and then adjust the actual in the fourth quarter based on our final results compared to targets.

Deferred Tax Asset. We evaluate quarterly the realizability of the deferred tax assets and assess the need for a valuation allowance. We record valuation allowances to reduce our deferred tax assets to an amount that we believe is more likely than not to be realized. Realization is dependent on generating sufficient taxable income prior to expiration of the loss carryforwards. Utilization of the net operating loss (“NOL”) carryforwards in future years could be substantially limited due to restrictions imposed under federal and state laws upon a change in ownership or control. Included in the NOL carryforwards are deductions from stock options that, if recognized, will be recorded as a credit to additional paid-in capital rather than through our results of operations. In determining taxable income for financial statement reporting purposes, we must make certain estimates and judgments. These estimates and judgments are applied in the calculation of certain tax liabilities and in the determination of the ability to recover deferred tax assets. The Company will continue to evaluate the ability to realize its net deferred tax assets on an ongoing basis to identify whether any significant changes in circumstances or assumptions have occurred that could materially affect the ability to realize deferred tax assets and will adjust the valuation accordingly.

Recent Accounting Pronouncements

New pronouncements issued for future implementation are discussed in Note 3, Recent Accounting Pronouncements, to our consolidated financial statements.

Segment and Related Information

We are engaged in the design, development and commercialization of directed and multidirectional sound technologies, voice broadcast products and location-based mass messaging solutions for emergency warning and workforce management. The Company operates in two business segments: Hardware (LRAD) and Software (Genasys) and its principle markets are North and South America, Europe, Middle East and Asia. As reviewed by the Company's chief operating decision maker, the Company evaluates the performance of each segment based on sales and operating income. Cash and cash equivalents, marketable securities, accounts receivable, inventory, property and equipment, deferred tax assets, goodwill and intangible assets are primary assets identified by segment. The accounting policies for segment reporting are the same for the Company as a whole and transactions between the two operating segments are not material. See Note 17, Segment Information, in our consolidated financial statements for further discussion.

Comparison of Results of Operations for Fiscal Years Ended September 30, 2018 and 2017

The following table provides for the periods indicated certain items of our consolidated statements of operations expressed in dollars and as a percentage of net sales. The financial information and discussion below should be read in conjunction with the consolidated financial statements and notes contained in this Annual Report.

	Year Ended September 30, 2018		September 30, 2017			
	Amount	**% of Total Revenue**	**Amount**	**% of Total Revenue**	**Fav(Unfav) Amount**	**%**
Revenues:						
Product sales	$23,495,788	89.3%	$19,247,020	94.7%	$4,248,768	22.1%
Contract and other	2,811,002	10.7%	1,067,158	5.3%	1,743,844	163.4%
Total revenues	26,306,790	100.0%	20,314,178	100.0%	5,992,612	29.5%
Cost of revenues	13,567,076	51.6%	10,035,577	49.4%	(3,531,499)	(35.2%)
Gross Profit	12,739,714	48.4%	10,278,601	50.6%	2,461,113	23.9%
Operating expenses						
Selling, general and administrative	10,692,681	40.6%	8,586,288	42.3%	(2,106,393)	(24.5%)
Research and development	3,523,498	13.4%	2,500,053	12.3%	(1,023,445)	(40.9%)
Total operating expenses	14,216,179	54.0%	11,086,341	54.6%	(3,129,838)	(28.2%)
Loss from operations	(1,476,465)	(5.6%)	(807,740)	(4.0%)	(668,725)	(82.8%)
Other income	107,023	0.4%	128,586	0.6%	(21,563)	(16.8%)

Loss from operations before income taxes	(1,369,442)	(5.2%)	(679,154)	(3.3%)	(690,288)	(101.6%)
Income tax expense	2,375,600	9.0%	197,600	1.0%	(2,178,000)	(1,102.2%)
Net loss	$(3,745,042)	(14.2%)	$(876,754)	(4.3%)	$(2,868,288)	(327.1%)

Net sales (a)