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 DECEMBER 31, 2002 .

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM ______ TO ______.

Commission File Number: 0-23336

ELECTRIC FUEL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	95-4302784
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
632 Broadway, New York, New York	10012
(Address of principal executive offices)	(Zip Code)

(646) 654-2107

(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
None	Not applicable

Securities registered pursuant to Section 12(g) of the Act: Common Stock, $0.01 par value

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 [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (ss. 229.405 of this chapter) 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. [X]

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes [ ] No [X]

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant as of June 30, 2002 was approximately $23,078,843 (based on the last sale price of such stock on such date as reported by The Nasdaq National Market).

(Applicable only to corporate registrants) Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 35,146,261 as of 3/15/03

Documents incorporated by reference: None

PRELIMINARY NOTE

This annual report contains historical information and forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 with respect to our business, financial condition and results of operations. The words "estimate," "project," "intend," "expect" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated in such forward-looking statements. Further, we operate in an industry sector where securities values may be volatile and may be influenced by economic and other factors beyond our control. In the context of the forward-looking information provided in this annual report and in other reports, please refer to the discussions of risk factors detailed in, as well as the other information contained in, our other filings with the Securities and Exchange Commission.

Electric Fuel(R) is a registered trademark and Arotech(TM) is a trademark of Electric Fuel Corporation. All company and product names mentioned may be trademarks or registered trademarks of their respective holders. Unless otherwise indicated, "we," "us," "our" and similar terms refer to Arotech and its subsidiaries.

PART I

ITEM 1. BUSINESS

General

We are a world leader in primary and refuelable Zinc-Air fuel cell technology, engaging directly and through our subsidiaries in the use of Zinc-Air battery technology for defense and security products and other military applications and for electric vehicles, in car armoring, and in interactive multimedia use-of-force simulators. We have been doing business since February 2003 under the name "Arotech Corporation." We operate in two business units:

- we develop, manufacture and market defense and security products, including advanced hi-tech multimedia and interactive digital solutions for training of military, law enforcement and security personnel and sophisticated lightweight materials and advanced engineering processes to armor vehicles; and

- we pioneer advancements in Zinc-Air battery technology for defense and security products and other military applications and for electric vehicles.

Background

We began work in 1990 on the research, development and commercialization of an advanced Zinc-Air battery system for powering electric vehicles, work that continues to this day. Beginning in 1998, we also began to apply our Zinc-Air fuel cell technology to the defense industry, by receiving and performing a series of contracts from the U.S. Army's Communications-Electronics Command (CECOM) to develop and evaluate advanced primary Zinc-Air fuel cell packs. This effort culminated in 2002 in our receipt of a National Stock Number, a Department of Defense catalog number assigned to products authorized for use by the U.S. military, and our subsequent receipt of a $2.54 million delivery order for our newly designated BA-8180/U military batteries.

We further enhanced our capabilities in the defense industry through our purchase in the third quarter of 2002 of two new subsidiaries: IES Interactive Training, Inc., which provides specialized "use of force" training for police, homeland security personnel and the military, and MDT Protective Industries, which is engaged in the use of sophisticated lightweight materials and advanced engineering processes to armor vehicles.

Between 1998 and 2002, we were also engaged in the design, development and commercialization of our proprietary Zinc-Air fuel cell technology for portable consumer electronic devices such as cellular telephones, PDAs, digital cameras and camcorders. In October 2002, we discontinued retail sales of our consumer battery products because of the high costs associated with consumer marketing and low volume manufacturing.

We were incorporated in Delaware in 1990, and we have been doing business under the name "Arotech Corporation" since February 2003. We anticipate changing our corporate name to Arotech Corporation at our next annual shareholders' meeting later in 2003. Unless the context requires otherwise, all references to us refer collectively to Electric Fuel Corporation (Arotech) and Arotech's wholly-owned Israeli subsidiary, Electric Fuel (E.F.L.) Limited (EFL), its majority-owned Israeli subsidiary, MDT Protective Industries, and its wholly-owned Delaware subsidiaries, Electric Fuel Transportation Corp. and IES Interactive Training, Inc.

For financial information concerning the business segments in which we operate, see Note 16 of the Notes to the Consolidated Financial Statements. For financial information about geographic areas in which we engage in business, see Note 16.c of the Notes to the Consolidated Financial Statements.

Defense and Security Products

Interactive Use-of-Force Training

Through our wholly-owned subsidiary, IES Interactive Training, Inc. (IES), we provide specialized "use of force" training for police, homeland security personnel and the military. We offer products and services that allow organizations to train their personnel in safe, productive, and realistic environments. We believe that our training systems offer more functionality, greater flexibility, unprecedented realism and a wider variety of user interface options than competing products. Our systems are sold to corporations, government agencies, military and law enforcement professionals around the world. The simulators are currently used by some of the worlds leading training academies, including (in the United States) the Secret Service, the Bureau of Alcohol, Tobacco and Firearms, the Houston Police Department, the Customs Service, the Border Patrol, the Bureau of Engraving and Printing, the Coast Guard, the Federal Law Enforcement Training Centers, the California Department of Corrections, the Detroit Police Department, the Washington DC Metro Police and international users such as the Israeli Defense Forces, the German National Police, the Royal Thailand Army, the Hong Kong Police, the Russian Security Police, and over 400 other training departments worldwide.

Our interactive training systems range from the powerful Range 3000 use-of-force simulator system to the multi-faceted A2Z Classroom Training system. The Range 3000 line of simulators addresses the entire use of force training continuum in law enforcement, allowing the trainee to use posture, verbalization, soft hand skills, impact weapons, chemical spray, low-light electronic weapons and lethal force in a scenario based classroom environment. The A2Z Classroom Trainer provides the trainer with real time electronic feedback from every student through wireless handheld keypads. The combination of interactivity and instant response assures that learning takes place in less time with higher retention.

Vehicle Armoring

Through our majority-owned MDT Protective Industries (MDT), we specialize in using state-of-the-art lightweight ceramic materials, special ballistic glass and advanced engineering processes to fully armor vans and cars. MDT is a leading supplier to the Israeli military, Israeli special forces and special services. MDT's products are proven in intensive battlefield situations and under actual terrorist attack conditions, and are designed to meet the demanding requirements of governmental and private sector customers worldwide.

Electric Fuel Batteries

We have been engaged in research and development in the field of Zinc-Air electrochemistry and battery design for over ten years, as a result of which we have developed our current

technology and its applications. We have successfully applied our technology to our high-energy battery packs for military and security applications. We have also applied our technology to the development of a refuelable Zinc-Air fuel cell for powering zero-emission electric vehicles. Through these efforts, we have sought to position ourselves as a world leader in the application of Zinc-Air technology to innovative primary and refuelable power sources.

We believe that our Zinc-Air batteries provide the highest energy and power density combination available today in the defense market, making them particularly appropriate where long missions are required and low weight is important.

Military Batteries

Our line of existing battery products for the military and defense sectors includes Advanced Zinc-Air Power Packs (AZAPPs) utilizing our most advanced cells (which have specific energy of 400 watt-hours per kilogram), a line of super-lightweight AZAPPs that feature the same 400 Wh/kg cell technology in smaller cells, and our new, high-power Zinc-Air Power Packs (ZAPPs), which offer extended-use portable power using our commercial Zinc-Air cell technology. Our AZAPPs have received a National Stock Number (a Department of Defense catalog number assigned to products authorized for use by the U.S. military), making our AZAPPs available for purchase by all units of the U.S. Armed Forces.

Electric Vehicle

Our Electric Vehicle effort, conducted through our subsidiary Electric Fuel Transportation Corp., continues to focus on obtaining and implementing demonstration projects in the U.S. and Europe, and on building broad industry partnerships that can lead to eventual commercialization of the Zinc-Air energy system. This approach supports our long-term strategy of achieving widespread implementation of the Electric Fuel Zinc-Air energy system for electric vehicles in large commercial and mass transit vehicle fleets. Our all-electric bus, powered by our Zinc-Air fuel cell technology, has demonstrated a world-record 127-mile range under rigorous urban conditions, and we have successfully demonstrated our vehicle in "on-the-road" programs in Germany, Sweden, Italy, Israel and the United States, most recently in public tests in Las Vegas, Nevada in November 2001, and in Washington, D.C., on Capitol Hill, with the participation of certain members of the United States Senate, in March 2002. We intend to strengthen existing relationships and to develop new networks of strategic alliances with fleet operators, companies engaged in energy production and transportation, automobile manufacturers and others in order to establish the infrastructure necessary for further development and commercialization of the Electric Fuel Zinc-Air system.

Lifejacket Lights

We produce water-activated lifejacket lights for commercial aviation and marine applications based on our patented water-activated magnesium-cuprous chloride battery technology. We intend to continue to work with OEMs, distributors and end-user companies to expand our market share in the aviation and marine segments. We presently sell four products in the safety products group, two for use with marine life jackets and two for use with aviation life vests. All four products are certified under applicable international marine and aviation safety regulations.

Facilities

Our principal executive offices are located at 632 Broadway, New York, New York 10012, and our telephone number at our executive offices is (646) 654-2107. Our corporate website is www.arotech.com. Our periodic reports to the Securities Exchange Commission, as well as recent filings relating to transactions in our securities by our executive officers and directors, that have been filed with the Securities and Exchange Commission in EDGAR format are available through hyperlinks located on the investor relations page of our website, at http://www.arotech.com/compro/investor.html. Reference to our websites does not constitute incorporation of any of the information thereon or linked thereto into this annual report.

The offices and facilities of our two of our principal subsidiaries, EFL and MDT, are located in Israel (in Beit Shemesh and Lod, respectively, both of which are within Israel's pre-1967 borders). We conduct research and development activities through EFL, and most of our senior management is located at EFL's facilities. We also conduct development and production activities at IES's offices in Littleton, Colorado, and at our new production facility in Auburn, Alabama, which builds and tests advanced batteries for the defense market.

Interactive Use-of-Force Training

We conduct our interactive training activities through our subsidiary IES Interactive Training, Inc. ("IES"), a Delaware corporation based in Littleton, Colorado. IES is a leading provider of interactive, multimedia, fully digital training simulators for law enforcement, homeland security, military and similar applications. With a customer base of over 500 customers in over thirty countries around the world, IES is a leader in the supply of simulation training products to military, law enforcement and corporate client communities, providing more than 40% of the worldwide market for government and military judgment training simulators.

Introduction

IES offers consumers the following interactive training products and services:

- Range 3000 - providing use of force simulation for military and law enforcement. We believe that the Range 3000 is the most technologically advanced judgmental training simulator in the world.

- A2Z Classroom Trainer - a state-of-the-art computer based training (CBT) system that allows students to interact with realistic interactive scenarios projected life-size in the classroom.

- Summit Training International - providing relevant, cost-effective professional training services and interactive courseware for law enforcement, corrections and corporate clients.

- IES Studio Productions - providing cutting edge multimedia video services for law enforcement, military and security agencies, utilizing the newest equipment to create the training services required by the most demanding authorities.

Our products feature state of the art all digital video formats, ultra-advanced laser-based lane detection for optimal accuracy and performance, customer-based authoring of training scenarios, and 95% COTS (commercial off-the-shelf)-based system.

In January 2003, IES was awarded a $2.6 million contract to supply simulation training systems to the largest regional police division in Germany. The contract calls for delivery of several separate interactive training systems, with delivery dates ranging from April to September 2003 and payment dates due following delivery, testing and ascertainment of appropriate run capability of each system.

IES's revenues during 2000, 2001 and 2002 were approximately $3.4 million, $3.5 million and $5.1 million, respectively.

Products

Below is a description of each of the core products and services in the IES line.

Range 3000 "Use of Force" Simulator

We believe that the Range 3000, which IES launched in late 2002, combines the most powerful operational hardware and software available, and delivers performance unobtainable by any competing product presently on the market.

The Range 3000 simulator allows training with respect to the full "Use of Force" continuum. Training can be done on an individual basis, or as many as four members of a team can participate simultaneously and be scored and recorded individually. Topics of training include (but are not limited to):

- Officer's Presence and Demeanor - Picture-on-picture digital recordings of the trainee's actions allows visual review of the trainee's reaction, body language and weapons handling during the course of the scenario, which then can be played back for debriefing of the trainee's actions.

- Verbalization - Correct phrases, timing, manner and sequence of an officer's dialogue is integrated within the platform of the system, allowing the situation to escalate or de-escalate through the officer's own words in the context of the scenario and in conjunction with the trainer.

- Less-Than-Lethal Training - Training in the use of non-lethal devices such as Taser, OC (pepper spray), batons and other devices can be used with the video training scenarios with appropriate reactions of each.

- Soft Hand Tactics - Low level physical controlled tactics with the use of additional equipment such as take-down dummies can be used.

- Firearms Training and Basic Marksmanship - Either utilizing laser based training weapons or in conjunction with a live-fire screen, the use of "Live Ammunition" training can be employed on the system.

The interactive training scenarios are projected either through single or multiple screens and projectors, allowing IES to immerse a trainee in - -true-to-life training scenarios and incorporating one or all the above training issues in the "Use of Force" continuum.

A2Z Classroom Trainer

The A2Z is a state-of-the-art Computer Based Training (CBT) system that allows students to interact with realistic interactive scenarios projected life-size in the classroom.

Using individual hand-held keypads, the students can answer true/false or multiple choice questions. Based on the student's performance, the scenario will branch and unfold to a virtually unlimited variety of different possible outcomes of the student's actions. The system logs and automatically scores each and every trainee's response and answer. At the end of the scenario, the system displays a session results summary from which the trainer can debrief the class.

The advanced A2Z Courseware Authoring Tools allow the trainer easily to create complete interactive courses and scenarios locally.

The Authoring Tools harness the latest advances in digital video and multimedia, allowing the trainer to capture video and graphics from any source. The A2Z allows the trainer to combine his or her insight, experience and skills to recreate a realistic learning environment. The A2Z Training System is based on the well-known PC-Pentium technology and Windows XPTM operated. The easy-to-use menu and mouse operation renders to A2Z user-friendly.

The individual keypads are connected "wirelessly." The system is completely portable and therefore not location dependent, allowing a complete setup within a matter of minutes.

Key advantages:

- Provides repeatable training to a standard based on established policy
- Quick dissemination and reinforcement of correct behavior and policies
- Reduces liability
- More efficient than "traditional and redundant" role-playing methods
- Realistic scenarios instead of outdated "play-acting"
- Interactive training of up to 250 students simultaneously with wireless keypads
- Easy Self-Authoring of interactive training content
- PC-Pentium ensures low cost of ownership
- Easy to use Windows XP-based software
- Easy to deploy in any classroom

Summit Training International

Summit Training International (STI) is a wholly-owned subsidiary of IES Interactive Training. STI provides relevant, cost-effective professional training seminars, consulting services,

and interactive courseware for law enforcement, corrections, and corporate clients. STI's emphasis and goal is to create a "total training" environment designed to address the cutting edge issues faced today. STI provides conferences throughout the United States, and develops courseware dealing with these important topics. The incorporation of IES Interactive Systems creates an intense learning environment and adds to the realism of the trainee's experience.

Conferences

STI has provided conferences throughout the United States, on such topics as:

- Recruiting and Retention of Law Enforcement and Corrections Personnel
- Ethics and Integrity
- Issues of Hate Crimes
- Traffic Stops and Use of Force
- Community and Corporate Partnerships for Public Safety
- Creating a Safe School Environment

In addition to these national and regional conferences, STI designs and produces training to address specific department issues. STI has a distinguished cadre of instructors that allows adaptation of programs to make them specifically focused for a more intense learning experience. The A2Z Classroom Trainer is incorporated into the "live" presentation creating a stimulating interactive training experience.

Courseware

STI develops courseware for use exclusively with IES Interactive Systems. Courses are designed to addresses specific department issues, and can be customized to fit each agency's needs. These courses are available in boxed sets that provide the customer with a turn-key training session. The A2Z Classroom Trainer and the Range 3000 XP-4 are used to deliver the curriculum and create a virtual world that the trainees respond and react to. Partnerships with high profile companies such as H&K Firearms, and Taser International, provide customers with training that deals with cutting edge issues facing law enforcement today. The incorporation of STI's courseware library along with simulation systems allows training to remain consistent and effective, giving customers more value for their training dollar.

IES Studio Productions

IES Studio Productions a division of IES Interactive Training, providing cutting-edge multimedia video services for law enforcement, military and security agencies, and others. IES Studio Productions creates interactive courseware and interactive scenarios for the Range 3000, Video Training Scenarios and all types of video production services. With the latest in media equipment, IES Studio Productions provides all media and marketing services to IES Interactive Training in-house.

Marketing

IES markets its products and services to domestic and international law enforcement, military and other federal agencies and to various companies that serve them, through attendance and presentations at conferences, exhibits at trade shows, seminars at law enforcement academies and government agencies, through its web pages on the Internet, and to its compiled database of prospect and customer names. IES's salespeople are also its marketing team. We believe that this is effective for several reasons: (1) customers appreciate talking directly with salespeople who can answer a wide range of technical questions about methods and features, (2) our salespeople benefit from direct customer contact through gaining an appreciation for the environment and problems of the customer, and (3) the relationships we build through peer-to-peer contact are needed in the military, police and federal agency market.

IES also uses its web pages on the Internet for such activities as providing product information and providing software updates.

IES markets augmentative and alternative law enforcement products through a network of employee representatives and independent resellers. These products include but are not limited to:

- Bristlecone Products
- Airmunitions Inc.
- Taser Inc.
- ASP Inc.
- H&K Training Centers

At the present time IES has six sales representatives based in Denver, eight domestic independent distributors, and fifteen independent resellers / representatives overseas. IES also as three inside sales/support persons who answer telephone inquiries on IES's 800 line and Internet, and who can also provide technical support. Additional outside sales persons and independent dealers and resellers are being actively recruited at this time.

IES participates in over thirty industry conferences, held throughout the United States. and in other countries, that are attended by our potential customers and their respective purchasing and budgeting decision makers. A significant percentage of IES's sales of products, both software and hardware are sold through leads developed at these shows.

IES and others in the industry demonstrate their products at these conferences and present technical papers that describe the application of their technologies and the effectiveness of their products. IES also advertises in selected publications of interest to potential customers.

Competition

IES competes against a number of established companies that provide similar products and services, many of which have financial, technical, marketing, sales, manufacturing, distribution and other resources significantly greater than ours. There are also companies whose products

do not compete directly, but are sometimes closely related. Firearms Training Systems, Inc., Advanced Interactive Systems, Inc., and LaserShot Inc. are IES's main competitors.

We believe the key factors in our competing successfully in this field will be our ability to develop simulation software and related products and services to effectively train law enforcement and military to today's standards, our ability to develop and maintain a proprietary technologically advanced hardware, and our ability to develop and maintain relationships with departments and government agencies.

Vehicle Armoring

Introduction

MDT Protective Industries was established in Israel in 1989 as one of Israel's first car armoring companies, and is Israel's leader in state-of-the art lightweight armoring of vehicles, ranging from light tactical vehicles to passenger vehicles. With two production lines, MDT specializes in using state-of-the-art lightweight ceramic materials, special ballistic glass and advanced engineering processes to fully armor vans and cars. MDT is a leading supplier to the Israeli military, Israeli special forces and special services. MDT's products have been proven in intensive battlefield situations and under actual terrorist attack conditions, and are designed to meet the demanding requirements of governmental and private sector customers worldwide.

MDT has acquired many years of battlefield experience in Israel. MDT's vehicles have provided proven life-saving protection for their passengers in incidents of rock throwing, handgun and assault rifle attack at point-blank range, roadside bombings and suicide bombings. In fact, to our knowledge an MDT-armored vehicle has never experienced bullet penetration into a vehicle cabin under attack. MDT also uses its technology to protect vehicles against vandalism.

MDT's revenues during 2000, 2001 and 2002 were approximately $747,000, $6.5 million and $6.4 million, respectively.

The Armoring Process

Armoring a vehicle involves much more than just adding "armor plates." It includes professional and secure installation of a variety of armor components - inside doors, dashboards, and all other areas of passenger and engine compartments. MDT uses overlapping sections to ensure protection from all angles, and installs armored glass in the windshield and windows. MDT has developed certain unique features, such as new window operation mechanisms that can raise windows rapidly despite their increased weight, gun ports, run-flat tires, and more. MDT developed the majority of the materials that it uses in-house, or in conjunction with renowned Israeli companies specializing in protective materials.

In order to armor a vehicle, MDT first disassembles the vehicle and removes the interior paneling, passenger seats, doors, windows, etc. MDT then fortifies the entire body of the vehicle, including the roof, motor and other critical components, and reinforces the door hinges. MDT achieves firewall protection from frontal assault with carefully designed overlapping armor. Options, such as air-conditioning, seating modifications and run-flat tires, are also available. MDT fixes the armoring into the shell of the vehicle, ensuring that the installation and finishing is

according to the standards set for that particular model. MDT then reassembles the vehicle as close to its original appearance as possible.

Once MDT has ensured full vehicle protection, it places a premium on retaining the original vehicle's look and feel to the extent possible, including enabling full serviceability of the vehicle, thereby rendering the armoring process "invisible." MDT works with its customers to understand their requirements, and together with the customer develops an optimized armoring solution. A flexible design-to-cost process helps evaluate tradeoffs between heavy and light materials and various levels of protection.

By working within the vehicle manufacturer's specifications, MDT maintains stability, handling, center-of-gravity and overall integrity. MDT's methods minimize impact on payload, and retain the full view from the passenger. In most cases all the original warranties provided by the manufacturer are still in effect.

Armoring Materials

MDT offers a variety of armoring materials, optimized to the customer's requirements. MDT uses ballistic steel, composite materials (including Kevlar(R), Dyneema(R) and composite armor steel) as well as special ceramics developed by MDT, together with special armored glass. MDT uses advanced engineering techniques and "light" composite materials, and avoids, to the extent possible, using traditional "heavy" materials such as armored steel because of the added weight, which impairs the driving performance and handling of the vehicle.

All materials used by MDT meet not only all international ballistic standards, but also the far more stringent requirements set down by the Israeli military, the Israeli Ministries of Defense and Transport, and the Israel Standards Institute. MDT's factory has also been granted the ISO 9002 quality standards award.

Products and Services

MDT armors a variety of vehicles for both commercial and military markets. At present, MDT offers armoring for approximately thirty different models of motor vehicles.

In the military market, MDT armors:

- troop and personnel carriers (such as vehicles in the Mercedes-Benz Vario and Sprinter lines)

- front-line police and military vehicles (such as the Mitsubishi Storm 4x4)

- command vehicles (such as the Land Rover Defender 4x4)

- specialty vehicles (such as HumVees).

In the commercial market, MDT armors:

- passenger vans and sports utility vehicles (such as the Chevrolet Savana, the General Motors Vandura and the Ford Econoline)

- money and valuables carriers (such as the Volkswagen T4 Transporter)

- luxury sedans (including a variety of models made by Mercedes, Cadillac, Volvo, Lincoln, etc.)

- ambulances (such as those made by Chevrolet).

Sales and Marketing

Most of MDT's business comes from Israel, although MDT has armored vehicles under contracts from companies in Yugoslavia, Mexico, Colombia, South Africa and Singapore. MDT's principal customer at present is the Israeli Ministry of Defense. Other customers include Israeli government ministries and agencies, private companies, medical services and private clients.

MDT markets its vehicle armoring through Israeli vehicle importers, both pursuant to marketing agreements and otherwise, and directly to private customers. Most sales are through vehicle importers.

MDT holds exclusive armoring contracts with Israel's sole General Motors and Chevrolet distributors. This means that these distributors will continue to honor the original vehicle warranty on armored versions of vehicles sold by them only if the armoring was done by MDT.

Competition

The global armored car industry is highly fragmented. Major suppliers include both vehicle manufacturers and aftermarket specialists. As a highly labor-intensive process, vehicle armoring is numerically dominated by relatively small businesses. Industry estimates place the number of companies doing vehicle armoring in the range of around 500 suppliers globally. While certain large companies may armor several hundred cars annually, most of these companies are smaller operations that may armor in the range of five to fifty cars per year. In 2002, MDT armored over 130 vehicles against weapons and explosives, and another approximately 300 vehicles against vandalism.

Among vehicle manufacturers, Mercedes-Benz has the largest vehicle-armoring market share, estimated at around 7% of the global market. Among aftermarket specialists, the largest share of the vehicle-armoring market is held by O'Gara-Hess & Eisenhardt. Other aftermarket specialists include International Armoring Corp. Lasco, Texas Armoring and Chicago Armor (Moloney). Many of these companies have financial, technical, marketing, sales, manufacturing, distribution and other resources significantly greater than ours.

We believes the key factors in our competing successfully in this field will be our ability to penetrate new military and paramilitary markets outside of Israel, particularly in North and South America and in Europe.

Electric Fuel Batteries for Defense and Homeland Security

We base our strategy in the field of military batteries on the development and commercialization of our next-generation Zinc-Air fuel cell technology, as applied in our batteries that we produce for the U.S. Army's Communications and Electronics Command (CECOM). We will

continue to seek new applications for our technology in defense projects, wherever synergistic technology and business benefits may exist. We intend to continue to develop our battery products for defense agencies, and plan to sell our products either directly to such agencies or through prime contractors.

Since 1998 we have received and performed a series of contracts from the U.S. Army's Communications-Electronics Command (CECOM) to develop and evaluate advanced primary Zinc-Air fuel cell packs. The terms of the current extension of a contract initially issued in 2001 call for us to deliver 500 prototype battery packs, and procure and install certain production equipment. The 12/24 volt, 800 watt-hour battery pack for battlefield power, which is based on our Zinc-Air fuel cell technology, weighs only about five pounds and has approximately twice the energy capacity per pound of the U.S. Army's standard lithium-sulfur dioxide battery packs.

In the second half of 2002, our five-year program with the US Army's Communications Electronics Command (CECOM) to develop a Zinc-Air battery for battlefield power culminated in the assignment of a National Stock Number and a $2.54 million delivery order for the newly designated BA-8180/U battery.

The BA-8180/U battery is our first defense battery product to go into mass production. We are developing other military batteries and related products that we hope to get into production in 2003 and 2004.

Advanced Zinc-Air Power Pack (AZAPPs)

BA-8180/U

Advanced Zinc-Air power packs (AZAPPs) are lightweight, low-cost primary Zinc-Air batteries with up to twice the energy capacity per pound of primary lithium ($LiSO_2$) battery packs, which are the most popular batteries used in the US military today. Zinc-Air batteries are inherently safe in storage, transportation, use, and disposal.

The BA-8180/U is a 12/24 volt, 800 watt-hour battery pack approximately the size and weight of a notebook computer. The battery is based on a new generation of lightweight, 30 ampere-hour cells developed by us over the last five years with partial funding by CECOM. Each BA-8180/U battery pack contains 24 cells.

The battery has specific energy of up to 350 Wh/kg, which is substantially higher than that of any competing disposable battery available to the defense and security industries. By way of comparison, the BA-5590, a popular $LiSO_2$ battery pack, has only 175 Wh/kg. Specific energy, or energy capacity per unit of weight, translates into longer operating times for battery-powered electronic equipment, and greater portability as well. Because of lower cost per watt-hour, the BA-8180/U can provide substantial cost savings to the Army when deployed for longer missions, even for applications that are not man-portable.

During the second half of 2002, CECOM assigned a National Stock Number (NSN) to our Zinc-Air battery, making it possible to order and stock the battery for use by the Armed Forces. During the fourth quarter, CECOM assigned the designation BA-8180/U to our Zinc-Air battery, the first time an official US Army battery designation was ever assigned to a Zinc-Air battery.

Also during the fourth quarter of 2002, CECOM provided us with a $2.54 million letter contract for delivery of BA-8180/U batteries and associated electrical interface adapters. The contract calls for order releases during the first three calendar quarters of 2003, with a current order ceiling of $2,543,250. Under the terms of the letter contract, a formal contract is to be entered into during the first quarter of 2003.

Based on extensive contacts with the US and foreign military agencies, we believe that we will be able to develop a significant market for the BA-8180/U both in the US Armed Forces and abroad.

Other AZAPP Products

The BA-8180/U was the first battery approved for military use based on our 30Ah Zinc-Air cell. We have also developed, with partial funding from CECOM, a 12-cell, 12 volt battery using the same 30Ah Zinc-Air cell. This battery, called the AZAPP FB, is currently in limited production for field testing purposes.

We are also working on two additional cell sizes. The first of these, a 20Ah cell, was developed for the Army's Land Warrior program, and some battery prototypes incorporating these cells have already been delivered to the Army under the terms of a Land Warrior subcontract that we received and completed in

2002.

We have also completed the conceptual design of a 40Ah cell and a 24-cell battery pack incorporating such a cell. We hope to complete the design of this cell in 2003 and put it into production either in late 2003 or early 2004.

Ancillary products

In order to provide compatibility between the BA-8180/U and various items of military equipment, we will supply three types of electrical interface adapters for the BA-8180/U, including equipment-specific adapters for the AN/PRC-119 SINCGARS and SINCGARS ASIP tactical radio sets, and a generic interface for items of equipment that were designed to interface with a BA-5590 or equivalent battery. Each of the three interfaces was also assigned a national stock number (NSN) by CECOM. We will continue to develop interface adapters that for our batteries as the need arises.

We have also developed interface adapters for other items of equipment which require higher power than the BA-8180/U can provide by itself. For example, we have developed a hybrid battery system comprising a BA-8180/U battery pack and two small rechargeable lead-acid packs. Even with the weight of the lead-acid batteries, this hybrid system powers a satellite communications terminal for significantly longer than an equivalent weight of BA-5590 $LiSO_2$ battery packs. We have also developed experimental hybrid systems incorporating other rechargeable technologies, such as lithium-ion batteries and ultracapacitors.

UAV/MAV

We are currently under contract with the U.S. military and an Israeli security agency, to demonstrate the feasibility of Zinc-Air batteries for both unmanned aerial vehicles (UAV) and micro-air vehicles (MAV) platforms, respectively.

Short-term development goals include the optimization and integration of cell components for performance and manufacturability. System-level objectives include refinement of battery envelope design and vehicle interfaces, and actual flight testing. We anticipate that the first fieldable batteries can be ready in 2004.

UAVs

Man-portable UAVs are considered to be an increasingly important battlefield tool for reconnaissance and surveillance of enemy positions. At present, power sources available to the military provide only marginally adequate operating times for these UAVs. For example, the Marine Corps' DragonEye system, operating off primary lithium batteries, can run for 30 to 60 minutes. We expect to achieve a cruise time of at least two hours using an equivalent weight of Zinc-Air cells.

MAVs

Development of electrically propelled MAVs has been hampered by the lack of a satisfactory battery solution. Achievement of our development targets will enable a Zinc-Air battery to power a typical 5-oz. MAV for as long as 30 minutes.

Zinc-Air Power Packs (ZAPPs)

During 2002 we developed a family of 12V batteries built around our high-power 4Ah metal cell. These batteries are aimed at the Homeland Security market and are designed to provide back-up power for portable 12V equipment such as handheld chemical or biological sensors. The first battery in this family to become ready for production is the ZAPP-48, which is a 14Ah battery capable of working at a continuous current of 2.5A.

Market/Applications

Being an external alternative to the popular lithium based BA-5590/U, the BA-8180 can be used in many applications operated by the 5590. The BA-8180/U can be used for a variety of military applications, including:

- Tactical radios
- SIGINT systems
- Training systems
- SATCOM radios
- Nightscope power
- Guidance systems

o Surveillance systems

o Sensors

Competition

The BA-8180/U is the only Zinc-Air battery to hold a US Army battery designation. It does, however, compete with other primary (disposable) batteries, and primarily lithium based

batteries. In some cases, primarily in training missions, it will also compete with rechargeable batteries.

Zinc-Air batteries are inherently safer in storage, transportation, use, and disposal, and are more cost effective. They are lightweight, with up to twice the energy capacity per pound of primary lithium battery packs. Zinc-Air batteries for the military are also under development by Rayovac Corporation. Rayovac's military Zinc-Air batteries utilize cylindrical cells, rather than the prismatic cells that we developed. While cylindrical cells may provide higher specific power than our prismatic cells, we believe they will generally have lower energy densities and be more difficult to manufacture.

The most popular competing primary battery in use by the US Armed Forces is the BA-5590, which uses lithium-sulfur dioxide (LiSO2) cells. The largest suppliers of LiSO2 batteries to the US military are believed to be Saft America Inc and Eagle Picher Technologies LLC. The battery compartment of most military communications equipment, as well as other military equipment, is designed for the x90 family of batteries, of which the BA-5590 battery is the most commonly deployed. Another primary battery in this family is the BA-5390, which uses lithium-manganese dioxide (LiMnO2) cells. LiMnO2 batteries are most commonly supplied by Ultralife Batteries Inc,. Saft and Eagle Picher.

Rechargeable batteries in the x90 family include lithium-ion and nickel-metal hydride batteries which may be used in training missions in order to save the higher costs associated with primary batteries. Because of the short usage time per charge cycle, rechargeable batteries are not considered suitable for use in combat.

Our BA-8180 does not fit inside the battery compartment of any military equipment, and therefore is connected externally using an interface adapter that we also sell to the Army. Our battery offers greatly extended mission time, along with lower total mission cost, and these significant advantages often greatly outweigh the slight inconvenience of fielding an external battery.

Technology

All batteries convert chemical energy to electrical energy through two separate electrochemical reactions: one consuming electrons (at the cathode) and the other releasing them (at the anode). These half-cell reactions are physically separated within the battery, allowing ions to flow between them, but not electrons. It is this separation that allows a battery to produce electrical power: The electrons are made to do work on their journey to the other side of the battery by passing across an electrical load, such as a light bulb, motor, or other electrically powered component or device.

Our Zinc-Air battery's superiority over other battery technologies lies in the underlying electrochemical make-up of a Zinc-Air cell. While other battery cells must carry the cathodic reagent - the active material that `consumes' the electrons freed at the anode - within the weight and volume of the battery, a Zinc-Air cell consumes oxygen that it extracts from the atmosphere.

On the anode side, the reaction in the Zinc-Air cell is the same as that of the common alkaline battery, wherein zinc, the active anodic material, is converted to zinc-oxide by reaction with hydroxyl ions present in the electrolyte.

On the cathode side, the reaction in both the Zinc-Air and alkaline batteries involves the reduction of oxygen to create those hydroxyl ions. In the case of the alkaline battery, an oxidizing material (manganese dioxide) is deployed inside the cell to provide the oxygen. The Zinc-Air cell, on the other hand, employs an air-permeable, hydrophobic, catalytic membrane which extracts oxygen from the atmosphere.

Thus, Zinc-Air has a weight and volume advantage over most other battery technologies, because one of its two active reagents, i.e., oxygen, adds no weight or volume within the cell. This frees up a lot of space inside the cell, which means that the zinc anode, our cell's energy storehouse, makes up most of the cell's weight and volume.

In addition to outstanding performance, Zinc-Air technology boasts two additional features that make it extremely attractive for military and security use:

- Safety: A Zinc-Air battery is an inherently safe battery, in storage, transportation, use, and disposal. The danger of fire, explosion or personnel exposure to hazardous materials is lower than in any other battery technology.

- Environment-friendliness: Zinc-Air cells contain no added mercury or other hazardous elements such as lead or cadmium that are often used in batteries, and in fact Zinc-Air batteries can be disposed of with household trash.

Manufacturing

We have established a battery factory at our new location in Auburn, Alabama, where we have leased 15,000 square feet of light industrial space from the city of Auburn. We also have production capabilities for some battery components at the facility of EFL, our Israeli subsidiary, in Beit Shemesh, Israel.

Electric Vehicles

Introduction

We believe that environmental concerns and current and proposed legislation create incentives for fleet operators to use zero emission electric vehicles, and that the Electric Fuel Zinc-Air Energy System for electric vehicles is particularly suitable for use by such fleet operations. We believe the U.S. government will continue to use us as a subcontractor to develop electric vehicles, and we hope this support will create incentives for fleet operators (primarily bus and mass transit operators) to introduce electric vehicles into their fleets. We further believe that recent government interest in hydrogen fuel cells is to our benefit, since we believe that an examination of the advantages and disadvantages offered by both hydrogen fuel cells and the Electric Fuel Zinc-Air Energy System for electric vehicles demonstrates that our system offers a mature technology that is ready to be implemented in a short time frame, unlike hydrogen fuel cells, which we believe are decades away from being a practical and economic alternative to traditional

petroleum-based fuel sources. Moreover, a recent study that we commissioned from consulting firm Arthur D. Little projected significant life cycle cost benefits for Zinc-Air when compared with hydrogen fuel cell technology over a five to ten year period.

The Electric Fuel Zinc-Air Energy System for Electric Vehicles

The Electric Fuel Zinc-Air Energy System consists of:

- an in-vehicle, Zinc-Air fuel cell unit consisting of a series of Zinc-Air cells and refuelable zinc-fuel anode cassettes;

- a battery exchange unit for fast vehicle turn-around that is equivalent to the time needed to refuel a diesel-based bus refueling;

- an automated battery refueling system for mechanically replacing depleted zinc-fuel cassettes with charged cassettes; and

- a regeneration system for electrochemical recycling and mechanical repacking of the discharged fuel cassettes.

With its proprietary high-power air cathode and zinc anode technologies, our Zinc-Air fuel cell delivers a unique combination of high-energy density and high-power density, which together power electric vehicles with speed, acceleration, driving range and driver convenience similar to that of conventionally powered vehicles.

We believe that our Zinc-Air fuel cell system for powering electric vehicles offers numerous advantages over other electric vehicle batteries that make it ideal for fleet and mass transit operators. Fleet operators require a long operating range, large payload capacity, operating flexibility, all-weather performance, fast vehicle turnaround and competitive life-cycle costs. Electric Fuel-powered full-size vehicles, capable of long-range, high-speed travel, could fulfill the needs of transit operators in all weather conditions, with fast, cost-effective refueling. An all-electric, full-size bus powered by the Electric Fuel system can provide to transit authorities a full day's operating range for both heavy duty city and suburban routes in all weather conditions.

In field trials with major European entities, we have demonstrated the commercial viability of our battery system by regularly driving 300 to 400 km in actual drive cycles. In 1996, a Mercedes-Benz MB410 van powered by our Zinc-Air fuel cell crossed the Alps, traveled from Chambray, France over the Moncenisio Pass, and continued to the Zinc-Air regeneration plant operated by Electric Fuel's Italian licensee, Edison Termoelettrica, SpA, in Turin, Italy. The 152 mile (244 km) drive included a 93 mile (150 km) continuous climb over mountainous terrain in which the vehicle climbed over 4,950 feet (1,500 meters) to reach the summit at 6,874 feet (2,083 meters), using only 65% of the battery's capacity. In November 1997, an electric Mercedes-Benz MB410 van drove from central London to Central Paris on a single charge - a distance of 272 miles (439 km), not including the rail transport through the English Channel Tunnel.

During 2002, we successfully completed Phase II of our program with the U.S. Department of Transportation's Federal Transit Administration. Among the items successfully tested during Phase II were ultracapacitors designed to improve and increase the performance of our bus. During this performance testing, our bus was driven a record-breaking 127 miles, more than

100 of them under the rigorous stop-and-go diving conditions of the Society of Automotive Engineers' Central Business District (CBD) cycle with a full passenger load. We demonstrated our bus in a public demonstration in Las Vegas, Nevada in November 2001, and in Washington, D.C., on Capitol Hill, with the participation of certain members of the United States Senate, in March 2002. In October 2002, we received approval from the FTA to subcontract at least half of the $2 million budget associated with the new Phase III of our Electric Transit Bus Program (described below), with remainder of the budget shared by the partners in the program.

Major Programs

We have formed several strategic partnerships and are engaged in demonstration programs involving the Electric Fuel Zinc-Air Energy System for electric vehicles in various locations in the U.S. and Europe.

The Department of Transportation-Federal Transit Administration Zinc-Air All Electric Transit Bus Program

In the United States, our Zinc-Air technology is the focus of a Zinc-Air All Electric Bus demonstration program the costs and expenditures of which are 50% offset by subcontracting fees paid by the U.S. Department of Transportation's Federal Transit Administration. Phase I of the project, which was for $4 million, was completed in July 2000. Phase II of the project, which was for $2.7 million, was completed in July 2002, and subcontracting for Phase III was approved in October 2002.

The program provides that the bus will utilize the new all-electric, battery/battery/ultracapacitor-hybrid propulsion system that we are jointly developing with General Electric's research and development center, with funding from the Israeli-U.S. Bi-National Industrial Research and Development (BIRD) Foundation (described below). The bus used in the program is a standard 40-foot (12.2 meter) transit bus manufactured by NovaBus Corporation. It has a capacity of 40 seated and 37 standing passengers and a gross vehicle weight of 39,500 lbs. (17,955 kg.). The all-electric hybrid system consists of an Electric Fuel Zinc-Air fuel cell as the primary energy source, an auxiliary battery to provide supplementary power and recuperation of energy when braking. Ultracapacitors enhance this supplementary power, providing faster throughput and higher current in both directions than the auxiliary battery can supply on its own. The vehicle draws cruising energy from the Zinc-Air fuel cell, and supplementary power for acceleration, merging into traffic and hill climbing, from the auxiliary battery and ultracapacitors.

The program, which includes General Electric and the Regional Transportation Commission of Southern Nevada (RTC) as project partners, seeks to demonstrate the ability of the Electric Fuel battery system to power a full-size, all-electric transit bus, providing a full day's range for heavy duty city and suburban routes, under all weather conditions. In November 1998, a consortium consisting of Electric Fuel, the Center for Sustainable Technology, L.L.C. and RTC received approval for $2 million in federal subcontracting fees for the $4 million Zinc-Air Electric Transit Bus Program (Phase I). Additional project partners included the Community College of Southern Nevada and the Desert Research Institute. We successfully completed this phase in July 2000.

Phase II focused on conducting evaluation of the system and vehicle performance, including track testing and limited on-road demonstrations, and enhancing the all-electric propulsion system developed in Phase I. Phase II also included testing and comparing the incorporation of ultracapacitors and associated interface controls in the Zinc-Air fuel cell system. Phase II was completed in July 2002, after successfully meeting all the original performance designed requirements (as per the American Public Transport Association's standard for transit buses) without addition of the ultracapacitors, and exceeding them in tests with the introduction of ultracapacitors.

The new Phase III effort, which was announced in October 2002, focuses on installation, testing and commissioning of new generation advanced ultracapacitors and associated interface controls. Advanced techniques will be used to implement control of the bus auxiliaries to optimize their efficiency and minimize energy consumption. The entire system will be analyzed, assessed and compared to previous configurations. Further evaluations of the system and vehicle performance, including track testing and limited on-road demonstrations, will also be carried out.

We are the principal participant in Phase III, with overall technical and administrative responsibility. The responsibilities of General Electric relate to the auxiliary control system and the ultracapacitor configuration. The Regional Transportation Commission of Southern Nevada, which was also a project participant in Phase II, continues its role in leading the project's peer review committee.

A performance evaluation test is anticipated to take place in Rome, New York in late 2003, where improvements over the previous configurations, if any, will be measured.

We believe that electric buses represent a particularly important market for electric vehicles in the United States. Transit buses powered by diesel engines operate in large urban areas where congestion is a fact of life and traffic is largely stop-and-go. As a result, they are the leading contributor to inner city toxic emissions, and are a major factor for those U.S. cities that have been designated as in "non-attainment" with respect to air quality standards. Moreover, the U.S. Environmental Protection Agency has identified particulate emissions from diesel engine emissions as a carcinogen.

Our Zinc-Air energy system is particularly suitable for transit buses because transit buses must operate for up to 12 hours a day on a single battery charge. Furthermore, transit buses require a large energy storage battery to power the vehicle while attending to passenger needs such as air-conditioning and handicapped access. The test program is designed to prove that an all-electric bus can meet these and all other Los Angeles and New York Municipal Transit Authority mass transit requirements including requirements relating to performance, speed, acceleration and hill climbing.

All-Electric Hybrid Propulsion System for Transit Buses and Heavy Duty Vehicles - the BIRD Program

We and General Electric are also jointly developing an all-electric, battery/battery-hybrid propulsion system for powering electric buses and heavy-duty trucks. In July 1998 the BIRD Foundation awarded the two companies funding for the joint development of the electric propulsion system. The first application for the system will be an all-electric, zero-emission, full-size

transit bus, in the program subcontracted to us by the Federal Transit Administration of the U.S. Department of Transportation referred to above. Our portion of the project related to a mobile refueling system for the transit bus. The refueling system, build in two standard 40" containers, was commissioned and successfully demonstrated in the All Electric Bus project. General Electric's portion of the project was to develop the EMS Energy Management System, which manages and controls all the various energy suppliers and consumers of the bus. The EMS was tested successfully as part of the integration drives completed under phase I of the FTA project.

Germany - Consortium Project

In January 2000, we agreed to participate in a new cooperative, all-electric hybrid vehicle development and demonstration program in Germany. A consortium consisting of major German industrial firms such as DaimlerChrysler AG, EPCOS and Varta Batterie AG will implement the program. The German Post, which sponsored an extensive field test of our Zinc-Air fuel cell system for electric vehicles from 1995 through 1998, has also joined the consortium as an Advisory Partner. In January 2001, we received a DM 1 million ($469,000) order for Zinc-Air fuel-cells and zinc anodes that we delivered during 2001, and we completed this project with a successful on-road demonstration of our Zinc-Air van in December 2002.

Competition

We believe that our products must be available at a price that is competitive with alternative technologies, particularly those intended for use in zero or low-emission vehicles. Besides other battery technologies, these include hydrogen fuel cells, "hybrid systems" that combine an internal combustion engine and battery technologies, and use of regular or low-pollution fuels such as gasoline, diesel, compressed natural gas, liquefied natural gas, ethanol and methanol. Other alternative technologies presently use costly components, including use of flywheels and catalytic removal of pollutants. These various technologies are at differing stages of development and any one of them, or a new technology, may prove to be more cost effective, or otherwise more readily acceptable by consumers, than the Electric Fuel Zinc-Air Energy System for electric vehicles. In addition, the California Air Resource Board has expressed to us concerns about the costs associated with the Zinc-Air regeneration infrastructure as compared to battery technologies that use electrical recharging.

The competition to develop electric vehicle battery systems and hydrogen fuel cells and to obtain funding for the development of electric vehicle battery systems is, and is expected to remain, intense. Our technology competes with other battery technologies as well as with different Zinc-Air batteries and with advanced vehicle propulsion systems. The competition consists of development stage companies as well as major international companies and consortia including such companies, including automobile manufacturers, battery manufacturers, and energy production and transportation companies, many of which have financial, technical, marketing, sales, manufacturing, distribution and other resources significantly greater than ours.

An area of increased development has been that of hydrogen fuel cell powered vehicles, spearheaded by the Ballard Corporation's solid polymer electrolyte hydrogen-air fuel cell program. Major automobile companies have made significant investments in this technology. However, we believe that our Zinc-Air fuel cell technology is more likely to be commercially viable,

and more likely to be ready for commercialization earlier, than the hydrogen fuel cell systems, with a lower system cost and with more advantageous performance characteristics.

We believe that vehicles based on hydrogen fuel cells are many years away from commercialization, with significant issues of hydrogen production and storage. We feel that storing hydrogen in containers on board vehicles may be risky and involves major investments in infrastructure for highly-pressurized hydrogen, and that using methanol for making hydrogen on board vehicles is highly complex, costly and risky.

We believe that competing Zinc-Air technologies, such as those offered by Metallic Power (Carlsbad, California) and Powerzinc Electric (City of Industry, California), are at a much earlier stage of development, not just in terms of size and number of cells, modules and demonstrations in electric vehicles, but also in terms of the scale of development effort. We are not aware of a competing Zinc-Air development effort that could yield a product that is superior to ours in terms of vehicle performance or life-cycle cost.

Marketing

We plan to seek to expand our existing strategic alliances in Europe, the United States and the Far East, benefiting from experience gained in connection with the DOT/FTA and our alliances with General Electric and other key players in this market. We also intend to seek support of government agencies, electric utilities and zinc manufacturers.

Lifejacket Lights

In 1996, we began to produce and market lifejacket lights built with our patented magnesium-cuprous chloride batteries, which are activated by immersion in water (water-activated batteries), for the aviation and marine safety and emergency markets. At present we have a product line consisting of four lifejacket light models, all of which work in both freshwater and seawater. Each of our lifejacket lights is certified for use by relevant governmental agencies under various U.S. and international regulations. We manufacture, assemble and package all our lifejacket lights in our factory in Beit Shemesh, Israel.

Market and Marketing Strategies

The market for aviation lifejacket lights has been declining because of extended maintenance cycles in the industry, and the events of September 11, 2001, exacerbated this trend. We market our lights to the commercial aviation industry in the United States exclusively through The Burkett Company of Houston, Texas, which receives a commission on sales.

The annual market for marine lifejacket lights is estimated at one to two million units worldwide, of which about 50% is in Europe and less than 25% is in the United States. We market our marine safety products through our own network of distributors in Europe, the United States, Asia and Oceania.

Competition

Two of the largest manufacturers of aviation and marine safety products, including TSO and SOLAS-approved lifejacket lights, are ACR Electronics Inc. of Hollywood, Florida, and

Pains Wessex McMurdo Ltd. of England. Other significant competitors in the marine market include Daniamant Aps of Denmark, and SIC of Italy.

Backlog

We generally sell our products under standard purchase orders. Orders constituting our backlog are subject to changes in delivery schedules and are typically cancelable by our customers until a specified time prior to the scheduled delivery date. Accordingly, our backlog is not necessarily an accurate indication of future sales. As of December 31, 2001 and 2002, our backlog for the following year was approximately $1.0 million and $6.2 million, respectively.

Regulatory and Environmental Matters

We believe that our Zinc-Air batteries as currently produced are in compliance with applicable Israeli, European, and United States federal, state and local standards that govern the manufacture, storage, use and transport of the various chemicals used, and waste materials produced, in the manufacture and use of our Zinc-Air fuel cell, including zinc and potassium hydroxide. We have obtained the necessary permits under the Israel Dangerous Substances Law, 5753-1993, required for the use of zinc metal, potassium hydroxide and certain other substances in our facilities in Israel.

The presence of potassium hydroxide as an electrolyte in our electric vehicle batteries may subject its disposal to regulation under some circumstances. This electrolyte is the same as the electrolyte used in primary alkaline batteries and rechargeable nickel-cadmium and nickel-metal hydride batteries. Our electric vehicle battery technology uses relatively small amounts of spillable potassium hydroxide. The United States Department of Transportation regulates the transport of potassium hydroxide, and it is likely that any over-the-road transport of spillable potassium hydroxide in the United States would require manifesting and placarding.

The EPA, the Occupational Safety and Health Administration and other federal, state and local governmental agencies would have jurisdiction over operations of our production facilities were they to be located in the United States. Based upon risks associated with potassium hydroxide, government agencies may impose additional restrictions on the manufacture, transport, handling, use and sale of our products.

Patents and Trade Secrets

We rely on certain proprietary technology and seek to protect our interests through a combination of patents, trademarks, copyrights, know-how, trade secrets and security measures, including confidentiality agreements. Our policy generally is to secure protection for significant innovations to the fullest extent practicable. Further, we continuously seek to expand and improve the technological base and individual features of our products through ongoing research and development programs.

We have been filing patents on our Zinc-Air fuel cell system for electric vehicles and on other aspects of our technology since 1990. These applications have resulted in 42 unexpired U.S. patents and 15 corresponding European patents. These patents cover various aspects of the Electric Fuel System technology, including the overall system, the zinc anode, including its physical and mechanical attributes, the construction of the air cathode, cell structure

and arrangements, connectors, the automatic refueling system, zinc regeneration, and safety features, as well as our high-power zinc-oxygen battery for torpedoes, the use of our zinc in other alkaline batteries, and our water-activated magnesium-cuprous chloride batteries. These patents expire between 2007 and 2018.

In addition to patent protection, we rely on the laws of unfair competition and trade secrets to protect our proprietary rights. We attempt to protect our trade secrets and other proprietary information through confidentiality and non-disclosure agreements with customers, suppliers, employees and consultants, and through other security measures. However, we may be unable to detect the unauthorized use of, or take appropriate steps to enforce our intellectual property rights. Effective patent, trademark, copyright and trade secret protection may not be available in every country in which we offer or intend to offer our products and services to the same extent as in the United States. Failure to adequately protect our intellectual property could harm or even destroy our brands and impair our ability to compete effectively. Further, enforcing our intellectual property rights could result in the expenditure of significant financial and managerial resources and may not prove successful. Although we intend to protect our rights vigorously, there can be no assurance that these measures will be successful.

Research and Development

During the years ended December 31, 2000, 2001 and 2002, our gross research and product development expenditures were approximately $5.5 million, $4.2 million and 2.2 million, respectively, including research and development in discontinued operations. During these periods, the Office of the Chief Scientist of the Israel Ministry of Industry and Trade (the "Chief Scientist") participated in our research and development efforts relating to our consumer battery business, thereby reducing our gross research and product development expenditures in the amounts of approximately $763,000, $705,000 and $49,000, for the years 2000, 2001 and 2002, respectively. During 1998 the Israel-U.S. Binational Industrial Research and Development Foundation (BIRD) also began participating in our research and development efforts by sponsoring a joint project to develop a hybrid propulsion system for transit buses with General Electric Corporate Research and Development. We received grants from BIRD totaling approximately $195,000, $0 and $0 during the years ended December 31, 2000, 2001 and 2002, respectively.

Under the terms of the grants from the Chief Scientist and current Chief Scientist regulations, we are obligated to pay royalties at the rate of 3% of the sales of products developed from projects funded by the Chief Scientist for the first three years of sales, increasing thereafter, up to 3.5%. We currently pay royalties at the rates of 3.5% of Electric Vehicle revenues. The obligation to make such royalty payments ends when 100% of the amount granted (in New Israeli Shekels (NIS) linked to the U.S. dollar, plus interest (with respect to grants after January 1, 1999, at the LIBOR rate)) is repaid. The Government of Israel does not acquire proprietary rights in the technology developed using its funding, but certain restrictions with respect to the technology apply, including the obligation to obtain the Israeli Government's consent to manufacture the product based on such technology outside of Israel or to transfer the technology to a third party, which consent may be conditioned upon an increase in royalty rates or in the amount to be repaid. Current regulations require that, in the case of the approved transfer of manufacturing rights out of Israel, the maximum amount to be repaid through royalty payments will be increased to between 120% and 300% of the amount granted, depending on the extent of the manufacturing

to be conducted outside of Israel, and that an increased royalty rate of up to 5% will be applied. Through 2002, we have received an aggregate of $9.9 million from grants from the Chief Scientist.

Under the terms of the grants from BIRD, we are obligated to pay royalties at the rate of 2-1/2% of the first year's gross sales and, in succeeding years, at the rate of 5% of gross sales until 100% of the grant has been repaid, at which point the repayment rate decreases to 2-1/2% of gross sales. The total amount to be repaid reaches a maximum of 150% of the grant if it takes five years or longer for the grant to be repaid. Should we sell any portion of the technology developed outright to a third party, one-half of all proceeds of the sale are applied as received on account of royalties. The repayment obligation is in U.S. dollars linked in value to the U.S. Consumer Price Index. Through 2002, we have received an aggregate of $772,000 from grants from BIRD.

Employees

As of February 28, 2003, we had 152 full-time employees worldwide. Of these employees, 3 hold doctoral degrees and 20 hold other advanced degrees. Of the total, 18 employees were engaged in product research and development, 110 were engaged in production and operations, and the remainder in general and administrative functions. Our success will depend in large part on our ability to attract and retain skilled and experienced employees.

We and the employees are not parties to any collective bargaining agreements. However, as many of our employees are located in Israel and employed by EFL or MDT, certain provisions of the collective bargaining agreements between the Histadrut (General Federation of Labor in Israel) and the Coordination Bureau of Economic Organizations (including the Manufacturers' Association of Israel) are applicable to EFL's and MDT's employees by order (the "Extension Order") of the Israeli Ministry of Labor and Welfare. These provisions principally concern the length of the work day and the work week, minimum wages for workers, contributions to a pension fund, insurance for work-related accidents, procedures for dismissing employees, determination of severance pay and other conditions of employment, including certain automatic salary adjustments based on changes in the Israeli CPI.

Israeli law generally requires severance pay upon the retirement or death of an employee or termination of employment without due cause; additionally, some of our senior employees have special severance arrangements, certain of which are described under "Item 11. Executive Compensation - Employment Contracts," below. We currently fund our ongoing severance obligations by making monthly payments to approved severance funds or insurance policies. In addition, Israeli employees and employers are required to pay specified sums to the National Insurance Institute, which is similar to the United States Social Security Administration. Since January 1, 1995, such amounts also include payments for national health insurance. The payments to the National Insurance

Institute are approximately 15.6% of wages, of which the employee contributes approximately 62% and the employer contributes approximately 38%. The majority of the permanent employees of EFL, and about a quarter of the permanent employees of MDT, are covered by "managers' insurance," which provides life and pension insurance coverage with customary benefits to employees, including retirement and severance benefits. We contribute 14.33% to 15.83% (depending on the employee) of base wages to such plans and the permanent employees contribute 5% of their base wages.

In 1993, an Israeli court held that companies that are subject to the Extension Order are required to make pension contributions exclusively through contributions to Mivtachim Social Institute of Employees Ltd., a pension fund managed by the Histadrut. We subsequently reached an agreement with Mivtachim with respect to providing coverage to certain production employees and bringing ourselves into conformity with the court decision. The agreement does not materially increase our pension costs or otherwise materially adversely affect its operations. Mivtachim has agreed not to assert any claim against us with respect to any of our past practices relating to this matter. Although the arrangement does not bind employees with respect to instituting claims relating to any nonconformity by us, we believe that the likelihood of the assertion of claims by employees is low and that any potential claims by employees against us, if successful, would not result in any material liability to us.

ITEM 2. PROPERTIES

Our New York headquarters, constituting approximately 4,000 square feet, are located in New York City and subleased on a month-to-month basis. The Auburn, Alabama research and manufacturing facility, constituting approximately 15,000 square feet, is leased from the City of Auburn through July 2004, with an option to extend the lease for an additional 1-1/2 years at the same rent and for another three years thereafter at a 10% rent increase. We also have an option to expand to 30,000 square feet, and we have free use of this additional space through mid-2004. Our management and administrative facilities and research, development and production facilities for the manufacture and assembly of our Survivor Locator Lights, constituting approximately 43,000 square feet, are located in Beit Shemesh, Israel, located between Jerusalem and Tel-Aviv (within Israel's pre-1967 borders). The lease for these facilities in Israel expires on December 31, 2007; we have the ability to terminate the lease every two years upon three months' written notice. Moreover, we may terminate the lease at any time upon twelve months written notice.

Our IES subsidiary rents approximately 8,900 square feet of office and warehouse space in Littleton, Colorado, approximately ten miles outside of Denver, pursuant to a lease expiring in September 2005, with an option to extend the lease for an additional five years, or until September 2010. IES also holds an option under certain circumstances to rent an addition 3,200 square feet of contiguous space.

Our MDT subsidiary rents approximately 20,000 square feet of office space in Lod, Israel, near Ben-Gurion International airport (within Israel's pre-1967 borders) pursuant to a lease renewable on an annual basis.

We believe that our existing facilities are adequate to meet our current and foreseeable future needs.

ITEM 3. LEGAL PROCEEDINGS

As of the date of this filing, there were no material pending legal proceedings against us.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Since February 1994, our common stock has been traded on the Nasdaq National Market. Our Nasdaq ticker symbol is currently "ARTX"; prior to February 2003, our Nasdaq ticker symbol was "EFCX." The following table sets forth, for the periods indicated, the range of high and low closing prices of our common stock on the Nasdaq National Market System:

Year Ended December 31, 2002	High	Low
Fourth Quarter.........................	$ 1.06	$ 0.61
Third Quarter..........................	$ 1.59	$ 0.83
Second Quarter.........................	$ 1.68	$ 0.73

First Quarter...........................	$ 2.20	$ 1.42
Year Ended December 31, 2001		
Fourth Quarter..........................	$ 2.43	$ 1.30
Third Quarter...........................	$ 2.75	$ 1.30
Second Quarter..........................	$ 3.95	$ 2.30
First Quarter...........................	$ 8.00	$ 3.50

As of February 28, 2003 we had approximately 300 holders of record of our common stock.

Our stock price is currently trading below $1.00, and has been since October 18, 2002. On December 6, 2002, Nasdaq notified us of our failure to meet the continued listing standards, and informed us that unless our stock closes for ten consecutive trading days with a bid price in excess of $1.00 prior to March 6, 2003 (subsequently extended, as a result of an amendment to Nasdaq's listing regulations, to June 4, 2003), Nasdaq would notify us of intent to delist our stock from the Nasdaq National Market. Should Nasdaq notify us of its intent to delist our stock, we would have the opportunity to appeal this notification, although there can be no assurances that this appeal would be resolved favorably.

There can be no assurance that our common stock will remain listed on the Nasdaq National Market. If our common stock were to be delisted from the Nasdaq National Market, we might apply to be listed on the Nasdaq SmallCap market; however, there can be no assurance that we would be approved for listing on the Nasdaq SmallCap market, which has the same $1.00 minimum bid and other similar requirements as the Nasdaq National Market. If we were to move to the Nasdaq SmallCap market, current Nasdaq regulations would give us the opportunity to obtain an additional 180-day grace period and an additional 90-day grace period after that if we meet certain net income, shareholders' equity or market capitalization criteria. While our stock would continue to trade on the over-the-counter bulletin board following any delisting from the Nasdaq, any such delisting of our common stock could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock. Also, if in the future we were to determine that we need to seek additional equity capital, it could have an adverse effect on our ability to raise capital in the public equity markets. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - If our shares were to be delisted, our stock price might decline further and we might be unable to raise additional capital," below.

Dividends

We have never paid any cash dividends on our common stock. The Board of Directors presently intends to retain all earnings for use in our business. Any future determination as to payment of dividends will depend upon our financial condition and results of operations and such other factors as the Board of Directors deems relevant.

Recent Sales of Unregistered Securities

In December 2002, we issued and sold to three institutional investors (i) an aggregate $3,500,000 principal amount of 9% Secured Convertible Debentures due June 30, 2005; (ii) Series A Warrants to purchase an aggregate of 1,166,700 shares of our common stock at any time prior to December 31, 2007 at a price of $0.84 per share; (iii) Series B Warrants to purchase an aggregate of 1,166,700 shares of our common stock at any time prior to December 31, 2007 at a price of $0.89 per share; (iv) Series C Warrants to purchase an aggregate of 1,166,700 shares of our common stock at any time prior to December 31, 2007 at a price of $0.93 per share, and (v) an aggregate of 387,301 shares of common stock in prepayment of the first nine months of interest on the debentures. If we default under the provisions of the debentures, including (but not limited to) the default of an interest payment, failure to have an effective registration statement covering the resale of common shares upon conversion declared effective by January 1, 2004, and failure to remain listed on the Nasdaq (National Market or SmallCap), the principal amount of the Debenture may at the option of the holders thereof become immediately due and payable.

We issued these securities in reliance on the exemption from registration provided by Section 4(2) of the Securities Act as transactions by an issuer not involving a public offering.

Annual Shareholders Meeting

We held our 2002 annual meeting of shareholders on June 12, 2002. Our 2003 Annual Meeting of Stockholders will be held on Monday, September 15, 2003 commencing at 10:00 a.m., local time, in the Ballroom of the Shelburne Murray Hill Hotel, 303 Lexington Avenue, New York, New York.

In light of the foregoing and in accordance with Rules 14a-5(f) and 14a-8(e)(2) under the Securities Exchange Act of 1934, as amended, we will consider stockholder proposals submitted in connection with our 2003 Annual Meeting to have been submitted in a timely fashion if such proposals are received by us at our principal offices no later than April 8, 2003. If a proposal is received after April 8, 2003, the proxies designated by the Board of Directors of the Company will have discretionary authority to vote on the proposal under circumstances consistent with the proxy rules of the Securities and Exchange Commission.

We expect to mail our Annual Report to Shareholders for the year ended December 31, 2002 along with the Notice and Proxy Statement of the 2003 Annual Meeting on or about August 6, 2003.

ITEM 6. SELECTED FINANCIAL DATA

The selected financial information set forth below with respect to the consolidated financial statements for each of the four fiscal years in the period ended December 31, 2002, and with respect to the balance sheets at the end of each such fiscal year has been derived from our consolidated financial

statements audited by Kost Forer & Gabbay, independent certified public accountants in Israel and a member firm of Ernst & Young Global.

The results of operations, including revenue, operating expenses, and financial income of the consumer battery segment for the years ended December 31, 2002, 2001, 2000, 1999 and 1998 have been reclassified in the accompanying statements of operations as discontinued operations. Our balance sheets at December 31, 2002, 2001, 2000, 1999 and 1998 give effect the assets of the consumer battery business as discontinued operations within current assets and liabilities. Thus, the financial information presented herein includes only continuing operations.

The selected financial information set forth below with respect to the consolidated financial statements for the fiscal year ended December 31, 1998 and with respect to the balance sheet at the end of such fiscal year has been derived from our financial statements audited by Kesselman & Kesselman, independent certified public accountants in Israel and a member firm of PriceWaterhouseCoopers International Limited.

The financial information set forth below is qualified by and should be read in conjunction with the Consolidated Financial Statements contained in Item 8 of this Report and the notes thereto and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," below.

<TABLE>
<CAPTION>

	Year Ended December 31,				
	1998	1999	2000	2001	2002
	(dollars in thousands, except per share data)				
Statement of Operations Data:					
<S>	<C>	<C>	<C>	<C>	<C>
Revenues.......................................	$ 4,013	$ 2,422	$ 1,490	$ 2,094	$ 6,407
Research and development expenses and costs of revenues....................................	6,622	3,867	1,985	2,448	5,108
Selling, general and administrative expenses and amortization of intangible assets.........	3,561	2,754	3,434	3,934	5,982
Operating (loss)...............................	(6,210)	(4,198)	(3,929)	(4,288)	(4,683)
Financial income, net..........................	652	190	544	263	100
Loss before taxes on income....................	(5,558)	(4,008)	(3,385)	(4,026)	(4,583)
Taxes on income................................	(43)	6	-	-	-
Net loss before minority interest in profit of subsidiary..................................	(5,515)	(4,014)	(3,385)	(4,026)	(4,583)
Minority interest in profit of subsidiary.......	-	-	-	-	

(355)

Net loss from continuing operations............	(5,515)	(4,014)	(3,385)	(4,026)	(4,938)
Net loss from discontinued operations..........	(3,018)	(2,902)	(8,596)	(13,261)	(13,566)
Net loss for the period........................	(8,533)	(6,916)	(11,981)	(17,287)	(18,504)
Deemed dividend to certain shareholders of common stock................................	-	-	-	(1,197)	-
Net loss attributable to shareholders of common stock	$ (8,533)	$ (6,916)	$ (11,981)	$ (18,483)	$ (18,504)
Net loss per share for combined operations......	$ (0.61)	$ (0.48)	$ (0.62)	$ (0.76)	$ (0.57)
Weighted average number of common shares used in computing basic and diluted net loss per share (in thousands).........................	14,013	14,334	19,243	24,200	32,382

</TABLE>

<TABLE>
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	As At December 31,				
	1998	1999	2000	2001	2002
Balance Sheet Data:					
Cash, cash equivalents, investments in marketable debt securities and restricted					
<S>	<C>	<C>	<C>	<C>	<C>
collateral deposits.........................	$ 8,943	$ 2,556	$ 11,596	$ 12,672	$ 2,091
Receivables and other assets*..................	4,300	5,215	13,771	11,515	7,895
Property and equipment, net of depreciation.....	2,156	2,258	2,289	2,221	2,555
Goodwill and other intangible assets, net.......	-	-	-	-	7,522
Total assets..................................	$ 15,399	$ 10,029	$ 27,656	$ 26,408	$ 20,063
Liabilities*..................................	$ 4,818	$ 5,787	$ 7,578	$ 7,000	$ 11,025
Stockholders' equity..........................	10,581	4,242	20,078	19,408	9,038
Total liabilities and stockholders equity*......	$ 15,399	$ 10,029	$ 27,656	$ 26,408	$ 20,063

</TABLE>

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* Includes assets and liabilities from discontinued operations.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve inherent risks and uncertainties. When used in this discussion, the words "believes," "anticipated," "expects," "estimates" and similar expressions are intended to identify such forward-looking statements. Such statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those projected. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. We undertake no obligation to publicly release the result of any revisions to these forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors including, but not limited to, those set forth elsewhere in this report. Please see "Risk Factors," below, and in our other filings with the Securities and Exchange Commission.

The following discussion and analysis should be read in conjunction with the Consolidated Financial Statements contained in Item 8 of this report, and the notes thereto. We have rounded amounts reported here to the nearest thousand, unless such amounts are more than 1.0 million, in which event we have rounded such amounts to the nearest hundred thousand.

Critical Accounting Policies

The preparation of financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, allowance for bad debts and impairment of intangible assets. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Under different assumptions or conditions, actual results may differ from these estimates.

We believe the following critical accounting policies, among others, affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition and Bad Debt

We generate revenues primarily from sales of multimedia and interactive digital training systems and use-of-force simulators specifically targeted for law enforcement and firearms training

and from service contracts related to such sales, from providing lightweight armoring services of vehicles, and, to a lesser extent, from sale of zinc-air battery products for defense applications and from development services and long-term arrangements subcontracted by the U.S government. We recognize revenues in respect of products when, among other things, we have delivered the goods being purchased and we believe collectibility to be reasonably assured. We do not grant a right of return to our customers. We perform ongoing credit evaluations of our customers' financial condition and we require collateral as deemed necessary. An allowance for doubtful accounts is determined with respect to those accounts that we have determined to be doubtful of collection. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances would be required, and this might cause a revision of recognized revenues.

Revenues from development services are recognized using contract accounting on a percentage of completion method, based on completion of agreed-upon milestones and in accordance with the "Output Method" or based on the time and material basis. Provisions for estimated losses on uncompleted contracts are recognized in the period in which the likelihood of such losses is determined.

Inventories

We state our inventories at the lower of cost or market value. Inventory write-offs and write-down provisions are provided to cover risks arising from slow-moving items or technological obsolescence. Our reserves for excess and obsolete inventory are primarily based upon forecasted demand for our products, and any change to the reserves arising from forecast revisions would be reflected in cost of sales in the period the revision is made.

Goodwill

Goodwill represents the excess of cost over the fair value of the net assets of businesses acquired.

As required by applicable accounting rules, we test goodwill for impairment at least annually and between annual tests in certain circumstances, and we write down goodwill when impaired, rather than amortizing it as previous accounting standards required. Goodwill is tested for impairment by comparing the fair value with its carrying value. Fair value is determined using discounted cash flows, market multiples and market capitalization. Significant estimates used in the methodologies include estimates of future cash flows, future short-term and long-term growth rates, weighted average cost of capital and estimates of market multiples for the reportable units.

The determination of the value of goodwill requires management to make assumptions regarding estimated future cash flows and other factors to determine the fair value of the respective assets. If these estimates or the related assumptions change in the future, we could be required to record impairment charges. Any material change in our valuation of assets in the future and any consequent adjustment for impairment could have a material adverse impact on our future reported financial results.

As a result of MDT and IES acquisitions, we recorded goodwill in the amount of $4,954,981 as of December 31, 2002.

Impairment of long-lived assets and intangibles

Long-lived assets and certain identifiable intangibles are reviewed for impairment in accordance with Statement of Financial Accounting Standard No. 144 "Accounting for the Impairment or Disposal of Long-Lived Assets" whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the

carrying amount of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less selling costs. As of December 31, 2002, no impairment losses have been identified.

The determination of the value of such long-lived and intangible assets requires management to make assumptions regarding estimated future cash flows and other factors to determine the fair value of the respective assets. If these estimates or the related assumptions change in the future, we could be required to record impairment charges. Any material change in our valuation of assets in the future and any consequent adjustment for impairment could have a material adverse impact on our future reported financial results.

As a result of MDT and IES acquisitions, we recorded intangible assets in the amount of $2.6 million as of December 31, 2002.

Business Combinations

We have accounted for the combination with IES and MDT utilizing the purchase method of accounting. The combination required management to estimate the fair value of the assets acquired and liabilities assumed. These estimates have been based on our business plans for the entity acquired. Should the actual use of assets or resolution of obligations differ from our estimates, revisions to the estimated fair values would be required. If a change in estimate occurs after one year following the acquisition, the change would be recorded in our statement of operations.

Recent Accounting Pronouncements

In June 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," which addresses significant issues regarding the recognition, measurement, and reporting of costs associated with exit and disposal activities, including restructuring activities. SFAS No. 146 requires that costs associated with exit or disposal activities be recognized when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS No. 146 is effective for all exit or disposal activities initiated after December 31, 2002. We do not expect the adoption of SFAS No. 146 to have a material impact on our results of operations or financial position.

Recent Developments

German Police Order

In January 2003, IES was awarded a $2.6 million contract to supply simulation training systems to the largest regional police division in Germany. The contract calls for delivery of several separate interactive training systems, with delivery dates ranging from April to September 2003 and payment dates due following delivery, testing and ascertainment of appropriate run capability of each system.

General

During 2002, we acquired two new subsidiaries, IES and MDT, we closed our money-losing consumer battery operations, and we reorganized into two divisions: Defense and Security Products and Electric Fuel Batteries. We have previously been organized into Instant Power, Electric Vehicles, and Defense and Security Products. Additionally, we focused on increasing our activities in the defense and security sectors, following the expansion of our battery development and procurement contracts with the US Army's Communications Electronics Command (CECOM) and other defense-related agencies, while searching for new opportunities to market our core Zinc-Air technology for commercial applications and to OEMs. With an expanded focus on defense and homeland security technology and business opportunities, we launched new Zinc-Air battery products designed to meet the requirements of this market. We also concentrated intensive efforts on various cost-cutting strategies, including downsizing staff in areas showing lower productivity and mandating participation among salaried employees in our options-for-salary plan, whereby employees permanently waived a portion of their salaries (generally between 15% and 25%) in exchange for options to purchase shares of our common stock at a ratio of options to purchase 2.5 shares of our stock for each dollar in salary waived. These options are issued at a market value exercise price, so that they are not recorded as an expense on our financials. This program ended at the end of 2002.

In conjunction with these cost-cutting efforts and with the movement of our activities away from consumer sales and in the direction of defense and security products and services, we decided during the third quarter of 2002 to discontinue retail sales of our consumer battery products, effective in October 2002. As a result of this decision, more than 60 employees were terminated. The discontinuation of the consumer retail products resulted in a one-time, pre-tax charge of approximately $7.1 million during 2002, reflecting a write-down of inventory and net fixed assets as well as costs associated with the reduction in our workforce. Almost all these charges were non-cash impacting items.

Our line of existing battery products for the military and defense sectors includes 12/24V, 30/60Ah Advanced Zinc-Air Power Packs (AZAPPs) utilizing our most advanced cells (which have specific energy of 400 Wh/kg), a line of super-lightweight AZAPPs that feature the same 400 Wh/kg cell technology in new 16Ah cells, and our new, high-power 12V Zinc-Air Power Packs (ZAPPs), which offer extended-use 12V portable power and current ratings up to 3.5A, using our commercial Zinc-Air cell technology.

Our Electric Fuel Batteries Division is continuing with the production of Zinc-Air fuel cell packs for the U.S. Army's Communications Electronics Command (CECOM). The 12/24 volt, 800 watt-hour battery pack for battlefield power, which is based on our Zinc-Air fuel cell

technology, is approximately the size and weight of a notebook computer. The battery is based on a new generation of lightweight, 30 ampere-hours cells developed by us for both military and future commercial products with high energy requirements.

In December 2002, we entered into a contract with the US Army Communications Electronic Command (CECOM) pursuant to 10 U.S.C. ss. 2304c(2), "Unusual and Compelling Urgency," for a delivery order of advanced Zinc-Air batteries.

The contract calls for order releases during the first three calendar quarters of 2003, with a current order ceiling of $2,543,250.

Under the terms of the contract, we will produce and supply the BA-8180/U Zinc-Air Nonrechargeable Battery. BA-8180/U is the new Army designation for Electric Fuel's Model FC Advanced Zinc-Air Power Pack, as it was previously known during its development phase. In addition, we will supply three types of electrical interface adapters for the BA-8180/U, including equipment-specific adapters for the AN/PRC-119 SINCGARS and SINCGARS ASIP tactical radio sets, and a generic interface for items of equipment that were designed to interface with a BA-5590 or equivalent battery. Each of the three interfaces was also assigned a national stock number (NSN) by CECOM. The BA-8180/U was assigned an NSN in August 2002.

The BA-8180/U is a 12/24 volt, 800 watt-hour battery pack approximately the size and weight of a notebook computer. The battery is based on a new generation of lightweight, 30 ampere-hours cells that we developed over the last five years with partial funding by CECOM. In extensive field testing, the BA-8180/U battery typically provided 4 to 6 times the run time of a BA-5590, a primary lithium battery pack widely used in the military.

Additionally, the Electric Fuel Batteries Division is continuing with the introduction of the new emergency lights for the marine life jackets market.

In July 2002, our existing research and development contract with CECOM was modified to provide us with additional funding of ten thousand dollars in order to develop prototype zinc air batteries for battlefield drones. As a result, we developed and plan to produce advanced zinc-air batteries for unmanned air vehicles (UAVs) and micro air vehicles (MAVs). The new batteries will provide the military's man-portable battlefield drones with longer range and flying time than existing battery alternatives. Our solutions for UAVs and MAVs are high-power, lightweight versions of our most advanced zinc-air cells, which have specific energy of 400 Wh/kg.

Our Electric Fuel Batteries Division is also continuing its American all-electric transit bus demonstration project, subcontracted by the Federal Transit Administration (FTA). We successfully completed Phase I in June 2000 and Phase II of the FTA program in July 2002, and have recently received approval of subcontracting fees from the FTA to begin Phase III of the program, which will focus on an evaluation of the performance of Zinc-Air battery propulsion systems for transit buses; the installation of new advanced ultra capacitors; and the implementation of an advanced control system for auxiliaries.

During 2002, we continued to invest in strengthening our intellectual property position. We have 42 unexpired U.S. patents and 15 corresponding European patents issued covering general

aspects and various applications of our Zinc-Air technology; these patents expire between 2007 and 2018.

We have experienced significant fluctuations in the sources and amounts of our revenues and expenses, and we believe that the following comparisons of results of operations for the periods presented do not necessarily provide a meaningful indication of our development. Our research and development expenses have been offset, to a limited extent, by the periodic receipt of research grants from Israel's Office of the Chief Scientist. We expect that, because of these and other factors, including our acquisitions of IES and MDT, our discontinuation of certain of our operations, and general economic conditions and delays due to legislation and regulatory and other processes and the development of competing technologies, future results of operations may not necessarily be meaningfully compared with those of current and prior periods. Thus, we believe that period-to-period comparisons of its past results of operations should not necessarily be relied upon as indications of future performance.

We incurred significant operating losses for the years ended December 31, 2000, 2001 and 2002. While we expect to continue to derive revenues from the sale of defense and security products that we manufacture (directly and through our subsidiaries) and from components of the Electric Fuel Electric Vehicle System, there can be no assurance that we will ever derive such revenues or achieve profitability.

Functional Currency

We consider the United States dollar to be the currency of the primary economic environment in which we and our Israeli subsidiary Electric Fuel (E.F.L) Ltd. ("EFL") operate and, therefore, both we and EFL have adopted and are using the United States dollar as our functional currency. Transactions and balances originally denominated in U.S. dollars are presented at the original amounts. Gains and losses arising from non-dollar transactions and balances are included in net income.

The majority of financial transactions of MDT is in New Israel Shekels ("NIS") and a substantial portion of MDT's costs is incurred in NIS. Management believes that the NIS is the functional currency of MDT. Accordingly, the financial statements of MDT have been translated into U.S. dollars. All balance sheet accounts have been translated using the exchange rates in effect at the balance sheet date. Statement of operations amounts has been translated using the average exchange rate for the period. The resulting translation adjustments are reported as a component of accumulated other comprehensive loss in shareholders' equity.

Results of Operations

Preliminary Note

Results for the year ended December 31, 2002 include the results of IES and MDT for such period as a result of our acquisitions of these companies early in the third quarter of 2002. The results of IES and MDT were not included in our operating results for the year ended December 31, 2001. Accordingly, the following year-to-year comparisons should not necessarily be relied upon as indications of future performance.

In addition, results are net of the operations of the retail consumer battery products, which operations were discontinued in the third quarter of

2002.

Fiscal Year 2002 compared to Fiscal Year 2001

Revenues. Revenues from continuing operations for the year ended December 31, 2002 totaled $6.4 million, compared to $2.1 million for 2001, an increase of $4.3 million, or 206%. This increase was primarily the result of the inclusion of IES and MDT in our results in 2002.

During 2002, we recognized revenues from the sale of interactive use-of-force training systems (through our IES subsidiary), from payments under vehicle armoring contracts (through our MDT subsidiary), and from the sale of lifejacket lights, as well as under contracts with the U.S. Army's CECOM for deliveries of batteries and for design and procurement of production tooling and equipment. We also recognized revenues from subcontracting fees received in connection with Phase II of the United States Department of Transportation (DOT) program, which began in the fourth quarter of 2001 and was completed in July 2002, and Phase III of the DOT program, which began in October 2002. We participate in this program as a member of a consortium seeking to demonstrate the ability of the Electric Fuel battery system to power a full-size, all-electric transit bus. The total program cost of Phase II was $2.7 million, 50% of which was covered by the DOT subcontracting fees. Subcontracting fees cover less than all of the expenses and expenditures associated with our participation in the program. In 2001, we derived revenues principally from the sale of lifejacket lights, under contracts with the U.S. Army's CECOM for deliveries of batteries and for design and procurement of production tooling and equipment and from subcontracting fees received in connection with the DOT program.

In 2002, revenues were $4.7 million for the Defense and Security Products Division (compared to $0 in 2001), due to the inclusion of IES and MDT in our 2002 results, and $1.7 million for the Electric Fuel Batteries Division (compared to $2.1 million in the comparable period in 2001, a decrease of $411,000, or 20%), due primarily to revenues from a German consortium project relating to our electric vehicle that were included in 2001 but that did not exist in 2002.

Cost of revenues and gross profit. Cost of revenues totaled $4.4 million during 2002, compared to $2.0 million in 2001, an increase of $2.4 million, or 122%, due to the inclusion of IES and MDT in our 2002 results.

Direct expenses for our two divisions during 2002 were $4.4 million for the Defense and Security Products Division (compared to $0 in 2001), due to the inclusion of IES and MDT in our 2002 results, and $3.1 million for the Electric Fuel Batteries Division (compared to $2.3 million in the comparable period in 2001, an increase of $767,000, or 33%), due primarily to the following factors:

- We began to ramp up production at our CECOM facility in Alabama in anticipation of the CECOM order that we received in December 2002; and

- We wrote off certain disqualified CECOM inventory in the amount of $116,000.

Gross profit was $2.0 million during 2002, compared to $101,000 during 2001, an increase of $1.9 million. This increase was the direct result of all factors presented above, most notably the inclusion of IES and MDT in our 2002 results.

Research and development expenses. Research and development expenses for 2002 were $686,000, compared to $456,000 in 2001, an increase of $230,000, or 50%. This increase was primarily the result of the inclusion of IES in our 2002 results.

Sales and marketing expenses. Sales and marketing expenses for 2002 were $1.3 million, compared to $106,000 in 2001, an increase of $1.2 million, or 1,136%, primarily attributable to the increase in marketing consultants and other expenses, such as travel, for our Electric Fuel Battery Division as well as due to the inclusion of IES and MDT in our 2002 results.

General and administrative expenses. General and administrative expenses for 2002 were $4.0 million compared to $3.8 million in 2001, an increase of $196,000, or 5%. This increase was primarily attributable to the inclusion of IES and MDT in our results beginning with the third quarter, which increased general and administrative expenses by approximately $839,000. This increase was offset by decrease in general and expenses of $643,000, resulting from:

- the dismissal of our litigation with Electrofuel Inc., which resulted in a decrease in litigation-related legal expenses; and

- the settlement of our dispute with a former employee on terms that resulted in a savings to us over the amount that we had set aside on our books.

Financial income. Financial income, net of interest expenses and exchange differentials, totaled approximately $100,000 in 2002 compared to $263,000 in 2001, a decrease of $163,000, or 62%. This decrease was due primarily to lower interest rates and lower balances of invested funds as a result of our use of the proceeds of private placements of our securities.

Income taxes. We and our Israeli subsidiary EFL incurred net operating losses during 2002 and 2001 and, accordingly, we were not required to make any provision for income taxes. MDT had taxable income, but we may use EFL's losses to offset MDT's income, and accordingly MDT has made no provision for income taxes.

Amortization of intangible assets. Amortization of intangible assets totaled $643,000 in 2002, compared to $0 in 2001, due to the inclusion of IES and MDT in our 2002 results.

Net loss from continuing operations. Due to the factors cited above, we reported a net loss from continuing operations of $4.9 million in 2002, compared to a net loss of $4.0 million in 2001, an increase of $913,000, or 22%.

Net loss from discontinued operations. In the third quarter of 2002, we decided to discontinue operations relating to the retail sales of our consumer battery products. Accordingly, all revenues and expenses related to this segment have been presented in our consolidated statements of operations for the year ended December 31, 2002 in an item entitled "Loss from discontinued operations."

Net loss from discontinued operations in 2002 was $13.6 million, compared to $13.3 million in 2001, an increase of $306,000, or 2%. This increase was the result of a write-off of fixed inventory and assets in the amount of $7.1 million in connection with our discontinuation of the operations relating to the retail sales of our consumer battery products at the end of the third quarter of 2002,

which was not entirely offset by the elimination of the losses from these discontinued operations beginning with the fourth quarter of 2002.

Net loss. Due to the factors cited above, we reported a net loss of $18.5 million in 2002, compared to a net loss of $18.5 million in 2001.

Fiscal Year 2001 compared to Fiscal Year 2000

Preliminary Note. We have broken down the results for the years ended December 31, 2001 and 2000 in accordance with the continuing operations divisions that we maintained at the time: Electric Vehicle, and Defense and Security Products (which at the time consisted of only our CECOM batteries and our water-activated batteries). Beginning in 2002, both of these divisions were combined into a single division called Electric Fuel Batteries. It is therefore appropriate to compare our overall results from continuing operations in 2001 and 2000 with the results of our Electric Fuel Battery Division in 2002.

Revenues. Revenues from continuing operations for the year ended December 31, 2001 totaled $2.1 million, compared to $1.5 million for 2000, an increase of $604,000, or 40%.

During 2001, we recognized revenues from continuing operations from the sale of lifejacket lights and portable high-power zinc-air fuel cell packs for military use. We also recognized revenues from subcontracting fees received in connection with the United States Department of Transportation (DOT) program which began in 1998 and, after we completed Phase I in July of 2000, was extended in the fourth quarter of 2000. We participate in this program as a member of a consortium seeking to demonstrate the ability of the Electric Fuel battery system to power a full-size, all-electric transit bus. The total program cost of Phase II is approximately $2.7 million, 50% of which will be covered by the DOT subcontracting fees. Subcontracting fees cover less than all of the expenses and expenditures associated with our participation in the program. We also received electric vehicle revenues during 2001 from our German consortium (EFRB) project. In 2000, we derived revenues from continuing operations principally from the sale of lifejacket lights. Additionally, we also recognized revenues from activities related to the DOT program.

In 2001, revenues were $894,000 for the Electric Vehicle Division (compared to $310,000 in 2000, an increase of $584,000, or 188%) and $1.2 million for the Defense and Security Products Division (formerly known as the Defense and Safety Products Division) (compared to $1.2 million in 2000, unchanged).

The increase in revenues from the Electric Vehicle Division in 2001 was the result of our having received the German consortium (EFRB) project, described above. This project generated revenues of $471,000 in 2001.

Cost of revenues and gross profit. Cost of revenues totaled $2.0 million during 2001, compared to $1.5 million in 2000, an increase of $506,000, or 34%. This increase was primarily the result of the increase in our Electric Vehicle revenues in 2001, as described above, which also resulted in an increase in cost of goods sold.

Gross profit was $101,000 during 2001, compared to $4,000 during 2000, an increase of $97,000. This increase was the direct result of all factors presented above, most notably the increased electric vehicle revenues during 2001 from our German consortium (EFRB) project.

Research and development expenses, net. Research and development expenses less royalty-bearing grants for 2001 were $456,000, compared to $499,000 in 2000, a decrease of $43,000, or 9%.

Research and development expenses were reduced by $0 of royalty bearing grants from the BIRD Foundation during 2001 (compared to $195,000 in 2000).

Direct expenses for our two divisions for the fiscal year ended December 31, 2001 were $907,000 for the Electric Vehicle Division ($634,000 in 2000, an increase of $273,000, or 43%), and $1.4 million for the Defense and Security Products Division ($1.1 million in 2000, an increase of $268,000, or 24%). The increase of expenses in the Electric Vehicle Division was the result of progress that was made in phase II of the FTA program and the German program.

Net costs of fixed assets (net of accumulated depreciation) at December 31, 2001 in the Electric Vehicle and Defense and Security Products Divisions were $666,000 and $853,000, respectively.

Selling expenses. Selling expenses for the year ended December 31, 2001 were $106,000, compared to $127,000 in 2000, a decrease of $21,000, or 16%.

General and administrative expenses. General and administrative expenses for 2001 were $3.8 million compared to $3.3 million in 2000, an increase of $521,000, or 16%. This increase in expenses was the result of the following factors (in descending order of importance):

- Increases in management salaries and in accruals related to our senior employees, accounting for approximately $150,000 of the increase in general and administrative expenses;

- Non-cash write-down of notes receivable from certain stockholders reflecting a diminution in the market value of securities collateralizing such notes, accounting for approximately $100,000 of the increase in general and administrative expenses; and

- An increase in expenses related to travel, consultants, and directors and officers liability insurance, accounting for approximately $200,000 of the increase in general and administrative expenses.

Financial income. Financial income, net of interest expenses and exchange differentials, totaled approximately $263,000 in 2001 compared to $544,000 in 2000, a decrease of $281,000, or 52%, due primarily to lower interest rates and lower balances of invested funds as a result of our use of the proceeds of private placements of our securities conducted in May and November 2000, which was only partially offset by income from the proceeds of private placements of our securities conducted in May, November and December 2001, as well as a decrease in interest income from certain shareholder loans.

Income taxes. We and our Israeli subsidiary EFL incurred net operating losses during 2001 and 2000 and, accordingly, we were not required to make any provision for income taxes.

Net loss from continuing operations. Due to the factors cited above, particularly the increase in general and administrative expenses and the decrease in financial income, we reported a net loss of $4.0 million in 2001, compared to a net loss of $3.4 million in 2000, an increase of $641,000, or 19%.

Net loss from discontinued operations. Net loss from discontinued operations was $13.3 million in 2001, compared to $8.6 million in 2000, an increase of $4.7 million, or 55%. This increase was primary the result of the following factors (in descending order of importance):

- Our sales and marketing expenses increased in 2001 compared to 2000, primarily because of increased sales and marketing expenses in the United States and the United Kingdom, accounting for an increase in sales and marketing of approximately $2.1 million;

- Our revenues derived from discontinued operations were lower by an amount of $620,000, primarily because a single large order that we received from one customer (Wal-Mart) during 2000 was not repeated in

2001, thereby resulting in fewer products sold. An additional factor in the decrease in revenues was our reduction in the price at which we sold our products during 2001, which resulted in lower revenues from the products we did sell;

- Products that we had sold that were still subject to possible return continued to be carried as inventory. Once it was clear that these products would not be returned, we decreased the inventory, resulting in an increase in cost of revenues of approximately $615,000;

- We took an inventory write-off as a result of a decision to discontinue production and sale of most disposable battery products in response to low consumer demand for those products, accounting for an increase in cost of revenues of approximately $440,000;

- When we lowered the retail prices of our products, we recognized losses on those of our products that we carried in inventory due to the principle of presenting inventory at the lower of cost or market value, accounting for an increase in cost of revenues of approximately $400,000;

- We increased our accruals for doubtful debts because a greater portion of our accounts receivable was aged over six months, accounting for approximately $300,000 of the increase in general and administrative expenses;

- We concentrated on production of chargers, which were more popular than disposable batteries but which have higher production costs and hence a higher gross loss than do the disposable batteries that we emphasized in 2000, accounting for an increase in cost of revenues of approximately $300,000; and

- Some of our equipment began to be depreciable beginning in the second half of 2001, which resulted in an increase in our cost of revenues during 2001 of the amount of the depreciation, which was approximately $200,000.

The above factors were offset to some extent by reduction in research and development expenses related to our discontinued operation in 2001 compared to 2000, primarily as a result of our move from a company primarily engaged in research and development to a company engaged in production.

Net loss. Due to the factors cited above, we reported a net loss of $17.3 million in 2001 (without taking into account a deemed dividend to certain shareholders as a result of the repricing of warrants held by certain of our investors, as described in Note 12.g.2 of the Notes to the Consolidated Financial Statements), compared to a net loss of $12.0 million in 2000, and increase of $5.3 million, or 44%.

Liquidity and Capital Resources

As of December 31, 2002, we had cash and cash equivalents of approximately $1.5 million, and certificates of deposit due within one year amounting to $633,000, compared with $12.7 million as of December 31, 2001, a decrease of $11.2 million, or 88%. The decrease in cash was primarily the result of losses incurred in our consumer battery division, which we shut down in the third quarter of 2002, and the costs of the acquisitions of IES and MDT.

We used available funds in 2002 primarily for the acquisition of IES and MDT, and other working capital needs. We increased our investment in fixed assets by $667,000 (including fixed assets used in discontinued operations) during the year ended December 31, 2002, primarily in the Electric Fuel Batteries Division. Our fixed assets amounted to $2.6 million as at year end after the write-off of net fixed assets in the amount of $4.5 million due to discontinuation of our consumer battery business.

Net cash used in operating activities from continuing operations for 2002 and 2001 was $3.5 million and $2.5 million, respectively, an increase of $1.0 million, or 40%. This increase was primarily the result of an increased net loss, an increase in inventory and a decrease in accounts payable and in accruals in comparison to 2001.

Net cash used in investing activities for 2002 and 2001 was $5.4 million and $1.3 million, respectively, an increase of $4.1 million, or 319%. This increase was primarily the result of our investment in the acquisition of IES and MDT.

Net cash provided by financing activities for 2002 and 2001 was $3.1 million and $15.7 million, respectively, a decrease of $12.6 million, or 80%. This decrease was primarily the result of lower amounts of funds raised through sales of our common stock in 2002 compared to 2001.

Our Israeli subsidiary EFL presently has a line of credit with the First

International Bank of Israel Ltd. (FIBI) of up to $750,000, secured by such security as we and the bank shall agree

upon from time to time. This credit facility imposes financial and other covenants on Arotech and EFL. As of December 31, 2002, the bank had issued letters of credit and bank guarantees totaling approximately $35,000.

During 2002, certain of our employees exercised options under our registered employee stock option plan. The proceeds to us from the exercised options were approximately $113,000.

On January 15, 2002 we issued and sold to Grenville Finance Ltd., for an aggregate purchase price of $750,000, an aggregate of 441,176 shares of common stock.

On January 23, 2002 we issued and sold to various institutional investors affiliated with the Special Situation funds, for an aggregate purchase price of $2,480,000, an aggregate of 1,600,000 shares of common stock.

On December 31, 2002 we issued and sold to various institutional investors we issued and sold to three institutional investors an aggregate $3,500,000 principal amount of 9% Secured Convertible Debentures due June 30, 2005, as more fully described under "Item 5. Market For Registrant's Common Equity and Related Stockholder Matters - Recent Sales of Unregistered Securities," above.

We have approximately $4.0 million in long term debt outstanding, and approximately $1.3 million in short-term debt.

Approximately 22.9% of the stock of our Israeli-based subsidiary EFL is deemed to be beneficially owned (directly, indirectly or by application of certain attribution rules) by four United States citizens: Leon S. Gross, Austin W. Marxe and David M. Greenhouse, and Robert S. Ehrlich. (Information with respect to the stockholdings of Messrs. Marxe and Greenhouse is based on a Schedule 13G filed with the Securities and Exchange Commission on February 11, 2002, as amended on February 13, 2003.) If at any time in the future, more than 50% of either (i) the voting power of our stock, or (ii) the total value of our stock, is held or deemed to be held by five or fewer individuals (including, if applicable, those individuals who currently own an aggregate of 22.9% of our stock) who are United States citizens or residents, EFL would satisfy the foreign personal holding company stock ownership test under the Internal Revenue Code and we could be subject to additional U.S. taxes on any undistributed foreign personal holding company income of EFL. For 2002, EFL had no income which would qualify as undistributed foreign personal holding company income. However, no assurance can be given that in the future EFL will not have income that qualifies as undistributed foreign personal holding company income.

We believe that our present cash position and anticipated cash flows from operations should be sufficient to satisfy our estimated cash requirements through the next year.

Impact of Inflation and Currency Fluctuations

Historically, the majority of our revenues have been in U.S. dollars. The United States dollar cost of our operations in Israel, with regard to expenses incurred in NIS, is influenced by the extent to which an increase in the rate of inflation in Israel is not offset by the devaluation of the NIS in relation to the dollar. In the past two years, inflation in Israel has been more than fully

compensated by the devaluation of the NIS and, accordingly, the dollar cost of our NIS expenses has decreased. Even if the recent trend is reversed (as was the case in previous years), we do not believe that continuing inflation in Israel or delays in the devaluation of the NIS are likely to have a material adverse effect on us, except to the extent that such circumstances have an impact on Israel's economy as a whole. In the years ended December 31, 2000, 2001 and 2002, the annual rates of inflation in Israel were 0.0%, 1.4% and 6.5%, respectively, compared to the devaluation of the NIS against the dollar during such periods of (2.7)%, 9.3% and 7.3%, respectively. Additionally, our $2.6 million contract to supply simulation training systems to the largest regional police division in Germany is denominated in Euros.

Effective Corporate Tax Rate

Our production facilities in Israel have been granted "Approved Enterprise" status under the Israel Law for Encouragement of Capital Investments, 5719-1959, and consequently are eligible for certain tax benefits for seven to ten years after they first generate taxable income (provided the maximum period as prescribed by law has not elapsed). Under this law, a company may either accept government grants and receive a reduced tax rate, or forego government grants and receive an alternate package of tax benefits that includes a complete exemption from certain taxes. We have elected to receive a grant of funds together with a reduced tax rate for the aforementioned period.

EFL's effective corporate tax rate may be affected by the classification of certain items of income as being "approved income" for purposes of the Approved Enterprise law, and hence subject to a lower tax rate (25% to 10%, depending on the extent of foreign ownership of EFL - presently 15%) than is imposed on other forms of income under Israeli law (presently 36%). The effective tax upon income we distribute to our stockholders would be increased as a result of the withholding tax imposed upon dividends distributed by EFL to Arotech, resulting in an overall effective corporate tax rate of approximately 28% for income arising from EFL's Approved Enterprises and 44% regarding other income.

Arotech and EFL have incurred net operating losses or had earnings arising from tax-exempt income during the years ended December 31, 2000, 2001 and 2002 and accordingly no provision for income taxes was required. Taxes in these entities paid in 2000, 2001 and 2002 are primarily composed of United States federal alternative minimum taxes.

As of December 31, 2002, we had U.S. net operating loss carry forwards of approximately $15 million that are available to offset future taxable income, expiring primarily in 2015, and foreign net operating loss carry forwards of approximately $93 million, which are available indefinitely to offset future taxable income.

RISK FACTORS

The following factors, among others, could cause actual results to differ materially from those contained in forward-looking statements made in this Report and presented elsewhere by management from time to time.

Business-Related Risks

We have had a history of losses and may incur future losses.

We were incorporated in 1990 and began our operations in 1991. We have funded our operations principally from funds raised in each of the initial public offering of our common stock in February 1994; through subsequent public and private offerings of our common stock and equity and debt securities convertible into shares of our common stock; research contracts and supply contracts; funds received under research and development grants from the Government of Israel; and sales of products that we and our subsidiaries manufacture. We incurred significant operating losses since our inception. Additionally, as of December 31, 2002, we had an accumulated deficit of approximately $100.7 million. There can be no assurance that we will ever achieve profitability or that our business will continue to exist. Additionally, because we do not presently meet the transaction requirements for filing registration statements for primary offerings of our securities on the simpler Form S-3 registration statement, raising capital through sales of our securities may be more difficult in the future than it has been in the past.

Our existing indebtedness may adversely affect our ability to obtain additional funds and may increase our vulnerability to economic or business downturns.

Our indebtedness, including the aggregate principal amount of the debentures sold by us in December 2002, aggregated approximately $5.3 million as of December 31, 2002. Accordingly, we are subject to the risks associated with indebtedness, including:

- we must dedicate a portion of our cash flows from operations to pay debt service costs and, as a result, we have less funds available for operations, future acquisitions of consumer receivable portfolios, and other purposes;

- it may be more difficult and expensive to obtain additional funds through financings, if available at all;

- we are more vulnerable to economic downturns and fluctuations in interest rates, less able to withstand competitive pressures and less flexible in reacting to changes in our industry and general economic conditions; and

- if we default under any of our existing debt instruments or if our creditors demand payment of a portion or all of our indebtedness, we may not have sufficient funds to make such payments.

The occurrence of any of these events could materially adversely affect our results of operations and financial condition and adversely affect our stock price.

The agreements governing the terms of our debentures contain numerous affirmative and negative covenants that limit the discretion of our management with respect to certain business matters and place restrictions on us, including obligations on our part to preserve and maintain our assets and restrictions on our ability to incur or guarantee debt, to merge with or sell our assets to another company, and to make significant capital expenditures without the consent of the debenture holders. Our ability to comply with these and other provisions of such agreements may be affected by changes in economic or business conditions or other events beyond our control.

Failure to comply with the terms of our debentures could result in a default that could have material adverse consequences for us.

A failure to comply with the obligations contained in our debenture agreements, including a failure to have our registration statement registering the shares underlying our debentures and the warrants issued as part of the debenture financing declared effective by the SEC on or before January 1, 2004, could result in an event of default under such agreements which could result in an acceleration of the debentures and the acceleration of debt under other instruments evidencing indebtedness that may contain cross-acceleration or cross-default provisions. If the indebtedness under the debentures or other indebtedness were to be accelerated, there can be no assurance that our assets would be sufficient to repay in full such indebtedness. The foregoing description of our agreement with our debenture holders is qualified in its entirety by reference to the agreements with our debenture holders filed as exhibits to our Current Report on Form 8-K that we filed with the SEC on January 6, 2003.

We have pledged a substantial portion of our assets to secure our borrowings.

The debentures are secured by a substantial portion of our assets. If we default under the indebtedness secured by our assets, those assets would be available to the secured creditor to satisfy our obligations to the secured creditor, which could materially adversely affect our results of operations and financial condition and adversely affect our stock price.

We need significant amounts of capital to operate and grow our business.

We require substantial funds to conduct the necessary research, development and testing of our products; to establish commercial scale manufacturing facilities; and to market our products. We continue to seek additional funding, including through the issuance of equity or debt securities. However, there can be no assurance that we will obtain any such additional financing in a timely manner or on acceptable terms. If additional funds are raised by issuing equity securities, stockholders may incur further dilution. If additional funding is not secured, we will have to modify, reduce, defer or eliminate parts of our anticipated future commitments and/or programs.

We may not be successful in operating a new business.

Prior to the IES and MDT acquisitions, our primary business was the marketing and sale of products based on primary and refuelable Zinc-Air fuel cell technology and advancements in battery technology for defense and security products and other military applications, electric vehicles and consumer electronics. As a result of the IES and MDT acquisitions, a substantial component of our business will be the marketing and sale of hi-tech multimedia and interactive digital solutions for training military, law enforcement and security personnel and sophisticated lightweight materials and advanced engineering processes used to armor vehicles. These are new businesses for us and our management group has limited experience operating these types of businesses. Although we have retained the management personnel at IES and MDT, we cannot assure that such personnel will continue to work for us or that we will be successful in managing this new business. If we are unable to successfully operate these new businesses, especially the business of IES, our business, financial condition and results of operations could be materially impaired.

We cannot assure you of market acceptance of our military Zinc-Air battery products and electric vehicle technology.

Our batteries for the defense industry and a signal light powered by water-activated batteries for use in life jackets and other rescue apparatus are the only commercial Zinc-Air battery products we currently have available for sale. Significant resources will be required to develop and produce additional consumer products utilizing this technology on a commercial scale.

Additional development will be necessary in order to commercialize our technology and each of the components of the Electric Fuel System for electric vehicles and defense products. We cannot assure you that we will be able to successfully develop, engineer or commercialize our Zinc-Air energy system, or that we will be able to develop products for commercial sale or that, if developed, they can be produced in commercial quantities or at acceptable costs or be successfully marketed. The likelihood of our future success must be considered in light of the risks, expenses, difficulties and delays frequently encountered in connection with the operation and development of a relatively early stage business and with development activities generally.

We believe that public pressure and government initiatives are important factors in creating an electric vehicle market. However, there can be no assurance that there will be sufficient public pressure or that further legislation or other governmental initiatives will be enacted, or that current legislation will not be repealed, amended, or have its implementation delayed. In addition, we are subject to the risk that even if an electric fuel vehicle market develops, a different form of zero emission or low emission vehicle will dominate the market. In addition, we cannot assure you that other solutions to the problem of containing emissions created by internal combustion engines will not be invented, developed and produced. Any other solution could achieve greater market acceptance than electric vehicles. The failure of a significant market for electric vehicles to develop would have a material adverse effect on our ability to commercialize this aspect of our technology. Even if a significant market for electric vehicles develops, there can be no assurance that our technology will be commercially competitive within that market.

Our acquisition strategy involves various risks.

Part of our strategy is to grow through the acquisition of companies that will complement our existing operations or provide us with an entry into markets we do not currently serve. Growth through acquisitions involves substantial risks, including the risk of improper valuation of the acquired business and the risk of inadequate integration. There can be no assurance that suitable acquisition candidates will be available, that we will be able to acquire or manage profitably such additional companies or that future acquisitions will produce returns that justify our investments therein. In addition, we may compete for acquisition and expansion opportunities with companies that have significantly greater resources than we do. Furthermore, acquisitions could disrupt our ongoing business, distract the attention of our senior managers, make it difficult to maintain our operational standards, controls and procedures and subject us to contingent and latent risks that are different, in nature and magnitude, than the risks we currently face.

We may finance future acquisitions with cash from operations or additional debt or equity financings. There can be no assurance that we will be able to generate internal cash or obtain financing from external sources or that, if available, such financing will be on terms acceptable to us. The issuance of additional common stock to finance acquisitions may result in substantial dilution to our stockholders. Any debt financing may significantly increase our leverage and may involve restrictive covenants which limit our operations.

We may not successfully integrate our new acquisitions.

In light of our recent acquisitions of IES and MDT, our success will depend in part on our ability to manage the combined operations of these companies and to integrate the operations and personnel of these companies along with our other subsidiaries and divisions into a single organizational

structure. There can be no assurance that we will be able to effectively integrate the operations of our subsidiaries and divisions and our newly-acquired businesses into a single organizational structure. Integration of these operations could also place additional pressures on our management as well as on our key technical resources. The failure to successfully manage this integration could have an adverse material effect on us.

If we are successful in acquiring additional businesses, we may experience a period of rapid growth that could place significant additional demands on, and require us to expand, our management, resources and management information systems. Our failure to manage any such rapid growth effectively could have a material adverse effect on our financial condition, results of operations and cash flows.

If we are unable to manage our growth, our operating results will be impaired.

We are currently experiencing a period of growth and development activity which could place a significant strain on our personnel and resources. Our activity has resulted in increased levels of responsibility for both existing and new management personnel. Many of our management personnel have had limited or no experience in managing growing companies. We have sought to manage our current and anticipated growth through the recruitment of additional management and technical personnel and the implementation of internal systems and controls. However, our failure to manage growth effectively could adversely affect our results of operations.

We will need to develop the experience to manufacture certain of our products in commercial quantities and at competitive prices.

We currently have limited experience in manufacturing in commercial quantities and have, to date, produced only limited quantities of military batteries and components of the batteries for electric vehicles. In order for us to be successful in the commercial market, these products must be manufactured to meet high quality standards in commercial quantities at competitive prices. The development of the necessary manufacturing technology and processes will require extensive lead times and the commitment of significant amounts of financial and engineering resources, which may not be available to us. We cannot assure you that we will successfully develop this technology or these processes. Moreover, we cannot assure you that we will be able to successfully implement the quality control measures necessary for commercial manufacturing.

Some of the components of our technology and our products pose potential safety risks which could create potential liability exposure for us.

Some of the components of our technology and our products contain elements that are known to pose potential safety risks. Also, because electric vehicle batteries contain large amounts of electrical energy, they may cause injuries if not handled properly. In addition to these risks, and although we incorporate safety procedures in our research, development and manufacturing processes, there can be no assurance that accidents in our facilities will not occur. Any accident, whether occasioned by the use of all or any part of our products or technology or by our manufacturing operations, could adversely affect commercial acceptance of our products and could result in significant production delays or claims for damages resulting from injuries. Any of these occurrences would materially adversely affect our operations and financial condition.

We may face product liability claims.

To date, there have been no material claims or threatened claims against us by users of our products, including the products manufactured by MDT, based on a failure of our products to perform as specified. In the event that any claims for substantial amounts were to be asserted against us, they could have a materially adverse effect on our financial condition and results of operations. We maintain general product liability insurance. However, there is no assurance that the amount of our insurance will be sufficient to cover potential claims or that the present amount of insurance can be maintained at the present level of cost, or at all.

Some of our business is dependent on government contracts.

Most of IES's customers to date have been in the public sector of the U.S., including the federal, state and local governments, and in the public sectors of a number of other countries, and most of MDT's customers have been in the public sector in Israel. A significant decrease in the overall level or allocation of defense spending or law enforcement in the U.S. or other countries could have a material adverse effect on our future results of operations and financial condition.

Sales to public sector customers are subject to a multiplicity of detailed regulatory requirements and public policies as well as to changes in training and purchasing priorities. Contracts with public sector customers may be conditioned upon the continuing availability of public funds, which in turn depends upon lengthy and complex budgetary procedures, and may be subject to certain pricing constraints. Moreover, U.S. government contracts and those of many international government customers may generally be terminated for a variety of factors when it is in the best interests of the government and contractors may be suspended or debarred for misconduct at the discretion of the government. There can be no assurance that these factors or others unique to government contracts or the loss or suspension of necessary regulatory licenses will not have a material adverse effect on our future results of operations and financial condition.

Our fields of business are highly competitive.

The competition to develop defense and security products and electric vehicle battery systems, and to obtain funding for the development of these products, is, and is expected to remain, intense.

Our defense and security products compete with other manufacturers of specialized training systems, including Firearms Training Systems, Inc., a producer of interactive simulation systems designed to provide training in the handling and use of small and supporting arms. In addition, we compete with manufacturers and developers of armor for cars and vans, including O'Gara-Hess & Eisenhardt, a division of Armor Holdings, Inc.

Our battery technology competes with other battery technologies, as well as other Zinc-Air technologies. The competition in this area of our business consists of development stage companies, major international companies and consortia of such companies, including battery manufacturers, automobile manufacturers, energy production and transportation companies, consumer goods companies and defense contractors. Many of our competitors have financial, technical, marketing, sales, manufacturing, distribution and other resources significantly greater than ours.

Various battery technologies are being considered for use in electric vehicles and defense and safety products by other manufacturers and developers, including the following: lead-acid, nickel-cadmium, nickel-iron, nickel-zinc, nickel-metal hydride, sodium-sulfur, sodium-nickel chloride, zinc-bromine, lithium-ion, lithium-polymer, lithium-iron sulfide, primary lithium, rechargeable alkaline and Zinc-Air.

If we are unable to compete successfully in each of our operating areas, especially in the defense and security products area of our business, our business and results of operations could be materially adversely affected.

Failure to receive required regulatory permits or to comply with various regulations to which we are subject could adversely affect our business.

Regulations in Europe, Israel, the United States and other countries impose various controls and requirements relating to various components of our business. While we believe that our current and contemplated operations conform to those regulations, we cannot assure you that we will not be found to be in non-compliance. We have applied for, and received, the necessary permits under the Israel Dangerous Substances Law, 5753-1993, required for the use of potassium hydroxide and zinc metal. However, there can be no assurance that changes in these regulations or the adoption of new regulations will not impose costly compliance requirements on us, subject us to future liabilities, or restrict our ability to operate our business.

Our business is dependent on patents and other proprietary rights that may be difficult to protect and could affect our ability to compete effectively.

Our ability to compete effectively will depend on our ability to maintain the proprietary nature of our technology and manufacturing processes through a combination of patent and trade secret protection, non-disclosure agreements and licensing arrangements. We hold patents, or patent applications, covering elements of our technology in the United States and in Europe. In addition, we have patent applications pending in the United States and in foreign countries, including the European Community, Israel and Japan. We intend to continue to file patent applications covering important features of our technology. We cannot assure you, however, that patents will issue from any of these pending applications or, if patents issue, that the claims allowed will be sufficiently broad to protect our technology. In addition, we cannot assure you that any of our patents will not be challenged or invalidated, that any of our issued patents will afford protection against a competitor or that third parties will not make infringement claims against us.

Litigation, or participation in administrative proceedings, may be necessary to protect our proprietary rights. This type of litigation can be costly and time consuming and could divert company resources and management attention to defend our rights, and this could harm us even if we were to be successful in the litigation. The invalidation of patents owned by or licensed to us could have a material adverse effect on our business. In addition, patent applications filed in foreign countries are subject to laws, rules and procedures that differ from those of the United States. Therefore, there can be no assurance that foreign patent applications related to patents issued in the United States will be granted. Furthermore, even if these patent applications are granted, some foreign countries provide significantly less patent protection than the United States. In the absence of patent protection, and despite our reliance upon our proprietary confidential information, our competitors may be able to use innovations similar to those used by us

to design and manufacture products directly competitive with our products. In addition, no assurance can be given that others will not obtain patents that we will need to license or design around. To the extent any of our products are covered by third-party patents, we could require a license under such patents to develop and market our patents.

Despite our efforts to safeguard and maintain our proprietary rights, we may not be successful in doing so. In addition, competition is intense, and there can be no assurance that our competitors will not independently develop or patent technologies that are substantially equivalent or superior to our technology. Moreover, in the event of patent litigation, we cannot assure you that a court would determine that we were the first creator of inventions covered by our issued patents or pending patent applications or that we were the first to file patent applications for those inventions. If existing or future third-party patents containing broad claims were upheld by the courts or if we were found to infringe third party patents, we may not be able to obtain the required licenses from the holders of such patents on acceptable terms, if at all. Failure to obtain these licenses could cause delays in the introduction of our products or necessitate costly attempts to design around such patents, or could foreclose the development, manufacture or sale of our products. We could also incur substantial costs in defending ourselves in patent infringement suits brought by others and in prosecuting patent infringement suits against infringers.

We also rely on trade secrets and proprietary know-how that we seek to protect, in part, through non-disclosure and confidentiality agreements with our customers, employees, consultants, strategic partners and potential strategic partners. We cannot assure you that these agreements will not be breached, that we would have adequate remedies for any breach or that our trade secrets will not otherwise become known or be independently developed by competitors.

We have undergone recent management changes.

In October 2002, Yehuda Harats, who had been our CEO since the inception of our company, resigned from his positions with us in order to pursue other interests. Our Board of Directors selected our long-time Chairman of the Board, Robert S. Ehrlich, to be our new President and CEO. Our success will depend to some extent on our ability to quickly and smoothly execute the change in leadership as a result of this change of CEO.

We are dependent on key personnel and our business would suffer if we fail to retain them.

We are highly dependent on certain members of our management and engineering staff, and the loss of the services of one or more of these persons could adversely affect us. We are especially dependent on the services of our Chairman, President and Chief Executive Officer, Robert S. Ehrlich. The loss of Mr. Ehrlich could have a material adverse effect on us. We are party to an employment agreement with Mr. Ehrlich, which agreement expires at the end of 2003. We do not have key-man life insurance on Mr. Ehrlich.

There are risks involved with the international nature of our business.

A significant portion of our sales are made to customers located outside the U.S., primarily in Europe and Asia. In 2000, 2001 and 2002, without taking account of revenues derived from discontinued operations, 45%, 49%, and 56%, respectively, of our revenues, including the revenues of IES and MDT on a pro forma basis, were derived from sales to customers located outside the U.S. We expect that our international customers will continue to account for a

substantial portion of our revenues in the near future. Sales to international customers may be subject to political and economic risks, including political instability, currency controls, exchange rate fluctuations, foreign taxes, longer payment cycles and changes in import/export regulations and tariff rates. In addition, various forms of protectionist trade legislation have been and in the future may be proposed in the U.S. and certain other countries. Any resulting changes in current tariff structures or other trade and monetary policies could adversely affect our sales to international customers.

We may be subject to increased United States taxation.

We believe that Electric Fuel and our wholly-owned Israeli subsidiary EFL will be treated as personal holding companies for purposes of the personal holding company (PHC) rules of the Internal Revenue Code of 1986. Under the PHC rules, a PHC is subject to a special 39.6% tax on its "undistributed PHC income", in addition to regular income tax. We believe that Electric Fuel and EFL have not had any material undistributed PHC income. However, no assurance can be given that Electric Fuel and EFL will not have undistributed PHC income in the future.

Approximately 22.9% of the stock of EFL was deemed to be beneficially owned (directly or indirectly by application of certain attribution rules) as of December 31, 2002 by four United States citizens: Leon S. Gross, Austin W. Marxe and David M. Greenhouse, and Robert S. Ehrlich (see "Item 12. Security Ownership of Certain Beneficial Owners and Management") (information with respect to the stockholdings of Messrs. Marxe and Greenhouse is based on a Schedule 13G filed with the Securities and Exchange Commission on February 11, 2002, as amended on February 13, 2003). If more than 50% of either (i) the voting power of our stock, or (ii) the total value of our stock, is ever acquired or deemed to be acquired by five or fewer individuals (including, if applicable, those individuals who currently own an aggregate of 22.9% of our shares) who are United States citizens or residents, EFL would satisfy the foreign personal holding company (FPHC) stock ownership test under the Internal Revenue Code, and we could be subject to additional U.S. taxes (including PHC tax) on any "undistributed FPHC income" of EFL. We believe that EFL has not had any material undistributed FPHC income. However, no assurance can be given that EFL will not become a FPHC and have undistributed FPHC income in the future.

Investors should not purchase our common stock with the expectation of receiving cash dividends.

We currently intend to retain any future earnings for funding growth and, as a result, do not expect to pay any cash dividends in the foreseeable future.

Market-Related Risks

The price of our common stock is volatile.

The market price of our common stock has been volatile in the past and may change rapidly in the future. The following factors, among others, may cause significant volatility in our stock price: o Announcements by us, our competitors or our customers;

- o The introduction of new or enhanced products and services by us or our competitors;

- o Changes in the perceived ability to commercialize our technology compared to that of our competitors;

- o Rumors relating to our competitors or us;

- o Actual or anticipated fluctuations in our operating results; and

- o General market or economic conditions.

If our shares were to be delisted, our stock price might decline further and we might be unable to raise additional capital.

One of the continued listing standards for our stock on the Nasdaq SmallCap Market is the maintenance of a $1.00 bid price. Our stock price is currently trading below $1.00, and has been since October 18, 2002. On December 6, 2002, Nasdaq notified us of our failure to meet the continued listing standards, and informed us that unless our stock closes for ten consecutive trading days with a bid price in excess of $1.00 prior to March 6, 2003 (subsequently extended, as a result of an amendment to Nasdaq's listing regulations, to June 4, 2003), Nasdaq would notify us of its intent to delist our stock from the Nasdaq National Market. Should Nasdaq notify us of its intent to delist our stock, we would have the opportunity to appeal this notification, although there can be no assurances that this appeal would be resolved favorably.

There can be no assurance that our common stock will remain listed on the Nasdaq National Market. If our common stock were to be delisted from the Nasdaq National Market, we might apply to be listed on the Nasdaq SmallCap market; however, there can be no assurance that we would be approved for listing on the Nasdaq SmallCap market, which has the same $1.00 minimum bid and other similar requirements as the Nasdaq National Market. If we were to move to the Nasdaq SmallCap market, current Nasdaq regulations would give us the opportunity to obtain an additional 180-day grace period and an additional 90-day grace period after that if we meet certain net income, shareholders' equity or market capitalization criteria. While our stock would continue to trade on the over-the-counter bulletin board following any delisting from the Nasdaq, any such delisting of our common stock could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock. Also, if in the future we were to determine that we need to seek additional equity capital, it could have an adverse effect on our ability to raise capital in the public equity markets.

In addition, if we fail to maintain Nasdaq listing for our securities, and no other exclusion from the definition of a "penny stock" under the Exchange Act is available, then any broker engaging in a transaction in our securities would be required to provide any customer with a risk disclosure document, disclosure of market quotations, if any, disclosure of the compensation of the broker-dealer and its salesperson in the transaction and monthly account statements showing the market values of our securities held in the customer's account. The bid and offer quotation and compensation information must be provided prior to effecting the transaction and must be contained on the customer's confirmation. If brokers become subject to the "penny stock" rules when engaging in transactions in our securities, they would become less willing to engage in transactions, thereby making it more difficult for our stockholders to dispose of their shares.

We are subject to significant influence by some stockholders that may have the effect of delaying or preventing a change in control.

As of February 28, 2003, our directors, executive officers and principal stockholders and their affiliates (including Leon S. Gross (11.6%), Austin W. Marxe and David M. Greenhouse (8.0%), IES Electronics Industries Ltd. (6.2%) and Robert S. Ehrlich (4.3%)) collectively are deemed beneficially to own approximately 29.0% of the outstanding shares of our common stock (see "Item 12. Security Ownership of Certain Beneficial Owners and Management"), including options and warrants exercisable within 60 days of February 28, 2003 (information with respect to the stockholdings of Messrs. Marxe and Greenhouse is based on a Schedule 13G filed with the Securities and Exchange Commission on February 11, 2002, as amended on February 13, 2003, and information with respect to the stockholdings of IES Electronics Industries Ltd. is based on a Schedule 13D filed with the Securities and Exchange Commission on August 12, 2002, as amended on October 28, 2002 and January 9, 2003). As a result, these stockholders are able to exercise significant influence over matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may also have the effect of delaying, preventing or discouraging a change in control of Electric Fuel.

Pursuant to a voting rights agreement dated September 30, 1996, as amended, between Leon S. Gross, Robert S. Ehrlich, Yehuda Harats and us, Lawrence M. Miller, Mr. Gross's advisor, is entitled to be nominated to serve on our board of directors so long as Mr. Gross, his heirs or assigns retain beneficial ownership of at least 1,375,000 shares of common stock. In addition, under the voting rights agreement, Mr. Gross and Messrs. Ehrlich and Harats agreed to vote and take all necessary action so that Messrs. Ehrlich, Harats and Miller shall serve as members of the board of directors until the earlier of December 28, 2004 or our fifth annual meeting of stockholders after December 28, 1999. Mr. Harats resigned as a director in 2002; however, we believe that Mr. Harats must continue to comply with the terms of this agreement.

A substantial number of our shares are available for sale in the public market and sales of those shares could adversely affect our stock price.

Sales of a substantial number of shares of common stock into the public market, or the perception that those sales could occur, could adversely affect our stock price or could impair our ability to obtain capital through an offering of equity securities. As of February 28, 2003, we had 35,146,261 shares of common stock issued and outstanding. Of these shares, 27,610,658 are freely transferable without restriction under the Securities Act of 1933 and 7,526,478 may be sold subject to the volume restrictions, manner-of-sale provisions and other conditions of Rule 144 under the Securities Act of 1933.

In connection with a stock purchase agreement dated September 30, 1996 between Leon S. Gross and us, we also entered into a registration rights agreement with Mr. Gross dated September 30, 1996, setting forth registration rights with respect to the shares of common stock issued to Mr. Gross in connection with the offering. These rights include the right to make two demands for the registration of the shares of our common stock owned by Mr. Gross. In addition, Mr. Gross was granted unlimited rights to "piggyback" on registration statements that we file for the sale of our common stock. Mr. Gross presently owns 3,547,870 shares, of which 1,538,462 have never been registered.

In addition, pursuant to the terms of their employment agreements with us, both Yehuda Harats and Robert S. Ehrlich have a right to demand registration of their shares. Of the shares owned by Mr. Harats, 435,404 shares have never been registered, and of the 688,166 shares owned by Mr. Ehrlich, 453,933 shares have never been registered.

Exercise of our warrants, options and convertible debt could adversely affect our stock price and will be dilutive.

As of February 28, 2003, there were outstanding warrants to purchase a total of 9,421,238 shares of our common stock at a weighted average exercise price of $1.86 per share, options to purchase a total of 5,715,955 shares of our common stock at a weighted average exercise price of $2.16 per share, of which 5,131,032 were vested and exercisable within 60 days of such date, at a weighted average exercise price of $2.15 per share, and outstanding debentures and promissory notes convertible into a total of 5,230,638 shares of our common stock at a weighted average conversion price of $0.76 per share. Holders of our options, warrants and convertible debt will probably exercise or convert them only at a time when the price of our common stock is higher than their respective exercise or conversion prices. Accordingly, we may be required to issue shares of our common stock at a price substantially lower than the market price of our stock. This could adversely affect our stock price. In addition, if and when these shares are issued, the percentage of our common stock that existing stockholders own will be diluted.

Our certificate of incorporation and bylaws and Delaware law contain provisions that could discourage a takeover.

Provisions of our amended and restated certificate of incorporation may have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us. These provisions could limit the price that certain investors might be willing to pay in the future for shares of our common stock. These provisions:

- divide our board of directors into three classes serving staggered three-year terms;

- only permit removal of directors by stockholders "for cause," and require the affirmative vote of at least 85% of the outstanding common stock to so remove; and

- allow us to issue preferred stock without any vote or further action by the stockholders.

The classification system of electing directors and the removal provision may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us and may maintain the incumbency of our board of directors, as the classification of the board of directors increases the difficulty of replacing a majority of the directors. These provisions may have the effect of deferring hostile takeovers, delaying changes in our control or management, or may make it more difficult for stockholders to take certain corporate actions. The amendment of any of these provisions would require approval by holders of at least 85% of the outstanding common stock.

Israel-Related Risks

A significant portion of our operations takes place in Israel, and we could be adversely affected by the economic, political and military conditions in that region.

The offices and facilities of two of our principal subsidiaries, EFL and MDT, are located in Israel (in Beit Shemesh and Lod, respectively, both of which are within Israel's pre-1967 borders). We conduct research and development activities through EFL, and most of our senior management is located at EFL's facilities. Although we expect that most of our sales will be made to customers outside Israel, we are nonetheless directly affected by economic, political and military conditions in that country. Accordingly, any major hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could have a material adverse effect on our operations. Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its Arab neighbors and a state of hostility, varying in degree and intensity, has led to security and economic problems for Israel.

Historically, Arab states have boycotted any direct trade with Israel and to varying degrees have imposed a secondary boycott on any company carrying on trade with or doing business in Israel. Although in October 1994, the states comprising the Gulf Cooperation Council (Saudi Arabia, the United Arab Emirates, Kuwait, Dubai, Bahrain and Oman) announced that they would no longer adhere to the secondary boycott against Israel, and Israel has entered into certain agreements with Egypt, Jordan, the Palestine Liberation Organization and the Palestinian Authority, Israel has not entered into any peace arrangement with Syria or Lebanon. Moreover, since September 2000, there has been a significant deterioration in Israel's relationship with the Palestinian Authority, and a significant increase in terror and violence. Efforts to resolve the problem have failed to result in an agreeable solution. Continued hostilities between the Palestinian community and Israel and any failure to settle the conflict may have a material adverse effect on our business and us. Moreover, the current political and security situation in the region has already had an adverse effect on the economy of Israel, which in turn may have an adverse effect on us.

Many of our employees are currently obligated to perform annual reserve duty in the Israel Defense Forces and are subject to being called for active military duty at any time. No assessment can be made of the full impact of such requirements on us in the future, particularly if emergency circumstances occur, and no prediction can be made as to the effect on us of any expansion of these obligations. However, further deterioration of hostilities with the Palestinian community into a full-scale conflict might require more widespread military reserve service by some of our employees, which could have a material adverse effect on our business.

Service of process and enforcement of civil liabilities on us and our officers may be difficult to obtain.

We are organized under the laws of the State of Delaware and will be subject to service of process in the United States. However, approximately 49% of our assets are located outside the United States. In addition, two of our directors and all of our executive officers are residents of Israel and all or a substantial portion of the assets of such directors and executive officers are located outside the United States.

There is doubt as to the enforceability of civil liabilities under the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, in original actions instituted in Israel. However, subject to certain time limitations and other conditions, Israeli courts may enforce final judgments of United States courts for liquidated amounts in civil matters, including judgments based upon the civil liability provisions of the Securities Act and the Exchange Act. As a result, it may not be possible for investors to enforce or effect service of process upon these directors and executive officers or to judgments of U.S. courts predicated upon the civil liability provisions of U.S. laws against our assets, as well as the assets of these directors and executive officers. In addition, awards of punitive damages in actions brought in the U.S. or elsewhere may be unenforceable in Israel.

Any failure to obtain the tax benefits from the State of Israel that we expect to receive could negatively impact our plans and prospects.

We benefit from various Israeli government programs, grants and tax benefits, particularly as a result of the "approved enterprise" status of a substantial portion of our existing facilities and the receipt of grants from the Office of the Chief Scientist of the Israeli Ministry of Industry and Trade. To be eligible for some of these programs, grants and tax benefits, we must continue to meet certain conditions, including producing in Israel and making specified investments in fixed assets. If we fail to meet such conditions in the future, we could be required to refund grants already received, adjusted for inflation and interest. From time to time, the government of Israel has discussed reducing or eliminating the benefits available under approved enterprise programs. We cannot assure you that these programs and tax benefits will be continued in the future at their current levels or at all. The Government of Israel has announced that programs receiving approved enterprise status in 1996 and thereafter will be entitled to a lower level of government grants than was previously available. The termination or reduction of certain programs and tax benefits (particularly benefits available to us as a result of the approved enterprise status of a substantial portion of our existing facilities and approved programs and as a recipient of grants from the office of the Chief Scientist) could have a material adverse effect on our business, results of operations and financial condition. In addition, EFL has granted a floating lien (that is, a lien that applies not only to assets owned at the time but also to after-acquired assets) over all of EFL's assets as a security to the State of Israel to secure its obligations under the approved enterprise programs.

Our grants from the Israeli government impose certain restrictions on us.

Since 1992, our Israeli subsidiary, EFL, has received funding from the Office of the Chief Scientist of the Israel Ministry of Industry and Trade relating to the development of our Zinc-Air battery products, such as our electric vehicle and our batteries and chargers for consumer products. Between 1998 and 2000, we have also received funds from the Israeli-U.S. Bi-National Industrial Research and Development (BIRD) Foundation. Through the end of 2002, we have received an aggregate of $9.9 million from grants from the Chief Scientist and $772,000 from grants from BIRD, and we may receive future grants, the amounts of which would be determined at the time of application. The funding from the Chief Scientist prohibits the transfer or license of know-how and the manufacture of resulting products outside of Israel without the permission of the Chief Scientist. Although we believe that the Chief Scientist does not unreasonably withhold this permission if the request is based upon commercially justified circumstances and any royalty obligations to the Chief Scientist are sufficiently assured, the matter is

solely within the discretion of the Chief Scientist, and we cannot be sure that such consent, if requested, would be granted upon terms satisfactory to us or granted at all. Without such consent, we would be unable to manufacture any products developed by this research outside of Israel, even if it would be less expensive for us to do so. Additionally, current regulations require that, in the case of the approved transfer of manufacturing rights out of Israel, the maximum amount to be repaid through royalty payments would be increased to between 120% and 300% of the amount granted, depending on the extent of the manufacturing to be conducted outside of Israel, and that an increased royalty rate of up to 5% would be applied. These restrictions could adversely affect our potential revenues and net income from the sale of such products.

Exchange rate fluctuations between the U.S. dollar and the Israeli NIS may negatively affect our earnings.

Although a substantial majority of our revenues and a substantial portion of our expenses are denominated in U.S. dollars, a significant portion of our costs, including personnel and facilities-related expenses, is incurred in New Israeli Shekels (NIS). Inflation in Israel will have the effect of increasing the dollar cost of our operations in Israel, unless it is offset on a timely basis by a devaluation of the NIS relative to the dollar.

Some of our agreements are governed by Israeli law.

Israeli law governs both our agreement with IES and our agreement with MDT, as well as certain other agreements, such as our lease agreements on our subsidiaries' premises in Israel. While Israeli law differs in certain respects from American law, we do not believe that these differences materially adversely affect our rights or remedies under these agreements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to the impact of interest rate changes and foreign currency fluctuations due to our international sales, production and funding requirements.

Our research, development and production activities are primarily carried out by our Israeli subsidiary, EFL, at its facility in Beit Shemesh, and accordingly we have sales and expenses in New Israeli Shekels. Additionally, our MDT subsidiary operates primarily in New Israeli Shekels. However, the majority of our sales are made outside Israel in U.S. dollars, and a substantial portion of our costs are incurred in U.S. dollars. Therefore, our functional currency is the U.S. dollar. Please see "Impact of Inflation and Currency Fluctuations," above and Note 2.b to the Notes to the Consolidated Financial Statements.

Although we have a line of credit that may be affected by interest rate changes, given our level of borrowing, we do not believe the market risk from interest rate changes is material.

<TABLE>
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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.
</TABLE>

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Executive Officers, Directors and Significant Employees

Executive Officers and Directors

Our executive officers and directors and their ages as of February 28, 2003 were as follows:

<TABLE>
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Name	Age	Position
<S>	<C>	
Robert S. Ehrlich...........	64	Chairman of the Board, President and Chief Executive Officer
Steven Esses..................	39	Executive Vice President, Chief Operating Officer and Director
Avihai Shen.................	35	Vice President - Finance and Chief Financial Officer
Dr. Jay M. Eastman..........	56	Director
Jack E. Rosenfeld...........	63	Director
Lawrence M. Miller..........	56	Director
Leon S. Gross*.............	96	Director
Bert W. Wasserman...........	70	Director

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* On March 17, 2003, Mr. Gross resigned from the board in view of his age.

Our by-laws provide for a board of directors of one or more directors. There are currently six directors. Under the terms of our certificate of incorporation, the board of directors is composed of three classes of similar size, each elected in a different year, so that only one-third of the board of directors is elected in any single year. Dr. Eastman is designated a Class I director and has been elected for a term expiring in 2004 and until his successor is elected and qualified; Messrs. Rosenfeld and Miller are designated Class II directors elected for a term expiring in 2005 and until their successors are elected and qualified; and Mr. Ehrlich is designated Class III directors elected for a term which expires in 2003 and until his successor is elected and qualified. Mr. Jeff Kahn, who had been elected as a Class III director along with Mr. Ehrlich, resigned from the Board of Directors for personal reasons, effective December 31, 2001. The Board replaced him in July 2002 with Mr. Steven Esses, who will be proposed for election to the Board as a Class III director at the next annual meeting of the shareholders. Mr. Yehuda Harats, our former President and Chief Executive Officer, resigned as a director in November 2002. The Board replaced him in February 2003 with Mr. Bert W. Wasserman, who will be proposed for election to the Board as a Class I director at the next annual meeting of the shareholders. Mr. Leon Gross, who had been elected as a Class I director along with Mr. Eastman, resigned from the Board of Directors in view of his age in March 2003. His position has not been filled.

Robert S. Ehrlich has been our Chairman of the Board since January 1993 and our President and Chief Executive Officer since October 2002. From May 1991 until January 1993, Mr. Ehrlich was our Vice Chairman of the Board, and from May 1991 until October 2002 he was our Chief Financial Officer. Mr. Ehrlich has been a director of Eldat, Ltd., an Israeli manufacturer of electronic shelf labels, since June 1999. Since 1987, Mr. Ehrlich has served as a director

of PSC Inc. ("PSCX"), a manufacturer and marketer of laser diode bar code scanners, and, since April 1997, Mr. Ehrlich has been the chairman of the board of PSCX. PSCX filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code in November 2002; its pre-negotiated plan of reorganization is awaiting confirmation by the Bankruptcy Court. Mr. Ehrlich received a B.S. and J.D. from Columbia University in New York, New York.

Steven Esses has been a director since July 2002 and our Executive Vice President since January 2003 and Chief Operating Officer since February 2003. From 2000 till 2002, Mr. Esses was a principal with Stillwater Capital Partners, Inc., a New York-based investment research and advisory company (hedge fund) specializing in alternative investment strategies. During this time, Mr. Esses also acted as an independent consultant to new and existing businesses in the areas of finance and business development. From 1995 to 2000, Mr. Esses founded Dunkin' Donuts in Israel and held the position of Managing Director and CEO. Prior thereto, he was Director of Retail Jewelry Franchises with Hamilton Jewelry, and before that he served as Executive Director of Operations for the Conway Organization, a major off-price retailer with 17 locations.

Avihai Shen has been our Vice President - Finance since September 1999 and our Chief Financial Officer since October 2002, and served as our corporate Secretary from September 1999 to December 2000. Mr. Shen was the CFO of Commtouch Software Ltd., an internet company based in California that develops e-mail solutions, from 1996 to early 1999, and worked previously at Ernst and Young in Israel. Mr. Shen is a Certified Public Accountant and has a B.A. in Economics from Bar-Ilan University in Israel and an M.B.A. from the Hebrew University of Jerusalem.

Dr. Jay M. Eastman has been one of our directors since October 1993. Since November 1991, Dr. Eastman has served as President and Chief Executive Officer of Lucid, Inc., which is developing laser technology applications for medical diagnosis and treatment. Dr. Eastman has served as a director of PSCX since April 1996 and served as Senior Vice President of Strategic Planning from December 1995 through October 1997. PSCX filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code in November 2002; its pre-negotiated plan of reorganization is awaiting confirmation by the Bankruptcy Court. Dr. Eastman is also a director of Dimension Technologies, Inc., a developer and manufacturer of 3D displays for computer and video displays, and Centennial Technologies Inc., a manufacturer of PCMCIA cards. From 1981 until January 1983, Dr. Eastman was Director of the University of Rochester's Laboratory for Laser Energetics, where he was a member of the staff from September 1975 to 1981. Dr. Eastman holds a B.S. and a Ph.D. in Optics from the University of Rochester in New York.

Jack E. Rosenfeld has been one of our directors since October 1993. Mr. Rosenfeld is also a director of Maurice Corporation and a director of PSCX. PSCX filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code in November 2002; its pre-negotiated plan of reorganization is awaiting confirmation by the Bankruptcy Court. Since April 1998, Mr. Rosenfeld has been President and Chief Executive Officer of Potpourri Collection Inc., a specialty catalog direct marketer. Mr. Rosenfeld was President and Chief Executive Officer of Hanover Direct, Inc., formerly Horn & Hardart Co., which operates a direct mail marketing business, from September 1990 until December 1995, and had been President and Chief Executive Officer of its direct marketing subsidiary, since May 1988. Mr. Rosenfeld holds a B.A. from Cornell University in Ithaca, New York and an LL.B. from Harvard University in Cambridge, Massachusetts.

Lawrence M. Miller was elected to the board of directors in November 1996. Mr. Miller has been a senior partner in the Washington D.C. law firm of Schwartz, Woods and Miller since 1990. He served from August 1993 through May 1996 as a member of the board of directors of The Phoenix Resource Companies, Inc., a publicly traded energy exploration and production company, and as a member of the Audit and Compensation Committee of that board. That company was merged into Apache Corporation in May 1996. Mr. Miller holds a B.A. from Dickinson College in Carlisle, Pennsylvania and a J.D. with honors from George Washington University in Washington, D.C. He is a member of the District of Columbia bar.

Leon S. Gross was elected to the board in March 1997 and resigned from the board in March 2003. Mr. Gross' principal occupation for the past five years has been as a private investor in various publicly-held corporations, including Electric Fuel.

Bert W. Wasserman was added to the board in February 2003. Mr. Wasserman served as Executive Vice President and Chief Financial Officer of Time Warner, Inc. from 1990 until his retirement in 1995 and served on the Board of Directors of Time Warner, Inc. and its predecessor company, Warner Communications, Inc. from 1981 to 1995. He joined Warner Communications, Inc. in 1966 and had been an officer of that company since 1970. Mr. Wasserman is director off several investment companies in the Dreyfus Family of Funds. He is also a director of Malibu Entertainment, Inc., Lillian Vernon Corporation, and PSCX. PSCX filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code in November 2002; its pre-negotiated plan of reorganization is awaiting confirmation by the Bankruptcy Court.

Committees of the Board of Directors

Our board of directors has an Audit Committee. a Compensation Committee, a Nominating Committee and an Executive Committee.

Created in December 1993, the purpose of the Audit Committee is to review with management and our independent auditors the scope and results of the annual audit, the nature of any other services provided by the independent auditors, changes in the accounting principles applied to the presentation of our financial statements, and any comments by the independent auditors on our policies and procedures with respect to internal accounting, auditing and financial controls. In addition, the Audit Committee is charged with the responsibility for making decisions on the engagement of independent auditors. As required by law, the Audit Committee operates pursuant to a charter. The Audit Committee consists of Messrs. Wasserman (Chair), Miller and Rosenfeld. We have determined that Mr. Wasserman qualifies as an "audit committee financial expert" under applicable SEC and Nasdaq regulations. Mr. Wasserman, as well as all the other members of the Audit Committee, is "independent," as independence is defined in Rule 4200(a)(15) of the National Association of Securities Dealers' listing standards and under Item 7(d)(3)(iv) of Schedule 14A of the proxy rules under the Exchange Act.

The Compensation Committee, also created in December 1993, recommends annual compensation arrangements for the Chief Executive Officer and Chief Financial Officer and reviews annual compensation arrangements for all officers and significant employees. All Committee

members are "disinterested persons" as that term is used in Rule 16b-3 under the Securities Exchange Act of 1934, as amended. The Compensation Committee consists of Dr. Eastman (Chair) and Messrs. Wasserman and Rosenfeld.

The Executive Committee, created in July 2001, exercises the powers of the Board during the intervals between meetings of the Board, in the management of the property, business and affairs of the Company (except with respect to certain extraordinary transactions). The Executive Committee consists of Messrs. Ehrlich (Chair), Miller and Esses.

The Nominating Committee, created in March 2003, identifies and proposes candidates to serve as members of the Board of Directors. Proposed nominees for membership on the Board of Directors submitted in writing by stockholders to the Secretary of the Company will be brought to the attention of the Nominating Committee. The Nominating Committee consists of Mr. Miller (Chair), Dr. Eastman and Mr. Rosenfeld, all of whom are independent non-employee directors.

Voting Agreements

Messrs. Gross, Ehrlich and Harats are parties to a Voting Rights Agreement dated September 30, 1996, as amended, pursuant to which each of the parties agrees to vote the shares of our common stock held by that person in favor of the election of Messrs. Ehrlich, Harats and Miller until the earlier of December 28, 2004 or our fifth annual meeting of stockholders after December 28, 1999. Mr. Harats resigned as a director in 2002; however, we believe that Mr. Harats must continue to comply with the terms of this agreement.

Pursuant to the terms of the Asset Purchase Agreement under which we purchased the assets of IES, the seller agreed, for a period of the greater of five (5) years from August 2, 2002 or all times that the seller holds at least 500,000 of our shares, to vote such shares in favor of: (i) Messrs. Yehuda Harats and Robert S. Ehrlich, and (ii) all proposals of management (except for proposals regarding the nomination of individuals other than Yehuda Harats or Robert S. Ehrlich to the Board of Buyer) that relate to (i) operation or management of the business in the ordinary course and not against our interest, or (ii) acquisitions, financings, stock option plans or business development and not against our interest. In light of Mr. Harats's resignation from the Board of Directors in 2002, we do not believe that IES continues to be bound to vote for Mr. Harats, but will continue to be bound to vote for Mr. Ehrlich.

Director Compensation

Non-employee members of our board of directors are paid $1,000 (plus expenses) for each board of directors meeting attended and $500 (plus expenses) for each meeting of a committee of the board of directors attended. In addition, we have adopted a Non-Employee Director Stock Option Plan pursuant to which non-employee directors receive an initial grant of options to purchase 25,000 shares of our common stock upon the effective date of such plan or upon the date of his or her election as a director. Thereafter, non-employee directors will receive options to purchase 10,000 shares of our common stock for each year of service on the board. All such options are granted at fair market value and vest ratably over three years from the date of the grant.

Significant Employees

Our significant employees as of February 28, 2003, and their ages as of December 31, 2002, are as follows:

<TABLE>
<CAPTION>

Name	Age	Position
Jonathan Whartman.................	48	Senior Vice President
Dr. Neal Naimer...................	44	Vice President and Chief Technology Officer
Yoel Gilon........................	50	Vice President - Electric Vehicle Technologies
Yaakov Har-Oz.....................	45	Vice President, General Counsel and Secretary
Danny Waldner.....................	31	Controller
Ron Putt..........................	55	Director of Technology, New Products
Conrad F. Mir.....................	34	Director of Investor Relations
Greg Otte.........................	43	President, IES Interactive Training, Inc.
Yosef Bar.........................	60	General Manager, MDT Protective Industries

</TABLE>

Jonathan Whartman has been Senior Vice President since December 2000, and Vice President of Marketing from 1994 to December 2000. From 1991 until 1994, Mr. Whartman was our Director of Special Projects. Mr. Whartman was also Director of Marketing of Amtec from its inception in 1989 through the merger of Amtec into Arotech. Before joining Amtec, Mr. Whartman was Manager of Program Management at Luz, Program Manager for desk-top publishing at ITT Qume in San Jose, California from 1986 to 1987, and Marketing Director at Kidron Digital Systems, an Israeli computer developer, from 1982 to 1986. Mr. Whartman holds a B.A. in Economics and an M.B.A. from the Hebrew University, Jerusalem, Israel.

Dr. Neal Naimer has been a Vice President since June 1997 and our Chief Technology Officer since December 2002. Dr. Naimer was previously Director of Electrode Engineering of our Air Electrode development program. From 1987 to 1989, he was the Manager of the Chemical Vapor Deposition (Thin Films) Group at Intel Electronics in Jerusalem, and was Project Manager of the photo voltaic IR detector development program at Tadiran Semiconductor Devices in Jerusalem from 1984 to 1987. Dr. Naimer was educated at University College of London, England, where he received his B.Sc. in Chemical Engineering and a Ph.D. in Chemical Engineering.

Yoel Gilon has been our Vice President - Electric Vehicle Technologies since 2001; prior to that, he served as Director of Electric Vehicle Technologies at our Beit Shemesh facility since joining us in 1994. From 1991 to 1994, Mr. Gilon was Project Development Manager at Ormat Industries. Previously, Mr. Gilon was Vice President of System Engineering Development at Luz Industries. Mr. Gilon holds a B.Sc. in Mathematics and Physics and a M.Sc. in Mathematics from the Hebrew University of Jerusalem. He also holds a B.A. in Fine Arts from the Bezalel Academy in Jerusalem.

Yaakov Har-Oz has served as our Vice President and General Counsel since October 2000 and as our corporate Secretary since December 2000. From 1994 until October 2000, Mr. Har-Oz was a partner in the Jerusalem law firm of Ben-Ze'ev, Hacohen & Co. Prior to moving to

Israel in 1993, he was an administrative law judge and in private law practice in New York. Mr. Har-Oz holds a B.A. from Brandeis University in Waltham, Massachusetts and a J.D. from Vanderbilt Law School (where he was an editor of the law review) in Nashville, Tennessee. He is a member of the New York bar and the Israel Chamber of Advocates.

Danny Waldner has served as our Controller since March 2000 and as our chief accounting officer since October 2002. Prior thereto, Mr. Waldner was an accountant at KPMG in Israel from 1996 to 2000. Mr. Waldner is a Certified Public Accountant and holds a B.A. in Accounting and Business Administration and an M.B.A. from the Rishon Lezion College of Administration in Israel.

Ron Putt has been Director of Technology, New Products at our Auburn research and development facility since April 1997. From October 1995 until April 1997, Mr. Putt worked as a consultant for Auburn University and Electro-Energy Inc. From April 1990 to October 1995, Mr. Putt was Vice President at MATSI, Inc. Mr. Putt holds bachelor's and master's degrees in Chemical Engineering from the University of Delaware and University of California at Berkeley.

Conrad F. Mir was hired as the Company's Director of Investor Relations in February 2002. From April 1999 until February 2002, Mr. Mir was a Senior Vice President of the Anne McBride Company, an investor communications firm based in New York. From February 1997 until March 1999, Mr. Mir was the Director of Small Cap and a corporate strategist with D.F. King & Co., a shareholder relations and proxy solicitation firm based in New York. Prior to that, Mr. Mir was a Senior Partner of the Mirad Group, a strategic consulting firm based in New Jersey. Mr. Mir holds a bachelor's degree in Economics and English from New York University.

Greg Otte has served as IES's President since January 2001. From 1994 to 2001, Mr. Otte was in charge of IES's North American marketing efforts. Prior to this, he was responsible for sales, product placement and national contracts with Tuxall Uniform & Equipment, a national supplier of law enforcement equipment. Mr. Otte holds a bachelor's degree in Marketing from the University of Colorado.

Yosef Bar established MDT Protective Industries in 1989 as one of the first bulletproofing companies in Israel. Under the direction of Mr. Bar, MDT moved from its initial emphasis on vandalism protection to bulletproofing not just windshields but the entire vehicle, as a result of which MDT became Israel's leader in the state-of-the art lightweight armoring of vehicles, ranging from light tactical vehicles to passenger vehicles. Mr. Bar served in the Israel Defense Forces, reaching the rank of Lieutenant Colonel of the paratroop regiment with over 1,000 jumps to his credit. He also participated in several anti-terrorism courses.

Section 16(a) Beneficial Ownership Reporting Compliance

Under the securities laws of the United States, our directors, certain of our officers and any persons holding more than ten percent of our common stock are required to report their ownership of our common stock and any changes in that ownership to the Securities and Exchange Commission. Specific due dates for these reports have been established and we are required to report any failure to file by these dates during 2002. We are not aware of any instances during 2002, not previously disclosed by us, where such "reporting persons" failed to file the required reports on or before the specified dates.

ITEM 11. EXECUTIVE COMPENSATION

Cash and Other Compensation

The following table shows the compensation that we paid (or accrued), in connection with services rendered for 2002, 2001 and 2000, to our Chief Executive Officer and the other highest paid executive officer (of which there was one) who were compensated at a rate of more than $100,000 in salary and bonuses during the year ended December 31, 2002 (collectively, the "Named Executive Officers").

<TABLE>
<CAPTION>

SUMMARY COMPENSATION TABLE(1)

		Annual Compensation			Long Term Compensation	
Name and Principal Position	Year	Salary	Bonus	Other Annual Compensation	Securities Underlying Options	All Other Compensation

-

<S>	<C>	<C>	<C>	<C>	<C>	<C> <C>
Yehuda Harats*	2002	$ 219,962	$ 32,380(2)	$ 14,687 (3)	112,500(4)	$ (602,129) (5)
President, Chief Executive Officer and director	2001	$ 248,681	$ 99,750	$ 19,145	616,000	$ 580,911
	2000	$ 245,560	$ 82,380	$ 8,083	400,000	$ 170,804
Robert S. Ehrlich Chairman of the Board, President, Chief Executive Officer and director**	2002	$ 202,962	$ 99,750(2)	$ 15,232(3)	262,500(6)	$ 194,142(7)
	2001	$ 211,644	$ 84,000	$ 17,201	521,000	$ 369,754
	2000	$ 245,574	$ 82,380	$ 7,146	400,000	$ 247,185

</TABLE>

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*   Mr. Harats's employment with us terminated on October 23, 2002.

**   Until October 23, 2002, Mr. Ehrlich served as our Chairman of the Board and Chief Financial Officer.

(1) We paid the amounts reported for each named executive officer in U.S. dollars and/or New Israeli Shekels (NIS). We have translated amounts paid in NIS into U.S. dollars at the exchange rate of NIS into U.S. dollars at the time of payment or accrual.

(2) We paid each of Messrs. Ehrlich and Harats $32,380 during 2002 on account of the 2002 bonuses to which they were entitled according to their contracts. Additionally, we accrued $67,370 for Mr. Ehrlich in satisfaction of the remainder of the bonus to which he was entitled according to his contract. The additional bonus to which Mr. Harats was entitled according to the terms of his contract was included in the sums that we are obligated to pay Mr. Harats under the terms of our severance agreement with him, which sums are detailed in footnote (5) below. During 2002, we also paid $99,750 to Mr. Harats in full payment of his 2001 bonus and $84,000 to Mr. Ehrlich in full payment of his 2001 bonus.

(3) Represents the costs of taxes paid by the Named Executive Officer and reimbursed by us in accordance with Israeli tax regulations.

(4) Of these amounts, 112,500 options issued in 2002 were in exchange for a total of $45,000 in salary waived by Mr. Harats pursuant to the options-for-salary program instituted by us beginning in May 2001, and 100,000 options issued in 2001 were in exchange for a total of $40,000 in salary waived by Mr. Harats during 2001 pursuant to the same program.

(5) Of this amount, $22,735 consists of our payments during 2002 to a pension fund that provides a savings plan, insurance and severance pay benefits and an education fund (as is customary in Israel). Additionally, $654 represents other benefits that we paid to Mr. Harats in 2002, and $36,500 represents a loan forgiveness during 2002 in the context of our settlement with Mr. Harats. The remainder represents the benefit we accrued due to the difference between the sum we had accrued on our books for amounts due to Mr. Harats upon his leaving our employ ($1,212,939) and the sums that we agreed to pay to or on behalf of Mr. Harats under the terms of our severance agreement with him ($550,920). Under the terms of our severance agreement with Mr. Harats, we will pay this sum of $550,920 to or on behalf of Mr. Harats, plus an additional $178,579 representing repayment of a loan from Mr. Harats, in accordance with the following schedule: $238,833 in 2003, $245,333 in 2004, and $245,333 in 2005.

(6) Of these amounts, 262,500 options issued in 2002 were in exchange for a total of $105,000 in salary waived by Mr. Ehrlich during 2002 pursuant to the options-for-salary program instituted by us beginning in May 2001, and 80,000 options issued in 2001 were in exchange for a total of $32,000 in salary waived by Mr. Ehrlich during 2001 pursuant to the same program.

(7) Of this amount, $109,935 represents our accrual for severance pay that would be payable to Mr. Ehrlich upon a "change of control" of Arotech or upon the occurrence of certain other events; $17,571 represents the increase of the accrual for sick leave and vacation redeemable by Mr. Ehrlich; $43,725 represents the increase of our accrual for severance pay that would be payable to Mr. Ehrlich under the laws of the State of Israel if we were to terminate his employment; and $22,256 represents our payments and accruals to pension and education funds. Additionally, $654 represents other benefits that we paid to Mr. Ehrlich in 2002.

Stock Options

The table below sets forth information with respect to stock options granted to the Named Executive Officers for the fiscal year 2002.

Option Grants in Last Fiscal Year

<TABLE>
<CAPTION>

Individual Grants

Name	Number of Securities Underlying Options Granted	% of Total Options granted to Employees in Fiscal Year	Exercise or Base Price ($/Sh)	Expiration Date	Potential Realizable Value of Assumed Annual Rates of Stock Price Appreciation for Option Term(1) 5% ($)	10% ($)
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Yehuda Harats..........	37,500(2)	2.3%	$1.42	4/1/12	$ 33,489	$84,887
	37,500(2)	2.3%	$0.73	7/1/12	$ 17,216	$43,629
	37,500(2)	2.3%	$0.85	10/1/12	$ 20,046	$50,801
Robert S. Ehrlich......	65,625(2)	4.0%	$1.42	4/1/12	$ 58,605	$148,552
	65,625(2)	4.0%	$0.73	7/1/12	$ 30,128	$76,350
	65,625(2)	4.0%	$0.85	10/1/12	$ 35,081	$88,901
	65,625(2)	4.0%	$0.61	1/1/13	$ 25,175	$63,799

</TABLE>

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(1) The potential realizable value illustrates value that might be realized upon exercise of the options immediately prior to the expiration of their terms, assuming the specified compounded rates of appreciation of the market price per share from the date of grant to the end of the option term. Actual gains, if any, on stock option exercise are dependent upon a number of factors, including the future performance of the common stock and the timing of option exercises, as well as the executive officer's continued employment through the vesting period. The gains shown are net of the option exercise price, but do not include deductions for taxes and other expenses payable upon the exercise of the option or for sale of underlying shares of common stock. The 5% and 10% rates of appreciation are mandated by the rules of the Securities and Exchange Commission and do not represent our estimate or projection of future increases in the price of our stock. There can be no assurance that the amounts reflected in this table will be achieved, and unless the market price of our common stock appreciates over the option term, no value will be realized from the option grants made to the executive officers.

(2) Granted in exchange for a waiver of salary under our options-for-salary program.

The table below sets forth information for the Named Executive Officers with respect to aggregated option exercises during fiscal 2002 and fiscal 2002 year-end option values.

Aggregated Option Exercises and Fiscal Year-End Option Values

<TABLE>
<CAPTION>

Name	Shares cquired on A Exercise	Value Realized	Number of Securities Underlying Unexercised Options at Fiscal Year End Exercisable	Unexercisable	Value of Unexercised In-the-Money Options at Fiscal-Year-End(1) Exercisable	Unexercisable
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Yehuda Harats........	50,000	$ 10,500.00	1,076,501	116,666	$ 0	$ 0
Robert S. Ehrlich....	50,000	$ 10,500.00	868,401	91,666	$ 1,969	$ 0

</TABLE>

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(1) Options that are "in-the-money" are options for which the fair market value of the underlying securities on December 31, 2002 exceeds the exercise or base price of the option.

Employment Contracts

In October 2002, we announced that Yehuda Harats, the president and CEO and a member of our Board, had decided to resign from his positions with Electric Fuel and its subsidiaries in order to pursue other interests. The Board of Directors selected Robert S. Ehrlich, Chairman of the Board, to be the new President and CEO. In connection with the resignation of Mr. Harats, we are required to pay him certain amounts due to him by law and under the terms of his employment agreement. In December 2002, we came to an agreement with Mr. Harats whereby we agreed to pay him $729,500 through the end of 2005 in satisfaction of all our contractual and legal severance and other obligations to him, which sum was approximately one-half of the amount we had accrued on our financial statements in connection with such obligations. Our debt to Mr. Harats is secured by certain of our assets in Israel.

Mr. Ehrlich is party to an employment agreement with us effective as of January 1, 2000. The term of this employment agreement expires on December 31, 2002, but is extended automatically for additional terms of two years each unless either Mr. Ehrlich or we terminate the agreement sooner. Additionally, we have the right, on at least 90 days' notice to Mr. Ehrlich, unilaterally to extend the initial term of his agreement for a period of one year (i.e., until December 31, 2003). We have exercised this right, and accordingly the automatic two-year extensions will begin from December 31, 2003 instead of December 31, 2002.

The employment agreement provides for a base salary of $20,000 per month, as adjusted annually for Israeli inflation and devaluation of the Israeli shekel against the U.S. dollar, if any. Additionally, the board may at its discretion raise Mr. Ehrlich's base salary. In January 2002, the board raised Mr. Ehrlich's base salary to $23,750 per month effective January 1, 2002; Mr. Ehrlich has elected to waive this increase in his salary and to receive options instead, under our salary for options program.

The employment agreement provides that if the results we actually attain in a given year are at least 80% of the amount we budgeted at the beginning of the year, we will pay a bonus, on a sliding scale, in an amount equal to a minimum of 35% of Mr. Ehrlich's annual base salary then in effect, up to a maximum of 90% of his annual base salary then in effect if the results we actually attain for the year in question are 120% or more of the amount we budgeted at the beginning of the year.

The employment agreement also contains various benefits customary in Israel for senior executives (please see "Item 1. Business - Employees," above), tax and financial planning expenses and an automobile, and contain confidentiality and non-competition covenants. Pursuant to the employment agreements, we granted Mr. Ehrlich demand and "piggyback" registration rights covering shares of our common stock held by him.

We can terminate Mr. Ehrlich's employment agreement in the event of death or disability or for "Cause" (defined as conviction of certain crimes, willful failure to carry out directives of our board of directors or gross negligence or willful misconduct). Mr. Ehrlich has the right to terminate his employment upon a change in our control or for "Good Reason," which is defined to include adverse changes in employment status or compensation, our insolvency, material breaches and certain other events. Additionally, Mr. Ehrlich may retire (after age 68) or terminate his agreement for any reason upon 150 days' notice. Upon termination of employment, the employment agreement provides for payment of all accrued and unpaid compensation, and (unless we have terminated the agreement for Cause or Mr. Ehrlich has terminated the agreement without Good Reason and without giving us 150 days' notice of termination) bonuses due for the year in which employment is terminated and severance pay in the amount of three years' base salary (or, in the case of termination by Mr. Ehrlich on 150 days' notice, a lump sum payment of $520,000). Furthermore, certain benefits will continue and all outstanding options will be fully vested.

Other employees have entered into individual employment agreements with us. These agreements govern the basic terms of the individual's employment, such as salary, vacation, overtime pay, severance arrangements and pension plans. Subject to Israeli law, which restricts a company's right to relocate an employee to a work site farther than sixty kilometers from his or her regular work site, we have retained the right to transfer certain employees to other locations and/or positions provided that such transfers do not result in a decrease in salary or benefits. All of these agreements also contain provisions governing the confidentiality of information and ownership of intellectual property learned or created during the course of the employee's tenure with us. Under the terms of these provisions, employees must keep confidential all information regarding our operations (other than information which is already publicly available) received or learned by the employee during the course of employment. This provision remains in force for five years after the employee has left our service. Further, intellectual property created during the course of the employment relationship belongs to us.

A number of the individual employment agreements, but not all, contain non-competition provisions which restrict the employee's rights to compete against us or work for an enterprise which competes against us. Such provisions remain in force for a period of two years after the employee has left our service.

Under the laws of Israel, an employee of ours who has been dismissed from service, died in service, retired from service upon attaining retirement age, or left due to poor health, maternity or certain other reasons, is entitled to severance pay at the rate of one month's salary for each year of service. We currently fund this obligation by making monthly payments to approved private provident funds and by its accrual for severance pay in the consolidated financial statements. See Note 2.q of the Notes to the Consolidated Financial Statements.

Compensation Committee Interlocks and Insider Participation

The Compensation Committee of our board of directors for the 2002 fiscal year consisted of Dr. Jay M. Eastman, Jack E. Rosenfeld and Lawrence M. Miller. None of the members have served as our officers or employees.

Robert S. Ehrlich, our Chairman and Chief Financial Officer, serves as Chairman and a director of PSCX, for which Dr. Eastman serves as director and member of the Executive and Strategic Planning Committees and Mr. Rosenfeld serves as director and member of the Executive Compensation Committees.

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

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information regarding the security ownership, as of February 28, 2003, of those persons owning of record or known by us to own beneficially more than 5% of our common stock and of each of our Named Executive Officers and directors, and the shares of common stock held by all of our directors and executive officers as a group.

Name and Address of Beneficial Owner(1)	Shares Beneficially Owned(2)(3)	Percentage of Total Shares Outstanding(3)
Leon S. Gross	4,036,036(4)(11)	11.6%
Austin W. Marxe and David M. Greenhouse(5)	2,843,597(5)	8.0%
IES Electronics, Inc.	2,188,971(6)	6.2%
Robert S. Ehrlich	1,556,567(7)(12)	4.3%
Steven Esses	0	*
Avihai Shen	92,381(8)	*
Dr. Jay M. Eastman	65,001(9)	*
Jack E. Rosenfeld	67,001(10)	*
Lawrence M. Miller	525,080(11)	1.5%
All of our directors and executive officers as a group (7 persons**)	6,342,066(13)	17.5%

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* Less than one percent.

** Including Mr. Gross, who resigned as a director on March 17, 2003.

(1) Unless otherwise noted, the address of each beneficial owner is in care of Arotech Corporation, 632 Broadway, New York, New York 10012.

(2) Unless otherwise indicated in these footnotes, each of the persons or entities named in the table has sole voting and sole investment power with respect to all shares shown as beneficially owned by that person, subject to applicable community property laws.

(3) For purposes of determining beneficial ownership of our common stock, owners of options exercisable within sixty days are considered to be the beneficial owners of the shares of common stock for which such securities are exercisable. The percentage ownership of the outstanding common stock reported herein is based on the assumption (expressly required by the applicable rules of the Securities and Exchange Commission) that only the person whose ownership is being reported has converted his options into shares of common stock.

(4) Includes 453,165 shares held by Leon S. Gross and Lawrence M. Miller as co-trustees of the Rose Gross Charitable Foundation, and 35,001 shares issuable upon exercise of options exercisable within 60 days.

(5) Consists of 2,055,718 shares and 787,879 warrants. Of these amounts, 916,027 shares and 315,151 warrants are owned by Special Situations Fund III, L.P., a Delaware limited partnership ("Special Fund III"), 437,273 shares and 218,182 warrants are owned by Special Situations Private Equity Fund, L.P., a Delaware limited partnership ("SSPE"), 331,336 shares and 109,091 warrants are owned by Special Situations Cayman Fund, L.P., a Cayman Islands limited partnership ("Special Cayman Fund"), and 371,082 shares and 145,455 warrants are owned by Special Situations Technology Fund, L.P., a Delaware limited partnership ("SST"). Austin W. Marxe and David M. Greenhouse are the principal owners of MGP Advisers Limited

Partnership, a Delaware limited partnership ("MGP"), MG Advisers, L.L.C., a New York limited liability company ("MG"), AWM Investment Company, Inc., a Delaware corporation ("AWM"), and SST Advisers, L.L.C., a Delaware limited liability company ("SSTA"). MGP is the general partner of Special Fund III. AWM is the general partner of MGP and the general partner of and investment adviser to the Cayman Fund. MG is the general partner of and investment adviser to SSPE. SSTA is the general partner of and investment adviser to SST. Messrs. Marxe and Greenhouse share voting and investment power over the shares held by all of Special Fund III, SSPE, Special Cayman Fund and SST and are principally responsible for the selection, acquisition and disposition of the portfolio securities by the investment advisers on behalf of their funds. The address of Messrs. Marxe and Greenhouse is 153 East 53rd Street, New York, New York 10022. All information in this footnote and in the text to which this footnote relates is based on a Schedule 13G filed with the Securities and Exchange Commission on February 11, 2002, as amended on February 13, 2003.

(6) Includes 563,971 shares issuable upon conversion of a convertible note. IES Technologies Inc. is a wholly-owned Delaware subsidiary of IES Technologies, Ltd., which is a wholly-owned Israeli subsidiary of IES Electronics Industries, Ltd., which is a publicly-traded Israeli corporation. The address of all of the above entities is 32 Ben-Gurion Street, Ramat-Gan 52573, Israel. All information in this footnote and in the text to which this footnote relates is based on a Schedule 13D filed with the Securities and Exchange Commission on August 12, 2002, as amended on October 28, 2002 and January 9, 2003.

(7) Includes 52,568 shares held by an affiliated corporation, 242,313 shares held in Mr. Ehrlich's pension plan, 22,000 shares held by children sharing the same household, and 868,401 shares issuable upon exercise of options exercisable within 60 days.

(8) Includes 81,881 shares issuable upon exercise of options exercisable within 60 days.

(9) Consists of 65,001 shares issuable upon exercise of options exercisable within 60 days.

(10) Includes 65,001 shares issuable upon exercise of options exercisable within 60 days.

(11) Includes 453,165 shares held by Leon S. Gross and Lawrence M. Miller as co-trustees of the Rose Gross Charitable Foundation, and 60,001 shares issuable upon exercise of options exercisable within 60 days.

(12) Messrs. Gross, Ehrlich and Harats are parties to a Voting Rights Agreement pursuant to which each of the parties agrees to vote the shares of our common stock held by that person in favor of the election of Messrs. Ehrlich, Harats and Miller until the earlier of December 28, 2004 or our fifth annual meeting of stockholders after December 28, 1999. Mr. Harats resigned as a director in 2002; however, we believe that Mr. Harats must continue to comply with the terms of this agreement. (13Includes 1,163,286 shares issuable upon exercise of options exercisable within 60 days.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table sets forth certain information, as of February 28, 2003, with respect to our 1991, 1993, 1995 and 1998 stock option plans, as well as any other stock options and warrants previously issued by us (including individual compensation arrangements) as compensation for goods and services:

Equity Compensation Plan Information

<TABLE>
<CAPTION>

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
<S>	<C>	<C>	<C>
Equity compensation plans approved by security holders.....	3,554,105	$2.66	2,578,463
Equity compensation			

plans not approved by security holders(1)(2)........	2,726,506	$2.16	2,070,460

</TABLE>

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(1) In October 1998, the Board of Directors adopted the 1998 Non-Executive Stock Option and Restricted Stock Purchase Plan, which under Delaware law did not require shareholder approval since directors and executive officers were ineligible to participate in it. Participation in the 1998 Plan is limited to those of our employees and consultants who are neither executive officers nor otherwise subject to Section 16 of the Securities Exchange Act of 1934, as amended, or Section 162(m) of the Internal Revenue Code of 1986, as amended. The 1998 Plan is administered by the Compensation Committee of our Board of Directors, which determined the conditions of grant. Options issued under the 1998 Plan generally expire no more than ten years from the date of grant, and incentive options issued under the 1998 Plan may be granted only at exercise prices equal to the fair market value of our common stock on the date the option is granted. A total of 4,750,000 shares of our common stock were originally subject to the 1998 Plan, of which 1,936,720 options are outstanding, 742,820 options have been exercised, and 2,070,460 remain available for grant.

(2) For a description of the material features of grants of options and warrants other than options granted under our employee stock option plans, please see Notes 12.g.2, 12.g.3, 12.g.4, and 12.h.2 of the Notes to the Consolidated Financial Statements

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Pursuant to a securities purchase agreement dated December 28, 1999 between a group of purchasers, including Mr. Gross, and us, Mr. Gross agreed that for a period of five years, neither he nor his "affiliates" (as such term is defined in the Securities Act) directly or indirectly or in conjunction with or through any "associate" (as such term is defined in Rule 12b-2 of the Exchange Act), will (i) solicit proxies with respect to any capital stock or other voting securities of ours under any circumstances, or become a "participant" in any "election contest" relating to the election of our directors (as such terms are used in Rule 14a-11 of Regulation 14A of the Exchange Act); (ii) make an offer for the acquisition of substantially all of our assets or capital stock or induce or assist any other person to make such an offer; or (iii) form or join any "group" within the meaning of Section 13(d)(3) of the Exchange Act with respect to any of our capital stock or other voting securities for the purpose of accomplishing the actions referred to in clauses (i) and (ii) above, other than pursuant to the voting rights agreement described below.

In connection with a stock purchase agreement dated September 30, 1996 between Leon S. Gross and us, we also entered into a registration rights agreement with Mr. Gross dated September 30, 1996, setting forth registration rights with respect to the shares of common stock issued to Mr. Gross in connection with the offering. These rights include the right to make two demands for a shelf registration statement on Form S-3 for the sale of the common stock that may, subject to certain customary limitations and requirements, be underwritten. In addition, Mr. Gross was granted the right to "piggyback" on registrations of common stock in an unlimited number of registrations. In addition, under the registration rights agreement, Mr. Gross is subject to customary underwriting lock-up requirements with respect to public offerings of our securities.

Pursuant to a voting rights agreement dated September 30, 1996 and as amended December 10, 1997 and December 28, 1999, between Mr. Gross, Robert S. Ehrlich, Yehuda Harats and us, Lawrence M. Miller, Mr. Gross's advisor, is entitled to be nominated to serve on our board of directors so long as Mr. Gross, his heirs or assigns retain at least 1,375,000 shares of common stock. In addition, under the voting rights agreement, Mr. Gross and Messrs. Ehrlich and Harats agreed to vote and take all necessary action so that Messrs. Ehrlich, Harats and Miller shall serve as members of the board of directors until the earlier of December 28, 2004 or our fifth annual meeting of stockholders after December 28, 1999. Mr. Harats resigned as a director in 2002; however, we believe that Mr. Harats must continue to comply with the terms of this agreement.

ITEM 14. CONTROLS AND PROCEDURES

Within 90 days prior to the date of this annual report, an evaluation (the "Evaluation") was performed under the supervision and with the participation of our management, including the CEO and CFO, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-14 promulgated under the Securities Exchange Act of 1934. Based on the Evaluation, our management, including the CEO and CFO, concluded that our disclosure controls and procedures were effective in timely alerting them to material information relating to us (including our consolidated subsidiaries) and required to be included in our periodic SEC filings.

There have been no significant changes in our internal controls or in other factors since the date of the Evaluation that could significantly affect internal controls subsequent to the date of our evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a) The following documents are filed as part of this report:

(1) Financial Statements - See Index to Financial Statements on page 58 above.

(2) Financial Statements Schedules - All schedules are omitted because of the absence of conditions under which they are required or because the required information is presented in the financial statements or related notes thereto.

(3) Exhibits - The following Exhibits are either filed herewith or have previously been filed with the Securities and Exchange Commission and are referred to and incorporated herein by reference to such filings:

Exhibit No.	Description
(8)3.1	Amended and Restated Certificate of Incorporation
(15)3.1.1	Amendment to our Amended and Restated Certificate of Incorporation
(2)3.2	Amended and Restated By-Laws
(1)4	Specimen Certificate for shares of common stock, $.01 par value
(1)10.1	Option Agreement dated October 29, 1992 between Electric Fuel B.V. ("EFBV") and Electric Storage Advanced Technologies, Sr ("ESAT")
(1)10.2	Sublicense Agreement dated May 20, 1993 between EFBV and ESAT
(1)10.3	Letter Agreement dated May 20, 1993 between EFBV and ESAT
(1)10.4	Notice of Edison's assumption of ESAT's obligations under the Sublicense Agreement with EFBV
(1)10.5	Letter of Intent between us and Deutsche Post AG dated November 18, 1993
+(6)10.6	Amended and Restated 1993 Stock Option and Restricted Stock Purchase Plan dated November 11, 1996
+(1)10.7.1	Form of Management Employment Agreements
+*(1)10.7.2	General Employee Agreements
*(1)10.8	Office of Chief Scientist documents
(2)10.8.1	Letter from the Office of Chief Scientist to us dated January 4, 1995
*(1)10.9	Lease Agreement dated December 2, 1992 between us and Har Hotzvim Properties Ltd.
*(1)10.10	Letter of Approval by the Investment Center of the Ministry of Trade
*(2)10.11	Summary of the terms of the Lease Agreements dated as of November 11, 1994, November 11, 1994 and April 3, 1995 between EFL and Industries Building Company, Ltd.
+(3)10.12	Amended and Restated 1995 Non-Employee Director Stock Option Plan
(3)10.13	Letters of Approval of Lines of Credit from First International Bank of Israel Ltd. dated March 14, 1996 and March 18, 1996

(4)10.14	Stock Purchase Agreement between us and Leon S. Gross ("Gross") dated September 30, 1996

Exhibit No.	Description
(4)10.15	Registration Rights Agreement between us and Gross dated September 30, 1996
(4)10.16	Voting Rights Agreement between us, Gross, Robert S. Ehrlich and Yehuda Harats dated September 30, 1996
(5)10.17	Agreement between us and Walter Trux dated December 18, 1996
(5)10.18	Cooperation Agreement between The Israel Electric Corporation and EFL dated as of October 31, 1996
+(5)10.19	Amended and Restated Employment Agreement dated as of October 1, 1996 between us, EFL and Yehuda Harats
+(15)10.19.1	Second Amended and Restated Employment Agreement, effective as of January 1, 2000 between us, EFL and Yehuda Harats
+(15)10.19.2	Letter dated January 12, 2001 amending the Second Amended and Restated Employment Agreement, effective as of January 1, 2000 between us, EFL and Yehuda Harats
+(5)10.20	Amended and Restated Employment Agreement dated as of October 1, 1996 between us, EFL and Robert S. Ehrlich
+(15)10.20.1	Second Amended and Restated Employment Agreement, effective as of January 1, 2000 between us, EFL and Robert S. Ehrlich
+(15)10.20.2	Letter dated January 12, 2001 amending the Second Amended and Restated Employment Agreement, effective as of January 1, 2000 between us, EFL and Robert S. Ehrlich
(5)10.21	Agreement dated February 20, 1997 between STN ATLAS Elektronik GmbH and EFL
+(6)10.22	Employment Agreement dated May 13, 1997 between us, EFL, and Joshua Degani
+(15)10.22.1	Amendment dated January 12, 2001 to Employment Agreement dated May 13, 1997 between us, EFL, and Joshua Degani
+(6)10.23	Termination Agreement dated March 12, 1998 between us, EFL and Menachem Korall
(6)10.24	Consulting Agreement dated March 12, 1998 between us, EFL, and Shampi Ltd.
(6)10.25	Amendment No. 1 to the Voting Rights Agreement between us, Gross, Robert S. Ehrlich, and Yehuda Harats dated December 10, 1997
(6)10.26	Amendment No. 2 to the Registration Rights Agreement between us, Gross, Robert S. Ehrlich and Yehuda Harats dated December 10, 1997
(7)10.27	1998 Non-Executive Stock Option and Restricted Stock Purchase Plan
(8)10.28	Distribution Agreement dated December 31, 1998 between us and TESSCO Technologies Inc.
(9)10.29	Amendment to our Restated Certificate of Incorporation
(10)10.30	Securities Purchase Agreement dated December 28, 1999, and exhibits thereto, by and among us and the Purchasers listed on Exhibit A thereto
(10)10.31	Form of Warrant dated December 28, 1999

Exhibit No.	Description
(10)10.32	Amendment No. 1 to Voting Rights Agreement dated December 28,

	1999, by and between us, Leon S. Gross, Robert S. Ehrlich, Yehuda Harats and the Purchasers listed on Exhibit A to the Securities Purchase Agreement dated December 28, 1999
(11)10.33	Common Stock Purchase Agreement dated January 5, 2000, and exhibits thereto, by and among us and the Purchasers listed on Exhibit A thereto
(12)10.34.1	Promissory Note dated January 3, 1998, from Yehuda Harats to us
(12)10.34.2	Amendment dated April 1, 1998, to Promissory Note dated January 3, 1998 between Yehuda Harats and us
(12)10.35.1	Promissory Note dated January 3, 1993, from Robert S. Ehrlich to us
(12)10.35.2	Amendment dated April 1, 1998, to Promissory Note dated January 3, 1993 between Robert S. Ehrlich and us (12)10.36 Promissory Note dated December 3, 1999, from Yehuda Harats to us
(12)10.37	Promissory Note dated December 3, 1999, from Robert S. Ehrlich to us
(12)10.38	Promissory Note dated February 9, 2000, from Yehuda Harats to us
(12)10.39	Promissory Note dated February 9, 2000, from Robert S. Ehrlich to us
(15)10.40	Share and Assets Purchase Agreement dated March 15, 2000 among us, Tadiran Limited, Tadiran Batteries Limited and Tadiran Electric Industries
(15)10.41	Stock Purchase Agreement dated March 15, 2000 between us and Koor Industries Ltd.
(15)10.42	Registration Rights Agreement dated March 15, 2000 between us, Tadiran Limited and Koor Industries Ltd.
(15)10.43	Voting Rights Agreement dated March 15, 2000 among made as of March 15, 2000 by and among us, Robert S. Ehrlich and Yehuda Harats, Koor Industries Ltd. and Tadiran Limited
(13)10.44	Termination and Release Agreement dated May 17, 2000 among us, Tadiran Limited, Tadiran Batteries Limited, Tadiran Electric Industries Corporation, Koor Industries Ltd., Robert S. Ehrlich and Yehuda Harats
(13)10.45	Common Stock Purchase Agreement dated May 17, 2000 between us and Koor Industries Ltd.
(13)10.46	Registration Rights Agreement dated May 17, 2000 between us and Koor Industries Ltd.
(14)10.47	Securities Purchase Agreement dated as of November 17, 2000 between us and Capital Ventures International
(14)10.48	Series A Stock Purchase Warrant issued to Capital Ventures International dated November 17, 2000
(14)10.49	Series B Stock Purchase Warrant issued to Capital Ventures International dated November 17, 2000
(14)10.50	Stock Purchase Warrant issued to Josephthal & Co., Inc. dated November 17, 2000
(15)10.51	Promissory Note dated January 12, 2001, from Yehuda Harats to us
(15)10.52	Promissory Note dated January 12, 2001, from Robert S. Ehrlich to us

Exhibit No.	Description
(15)10.53	Promissory Note dated January 12, 2001, from Joshua Degani to us
(15)10.54	Agreement of Lease dated December 5, 2000 between us as tenant and Renaissance 632 Broadway LLC as landlord
(16)10.55	Series C Stock Purchase Warrant issued to Capital Ventures International dated May 3, 2001
(17)10.56	Form of Common Stock Purchase Warrant dated May 8, 2001

(18)10.57	Securities Purchase Agreement dated as of October 25, 2001 between us and Orsay Services Inc.
(19)10.58	Securities Purchase Agreement dated as of December 4, 2001 between us and Vertical International Limited
(20)10.59	Stock Purchase Agreement dated as of January 11, 2002 between us and Grenville Finance Ltd.
(21)10.60	Stock Purchase Agreement dated as of January 18, 2002 between us and Special Situations Private Equity Fund, L.P., Special Situations Fund III, L.P., Special Situations Technology Fund, L.P. and Special Situations Cayman Fund, L.P.
(22)10.61	Asset Purchase Agreement dated August 2, 2002 between us and I.E.S. Electronics Industries U.S.A., Inc. and its direct and certain of its indirect shareholders
(22)10.62	Share Purchase Agreement dated August 2, 2002 between us and H.R.T. Ltd. And A.G.A. Protection Methods and Commerce Ltd. [English summary of Hebrew original]
(23)10.63	Securities Purchase Agreement dated December 31, 2002 between us and the Investors
(23)10.64	Form of 9% Secured Convertible Debenture due June 30, 2005
(23)10.65	Form of Warrant dated December 31, 2002
(23)10.66	Form of Security Agreement dated December 31, 2002
(23)10.67	Form of Intellectual Property Security Agreement dated December 31, 2002
+**10.68	Settlement Agreement and Release between us and Yehuda Harats dated December 31, 2002
**10.69.1	Commercial lease agreement between Commerce Square Associates L.L.C. and I.E.S. Electronics Industries U.S.A., Inc. dated September 24, 1997
**10.69.2	Amendment to Commercial lease agreement between Commerce Square Associates L.L.C. and I.E.S. Electronics Industries U.S.A., Inc. dated as of May 1, 2000
**10.70	Agreement of Lease dated December 6, 2000 between Janet Nissim et al. and M.D.T. Protection (2000) Ltd. [English summary of Hebrew original]
**10.71	Agreement of Lease dated August 22, 2001 between Aviod Building and Earthworks Company Ltd. et al. and M.D.T. Protective Industries Ltd. [English summary of Hebrew original]
**21	List of Subsidiaries of the Registrant
**23	Consent of Kost Forer & Gabbay
**99.1	Written Statement of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**99.2	Written Statement of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

- ------------------------------------

*   English translation or summary from original Hebrew
**   Filed herewith
+   Includes management contracts and compensation plans and arrangements
(1) Incorporated by reference to our Registration Statement on Form S-1 (Registration No. 33-73256), which became effective on February 23, 1994
(2) Incorporated by reference to our Registration Statement on Form S-1 (Registration No. 33-97944), which became effective on February 5, 1996
(3) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 1995
(4) Incorporated by reference to our Current Report on Form 8-K dated October 4, 1996
(5) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 1996, as amended
(6) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 1997, as amended
(7) Incorporated by reference to our Registration Statement on Form S-8 (Registration No. 333- 74197), which became effective on March 10, 1998

(8) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 1998
(9) Incorporated by reference to our Registration Statement on Form S-3 (Registration No. 333-95361), which became effective on February 10, 1999
(10) Incorporated by reference to our Current Report on Form 8-K filed January 7, 2000
(11) Incorporated by reference to our Current Report on Form 8-K filed January 24, 2000
(12) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 1999
(13) Incorporated by reference to our Current Report on Form 8-K filed May 23, 2000
(14) Incorporated by reference to our Current Report on Form 8-K filed November 17, 2000
(15) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 2000
(16) Incorporated by reference to our Current Report on Form 8-K filed May 7, 2001 (EDGAR Film No. 1623996)
(17) Incorporated by reference to our Current Report on Form 8-K filed May 7, 2001 (EDGAR Film No. 1623989)
(18) Incorporated by reference to our Current Report on Form 8-K filed November 21, 2001
(19) Incorporated by reference to our Current Report on Form 8-K filed December 4, 2001
(20) Incorporated by reference to our Current Report on Form 8-K filed January 15, 2002
(21) Incorporated by reference to our Current Report on Form 8-K filed January 23, 2002
(22) Incorporated by reference to our Current Report on Form 8-K filed August 12, 2002
(23) Incorporated by reference to our Current Report on Form 8-K filed January 6, 2003

(b) Reports on Form 8-K.

(1) We filed an amendment to a Current Report on Form 8-K on October 11, 2002, reporting "Item 7. Financial Statements, Pro Forma Financial Information and Exhibits," in connection with our acquisition of the assets of I.E.S. Electronics Industries U.S.A., Inc.
(2) We filed a Current Report on Form 8-K on October 22, 2002, reporting "Item 5. Other Events and Regulation FD Disclosure," in connection with our decision to discontinue retail sales of our consumer battery products and the resignation of Yehuda Harats as our President and Chief Executive Officer.
(3) We filed a Current Report on Form 8-K on January 6, 2003, reporting "Item 5. Other Events and Regulation FD Disclosure," in connection with our sale of $3,500,000 principal amount 9% Secured Convertible Debentures due June 30, 2005 and certain other related transactions, and in connection with our reaching a settlement with our former CEO.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 31, 2003.

ELECTRIC FUEL CORPORATION

By:/s/ Robert S. Ehrlich

Name: Robert S. Ehrlich
Title:Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<TABLE>
<CAPTION>

Signature	Title	Date
<S>	<C>	<C>
/s/ Robert S. Ehrlich ------------------------------------- Robert S. Ehrlich	Chairman, President, Chief Executive Officer and Director (Principal Executive Officer)	March 31, 2003
/s/ Avihai Shen ------------------------------------	Vice President - Finance (Principal Financial Officer)	March 31, 2003

Avihai Shen		
/s/ Danny Waldner Danny Waldner	Controller (Principal Accounting Officer)	March 31, 2003
/s/ Steven Esses Steven Esses	Executive Vice President, Chief Operating Officer and Director	March 31, 2003
/s/ Jay M. Eastman Dr. Jay M. Eastman	Director	March 31, 2003
/s/ Lawrence M. Miller Lawrence M. Miller	Director	March 31, 2003
/s/ Jack E. Rosenfeld Jack E. Rosenfeld	Director	March 31, 2003
Bert W. Wasserman	Director	March __, 2003

</TABLE>

CERTIFICATIONS

I, Robert S. Ehrlich, certify that:

1. I have reviewed this annual report on Form 10-K of Electric Fuel Corporation;

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

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

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

   (a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   (b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

   (c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

   (a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in

internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 31, 2003

/s/ Robert S. Ehrlich

Robert S. Ehrlich, Chairman,
President and CEO
(Principal Executive Officer)

CERTIFICATIONS

I, Avihai Shen, certify that:

1. I have reviewed this annual report on Form 10-K of Electric Fuel Corporation;

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

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

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

   (a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   (b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

   (c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

   (a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 31, 2003

/s/ Avihai Shen

Avihai Shen, Vice President -
Finance and CFO
(Principal Financial Officer)

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2002

IN U.S. DOLLARS

INDEX

[LOGO] Ernst & Young

REPORT OF INDEPENDENT AUDITORS

To the Shareholders of

ELECTRIC FUEL CORPORATION

We have audited the accompanying consolidated balance sheets of Electric Fuel Corporation (doing business as Arotech Corporation) (the "Company") and its subsidiaries as of December 31, 2002 and 2001, and the related consolidated statements of operations, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of December 31, 2002 and 2001, and the consolidated results of their operations and cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States.

/s/ Kost, Forer & Gabbay
KOST FORER & GABBAY
A Member of Ernst & Young Global

Tel Aviv, Israel
February 27, 2003

The accompanying notes are an integral part of the consolidated financial statements.

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

In U.S. dollars

	December 31, 2002	December 31, 2001
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 1,457,526	$12,671,754
Restricted collateral deposit and other restricted cash	633,339	--
Trade receivables (net of allowance for doubtful accounts in the amounts of $40,636 and $39,153 as of December 31, 2002 and 2001, respectively)	3,776,195	765,402
Other accounts receivable and prepaid expenses	1,032,311	448,651
Inventories	1,711,479	523,366
Assets of discontinued operations	349,774	8,422,082
Total current assets	8,960,624	22,831,255
LOANS TO SHAREHOLDERS	--	501,288
SEVERANCE PAY FUND	1,025,071	854,891
PROPERTY AND EQUIPMENT, NET	2,555,249	2,220,806
GOODWILL	4,954,981	--
OTHER Intangible Assets, NET	2,567,457	--
	$20,063,382	$26,408,240

The accompanying notes are an integral part of the consolidated financial statements.

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

In U.S. dollars

	December 31, 2002	December 31, 2001
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Short term bank loans	$ 108,659	$ --
Trade payables	2,900,117	791,576

Other accounts payable and accrued expenses	2,009,109	1,222,653
Current portion of promissory note due to purchase of a subsidiary	1,200,000	--
Liabilities of discontinued operations	1,053,798	1,860,107
Total current liabilities	7,271,683	3,874,336
LONG TERM LIABILITIES		
Accrued severance pay	2,994,233	3,125,848
Promissory note due to acquisition of a subsidiary	516,793	- -
Total long-term liabilities	3,511,026	3,125,848
COMMITMENTS AND CONTINGENT LIABILITIES		
MINORITY INTEREST	243,172	--
SHAREHOLDERS' EQUITY:		
Share capital -		
Common stock - $0.01 par value each; Authorized: 100,000,000 shares as of December 31, 2002 and 2001; Issued: 35,701,594 shares and 29,059,469 shares as of December 31, 2002 and 2001, respectively; Outstanding - 35,146,261 shares and 28,504,136 shares as of December 31, 2002 and 2001, respectively	357,017	290,596
Preferred shares - $0.01 par value each; Authorized: 1,000,000 shares as of December 31, 2002 and 2001; No shares issued and outstanding as of December 31, 2002 and 2001	--	- -
Additional paid-in capital	114,082,584	105,686,909
Accumulated deficit	(100,673,619)	(82,169,261)
Deferred stock compensation	(12,000)	(18,000)
Treasury stock, at cost (Common stock - 555,333 shares as of December 31, 2002 and 2001)	(3,537,106)	(3,537,106)
Notes receivable from shareholders	(1,177,589)	(845,081)
Accumulated other comprehensive loss	(1,786)	- -
Total shareholders' equity	9,037,501	19,408,057
	$ 20,063,382	$ 26,408,241

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

In U.S. dollars

<TABLE>
<CAPTION>

	Year ended December 31,		
	2002	2001	2000
Revenues:			
<S>	<C>	<C>	<C>

Products	$ 5,944,370	$ 1,670,634	$ 1,179,500
Services	462,369	422,998	310,442
Total revenues	6,406,739	2,093,632	1,489,942
Cost of revenues	4,421,748	1,992,636	1,486,300
Gross profit	1,984,991	100,996	3,642
Operating expenses:			
Research and development, net	685,919	455,845	498,895
Selling and marketing expenses	1,309,669	105,977	126,893
General and administrative expenses	4,023,103	3,827,544	3,306,716
Amortization of intangible assets	623,543	--	--
In-process research and development write-off	26,000	--	--
Total operating costs and expenses	6,668,234	4,389,366	3,932,504
Operating loss	(4,683,243)	(4,288,370)	(3,928,862)
Financial income, net	100,451	262,581	544,181
Loss before minority interest in earnings of a subsidiary	(4,582,792)	(4,025,789)	(3,384,681)
Minority interest in earnings of a subsidiary	(355,360)	--	--
Net loss from continuing operations	(4,938,152)	(4,025,789)	(3,384,681)
Net loss from discontinued operations (including loss on disposal of $4,446,684)	(13,566,206)	(13,260,999)	(8,596,277)
Net loss	$(18,504,358)	$(17,286,788)	$(11,980,958)
Deemed dividend to certain shareholders of Common stock	$ --	$ (1,196,667)	$ --
Net loss attributable to shareholders of Common stock	$(18,504,358)	$(18,483,455)	$(11,980,958)
Basic and diluted net loss per share from continuing operations	$ (0.15)	$ (0.21)	$ (0.17)
Basic and diluted net loss per share from discontinued operations	$ (0.42)	$ (0.55)	$ (0.45)
Basic and diluted net loss per share	$ (0.57)	$ (0.76)	$ (0.62)
Weighted average number of shares used in computing basic and diluted net loss per share	32,381,502	24,200,184	19,243,446

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

In U.S. dollars

<TABLE>
<CAPTION>

Accumulated other comprehensive income (loss)	Common stock Shares	Common stock Amount	Additional paid-in capital	Accumulated deficit	Deferred stock compensation
<S>	<C>	<C>	<C>	<C>	<C>

<C>

Balance as of January 1, 2000	15,728,387	$ 157,284	$60,110,815	$(52,901,515)	-	-
Payment of interest and principal on notes receivable from shareholders	-	-	-	-	-	-
Issuance of shares to investors, net	2,477,952	24,780	18,249,373	-	-	-
Issuance of shares to service providers	35,000	350	524,650	-	-	-
Exercise of options	1,880,156	18,802	6,936,355	-	-	-
Exercise of warrants	1,301,196	13,011	2,437,295	-	-	-
Deferred stock compensation	-	-	37,924	-	(37,924)	-
Stock compensation related to options repriced	-	-	26,250	-		-
Amortization of deferred stock compensation	-	-	-	-	20,684	-
Stock compensation related to options issued to consultants	-	-	769,128	-	-	-
Accrued interest on notes receivable from shareholders	-	-	-	-	-	-
Comprehensive loss :						
Net loss	-	-	-	(11,980,958)	-	-
Total comprehensive loss						
Balance as of December 31, 2000	21,422,691	$ 214,227	$89,091,790	$ (64,882,473)	$ (17,240)	$ -

	Treasury stock	Total comprehensive loss	Notes receivable from shareholders	Total shareholders' equity
Balance as of January 1, 2000	$ (37,731)		$ (3,086,494)	$ 4,242,359
Payment of interest and principal on notes receivable from shareholders	-		2,705,052	2,705,052
Issuance of shares to investors, net	-		-	18,274,153
Issuance of shares to service providers	-	-	-	525,000
Exercise of options	-	-	(3,723,456)	3,231,701
Exercise of warrants	-	-		2,450,306
Deferred stock compensation	-		-	-
Stock compensation related to options repriced	-		-	26,250
Amortization of deferred stock compensation	-		-	20,684
Stock compensation related to options issued to consultants	-		-	769,128
Accrued interest on notes receivable from shareholders	-		(185,306)	(185,306)
Comprehensive loss :				
Net loss	-	(11,980,958)	-	(11,980,958)
Total comprehensive loss		$ (11,980,958)		
Balance as of December 31, 2000	$ (37,731)		$ (4,290,204)	$ 20,078,369

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

In U.S. dollars

<TABLE>
<CAPTION>

<S>	Common stock Shares	Common stock Amount	Additional paid-in capital	Accumulated deficit	Deferred stock compensation
Balance as of January 1, 2001	21,422,691	$ 214,227	$89,091,790	$ 64,882,473)	$ (17,240)
Repurchase of common shares from shareholders and repayment of the related interest and principal of notes from shareholders	-	-	228,674	-	-
Issuance of shares to investors, net	6,740,359	67,405	14,325,941	-	-
Retirement of shares	(3,000)	(30)	(17,970)	-	-
Issuance of shares to service providers	346,121	3,461	536,916	-	-
Exercise of options	219,965	2,200	512,089	-	-
Exercise of warrants	333,333	3,333	836,667	-	-
Deferred stock compensation	-	-	18,000	-	(18,000)
Amortization of deferred stock compensation	-	-	(6,193)	-	17,240
Stock compensation related to options issued to consultants	-	-	139,291	-	-
Stock compensation related to options to consultants repriced	-	-	21,704	-	-
Comprehensive loss:					
Net loss	-	-	-	(17,286,788)	-
Total comprehensive loss					
Balance as of December 31, 2001	29,059,469	$ 290,596	$105,686,909	$(82,169,261)	$ (18,000)

	Treasury stock	Total comprehensive loss	Notes receivable from shareholders	Total shareholders' equity
Balance as of January 1, 2001	$ (37,731)		$ (4,290,204)	$ 20,078,369
Repurchase of common shares from shareholders and repayment of the related interest and principal of notes from shareholders	(3,499,375)		3,470,431	199,730
Issuance of shares to investors, net	-		-	14,393,346
Retirement of shares	-		18,000	-
Issuance of shares to service providers	-		-	540,377
Exercise of options	-		(43,308)	470,981
Exercise of warrants	-	-	-	840,000
Deferred stock compensation	-		-	-
Amortization of deferred stock compensation	-		-	11,047
Stock compensation related to options issued to consultants	-		-	139,291
Stock compensation related to options to consultants repriced	-		-	

21,704

Comprehensive loss:				
Net loss	-	(17,286,788)	-	(17,286,788)
Total comprehensive loss		$(17,286,788)		
Balance as of December 31, 2001	$ (3,537,106)		$ (845,081)	$ 19,408,057

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

<TABLE>
<CAPTION>

	Common stock		Additional paid-in	Accumulated	Deferred stock	Treasury
	Shares	Amount	capital	deficit	compensation	stock
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Balance as of January 1, 2002	29,059,469	$ 290,596	$105,686,909	$(82,169,261)	$ (18,000)	$(3,537,106)
Adjustment of notes from shareholders						
Repayment of notes from employees	-	-	-	-	-	-
Issuance of shares to investors	2,041,176	20,412	3,209,588			
Issuance of shares to service providers	368,468	3,685	539,068			
Issuance of shares to lender in respect of prepaid interest expenses	387,301	3,873	232,377	-	-	-
Exercise of options by employees	191,542	1,915	184,435			
Amortization of deferred stock compensation					6,000	
Stock compensation related to options issued to employees	13,000	130	12,870			
Issuance of shares in respect of acquisition	3,640,638	36,406	4,056,600			
Accrued interest on notes receivable			160,737			
Other comprehensive loss Foreign currency translation adjustment						
Net loss				(18,504,358)		
Total comprehensive loss						
Balance as of December 31, 2002	35,701,594	$ 357,017	$114,082,584	$(100,673,619)	$ (12,000)	$ (3,537,106)

	Total comprehensive loss	Notes receivable from shareholders	Accumulated other comprehensive loss	Total shareholders' equity
Balance as of January 1, 2002		$ (845,081)	-	$ 19,408,057
Adjustment of notes from shareholders		(178,579)		(178,579)
Repayment of notes from employees		43,308		43,308
Issuance of shares to investors				3,230,000
Issuance of shares to service providers				542,753
Issuance of shares to lender in respect of prepaid interest expenses		-		236,250
Exercise of options by				

employees		(36,500)		149,850
Amortization of deferred stock compensation				6,000
Stock compensation related to options issued to employees				13,000
Issuance of shares in respect of acquisition				4,093,006
Accrued interest on notes receivable		(160,737)		-
Other comprehensive loss				
Foreign currency translation adjustment	(1,786)		(1,786)	(1,786)
Net loss	(18,504,358)			(18,504,358)
Total comprehensive loss	$ (18,506,144)			
Balance as of December 31, 2002		$ (1,177,589)	$ (1,786)	$ 9,037,501

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

ELECTRIC FUEL CORPORATION AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
In U.S. dollars

<TABLE>
<CAPTION>

	Year ended December 31,		
	2002	2001	2000
Cash flows from operating activities:			
<S>	<C>	<C>	<C>
Net loss	(18,504,358)	(17,286,788)	(11,980,958)
Less loss for the period from discontinued operations	13,566,206	13,260,999	8,596,277
Adjustments required to reconcile net loss to net cash used in operating activities:			
Minority interest in earnings of subsidiary	355,360	--	--
Depreciation	473,739	530,013	514,242
Amortization of intangible assets	623,543	--	--
In-process research and development write-off	26,000	--	--
Accrued severance pay, net	(357,808)	530,777	209,999
Amortization of deferred stock compensation	6,000	17,240	9,010
Impairment and write-off of loans to shareholders	542,317	206,005	--
Compensation expenses related to repurchase of treasury stock	--	228,674	--
Write-off of inventories	116,008	--	--
Amortization of compensation related to options issued to consultants and repriced options issued to employees and consultants	--	--	233,636
Compensation expenses related to shares issued to employees	13,000	--	--
Accrued interest on notes receivable from shareholders	--	36,940	(230,922)
Interest accrued on promissory notes due to acquisition	29,829	--	--
Interest accrued on restricted collateral deposit	(3,213)	--	

--

Capital (gain) loss from sale of property and equipment	(4,444)	815	(6,330)
Decrease (increase) in trade receivables	389,516	(452,425)	35,741
Decrease (increase) in other accounts receivable and prepaid expenses	257,218	616,040	(595,744)
Increase in inventories	(520,408)	(128,897)	(98,092)
Increase (decrease) in trade payables	(62,536)	(301,075)	(85,996)
Increase (decrease) in other accounts payable and accrued expenses	(423,664)	286,511	(40,191)
Net cash used in operating activities from continuing operations (reconciled from continuing operations)	(3,477,695)	(2,455,171)	(3,439,328)
Net cash used in operating activities from discontinued operations (reconciled from discontinued operations)	(5,456,912)	(10,894,660)	(10,523,852)
Net cash used in operating activities	(8,934,607)	(13,349,831)	(13,963,180)

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS
In U.S. dollars

<TABLE>
<CAPTION>

	Year ended December 31,		
	2002	2001	2000
Cash flows from investing activities:			
<S>	<C>	<C>	<C>
Purchase of property and equipment	(275,540)	(513,746)	(552,044)
Payment to suppliers for purchase of property and equipment from previous year	(39,336)	(43,883)	--
Loans granted to shareholders	(4,529)	--	(958,156)
Repayment of loans granted to shareholders	--	--	225,097
Proceeds from sale of property and equipment	8,199	40,217	57,867
Acquisition of IES (1)	(2,958,083)	--	--
Acquisition of MDT (2)	(1,201,843)	--	--
Increase in restricted cash	(595,341)	--	--
Net cash used in discontinued operations (purchase of property and equipment)	(290,650)	(761,555)	(2,306,467)
Net cash used in investing activities	(5,357,123)	(1,278,967)	(3,533,703)
Cash flows from financing activities:			
Proceeds from issuance of shares, net	3,230,000	14,393,346	18,150,404
Proceeds from exercise of options	113,350	470,981	3,231,701
Proceeds from exercise of warrants	--	840,000	2,450,306
Payment of interest and principal on notes receivable from shareholders	43,308	--	2,705,052
Profit distribution to minority	(412,231)	--	--
Increase in short term bank credit	108,659	--	--
Payment on capital lease obligation	(5,584)	--	--
Net cash provided by financing activities	3,077,502	15,704,327	26,537,463
Increase (decrease) in cash and cash equivalents	(11,214,228)	1,075,529	9,040,580
Cash and cash equivalents at the beginning of the year	12,671,754	11,596,225	2,555,645

Cash and cash equivalents at the end of the year	$ 1,457,526	$ 12,671,754	$ 11,596,225
Supplementary information on non-cash transactions:			
Purchase of property and equipment against trade payables	$ --	$ 39,336	$ 227,230
Purchase of treasury stock in respect of notes receivable from shareholders	$ --	$ 3,499,375	$ --
Retirement of shares issued under notes receivables	$ --	$ 18,000	$ --
Issuance of shares to consultants in respect of prepaid interest expenses	$ 236,250	$ --	$ 120,000
Exercise of options against notes receivable	$ 36,500	$ 43,308	$ 3,723,456
Supplemental disclosure of cash flows activities:			
Cash paid during the year for:			
Interest	$ 10,640	$ 19,106	$ 25,537

</TABLE>

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS (Cont.)
In U.S. dollars

(1) In July 2002, the Company acquired substantially all of the assets of I.E.S. Electronics Industries U.S.A., Inc. ("IES"). The net fair value of the assets acquired and the liabilities assumed, at the date of acquisition, was as follows:

Working capital, excluding cash and cash equivalents	$ 1,197,000
Property and equipment, net	396,776
Capital lease obligation	(15,526)
Technology	1,515,000
Existing contracts	46,000
Covenants not to compete	99,000
In process research and development	26,000
Customer list	527,000
Trademarks	439,000
Goodwill	4,068,726
	8,298,976
Issuance of shares	(3,653,929)
Issuance of promissory note	(1,686,964)
	$ 2,958,083

(2) In July 2002, the Company acquired 51% of the outstanding ordinary shares of MDT Protective Industries Ltd. ("MDT"). The fair value of the assets acquired and liabilities assumed was as follows:

Working capital, excluding cash and cash and cash equivalents	$ 350,085
Property, and equipment, net	139,623
Minority rights	(300,043)
Technology	280,000
Customer base	285,000
Goodwill	886,255
	1,640,920
Issuance of shares	(439,077)
	$ 1,201,843

The accompanying notes are an integral part of the consolidated financial statements.

In U.S. dollars

NOTE 1: - GENERAL

a. Electric Fuel Corporation d/b/a Arotech Corporation ("EFC," "Electric Fuel," or the "Company") and its subsidiaries are engaged in the development, manufacture and marketing of defense and security products, including advanced hi-tech multimedia and interactive digital solutions for training of military, law enforcement and security personnel and sophisticated lightweight materials and advanced engineering processes to armor vehicles, and in the design, development and commercialization of its proprietary zinc-air battery technology for electric vehicles and defense applications. The Company is primarily operating through Electric Fuel Ltd. ("EFL") a wholly-owned Israeli based subsidiary, IES Interactive Training, Inc. ("IES"), a wholly-owned U.S. subsidiary, and MDT Protective Industries, an Israeli concern in which the Company has a 51% interest. The Company's production and research and development operations are primarily located in Israel and in the United States.

In addition to EFL and MDT, the Company has three wholly-owned non-operating foreign subsidiaries, in the U.K ("EFL U.K."), in Germany ("GmbH") and in the Netherlands ("BV"). The Company also has three subsidiaries in the United States in addition to IES: Electric Fuel Transportation Corp. (Delaware), Instant Power Corporation (Delaware), and I.E.S. Defense Services, Inc. (Delaware).

b. Acquisition of IES:

In August 2, 2002, the Company entered into an asset purchase agreement among I.E.S. Electronics Industries U.S.A., Inc. ("IES"), its direct and certain of its indirect shareholders, and its wholly-owned Israeli subsidiary, EFL, pursuant to the terms of which it acquired substantially all the assets, subject to substantially all the liabilities, of IES, a developer, manufacturer and marketer of advanced hi-tech multimedia and interactive digital solutions for training of military, law enforcement and security personnel. The Company intends to continue to use the assets purchased in the conduct of the business formerly conducted by IES (the "Business"). The acquisition has been accounted under the purchase method of accounting. Accordingly, all assets and liabilities were acquired as at the values on such date, and the Company consolidated IES's results with its own commencing at such date.

The assets purchased consisted of the current assets, property and equipment, and other intangible assets used by IES in the conduct of the Business. The consideration for the assets and liabilities purchased consisted of (i) cash and promissory notes in an aggregate amount of $4,800,000 ($3,000,000 in cash and $1,800,000 in promissory notes, which was recorded at its fair value in the amount of $1,686,964) (see Note 9), and (ii) the issuance, with registration rights, of a total of 3,250,000 shares of our common stock, $.01 par value per share, having a value of approximately $3,653,929, which shares are the subject of a voting agreement on the part of IES and certain of its affiliated companies. The value of 3,250,000 shares issued was determined based on the average market price of EFC's Common stock over the period including two days before and after the terms of the acquisition were agreed to and announced. The total consideration of $8,390,893 (including $50,000 of transaction costs) was determined based upon arm's-length negotiations between the Company and IES and IES's shareholders.

NOTE 1: - GENERAL (Cont.)

Based upon an independent valuation of tangible and intangible assets acquired, Electric Fuel has allocated the total cost of the acquisition to I.E.S.'s assets as follows:

Tangible assets acquired	$ 2,856,951
Intangible assets	
Technology (four year useful life)	1,515,000

In U.S. dollars

Existing contracts (one year useful life)	46,000
Covenants not to compete (five year useful life)	99,000
In process research and development	26,000
Customer list (seven year useful life)	527,000
Trademarks (indefinite useful life)	439,000
Goodwill	4,068,726
Liabilities assumed	(1,186,784)
Total consideration	$ 8,390,893

In accordance with SFAS No. 142, "Goodwill and Other Intangible Assets," goodwill arising from acquisitions will not be amortized. In lieu of amortization, EFC is required to perform an annual impairment review. If EFC determines, through the impairment review process, that goodwill has been impaired, it will record the impairment charge in its statement of operations. EFC will also assess the impairment of goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable.

The value assigned to the tangible, intangibles assets and liabilities was determined as follows:

1. To determine the value of the Company's net current assets, property and equipment, and net liabilities; the Cost Approach was used, which requires that the assets and liabilities in question be restated to their market values. Per estimation made by the independent appraisal the book values for the current assets and liabilities were reasonable proxies for their market values.

2. The amount of the excess cost attributable to technology of Range 2000, 3000 and A2Z Systems is $1,515,000 and was determined using the Income Approach.

NOTE 1: - GENERAL (Cont.)

3. The value assigned to purchased in-process technology relates to two projects "Black Box" and A2Z trainer. The estimated fair value of the acquired in-process research and development platforms that had not yet reached technological feasibility and had no alternative future use amounted to $26,000. Technological feasibility or commercial viability of these projects was established at the acquisition date. These products were considered to have no alternative future use other than the technological indications for which they were in development. Accordingly, these amounts were immediately expensed in the consolidated statement of operations on the acquisition date in accordance with FASB Interpretation No. 4, "Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method." The estimated fair values of these platforms were determined using discounted cash flow models. Projects were estimated to be 4% complete; estimated costs to completion of these platforms were approximately $200,000 and $25,000, respectively, and discount rate of 25% was used.

4. The value assigned to the customer list is amounted to $527,000. Management states that its customers have generally been very loyal to the Company's products; most present customers will purchase add-ons or up-grades to their IES simulator systems in the future, and some will purchase additional warranties for the systems they possess. Independent appraisal has therefore valued the Company's customer list using the Income Approach.

5. The value assigned to the trademarks is amounted to $439,000 and was determined based on the Cost Approach. In doing so, it is assumed that historical expenditures for advertising are a reasonable proxy for the future benefits expected from the Trademarks and Trade names.

6. Value of IES's Covenant Not to Compete (CNC) was valued at the amount of $99,000. One of IES's intangible assets is its covenant not to compete. Asset Purchase Agreement precludes the former parent company, and its principals and key employees from competing with IES for five years from the Valuation Date. According to management, among the individuals covered by the CNC are the original developers of the Range 2000 and A2Z systems. Estimated CNC's value was determined using

In U.S. dollars

the Income Approach. The estimated value of the CNC is the sum of the present value of the cash flows that would be lost if the CNC was not in place. Specifically, the value of the CNC is calculated as the difference between the projected cash flows if the former parent company or its principals were to start competing immediately and the projected cash flows if those parties start competing after five years, when the CNC expires.

NOTE 1: - GENERAL (Cont.)

c. Acquisition of MDT:

On July 1, 2002, the Company entered into a stock purchase agreement with all of the shareholders of M.D.T. Protective Industries Ltd. ("MDT"), pursuant to the terms of which the Company purchased 51% of the issued and outstanding shares of MDT, a privately-held Israeli company that specializes in using sophisticated lightweight materials and advanced engineering processes to armor vehicles. The Company also entered into certain other ancillary agreements with MDT and its shareholders and other affiliated companies. The Acquisition was accounted under the purchase method accounting and results of MDT's operations have been included in the consolidated financial statements since that date. The total consideration of $1,767,877 for the shares purchased consisted of (i) cash in the aggregate amount of 5,814,000 New Israeli Shekels ($1,231,780), and (ii) the issuance, with registration rights, of an aggregate of 390,638 shares of our common stock, $0.01 par value per share, having a value of approximately $439,077. The value of 390,638 shares issued was determined based on the average market price of EFC's Common stock over the period including two days before and after the terms of the acquisition were agreed to and announced.

Based upon an independent valuation of tangible and intangible assets acquired, Electric Fuel has allocated the total cost of the acquisition to MDT's assets as follows:

Tangible assets acquired	$ 1,337,048
Intangible assets	
Technology (five year weighted average useful life)	280,000
Customer base (five year weighted average useful life)	285,000
Goodwill	886,255
Liabilities assumed	(1,020,426)
Total consideration	$ 1,767,877

In accordance with SFAS No. 142, "Goodwill and Other Intangible Assets," goodwill arising from acquisitions will not be amortized. In lieu of amortization, EFC is required to perform an annual impairment review. If EFC determines, through the impairment review process, that goodwill has been impaired, it will record the impairment charge in its statement of operations. EFC will also assess the impairment of goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable.

NOTE 1: - GENERAL (Cont.)

The value assigned to the tangible, intangibles assets and liabilities was determined as following:

1. To determine the value of the Company's net current assets, net property, and equipment and net liabilities; the Cost Approach was

In U.S. dollars

used, which requires that the assets and liabilities in question be restated to their market values. Per estimation made by the independent appraisal the book values for the current assets and liabilities were reasonable proxies for their market values.

2. The amount of the excess cost attributable to technology of optimal bulletproofing material and power mechanism for bulletproofed windows is $280,000 and was determined using the Income Approach.

3. The value assigned to the customer base is amounted to $285,000. Independent appraisal has valued the Company's customer base using the Income Approach. The valuation of the customers' base derives mostly from relations with customers with no contracts. Most of the customers of MDT are from defense sector and usually have longstanding relationships and tend to reorder from the Company.

d. Pro forma results:

The following unaudited proforma information does not purport to represent what the Company's results of operations would have been had the acquisitions occurred on January 1, 2001 and 2002, nor does it purport to represent the results of operations of the Company for any future period.

	Year ended December 31, 2002	Year ended December 31, 2001
Revenues	$12,997,289	$ 12,369,749
Net loss from continuing operations	$(6,103,771)	$ (5,757,675)
Basic and diluted net loss per share for continuing operations	$ (0.18)	$ (0.21)
Weighted average number of shares of common stock in computation of basic and diluted net loss per share	34,495,185	27,840,822

The amount of the excess cost attributable to in-process research and development of IES and MDT in the amount of $26,000 has not been included in the pro forma information, as it does not represent a continuing expense.

NOTE 1: - GENERAL (Cont.)

e. Discontinued operations:

In September 2002, the Company committed to a plan to discontinue the operations of its retail sales of consumer battery products. The Company ceased the operation and disposed of all assets related to this segment by an abandonment. The operations and cash flows of consumer battery business have been eliminated from the operations of the entity as a result of the disposal transactions. The Company has no intent of continuing its activity in the consumer battery business. The Company's plan of discontinuance involved (i) termination of all employees whose time was substantially devoted to the consumer battery line and who could not be used elsewhere in the Company's operations, including payment of all statutory and contractual severance sums, by the end of the fourth quarter of 2002, and (ii) disposal of the raw materials, equipment and inventory used exclusively in the consumer battery business, since the Company has no reasonable expectation of being able to sell such raw materials, equipment or inventory for any sum substantially greater than the cost of disposal or shipping, by the end of the first quarter of 2003. The Company had previously reported its consumer battery business as a separate segment (Consumer Batteries) as called for by Statement of Financial Standards No. 131, "Disclosures About Segments of an Enterprise and Related Information" ("SFAS No. 131").

In U.S. dollars

The results of operations including revenue, operating expenses, other income and expense of the retail sales of consumer battery products business unit for 2002, 2001 and 2000 have been reclassified in the accompanying statements of operations as a discontinued operation. The Company's balance sheets at December 31, 2002 and 2001 reflect the net liabilities of the retail sales of consumer battery products business as net liabilities and net assets of discontinued operation within current liabilities and current assets.

At December 31, 2002, the estimated net losses associated with the disposition of the retail sales of consumer battery products business were approximately $13,566,206 for 2002. These losses included approximately $6,508,222 in losses from operations for the period from January 1, 2002 through the measurement date of December 31, 2002 and $7,057,684, reflecting a write-down of inventory and net property and equipment of the retail sales of consumer battery products business, as follows:

	December 31, 2002
Write-off of inventories	$2,611,000
Impairment of property and equipment	4,446,684
	$7,057,684

As a result of the discontinuance of consumer battery segment, the Company ceased to use property and equipment related to this segment. In accordance with Statement of Financial Accounting Standard No. 144 "Accounting for the Impairment or Disposal of Long- Lived Assets" ("SFAS No. 144") such assets was considered to be impaired, the impairment to be recognized was measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets.

NOTE 1: - GENERAL (Cont.)

Obligations to employees for severance and other benefits resulting from the discontinuation have been reflected in the financial statements on an accrual basis.

Summary operating results from the discontinued operation for the years ended December 31, 2002, 2001 and 2000 are as follows:

<TABLE>
<CAPTION>

	Year Ended December 31,		
	2002	2001	2000
<S>	<C>	<C>	<C>
Revenues	$ 1,100,442	$ 1,939,256	$ 2,563,620
Cost of sales (1)	(5,293,120)	(5,060,966)	(3,073,142)
Gross loss	4,192,678	3,121,710	509,522
Operating expenses	4,926,844	10,139,289	8,086,755
Impairment of fixed assets	4,446,684	--	--
Operating loss	$ 13,566,206	$ 13,260,999	$ 8,596,277

</TABLE>

(1) Including write-off of inventory in the amount of $2,611,000, $441,000 and $0 for the years ended December 31, 2002, 2001 and 2000.

In U.S. dollars

NOTE 2: - SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("U.S. GAAP").

a. Use of estimates:

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

b. Financial statements in U.S. dollars:

A majority of the revenues of the Company and most of its subsidiaries is generated in U.S. dollars. In addition, a substantial portion of the Company's and most of its subsidiaries costs are incurred in U.S. dollars ("dollar"). Management believes that the dollar is the primary currency of the economic environment in which the Company and most of its subsidiaries operate. Thus, the functional and reporting currency of the Company and most of its subsidiaries is the dollar. Accordingly, monetary accounts maintained in currencies other than the U.S. dollar are remeasured into U.S. dollars in accordance with Statement of Financial Accounting Standards No. 52 "Foreign Currency Translation" ("SFAS No. 52"). All transaction, gains and losses from the remeasured monetary balance sheet items are reflected in the consolidated statements of operations as financial income or expenses, as appropriate.

The majority of financial transactions of MDT is in New Israel Shekel ("NIS") and a substantial portion of MDT's costs is incurred in NIS. Management believes that the NIS is the functional currency of MDT. Accordingly, the financial statements of MDT have been translated into U.S. dollars. All balance sheet accounts have been translated using the exchange rates in effect at the balance sheet date. Statement of operations amounts has been translated using the average exchange rate for the period. The resulting translation adjustments are reported as a component of accumulated other comprehensive loss in shareholders' equity

c. Principles of consolidation:

The consolidated financial statements include the accounts of the Company and its wholly and majority owned subsidiaries. Intercompany balances and transactions have been eliminated upon consolidation.

d. Cash equivalents:

Cash equivalents are short-term highly liquid investments that are readily convertible to cash with maturities of three months or less when acquired.

e. Inventories:

Inventories are stated at the lower of cost or market value. Inventory write-offs and write-down provisions are provided to cover risks arising from slow-moving items or technological obsolescence and for market prices lower than cost. The Company periodically evaluates the quantities on hand relative to current and historical selling prices and historical and projected sales volume. Based on this evaluation, provisions are made to write inventory down to its market value. In 2002, the Company wrote off $116,008 of obsolete inventory, which has been included in the cost of revenues.

NOTE 2: - SIGNIFICANT ACCOUNTING POLICIES

Cost is determined as follows:

Raw and packaging materials - by the average cost method.

Work in progress - represents the cost of manufacturing with the addition of allocable indirect manufacturing cost.

Finished products - on the basis of direct manufacturing costs with the addition of allocable indirect manufacturing costs.

f. Property and equipment:

Property and equipment are stated at cost net of accumulated depreciation and investment grants (no investment grants were received during 2002, 2001 and 2000).

Depreciation is calculated by the straight-line method over the estimated useful lives of the assets, at the following annual rates:

	%
Computers and related equipment	33
Motor vehicles	15
Office furniture and equipment	6 - 10
Machinery, equipment and installation	10 - 25 (mainly 10)
Leasehold improvements	Over the term of the lease

The Company and its subsidiaries' long-lived assets and certain identifiable intangibles are reviewed for impairment in accordance with Statement of Financial Accounting Standard No. 144 "Accounting for the Impairment or Disposal of Long-Lived Assets" ("SFAS No. 144") whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the carrying amount of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of by sale are reported at the lower of the carrying amount or fair value less selling costs. As of December 31, 2002 no impairment losses have been identified.

g. Goodwill:

Goodwill represents the excess of cost over the fair value of the net assets of businesses acquired. Under Statement of Financial Accounting Standard No. 142, "Goodwill and Other Intangible Assets" ("SFAS No, 142") goodwill acquired in a business combination on or after July 1, 2001, is not amortized.

SFAS No. 142 requires goodwill to be tested for impairment on adoption of the Statement and at least annually thereafter or between annual tests in certain circumstances, and written down when impaired, rather than being amortized as previous accounting standards required. Goodwill is tested for impairment by comparing the fair value of the Company's reportable units with their carrying value. Fair value is determined using discounted cash flows, market multiples and market capitalization. Significant estimates used in the methodologies include estimates of future cash flows, future short-term and long-term growth rates, weighted average cost of capital and estimates of market multiples for the reportable units.

h. Other intangible assets:

Intangible assets acquired in a business combination that are subject to amortization should be amortized over their useful life using a method of amortization that reflects the pattern in which the economic benefits of the intangible assets are consumed or otherwise used up, in accordance with SFAS No. 142. Intangible assets are amortized over their useful life (See Note 1b. and c).

i. Impairment of indefinite lived intangible asset

The acquired trademark is deemed to have an indefinite useful life because it is expected to contribute to cash flows indefinitely. Therefore, the trademark will not be amortized until its useful life is no longer indefinite The trademark will be tested for impairment in accordance FAS 142.

j. Revenue recognition:

The Company generates revenues primarily from sales of multimedia and interactive digital training systems and use-of-force simulators specifically targeted for law enforcement and firearms training and from service contracts related to such sales (through IES), from providing lightweight armoring services of vehicles (through MDT), and, to a lesser extent, from sale of zinc-air battery products for defense applications. To a lesser extent, revenues are generated from development services and long-term arrangements subcontracted by the U.S Government.

Revenues from products, training and simulation systems are recognized in accordance with Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements ("SAB No. 101") when the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred, the seller's price to the buyer is fixed or determinable, no further obligation remains and collectibility is reasonably assured.

The Company does not grant a right of return to its customers.

Revenues from long-term agreements, subcontracted by the U.S. government, are recorded on a cost-sharing basis, when services are rendered and products delivered, as prescribed in the related agreements. Provisions for estimated losses are recognized in the period in which the likelihood of such losses is determined. As of December 31, 2002, no such estimated losses were identified.

Deferred revenues includes unearned amounts received from customers, but not recognized as revenues.

NOTE 2: - SIGNIFICANT ACCOUNTING POLICIES

Revenues from development services are recognized based on Statement of Position No. 81-1 "Accounting for Performance of Construction - Type and Certain Production - Type Contracts" ("SOP 81-1"), using contract accounting on a percentage of completion method, based on completion of agreed-upon milestones and in accordance with the "Output Method" or based on the time and material basis. Provisions for estimated losses on uncompleted contracts are recognized in the period in which the likelihood of such losses is determined. As of December 31, 2002, no such estimated losses were identified.

Revenues from lightweight armoring services of vehicles are recorded when services are rendered and vehicle is delivered and no additional obligations exists.

k. Research and development cost:

Research and development costs, net of grants received, are charged to the statements of operations as incurred.

l. Royalty-bearing grants:

Royalty-bearing grants from the Office of the Chief Scientist ("OCS") of the Israeli Ministry of Industry and Trade and from the Israel-U.S. Bi-national Industrial Research and Development Foundation ("BIRD-F") for funding approved research and development projects are recognized at the time the Company is entitled to such grants on the basis of the costs incurred, and included as a deduction of research and development costs.

m. Income taxes:

The Company and its subsidiaries account for income taxes in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" ("SFAS No. 109"). This Statement prescribes the use of the liability method, whereby deferred tax assets and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company and its subsidiaries provide a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

n. Concentrations of credit risk:

Financial instruments that potentially subject the Company and its subsidiaries to concentrations of credit risk consist principally of cash and cash equivalents, restricted collateral deposit and other restricted cash, trade receivables and long-term loans to shareholders. Cash and cash equivalents are invested in U.S. dollar deposits with major Israeli, U.S. and U.K. banks. Such deposits in the U.S. may be in excess of insured limits and are not insured in other jurisdictions. Management believes that the financial institutions that hold the Company's investments are financially sound and, accordingly, minimal credit risk exists with respect to these investments.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
In U.S. dollars

NOTE 2: - SIGNIFICANT ACCOUNTING POLICIES

The trade receivables of the Company and its subsidiaries are mainly derived from sales to customers located primarily in the United States, Europe and Israel. Management believes that credit risks are moderated by the diversity of its end customers and geographic sales areas. The Company performs ongoing credit evaluations of its customers' financial condition. An allowance for doubtful accounts is determined with respect to those accounts that the Company has determined to be doubtful of collection.

The Company has provided long-term loans to its shareholders, amounting to $733,059 as of December 31, 2002. The long-term loans are secured by the Company's shares and since the value of the Company's shares has decreased, the Company incurred a material loss during the years 2002 and 2001.

The Company and its subsidiaries had no off-balance-sheet concentration of credit risk such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

o. Basic and diluted net loss per share:

Basic net loss per share is computed based on the weighted average number of shares of common stock outstanding during each year. Diluted net loss per share is computed based on the weighted average number of shares of common stock outstanding during each year, plus dilutive potential shares of common stock considered outstanding during the year, in accordance with Statement of Financial Standards No. 128, "Earnings Per Share" ("SFAS No. 128").

All outstanding stock options and warrants have been excluded from the calculation of the diluted net loss per common share because all such securities are anti-dilutive for all periods presented. The total weighted average number of shares related to the outstanding options and warrants excluded from the calculations of diluted net loss per share was 4,394,803, 3,170,334 and 2,812,725 for the years ended December 31, 2002, 2001 and 2000, respectively.

p. Accounting for stock-based compensation:

The Company has elected to follow Accounting Principles Board Opinion No. 25 "Accounting for Stock Issued to Employees" ("APB No. 25") and Interpretation No. 44 "Accounting for Certain Transactions Involving Stock Compensation" ("FIN No. 44") in accounting for its employee stock option plans. Under APB No. 25, when the exercise price of the Company's share options is less than the market price of the underlying shares on the date of grant, compensation expense is recognized. Under Statement of Financial Accounting Standard No. 123, "Accounting for Stock-Based Compensation" ("SFAS No. 123"), pro-forma information regarding net income and income per share is required, and has been determined as if the Company had accounted for its employee stock options under the fair value method of SFAS No. 123.

The Company applies SFAS No. 123 and Emerging Issue Task Force No. 96-18 "Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services" ("EITF 96-18") with respect to options issued to non-employees. SFAS No. 123 requires use of an option valuation model to measure the fair value of the options at the grant date.

NOTE 2: - SIGNIFICANT ACCOUNTING POLICIES (Cont.)

The fair value for the options to employees was estimated at the date of grant, using the Black-Scholes Option Valuation Model, with the following weighted-average assumptions: risk-free interest rates of 3.5%, 3.5-4.5%, and 6.5% for 2002, 2001 and 2000, respectively; a dividend yield of 0.0% for each of those years; a volatility factor of the expected market price of the Common Stock of 0.64 for 2002, 0.82 for 2001 and 0.95% for 2000; and a weighted-average expected life of the option of 10 years for 2002, 2001 and 2000.

The following table illustrates the effect on net income and earnings per share, assuming that the Company had applied the fair value recognition provision of SFAS No. 123 on its stock-based employee compensation:

<TABLE>

In U.S. dollars

<CAPTION>

	Year ended December 31,		
	2002	2001	2000
<S>	<C>	<C>	<C>
Net income as reported	$(18,504,358)	$(18,483,455)	$(11,980,958)
Add: Stock-based compensation expenses included in reported net loss	--	17,240	20,684
Deduct: Stock-based compensation expenses determined under fair value method for all awards	(2,072,903)	(2,906,386)	(2,045,764)
Pro forma net loss	$(20,577,261)	$(21,372,601)	$(14,006,038)
Loss per share:			
Basic and diluted, as reported	$ (0.57)	$ (0.76)	$ (0.62)
Diluted, pro forma	$ (0.64)	$ (0.88)	$ (0.73)

</TABLE>

q. Fair value of financial instruments:

The following methods and assumptions were used by the Company and its subsidiaries in estimating their fair value disclosures for financial instruments:

The carrying amounts of cash and cash equivalents restricted collateral deposit and other restricted cash, trade receivables, short-term bank credit, and trade payables approximate their fair value due to the short-term maturity of such instruments.

The carrying amount of the Company's long-term loans to shareholders approximates their fair value. The fair value was estimated using the fair market value of the secured Company's shares.

Long-terms liabilities are estimated by discounting the future cash flows using current interest rates for loans or similar terms and maturities. The carrying amount of the long-term liabilities approximates their fair value.

r. Severance pay:

The Company's liability for severance pay is calculated pursuant to Israeli severance pay law based on the most recent salary of the employees multiplied by the number of years of employment as of the balance sheet date. Employees are entitled to one month's salary for each year of employment, or a portion thereof. The Company's liability for all of its employees is fully provided by monthly deposits with severance pay funds, insurance policies and by an accrual. The value of these policies is recorded as an asset in the Company's balance sheet.

NOTE 2: - SIGNIFICANT ACCOUNTING POLICIES (Cont.)

In addition and according to certain employment agreements, the Company is obligated to provide for a special severance pay in addition to amounts due to certain employees pursuant to Israeli severance pay law. The Company has made a provision for this special severance pay in accordance with Statement of Financial Accounting Standard No. 106, "Employer's Accounting for Post Retirement Benefits Other than Pensions" ("SFAS No. 106"). As of December 31, 2002 and 2001, the accumulated severance pay in that regard amounted to $1,630,366 and $1,975,535, respectively.

The deposited funds include profits accumulated up to the balance sheet date. The deposited funds may be withdrawn only upon the fulfillment of the obligation pursuant to Israeli severance pay law or labor agreements. The value of the deposited funds is based on the cash surrendered value of these policies and includes immaterial profits.

Severance income for the year ended December 31, 2002 amounted to $338,574 as compared to severance expenses for the years ended December 31, 2001 and 2000, which amounted to $653,885 and $430,943, respectively.

s. Advertising costs:

In U.S. dollars

The Company and its subsidiaries expense advertising costs as incurred. Advertising expense for the years ended December 31, 2002, 2001 and 2000 was approximately $294,599, $1,676,280 and $1,453,025, respectively.

t. Impact of recently issued accounting standards:

In June 2002, the FASB issued SFAS No. 146 "Accounting for Costs Associated with Exit or Disposal Activities" which addresses significant issues regarding the recognition, measurement, and reporting of costs associated with exit and disposal activities, including restructuring activities. SFAS No. 146 requires that costs associated with exit or disposal activities be recognized when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS No. 146 is effective for all exit or disposal activities initiated after December 31, 2002. The Company does not expect the adoption of SFAS No. 146 to have a material impact on its results of operations or financial position.

NOTE 3: - RESTRICTED COLLATERAL DEPOSIT AND OTHER RESTRICTED CASH

The restricted collateral deposit is invested in a $595,341 certificate of deposit that is used to secure a standby letter of credit required in connection with a sales contract the Company signed with the Royal Thai Army on September 28, 2002. The other restricted cash consists of security deposits in connection with real property lease arrangements.

NOTE 4: - OTHER ACCOUNTS RECEIVABLE AND PREPAID EXPENSES

	December 31, 2002	December 31, 2001
Government authorities	$ 348,660	$ 204,435
Employees	23,959	4,680
Prepaid expenses	591,008	198,150
Other	68,684	41,386
	$1,032,311	$ 448,651

NOTE 5: - INVENTORIES

	December 31, 2002	December 31, 2001
Raw and packaging materials	$ 893,666	$ 454,086
Work in progress	296,692	28,995
Finished products	521,121	40,285
	$1,711,479	$ 523,366

NOTE 6: - LOANS TO SHAREHOLDERS

In February and May 2000, two officers of the Company exercised options to purchase a total of 263,330 and 550,000, respectively, shares of the Company's common stock (see Note 12.e.2). In connection with such exercises, the Company granted loans secured by the Company's shares to those two officers to cover their related tax liabilities. The loans were in the form of non-recourse promissory notes in the total amount of $958,156, bearing interest at a rate equal to 4% over the then-current percentage increase in the Israeli Consumer Price Index ("CPI") between the date of the loan and the date of the annual interest calculation. During the years 2000 and 2001 one of the shareholders repaid a portion of his non-recourse note at the amount of $225,097 and $38,639, respectively. During the years 2002 and 2001, the Company has impaired those loans and has written off the amounts of $501,288 and $206,005, respectively, due to decline of the fair market value of its shares, which was recorded in general and administrative expenses.

IN U.S. DOLLARS

NOTE 7: - PROPERTY AND EQUIPMENT, NET

a. Composition of property and equipment is as follows:

<TABLE>
<CAPTION>

	December 31, 2002	December 31, 2001
Cost:		
<S>	<C>	<C>
Computers and related equipment	$ 815,759	$ 786,158
Motor vehicles	335,286	336,216
Office furniture and equipment	519,092	313,760
Machinery, equipment and installations	4,715,182	4,294,600
Leasehold improvements	442,482	355,536
Demo inventory	154,689	--
	6,982,490	6,086,270
Accumulated depreciation:		
Computers and related equipment	669,258	566,290
Motor vehicles	39,281	62,523
Office furniture and equipment	255,829	180,498
Machinery, equipment and installations	3,106,389	2,797,558
Leasehold improvements	356,484	258,595
	4,427,241	3,865,464
Depreciated cost	$2,555,249	$2,220,806

</TABLE>

b. Depreciation expense amounted to $473,739, $530,013 and $514,242, for the years ended December 31, 2002, 2001 and 2000, respectively.

As for liens, see Note 11.d.

NOTE 8: - OTHER INTANGIBLE ASSETS, NET

a.

	Year ended December 31, 2002	Year ended December 31, 2001
Cost:		
Technology	$1,795,000	$ --
Existing contracts	46,000	--
Covenants not to compete	99,000	--
Customer list	812,000	--
	2,752,000	--
Less - accumulated amortization	623,543	--

IN U.S. DOLLARS

Amortized cost	2,128,457	--
Trademarks	439,000	--
	2,567,457	--

b. Amortization expenses amounted to $623,543 for the year ended December 31, 2002.

c. Estimated amortization expenses for the years ended:

Year ended December 31,	
2003	$1,172,000
2004	263,000
2005	233,000
2006	205,843
2007 and forward	254,614
	$2,128,457

NOTE 9: - PROMISSORY NOTES

In connection with the acquisition discussed in Note 1b, the Company issued promissory notes in the face amount of an aggregate of $1,800,000, one of which was a note for $400,000 that was convertible into an aggregate of 200,000 shares of the Company's common stock. The Company has accounted for these notes in accordance with Accounting Principles Board Opinion No. 21, "Interest on Receivables and Payables," and recorded the notes at its present value in the amount of $1,686,964. In December 2002, the terms of these promissory notes were amended to (i) extinguish the $1,000,000 note due at the end of June 2003 in exchange for prepayment of $750,000, (ii) amend the $400,000 note due at the end of December 2003 to be a $450,000 note, and (iii) amend the convertible $400,000 note due at the end of June 2004 to be a $450,000 note convertible at $0.75 as to $150,000, at $0.80 as to $150,000, and at $0.85 as to $150,000. In accordance with EITF 96-19, "Debtor's Accounting for a Modification or Exchange of Debt Instruments," the terms of the promissory notes are not changed or modified and the cash flow effect on a present value basis is less than 10 % and therefore the Company did not record any compensation related to these changes.

NOTE 10: - OTHER ACCOUNTS PAYABLE AND ACCRUED EXPENSES

	December 31, 2002	December 31, 2001
Employees and payroll accruals	$ 615,292	$ 688,985
Accrued vacation pay	137,179	300,779
Accrued expenses	342,793	74,639
Advances from customers	--	98,070
Minority balance	289,451	--
Government authorities	497,428	--
Deferred warranty revenues	95,831	--
Other	31,135	60,180
	$2,009,109	$1,122,653

NOTE 11: - COMMITMENTS AND CONTINGENT LIABILITIES

a. Royalty commitments:

1. Under EFL's research and development agreements with the Office of the Chief Scientist ("OCS"), and pursuant to applicable laws, EFL is required to pay

royalties at the rate of 3%-3.5% of net sales of products developed with funds provided by the OCS, up to an amount equal to 100% of research and development grants received from the OCS (linked to the U.S. dollars. Amounts due in respect of projects approved after year 1999 also bear interest of the Libor rate).

EFL is obligated to pay royalties only on sales of products in respect of which OCS participated in their development. Should the project fail, EFL will not be obligated to pay any royalties.

Royalties paid or accrued for the years ended December 31, 2002, 2001 and 2000, to the OCS amounted to $32,801, $75,791 and $70,637, respectively.

As of December 31, 2002, total contingent liability to pay to OCS (at 100%) was outstanding at the amount of approximately $9,882,000.

2. EFL, in cooperation with a U.S. participant, has received approval from the BIRD-F for 50% funding of a project for the development of a hybrid propulsion system for transit buses. The maximum approved cost of the project is approximately $1.8 million, and the Company's share in the project costs is anticipated to amount to approximately $1.1 million, which will be reimbursed by BIRD-F at the aforementioned rate of 50%.

Royalties at rates of 2.5%-5% of sales are payable up to a maximum of 150% of the grant received, linked to the U.S. Consumer Price Index. Accelerated royalties are due under certain circumstances.

EFL is obligated to pay royalties only on sales of products in respect of which BIRD-F participated in their development. Should the project fail, EFL will not be obligated to pay any royalties.

NOTE 11: - COMMITMENTS AND CONTINGENT LIABILITIES (Cont.)

Royalties paid or accrued to the BIRD-F amounted at $0 for each of the three years ended December 31, 2002.

As of December 31, 2002, total contingent liability to pay BIRD-F (at 150%) was approximately $772,000.

b. Lease commitments:

The Company and its subsidiaries rent their facilities under various operating lease agreements, which expire on various dates, the latest of which is in 2005. The minimum rental payments under non-cancelable operating leases are as follows:

Year ended December 31,	
2003	$439,947
2004	147,444
2005	86,775
	$674,166

Total rent expenses for the years ended December 31, 2002, 2001 and 2000, were approximately $629,101, $456,701 and $261,000, respectively.

Rental payments are primarily payable in Israeli currency, linked to the Israeli Consumer Price Index ("CPI").

c. Guarantees:

The Company obtained bank guarantees in the amount of $34,893, mainly in respect of a letter of credit to the supplier of one of its subsidiaries.

d. Liens:

As security for compliance with the terms related to the investment grants from the state of Israel, EFL has registered floating liens on all of its assets, in favor of the State of Israel.

NOTE 12: - SHAREHOLDERS' EQUITY

a. Shareholders' rights:

The Company's shares confer upon the holders the right to receive notice to participate and vote in the general meetings of the Company and right to receive dividends, if and when declared.

b. Issuance of common stock to investors:

1. On January 5, 2000, the Company entered into a Common Stock Purchase Agreement with a group of private investors. Pursuant to this agreement, on January 10, 2000, the Company issued 385,000 shares of common stock to the investors for a total purchase price of $962,500.

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

2. On May 17, 2000, the Company entered into an agreement with an investor, pursuant to which the Company issued 1,000,000 shares of common stock to the investor, at a price of $10.00 per share, for a total purchase price of $10,000,000. In addition, on November 16, 2000, the Company subsequently issued an additional 92,952 shares of common stock pursuant to the anti-dilution calculation stated in the share purchase agreement with the investor.

3. On November 17, 2000, the Company entered into an agreement with a venture capital fund, pursuant to which the Company issued 1,000,000 shares of common stock to the investor, at a price of $8.375 per share, for a total purchase price of $8,375,000. (See also Note 12.f.2.)

4. In May 2001, the Company issued a total of 4,045,454 shares of its common stock to a group of institutional investors at a price of $2.75 per share, or a total purchase price of $11,125,000. (See also Note 12.f.2 and 12.f.3.)

5. On November 21, 2001, the Company issued a total of 1,503,759 shares of its common stock at a purchase price of $1.33 per share, or a total purchase price of $2,000,000, to a single institutional investor.

6. On December 5, 2001, the Company issued a total of 1,190,476 shares of its common stock at a purchase price of $1.68 per share, or a total purchase price of $2,000,000, to a single institutional investor.

7. On January 18, 2002, the Company issued a total of 441,176 shares of its common stock at a purchase price of $1.70 per share, or a total purchase price of $750,000, to an investor (see also Note 12.f.4).

8. On January 24, 2002, the Company issued a total of 1,600,000 shares of its common stock at a purchase price of $1.55 per share, or a total purchase price of $2,480,000, to a group of investors.

c. Issuance of common stock to service providers and employees:

1. In June 2000, 35,000 shares of common stock were issued at par consideration to a consultant for providing business development and marketing services in the United Kingdom. At the issuance date, the fair value of these shares was determined both by the value of the shares issued as reflected by fair market price at the issuance date and by the value of the services provided and amounted to $525,000 in accordance with EITF 96-18. In accordance with EITF 00-18, "Accounting Recognition for Certain Transactions Involving Equity Instruments Granted to Other Than Employees" ("EITF 00-18"), the Company recorded this compensation expenses of $405,000 during the year 2000 and $120,000 during the year 2001 and included these amounts in marketing expenses.

2. On June 17, 2001 the Company issued a consultant a total of 8,550 shares of its common stock in compensation for services rendered by such consultant for the Company for preparation of certain video point-of-purchase and sales demonstration materials. At the issuance date the fair value of these shares was determined both by the value of the shares issued as reflected by fair market price at the issuance date and by the value of the services provided and amounted to $15,488 in accordance with EITF 96-18. In accordance with EITF 00-18, the Company recorded this compensation expense as marketing expenses in the amount of $15,488.

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

3. On September 17, 2001 the Company issued to selling and marketing consultants a total of 337,571 shares of its common stock in compensation for distribution services rendered by such consultant. At the issuance date the fair value of these shares was determined both by the value of the shares issued as reflected by fair market price at the issuance date and by the value of the services provided and amounted to $524,889 in accordance with EITF 96-18 and in accordance with EITF 00-18. The Company recorded this compensation expense as marketing expenses in the amount of $524,889.

4. On February 15, 2002 and September 10, 2002, 318,468 and 50,000 shares, respectively, of common stock were issued at par consideration to a consultant for providing business development and marketing services in the United Kingdom. At the issuance date, the fair value of these shares was determined both by the value of the shares issued as reflected by fair market price at the issuance date and by the value of the services provided and amounted to $394,698 and $63,000, respectively, in accordance with EITF 96-18. In accordance with EITF 00-18, the Company recorded this compensation expense of $394,698 and $63,000, respectively, during the year 2002 and included this amount in marketing expenses.

5. On September 10, 2002, an aggregate of 13,000 shares of common stock were issued at par consideration to two of our employees as stock bonuses. At the issuance date, the fair value of these shares was determined by the fair market value of the shares issued as reflected by fair market price at the issuance date in accordance with APB No. 25. In accordance with APB No. 25, the Company recorded this compensation expense of $13,000 during the year 2002 and included this amount in general and administrative expenses.

d. Issuance of shares to lenders

As part of the securities purchase agreement on December 31, 2002 (see Note 17), the Company issued 387,301 shares at par consideration to lenders for the first nine months of interest expenses. At the issuance date, the fair value of these shares was determined both by the value of the shares issued as reflected by fair market price at the issuance date and by the value of the interest and amounted to $236,250 in accordance with APB 14.

e. Issuance of notes receivable:

1. Non-recourse notes receivable from employee-shareholders arising from the purchase of 1,500,000 of the Company's shares, matured in 1998. The notes were renewed as recourse notes, due on December 31, 2007, bearing interest at a rate of 1% over the then-current federal funds rate of 5.5% or linked to the Israeli CPI, whichever is higher. In April 1998, the terms of the recourse notes were amended such that the Company would have recourse only to certain termination compensation due to the employee-shareholders (which exceeds the amounts outstanding under the notes), or if terminated for cause, the employee-shareholders would continue to be personally liable.

Additionally, the Company agreed to purchase the Company's shares from the employee-shareholders, at prevailing market prices, up to the full amount outstanding under the notes and to grant new options at exercise prices equal to prevailing market prices, in the amount that the shares were sold by the employee-shareholders.

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

In March 2000, the employee-shareholders exercised certain stock options (see Note 12.g). The proceeds in the amount of $605,052 from the sale of the shares were allocated to the repayment of the loan referred to above. As of December 31, 2002, there was no outstanding balance on this loan.

2. In February 2000 and in May 2000, certain officers of the Company exercised options to purchase a total of 263,330 and 550,000, respectively, shares of the Company's common stock, paying the exercise price in form of ten-year non-recourse promissory notes in an aggregate amount of $658,326 and $3,040,250, respectively. The notes are secured by the shares issued upon exercise of such options, bearing non-recourse interest at a rate equal to the federal fund rate + 1%. (See Note 6)

The Company has accounted for these promissory notes as a variable stock award pursuant to the provisions of Emerging Issues Task Force issue 95-16, "Accounting for Stock Compensation Arrangements with Employer Loan Features under APB Opinion 25" ("EITF 95-16"). The Company did not record any compensation due to the decrease in the market value of the Company's shares during the years 2001 and 2000.

In February 2001, the Board of Directors of the Company, upon the recommendation of its Compensation Committee and with the agreement of the officers involved, purchased a total of 550,000 of the shares, which had already been issued, in exchange for repayment of the non-recourse notes from the officers in the amount of $3,470,431. $3,183,530 out of this amount relates to 550,000 shares from May 2000. The remaining amount of $248,262 represents repayment of other notes, including $38,639 of loans to shareholders described in Note 6. As a result of this transaction, the Company recorded treasury stock in the amount of $3,499,375. An amount of $228,674 was recorded as additional paid-in-capital as it reflected a compensation expense related to this re-purchase.

f. Warrants:

1. As part of an investment agreement in December 1999, the Company issued warrants to purchase up to an additional 950,000 and 475,000 shares of the Company's common stock to the investors at the exercise price of $1.25 and $4.50 per share, respectively. Pursuant to the terms of these warrants, a total of 251,196 shares of common stock were issued to such warrant holders in 2000 on a cashless exercise basis. As of December 31, 2000, 1,050,000 warrants had been exercised, in addition to the warrants issued on a cashless basis.

2. As part of the investment agreement in November 2000 (see Note 12.b.3), the Company issued warrants to purchase an additional 1,000,000 shares of common stock to the investor, with exercise prices of $11.31 for 333,333 of these warrants and $12.56 per share for 666,667 of these warrants. In addition, the Company issued warrants to purchase 150,000 shares of common stock, with exercise prices of $9.63 for 50,000 of these warrants and $12.56 per share for 100,000 of these warrants to an investment banker involved in this agreement. Out of these warrants issued to the investor, 666,667 warrants expire on November 17, 2005 and 333,333 warrants were to expire on August 17, 2001.

As part of the transaction in May 2001 (see Note 12 b.4), the Company repriced these warrants in the following manner:

- o Of the 1,000,000 warrants granted to the investor, the exercise price of 666,667 warrants was reduced from $12.56 to $3.50 and of 333,333 warrants was reduced from $11.31 to $2.52. In addition, the 333,333 warrants that were to expire on August 17, 2001, were immediately exercised for a total consideration of $840,000.

- o Moreover, the Company issued to this investor an additional warrant to purchase 250,000 shares of common stock at an exercise price of $3.08 per share, to expire on May 3, 2006.

- o Of the 150,000 warrants granted to the investment banker the exercise price of 100,000 warrants was reduced from $12.56 to $3.08 and of 50,000 warrants was reduced from $9.63 to $3.08. In addition, the 50,000 warrants that were to expire on August 17, 2001 were extended to November 17, 2005.

As a result of the aforesaid modifications, including the repricing of the warrants to the investors and to the investment banker and the additional grant of warrants to the investor, the Company has recorded a deemed dividend in the amount of $1,196,667, to reflect the additional benefit created for these certain investors. The fair value of the repriced warrants was calculated as a difference measured between (1) the fair value of the modified warrant determined in accordance with the provisions of SFAS No. 123, and (2) the value of the old warrant immediately before its terms are modified, determined based on the shorter of (a) its remaining expected life or (b) the expected life of the modified option. The deemed dividend increased the loss applicable to common stockholders in the calculation of basic and diluted net loss per share for the year ended December 31, 2001, without any effect on total shareholder's equity.

3. As part of the investment agreement in May 2001 (see Note 12.b.4), the Company issued to the investors a total of 2,696,971 warrants to purchase shares of common stock at a price of $3.22 per share; these warrants are exercisable by

the holder at any time after November 8, 2001 and will expire on May 8, 2006. The Company also issued to a financial consultant that provided investment banking services concurrently with this transaction a total of 125,000 warrants to purchase shares of common stock at a price of $3.22 per share; these warrants are exercisable by the holder at any time and will expire on June 12, 2006. In addition the Company paid approximately $562,000 in cash, which was recorded as deduction from additional paid in capital.

4. As part of the investment agreement in January 2002 (see Note 12.b.7), the Company, in January 2002, issued to a financial consultant that provided investment banking services concurrently with this transaction a warrants to acquire (i) 150,000 shares of common stock at an exercise price of $1.68 per share, and (ii) 119,000 shares of common stock at an exercise price of $2.25 per share; these warrants are exercisable by the holder at any time and will expire on January 4, 2007.

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

5. As part of the securities purchase agreement on December 31, 2002 (see Note 17), the Company issued to the purchasers of its 9% secured convertible debentures warrants as follows: (i) Series A Warrants to purchase an aggregate of 1,166,700 shares of common stock at any time prior to December 31, 2007 at a price of $0.84 per share; (ii) Series B Warrants to purchase an aggregate of 1,166,700 shares of common stock at any time prior to December 31, 2007 at a price of $0.89 per share; and (iii) Series C Warrants to purchase an aggregate of 1,166,700 shares of common stock at any time prior to December 31, 2007 at a price of $0.93 per share.

In connection with these warrants, the Company will record financial expenses of $1,096,698, which will be amortized ratably over the life of the convertible debentures (3 years). This transaction was accounted according to APB No. 14 "Accounting for Convertible debt and Debt Issued with Stock Purchase Warrants and EITF 00-27 "Application of Issue No. 98-5 to Certain Convertible Instruments". The fair value of these warrants was determined using Black-Scholes pricing model, assuming a risk-free interest rate of 3.5%, a volatility factor 64%, dividend yields of 0% and an contractual life of 5 years.

g. Stock option plans:

1. Options to employees and others (except consultants)

a. The Company has adopted the following stock option plans, whereby options may be granted for purchase of shares of the Company's common stock. Under the terms of the employee plans, the Board of Directors or the designated committee grants options and determines the vesting period and the exercise terms.

1) 1991 Employee Option Plan - 2,115,600 shares reserved for issuance, of which 33,692 are available for future grants to employees as of December 31, 2002.

2) 1993 Employee Option Plan - as amended, 4,200,000 shares reserved for issuance, of which 1,904,781are available for future grants to employees as of December 31, 2002.

3) 1998 Employee Option Plan - as amended, 4,750,000 shares reserved for issuance, of which 2,070,460 are available for future grants to employees and consultants as of December 31, 2001.

4) 1995 Non-Employee Director Plan - 1,000,000 shares reserved for issuance, of which 640,000 are available for future grants to directors as of December 31, 2002.

b. Under these plans, options generally expire no later than 10 years from the date of grant. Each option can be exercised to purchase one share, conferring the same rights as the other common shares. Options that are cancelled or forfeited before expiration become available for future grants. The options generally vest over a three-year period (33.3% per annum).

IN U.S. DOLLARS

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

c. A summary of the status of the Company's plans and other share options (except for options granted to consultants) granted as of December 31, 2002, 2001 and 2000, and changes during the years ended on those dates, is presented below:

	2002		2001		2000	
	Amount	Weighted average exercise price $	Amount	Weighted average exercise price $	Amount	Weighted average exercise price $
Options outstanding at beginning of year	4,240,228	$2.74	2,624,225	$3.82	2,820,679	$3.44
Changes during year:						
Granted (1) (3)	1,634,567	$0.87	2,172,314	$1.55	1,598,233	$4.58
Exercised (4) (2)	(191,542)	$1.29	(159,965)	$1.31	(1,715,628)	$3.84
Forfeited or cancelled	(422,887)	$1.92	(396,346)	$4.11	(79,059)	$4.93
Repriced (2):						
Old exercise price	--	--	--	--	(310,000)	$4.95
New exercise price	--	--	--	--	310,000	$4.95
Options outstanding at end of year	5,260,366	$2.26	4,240,228	$2.74	2,624,225	$3.82
Options exercisable at end of year	4,675,443	$2.26	2,643,987	$2.75	1,078,332	$3.81

(1) Includes 481,435, 1,189,749 and 870,000 options granted to related parties in 2002, 2001 and 2000, respectively.

(2) On May 25, 2000, the Company repriced downwards 150,000 options from $6.60 per share to $4.95. The Company also repriced upward 160,000 options held by the same options holder from $3.375 per share to $4.95. The options holder immediately exercised those options. In accordance with FIN 44 the downward repricing resulted in a variable plan accounting, however, due to the immediate exercise the Company recorded a compensation expense in the amount of $26,250 at that date only.

(3) The Company recorded deferred stock compensation for options issued with an exercise price below the fair value of the common stock in the amount of $0, $18,000 and $37,924 as of December 31, 2002, 2001 and 2000, respectively. Deferred stock compensation is amortized and recorded as compensation expenses ratably over the vesting period of the option. The stock compensation expense that has been charged in the consolidated statements of operations in respect of options to employees in 2002, 2001 and 2000, was $6,000, $17,240 and $20,684, respectively.

(4) In September 2002 and December 2001, the employees exercised 100,000 and 33,314, respectively, options for which the exercise price was not paid at the exercise date. The Company recorded the owed amount of $73,000 and $43,308, respectively, as "Note receivable from shareholders" in the statement of shareholders' equity. In accordance with EITF 95-16, since the original option grant did not permit the exercise of the options through loans, and due to the immediate Company's history of granting non-recourse loans, this postponement in payments of the exercise price resulted in a variable plan accounting. However, the Company did not record any compensation due to the decrease in the market value of the Company's shares during 2001 and 2002. During the year 2002 the notes in the amount of $43,308 were entirely repaid and note at the amount of $36,500 was forgiven and appropriate compensation was recorded.

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

d. The options outstanding as of December 31, 2002 have been separated into ranges of exercise price, as follows:

<TABLE>
<CAPTION>

	Total options outstanding			Exercisable options outstanding	
Range of exercise prices	Amount Amount outstanding at December 31, 2002	Weighted average remaining contractual life	Weighted average exercise price	Amount exercisable at December 31, 2002	Weighted average exercise price
$		Years	$		$
<S>	<C>	<C>	<C>	<C>	<C>
0.30-2.00	3,422,797	6.91	1.15	3,011,530	1.12
3.00-4.00	421,069	3.84	3.00	419,669	3.00
4.00-6.00	1,356,500	7.45	4.60	1,189,244	4.64
6.00-8.00	50,000	2.43	7.49	45,000	7.56
8.00	10,000	4.75	9.06	10,000	9.06
	5,260,366	6.75	2.26	4,675,443	2.26

</TABLE>

Weighted-average fair values and exercise prices of options on dates of grant are as follows:

<TABLE>
<CAPTION>

	Equals market price			Exceeds market price			Less than market price		
	Year ended December 31,			Year ended December 31,			Year ended December 31,		
	2002	2001	2000	2002	2001	2000	2002	2001	2000
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
Weighted average exercise prices	$ 1.265	$ 1.579	$ 4.580	$ --	$ 1.466	$ 7.125	$ 0.755	$ 1.300	$ 5.270
Weighted average fair			0					0	0
value on grant date	$ 0.560	$ 0.50	$ 4.12	$ --	$ 0.560	$ 3.760	$ 0.250	$ 0.79	$ 6.60

</TABLE>

2. Options issued to consultants:

a. The Company's outstanding options to consultants as of December 31, 2002, are as follows:

<TABLE>
<CAPTION>

	2002		2001		2000	
	Amount	Weighted average exercise price	Amount	Weighted average exercise price	Amount	Weighted average exercise price
		$		$		$
<S>	<C>	<C>	<C>	<C>	<C>	<C>
Options outstanding at beginning of year	245,786	$5.55	175,786	$6.57	141,814	$3.09
Changes during year:						
Granted (1)	--	--	130,000	$6.02	198,500	$5.86
Exercised	--	--	(60,000)	$5.13	(164,528)	$2.72
Repriced (2):						
Old exercise price	--	--	(56,821)	$9.44	--	--
New exercise price	--	--	56,821	$4.78	--	--

Options outstanding at end of year	245,786	$5.55	245,786	$5.55	175,786	$6.56
Options exercisable at end of year	125,786	$6.42	125,786	$6.42	149,044	$6.80

</TABLE>

NOTE 12: - SHAREHOLDERS' EQUITY (Cont.)

(1) 120,000 options out of 130,000 options granted in 2001 to the Company's selling and marketing consultants are subject to the achievement of the targets specified in the agreements with these consultants. The measurement date for these options has not yet occurred, as these targets have not been met, in accordance with EITF 96-18. When the targets is achieved the Company will record appropriate compensation upon the fair value at the same date at which the targets is achieved.

(2) During the year 2001 the Company repriced 56,821 options to its service providers. The fair value of repriced warrants was calculated as a difference measured between (1) the fair value of the modified warrants determined in accordance with the provisions of SFAS 123, and (2) the value of the old warrant immediately before its terms were modified, determined based on the shorter of (a) its remaining expected life or (b) the expected life of the modified option. As a result of the repricing, the Company has recorded an additional compensation at the amount of $21,704, and included this amount in marketing expenses.

b. The Company accounted for its options to consultants under the fair value method of SFAS No. 123 and EITF 96-18. The fair value for these options was estimated using a Black-Scholes option-pricing model with the following weighted-average assumptions:

	2002	2001	2000
Dividend yield	--	0%	0%
Expected volatility	--	82%	95%
Risk-free interest	--	3.5-4.5%	6.5%
Contractual life of up to	--	10 years	5 years

c. In connection with the grant of stock options to consultants, the Company recorded stock compensation expenses totaling $0, $139,291 and $796,128 for the years ended December 31, 2002, 2001 and 2000, respectively, and included these amounts in marketing expenses.

3. Dividends:

In the event that cash dividends are declared in the future, such dividends will be paid in U.S. dollars. The Company does not intend to pay cash dividends in the foreseeable future.

4. Treasury Stock:

Treasury stock is the Company's common stock that has been issued and subsequently reacquired. The acquisition of common stock is accounted for under the cost method, and presented as reduction of stockholders' equity.

NOTE 13: - INCOME TAXES

a. Taxation of U.S. parent company (EFC):

As of December 31, 2002, EFC has operating loss carryforwards for U.S. federal income tax purposes of approximately $15 million, which are available to offset future taxable income, if any, expiring in 2010-2015. Utilization of U.S net operating losses may be subject to substantial annual limitations due to the "change in ownership" provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitation may result in the expiration of net operating loses before utilization.

b. Israeli subsidiary (EFL):

1. Tax benefits under the Law for the Encouragement of Capital Investments, 1959 (the "Investments Law"):

EFL's manufacturing facility has been granted "Approved Enterprise" status under the Investments Law, and is entitled to investment grants from the State of Israel of 38% on property and equipment located in Jerusalem, and 10% on property and equipment located in its plant in Beit Shemesh, and to reduced tax rates on income arising from the "Approved Enterprise," as detailed below.

The approved investment program is in the amount of approximately $500,000. EFL effectively operated the program during 1993, and is entitled to the tax benefits available under the Investments Law. EFL is entitled to additional tax benefits as a "foreign investment company," as defined by the Investments Law. In 1995, EFL received approval for a second "Approved Enterprise" program for investment in property and equipment, in the amount of approximately $6,000,000, and approval for grants at the abovementioned rates, for these approved property and equipment.

The entitlement to the above benefits is conditional upon the Company's fulfilling the conditions stipulated by the Investments Law, regulations published thereunder and the instruments of approval for the specific investments in "approved enterprises." In the event of failure to comply with these conditions, the benefits may be canceled and the Company may be required to refund the amount of the benefits, in whole or in part, including interest. As of December 31, 2002, according to the Company's management, the Company has fulfilled all conditions.

The main tax benefits available to EFL are:

a) Reduced tax rates:

During the period of benefits (seven to ten years), commencing in the first year in which EFL earns taxable income from the "Approved Enterprise," a reduced corporate tax rate of between 10% and 25% (depending on the percentage of foreign ownership, based on present ownership percentages of 15%) will apply, instead of the regular tax rates.

NOTE 13: - INCOME TAXES (Cont.)

The period of tax benefits, detailed above, is subject to limits of 12 years from the commencement of production, or 14 years from the approval date, whichever is earlier. Hence, the first program will expire in the year 2004 and the second in the year 2008. The commencement of production according to the third program has not been determined yet by the investment center and so there is no ability to determine the period of the tax benefits according to this program. The benefits have not yet been utilized since the Company has no taxable income, since its incorporation.

b) Accelerated depreciation:

EFL is entitled to claim accelerated depreciation in respect of machinery and equipment used by the "Approved Enterprise" for the first five years of operation of these assets.

2. Measurement of results for tax purposes under the Income Tax Law (Inflationary Adjustments), 1985

Results for tax purposes are measured in real terms of earnings in NIS after certain adjustments for increases in the Consumer Price Index. As explained in Note 2b, the financial statements are presented in U.S. dollars. The difference between the annual change in the Israeli consumer price index and in the NIS/dollar exchange rate causes a difference between taxable income and the income before taxes shown in the financial statements. In accordance with paragraph 9(f) of SFAS No. 109, EFL has not provided deferred income taxes on this difference between the reporting currency and the tax bases of assets and liabilities.

IN U.S. DOLLARS

3. Tax benefits under the Law for the Encouragement of Industry (Taxation), 1969:

EFL is an "industrial company," as defined by this law and, as such, is entitled to certain tax benefits, mainly accelerated depreciation, as prescribed by regulations published under the inflationary adjustments law, the right to claim public issuance expenses and amortization of know-how, patents and certain other intangible property rights as deductions for tax purposes.

4. Tax rates applicable to income from other sources:

Income from sources other than the "Approved Enterprise," is taxed at the regular rate of 36%.

5. Tax rates applicable to income distributed as dividends by EFL:

The effective taxes on income distributed by EFL to its parent company, EFC, would increase as a result of the Israeli withholding tax imposed upon such dividend distributions. The overall effective tax rate on such distribution would be 28%, in respect of income arising from EFL's "Approved Enterprise," and 44% in respect of other income. EFL does not have any earnings available for distribution as dividend, nor does it intend to distribute any dividends in the foreseeable future.

6. Tax loss carryforwards:

As of December 31, 2002, EFL has operating loss carryforwards for Israeli tax purposes of approximately $93 million, which are available, indefinitely, to offset future taxable income.

NOTE 13: - INCOME TAXES (Cont.)

c. European subsidiaries:

Income of the European subsidiaries, which is derived from intercompany transactions, is based on the tax laws in their countries of domicile.

d. Deferred income taxes:

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and amounts used for income tax purposes. Significant components of the Company's deferred tax assets resulting from tax loss carryforward are as follows:

<TABLE>
<CAPTION>

	December 31, 2002	December 31, 2001
	U.S. dollars	U.S. dollars
<S>	<C>	<C>
Operating loss carryforward	$ 29,257,118	$ 12,162,581
Reserve and allowance	303,204	477,522
Net deferred tax asset before valuation allowance	29,560,322	12,640,103
Valuation allowance	(29,560,322)	(12,640,103)
	$ --	$ --

</TABLE>

The Company and its subsidiaries provided valuation allowances in respect of deferred tax assets resulting from tax loss carryforwards and other temporary differences. Management currently believes that it is more likely than not that the deferred tax regarding the loss carryforwards and other temporary differences will not be realized. The change in the valuation allowance as of December 31, 2002 was $16,920,219.

e. Loss before taxes on income:

IN U.S. DOLLARS

<TABLE>
<CAPTION>

	Year ended December 31		
	2002	2001	2000
	U.S. dollars		
<S>	<C>	<C>	<C>
Domestic	$ (5,250,633)	$ (5,828,828)	$ (2,021,661)
Foreign	(13,254,195)	(11,457,960)	(9,959,297)
	$(18,504,358)	$(17,286,788)	$(11,980,958)

</TABLE>

NOTE 14: - SELECTED STATEMENTS OF OPERATIONS DATA

a. Research and development expenses, net:

	Year ended December 31		
	2002	2001	2000
	U.S. dollars		
Research and development costs	$ 685,919	$ 455,845	$1,065,065
Less royalty-bearing grants	--	--	195,170
	$ 685,919	$ 455,845	$ 869,895

b. Financial income, net:

<TABLE>
<CAPTION>

	Year ended December 31,		
	2002	2001	2000
	U.S. dollars		
Financial expenses:			
<S>	<C>	<C>	<C>
Interest, bank charges and fees	$ (89,271)	$ (49,246)	$ (67,480)
Foreign currency translation differences	15,202	(16,003)	(219,043)
	(74,069)	(65,249)	(286,523)
Financial income:			
Interest	174,520	327,830	830,704
Total	$ 100,451	$ 262,581	$ 544,181

</TABLE>

NOTE 15: - RELATED PARTY DISCLOSURES

<TABLE>
<CAPTION>

	Year ended December 31,		
	2002	2001	2000
	U.S. dollars		

Transactions:			
Reimbursement of general and administrative expenses	$ 36,000	$ 23,850	$ 28,880
Financial income (expenses), net from notes receivable and loan holders (see Notes 6 and 12.e.2)	$ (7,309)	$(36,940)	$230,924

</TABLE>

NOTE 16: - SEGMENT INFORMATION

a. General:

The Company and its subsidiaries operate primarily in two business segments (see Note 1a for a brief description of the Company's business) and follow the requirements of SFAS No. 131.

The Company previously managed its business in three reportable segments organized on the basis of differences in its related products and services. With the discontinuance of Consumer Batteries segment (see Note 1.e-Discontinued Operation) and acquiring two subsidiaries (see Notes 1.b.and c.), two reportable segments remain: Electric Fuel Batteries, and Defense and Security Products. As a result the Company reclassified information previously reported in order to comply with new segment reporting.

The Company's reportable operating segments have been determined in accordance with the Company's internal management structure, which is organized based on operating activities. The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies. The Company evaluates performance based upon two primary factors, one is the segment's operating income and the other is based on the segment's contribution to the Company's future strategic growth.

b. The following is information about reported segment gains, losses and assets:

<TABLE>
<CAPTION>

	Electric Fuel Batteries	Defense and Security Products	All Other	Total
2002				
Revenues from outside customers	1,682,296	$ 4,724,444	$ --	$ 6,406,739
Depreciation expense and amortization	(252,514)	(676,754)	(194,013)	(1,123,281)
Direct expenses (1)	(3,062,548)	(4,353,770)	(2,905,743)	(10,322,061)
Segment gross loss	$ (1,632,766)	$ (306,080)	$ (3,099,756)	(5,038,602)
Financial income				100,451
Net loss from continuing operation				$ 4,938,151
Segment assets (2)	$ 2,007,291	$ 1,683,825	$ 575,612	$ 4,266,728
Expenditures for segment assets	$ 246,664	$ 58,954	$ 70,486	$ 376,104

IN U.S. DOLLARS

2001				
Revenues from outside customers	$ 2,093,632	$ --	$ --	$ 2,093,632
Depreciation expense	(304,438)	--	(225,575)	(530,013)
Direct expenses (1)	(2,295,501)	--	(3,556,486)	(5,851,987)
Segment gross loss	$ (506,307)	$ --	$ (3,782,061)	(4,288,368)
Financial income net				262,581
Net loss from continuing operations				$ (4,025,787)
Segment assets (2)	$ 2,041,257	$ --	$ 702,915	$ 2,744,172
Expenditures for segment assets	$ 229,099	$ --	$ 323,985	$ 553,084

</TABLE>

NOTE 16: - SEGMENT INFORMATION (Cont.)

<TABLE>
<CAPTION>

	Electric Fuel Batteries	Defense and Security Products	All Other	Total
2000				
<S>	<C>	<C>	<C>	<C>
Revenues from outside customers	$ 1,478,495	$ --	$ 11,446	$ 1,489,941
Depreciation expense	(310,408)	--	(203,834)	(514,242)
Direct expenses (1)	(1,754,003)	--	(3,150,558)	(4,904,561)
Segment gross loss	$ (585,916)	$ --	$(3,342,946)	(3,928,862)
Financial income net				544,181
Net loss from continuing operations				$(3,384,681)
Segment assets (2)	$ 2,020,771	$ --	$ 662,575	$ 2,683,346
Expenditures for segment assets	$ 284,939	$ --	$ 310,988	$ 595,927

</TABLE>

(1) Including sales and marketing, general and administrative expenses.

(2) Including property and equipment and inventory.

c. Summary information about geographic areas:

The following presents total revenues according to end customers location for the years ended December 31, 2002, 2001 and 2000, and long-lived assets as of December 31, 2002, 2001 and 2000:

<TABLE>
<CAPTION>

IN U.S. DOLLARS

	2002		2001		2000	
	Total revenues	Long-lived assets	Total revenues	Long-lived assets	Total revenues	Long-lived assets
	U.S. dollars					
<S>	<C>	<C>	<C>	<C>	<C>	<C>
U.S.A.	$ 2,787,250	$ 6,710,367	$ 1,057,939	$ 60,531	$ 813,658	$ 26,412
Germany	38,160	-	526,766	-	44,117	-
England	47,696	-	36,648	-	30,885	-
Thailand	291,200	-	-	-	-	-
Israel	2,799,365	3,367,320	13,773	2,160,275	19,279	2,262,465
Other	443,068	-	458,506	-	582,003	-
	$ 6,406,739	$ 10,077,687	$ 2,093,632	$ 2,220,806	$ 1,489,942	$ 2,288,877

</TABLE>

* Reclassified

d. Revenues from major customers:

<TABLE>
<CAPTION>

	Year ended December 31,		
	2002	2001 %	2000
Electric Fuel Batteries:			
<S>	<C>	<C>	<C>
Customer A	-	22%	-
Customer B	7%	20%	17%
Customer C	2%	13%	20%
Customer D	8%	12%	-
Deference and security: Products	43%	-	-

</TABLE>

NOTE 16: - SEGMENT INFORMATION (Cont.)

e. Revenues from major products:

	Year ended December 31,		
	2002	2001	2000
EV	460,562	894,045	310,441
WAB	647,896	951,598	1,168,055
Security and defense	573,839	247,989	--
Car armoring	2,744,382	--	--
Interactive use-of-force training	1,980,060	--	--
Other	--	--	11,446
Total	6,406,749	2,093,632	1,489,942

NOTE 17: - CONVERTIBLE DEBENTURES

Pursuant to the terms of a Securities Purchase Agreement dated December 31, 2002, the Company issued and sold to a group of institutional investors an aggregate principal amount of 9% secured convertible debentures in the amount of $3.5 million due June 30, 2005. These debentures are convertible at any time prior to June 30, 2005 at a conversion price of $0.75 per share, or a maximum aggregate of 4,666,667 shares of common stock (see also Note 12.f.5).

In connection with these convertible debentures, the Company will record financial expenses of $585,365, which will be amortized ratably over the life period of the convertible debentures. This transaction was accounted according to EITF 00-27.

IN U.S. DOLLARS

NOTE 18: - PROFIT DISTRIBUTION

On September 30, 2002, MDT distributed in cash to its shareholders profit in the amount of NIS 4,000,000 (approximately $841,288), out of which $412,231 was paid to the minority interest.

\- - - - - - - -

SUPPLEMENTARY FINANCIAL DATA

Quarterly Financial Data (unaudited) for the two years ended December 31, 2002

<TABLE>
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	Quarter Ended			
2002	March 31	June 30	September 30	December 31
Net revenue	$ 570,545	$ 425,053	$ 3,262,711	$ 2,148,430
Gross profit	$ 186,917	$ 48,807	$ 1,593,770	$ 155,497
Net loss from continuing operations	$ (990,097)	$ (1,005,877)	$ (923,122)	$ (2,019,054)
Net loss from discontinued operations	$ (2,324,109)	$ (1,654,108)	$ (8,716,422)	$ (871,567)
Net loss for the period	$ (3,314,208)	$ (2,659,985)	$ (9,369,544)	$ (2,890,621)
Net loss per share - basic and diluted	$ (0.11)	$ (0.09)	$ (0.29)	$ (0.08)
Shares used in per share calculation	30,149,210	30,963,919	33,441,137	34,758,048
2001				
Net revenue	$ 503,619	$ 400,879	$ 632,344	$ 556,790
Gross profit (loss)	$ 121,633	$ (3,117)	$ 43,326	$ (60,896)
Net loss from continuing operations	$ (531,866)	$ (1,107,576)	$ (771,238)	$ (1,615,109)
Net loss from discontinued operations	$ (2,893,088)	$ (3,483,264)	$ (3,639,318)	$ (3,245,329)
Net loss for the period	$ (3,424,954)	$ (4,590,840)	$ (4,410,556)	$ (4,860,438)
Deemed dividend to certain shareholders of common stock	$ -	$ (1,196,667)	$ -	$ -
Net loss attributable to shareholders of common stock	$ (3,424,954)	$ (5,787,507)	$ (4,410,556)	$ (4,860,438)
Net loss per share - basic and diluted	$ (0.16)	$ (0.25)	$ (0.19)	$ (0.18)
Shares used in per share calculation	21,802,499	23,562,099	23,612,097	26,648,319

</TABLE>

Exhibit 10.68

SETTLEMENT AGREEMENT AND RELEASE

AGREEMENT ("Agreement") entered into this 31 day of December, 2002, by and between ELECTRIC FUEL CORPORATION, a Delaware corporation ("EFC") and ELECTRIC FUEL (E.F.L.) LTD., an Israeli corporation ("EFL" and, together with EFC, the "Company"), and YEHUDA HARATS, an individual residing at 45 HaShayarot Street, Jerusalem 92544, Israel (the "Employee").

W I T N E S S E T H :

WHEREAS, the Company and Employee are parties to an amended and restated employment agreement dated as of January 1, 2000 (the "Employment Agreement"); and

WHEREAS, the Company and the Employee, through their respective representatives, have held certain discussions concerning the facts and circumstances surrounding the termination of the Employee's employment with the Company; and

WHEREAS, both parties realize the uncertainty of litigation and the time-consuming and costly nature thereof; and

WHEREAS, the Company and the Employee desire to settle and resolve fully and finally any and all claims, potential claims, controversies or differences between them; and as more specifically set forth below and solely under the terms and conditions of this Settlement Agreement and Release; and

WHEREAS, the Company and the Employee desire to dismiss all the claims connected to or derived from Motion No. 2977/02 filed by the Employee in the labor court of Jerusalem and from the lawsuit filed by the Company against the Employee at the New-York State Supreme Court;

NOW, THEREFORE, in consideration of the premises and the mutual agreements hereinafter contained, the parties hereby agree as follows:

1. Employment Termination.

(a) The Company and Employee agree that the employment of the Employee shall be deemed to have ceased as of December 31, 2002.

(b) Subject to fulfillment of all the terms of this Agreement, the Employee represents and warrants that he has received full salary and any other compensation or benefit to which he is entitled from the Company.

(c) For the avoidance of doubt, it is agreed that the Employee will not be entitled to any other compensation or benefit for his employment with the Company.

(d) Until January 15, 2003, the Employee will return to the Company (and will not keep in his possession, recreate or deliver to anyone else) any and all devices, Company property including without limitations, , palm pilot, cellular telephone sets, records, data, notes, correspondence developed or received by the Employee pursuant to Employee's employment with the Company or otherwise belonging to the Company.

2. Payments.

(a) In place of whatever amounts to which the Employee may be entitled by law or by contract, and as full settlement of all mutual claims of the parties, the Employee agrees to accept a payment of US $640,000 (which payments and benefits are in substitution for those required by any and all applicable laws of any and all jurisdictions and/or the terms of the Employment Agreement).

(b) US $178,579 of the amount of US $640,000 above is a return of a loan given by the Employee to the Company.

(c) US $50,000 of the amount of US $640,000 above is statutory severance payment. under the Israeli Severance Pay Law-1963 for the Employee's employment during a period of over 22 years (since July 15th, 1980).

(d) US $411,421 of the amount of US $640,000 above is special severance payment..

(e) Subject to fulfillment of all the terms of this Agreement, the above payment of US $640,000 shall be paid according to the following schedule:

(i) Beginning in January 2nd 2003 and continuing through and including

December 2005, the Company will pay the Employee, by direct deposit to the Employee's bank account at Bank Igud, Main Branch Jerusalem 013 Account No. 013433/65 (or as will be instructed by the employee from time to time, in writing), on a monthly basis, a total of 36 monthly payments of US $7,777.77.

(ii) Prior to January 15, 2003, the Company shall transfer to the Employee the amount of US $35,000, by direct deposit to the Employee's bank account provided above (or as will be instructed by the employee from time to time, in writing).

(iii) The Company shall pay the Employee, by direct deposit to the Employee's bank account provided above (or as will be instructed by the employee from time to time, in writing), an aggregate amount of $325,000 in ten equal installments of US $32,500. One such installment shall be due and payable by the last day of each of the months of September and December 2003, March, June, September and December 2004, and March, June, September and December 2005. The Employee shall be entitled to inform the Company by December 31, 2002, that he elects, at his sole discretion, to receive on or prior to December 31, 2002, the above amount of US $325,000 or any part thereof by check paid in the United States that will be immediately endorsed by the Employee over to the order of EFC as a loan ("Loan"). The Loan shall be evidenced by a promissory note and shall be payable by the Company to the Employee according to the ten equal installments provided above. The Loan shall bear no interest.

(iv) Of the above specified amounts, the first US $ 50,000 paid to the Employee will be considered as statutory severance payment under the Israeli Severance Pay Law-1963 for the Employee's employment referred to in sub section 2 (c). The next US $ 178,579 will be considered as a return of the above loan given by the Employee to the Company referred to in Sub Section 2(b).

(e) The Employee shall provide the Company with a receipt for each of the payments provided on Sub-Section (d) above.

(f) The Employee acknowledges that he is responsible for, and he does hereby indemnify the Company and its shareholders, directors, officers and employees from and against, the payment of any and all federal and state, including without limitations in Israel, income and like taxes, social security payments or any other withholding which may be or become payable with respect to any and all payment or any other consideration provided in this Agreement. With respect to any of the payments provided above, the Company shall deduct all statutory withholdings under any applicable law, including without limitations income tax and social security payments. If the company will deduct any sum of the above payments it will submit to the Employee all documentation concerning such deduction.

(g) In addition to the foregoing, the Company will also release the Employee's manager's insurance fund and study fund. The Company will take all steps reasonably necessary to release the above funds to the Employee, including but not limited to the prompt execution of any necessary paperwork. The Company declares that it does not have any rights whatsoever in the above funds and will not have any demands in regard with those funds.

3. Tax Refund.

The Employee presently has a petition for a tax refund relating to the execution of 131,655 options in February 9th, 2000 (the "Petition") pending before the Israeli tax authorities (the "Israeli IRS"). With respect to such Petition, the parties agree as follows:

(i) The Employee shall notify the Company within three business days of receipt of any communication from the Israeli IRS with respect to the Petition, including a copy of such communication, if in writing (including e-mail), or a written summary of such communication, if not in writing.

(ii) In the event that the Employee shall actually receive any tax refund, of any size, in connection with the Petition (an "Actual Refund"), he shall immediately notify the Company both orally and in writing of the amount of such Actual Refund., the parties agree that an amount of money equal to 10% of the amount of an Actual Refund (the "Refund Credit") shall be credited against the remaining amount that the Company shall owe the Employee at such time under Section 2(d)(iii) above. In the event that the Refund Credit shall be in excess of such remaining amount, the Employee shall immediately pay the Company any and all such excess Refund Credit.

(iii) In the event that the Employee shall receive any communication from the Israel IRS indicating that his petition for a tax refund has been granted, in whole or in part, but shall not yet have received an Actual Refund by the time any of the last two payments under Section 2(d)(iii) above shall have become due, the Company shall make such payments (up to the maximum amount of the Refund Credit) into an escrow account maintained by the law firm of Dr. J. Segev & Co. (the "Escrow") pending a final determination of the status of the Actual Refund.

To the extent that, prior to or contemporaneously with the Company having received notice of an Actual Refund, the Company shall have paid amounts into Escrow, an amount of money equal to the amount paid into Escrow or the amount of the Refund Credit, whichever is the lesser, shall be released from the Escrow and returned to the Company. Should the Israeli IRS reverse its determination and irrevocably decide that it will not give the Employee a refund, then these sums shall be released to the Employee.

(iv) The Company shall use its commercially reasonable best efforts to assist the Employee with obtaining a refund under the Petition (including but not limited to the prompt execution of any necessary paperwork), provided that such assistance is approved in advance by the Company's accountants.

4. Car.

The Employee shall be entitled to continue and hold the Company's car (VOLVO S-80, registration plate # 74-526-35) currently in his possession ("Car") as security for the Company payments under this agreement. The Employee shall return the Car to the Company by December 31, 2005. It is hereby agreed that the Employee may use the Car and he shall bear any and all expenses and taxes related to the Car. The Employee shall maintain the Car in good condition consistent with past practice and shall maintain an insurance policy on the Car at all times. To avoid doubt, holding the Car as security will not constitute any employment status or other relationship between the parties.

5. Standstill; Options.

(a) The Employee agrees that from the date hereof until September 30, 2003, neither he nor any member of his family shall, directly or indirectly, (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any of the shares of common stock or other securities of EFC ("Shares") nor (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of the Shares, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Shares, in cash or otherwise.

(b) In consideration for this standstill agreement, the Company shall extend the term of the Employee's existing vested stock options to expire on September 30, 2005. Options granted to the employee in lieu of salary shall continue to have a ten-year limitation on their term.

(c) The parties acknowledge that any and all of Employee's stock options that shall not have vested by December 31, 2002, shall expire on that date.

(d) Any violation of the provisions of Section 5(a) above shall automatically result in the immediate cancellation of all of the Employee's vested and outstanding options.

(e) The parties agree that the all the outstanding options and shares for which no share certificate has been issued in the name of the Employee on the date hereof are listed on EXHIBIT A attached hereto.

(f) Prior to September 30, 2003, the Company will. comply with the terms of Section 16 of the Employment Agreement, provided that the Employee shall fulfill in a timely fashion all of his obligations under the terms of Section 16 of the Employment Agreement

6. Release of Claims.

(a) The Employee, subject to the release provided on Sub Section (b) below, for himself, his heirs, executors, administrators, successors and assigns, hereby fully and unconditionally waives, releases, and forever discharges, the Company, its subsidiary companies, related and affiliated companies, predecessors, successors, assigns and its present and former directors, officers, agents and employees, from any and all suits, causes of action, and claims of any nature whatsoever, known or unknown, which the Employee may have against the Company and the other parties released hereby, which he and his heirs, executors, administrators, successors and assigns ever had, now have or hereafter can, shall or may have, for, upon, or by reason of any matter, cause or thing whatsoever from the beginning of the world to the day of the date of this release, including without limitation any and all claims in any way resulting from, arising out of or connected with his employment or its termination or pursuant to any Israeli common law, statute, regulation or other requirement, including without limitation (i) the Severance Payment Law of 1963, Annual Vacation Law of 1951, Protection of Wages Law of 1958, Sick Payment Law of 1976, Prior Notice for Dismisal and Resignation Law of 2001, recreation payment (Dmei Havra'a payment) and any and all claims under any collective bargaining agreement or extension thereof; (ii) any other compensation or consideration as a result of employment relations or end of employment relations including without limitation, Bituach Menahalim, Keren Hishtalmut, pension compensation, and/or any compensation and consideration resulting from such relations, or arising out of or connected with his position as a director of the Company and/or as a principal in the Company and/or connected with any act or vote of the Company's board of directors, whether by virtue of his position as a director, officer, employee or shareholder, all pursuant to any Israeli common law, statute, order, regulation or other requirement (including without limitation the Companies Ordinance [New Version] of 1983, the Companies Law of 1999, the Securities Law of 1968, the Torts Ordinance [New Version], each as amended from time to time, infliction of any tort, or breach of contract, whether actual or implied, or whether oral or written) including without limitation any United States federal, state or local common law, statute, regulation or other requirement (including without limitation the General Corporation Law of the State of Delaware, the United States Securities Act of 1933, and the United States Securities Exchange Act of 1934, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, the Americans with Disabilities Act, the fair employment practices laws of the state or states in which the Employee have been employed by the Company, each as amended from time to time, infliction of any tort, or breach of contract, whether actual or implied, or whether oral or written).

(b) The Company, subject to the release provided on Sub Section (a) below, for itself, its subsidiary companies, related and affiliated companies, predecessors, successors, assigns and its present and former directors, officers, agents and employees, hereby fully and unconditionally waives, releases, and forever discharges, the Employee, his heirs, executors, administrators, successors and assigns, from any and all suits, causes of action, and claims of any nature whatsoever, known or unknown, which the Company may have against the Employee and the other parties released hereby, which it and its subsidiary companies, related and affiliated companies, predecessors, successors, assigns and its present and former directors, officers, agents and employees, ever had, now have or hereafter can, shall or may have, for, upon, or by reason of any matter, cause or thing whatsoever from the beginning of the world to the day of the date of this release, including without limitation any and all claims in any way resulting from, arising out of or connected with his employment or its termination or arising out of or connected with his position as a director of the Company and/or as a principal in the Company and/or connected with any act or vote of the Employee in the board of directors, and/or connected with any act of the Employee as a shareholder, all pursuant to any Israeli common law, statute, order, regulation or other requirement (including without limitation the Companies Ordinance [New Version] of 1983, the Companies Law of 1999, the Securities Law of 1968, the Torts Ordinance [New Version], each as amended from time to time, infliction of any tort, or breach of contract, whether actual or implied, or whether oral or written) including without limitation any United States federal, state or local common law, statute, regulation or other requirement (including without limitation all Securities acts, laws and regulations, the General Corporation Law of the State of Delaware, the United States Securities Act of 1933, and the United States Securities Exchange Act of 1934, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, the Americans with Disabilities Act, the fair employment practices laws of the states in which the Employee have been employed by the Company, each as amended from time to time, infliction of any tort, or breach of contract, whether actual or implied, or whether oral or written).

(c) The Employee has carefully read this Agreement, knows its contents, and freely and voluntarily agrees to all of its terms and conditions. The Employee acknowledges that he has had reasonable time to consider and discuss this Agreement with his attorney. By signing this Agreement, the Employee specifically acknowledges that he has read it; he understands it and knows he is giving up important rights; he agrees with everything in it; he is aware of his right to consult an attorney of his own choice before signing it; and he has signed it knowingly and voluntarily.

(d) This Agreement also constitutes a compromise agreement and notice of final clearance in according with Article 29 of the Severance Payment Law of 1963.

(e) Subject to the registration of the lien according to section 10 below, the parties shall submit to the labor court of Jerusalem a petition in the form attached hereto as EXHIBIT B1, to strike out Motion No. 2977/02 filed by the Employee.

(f) Immediately upon execution of this Agreement, the parties shall submit to the labor court of Jerusalem the executed petition attached hereto as EXHIBIT B2, requesting the release of the Company's holdings in M.D.T. Protective Industries Ltd. from any limitation or ant other obligation undertaken in connection with Motion No. 2977/02 filed by the Employee.

(g) The Company will withdraw the lawsuit filed by it in the New York State Supreme Court, County of New York, and/or any other lawsuit and/or petition filed by it against the Employee, within 5 working days and will submit to the Employee a copy of such petition to dismiss the lawsuit immediately upon its submission.

7. Surviving Terms of Employment Agreement. The Employee acknowledges and agrees that he shall continue to be bound by and comply with the provisions of Section 8 of the Employment Agreement (entitled "Confidentiality; Proprietary Rights; Competitive Activity").

8. Approval. The Company hereby declares that the Company's Board of Directors has approved this Agreement, and empowered Mr. Robert S. Ehrlich to sign this Agreement in the name of EFL & EFC. The resolution adopted by the board and all its details and provisions and authorizing Mr. Ehrlich to sign this Agreement is attached hereto as EXHIBIT C.

9. Attorney Fees. The Company shall pay directly to the Employee's attorney, Dr. J. Segev & Co., of 4 Wissozki St., Tel Aviv, an amount of US $89,500, as follows:

(a) An amount of US $34,500, on or prior to January 15, 2003.

(b) An amount of US $55,000 in ten equal installments of US $5,500. One such installment shall be due and payable by the last day of each of the months of September and December 2003, March, June, September and December 2004, and March, June, September and December 2005.

(c) The Company will add VAT (at the rate determined by law at the time any payment hereto) to all payments under this Section 9 and receive an invoice for any such payment.

(d) The Company will pay Dr. J. Segev & Co., all sums setforth in this section by direct deposit to Dr. J. Segev & Co.'s bank account at Bank Hapoalim, Pinkas Branch Tel-Aviv (754) Account No. 187772 (or as will be instructed by the employee from time to time, in writing).

(e) This Section 9 and Section 10 below shall constitute an agreement for the benefit of third party.

10. Security. Debts.

(a) The payments provided in Sections 2 and 9 above shall be secured by a lien in favor of the Employee and/or Dr. J. Segev & Co., that will be registered on those of the assets of EFL that relate exclusively to EFL's Water-Activated Battery line (the "WAB"), the Instant Power consumer battery business, including patents related exclusively thereto, and the Company's rights in the Car, a breakdown of which is provided in EXHIBIT D attached

hereto ("Lien"). For the avoidance of doubt, it is expressly understood that the Lien shall include only such items provided on EXHIBIT D and shall not include any shares owned by EFL, including without limitations shares of M.D.T. Protective Industries Ltd., and that the Lien shall not include any patents owned by EFC which relate, in whole or in part, to the field of batteries for military use or to electric vehicles. The Company shall be empowered to sell assets subject to the Lien and take off the Lien, and the Employee will make all necessary steps to take off the Lien including but not limited to the prompt execution of any necessary documents, provided that the proceeds from such sale are applied to reduction of the remaining sums to be due at such time under Section 2 and 9 above and that the total consideration of such sale exceeds the remaining sums to be due at such time under Section 2 and 9 above.

(b) The Company shall maintain the WAB in good condition consistent with its current practice and shall maintain an insurance policy on the WAB.

(c) During the year 2003 the Company shall maintain the Instant Power consumer battery business in good condition consistent with its current practice. However, the Company may elect at any time during the year 2003 to stop maintaining the Instant Power consumer battery business. In such event the company will notify in writing its decision not to maintain the Instant Power consumer battery business during or after 2003 and the Employee shall have two months in which he may try to sell the Instant Power consumer battery business. During these two months the Company shall continue to maintain the Instant Power consumer battery business in its current condition. In the event that the Employee is successful in selling, the consideration out of the selling will be taken off from the Company payments in section 2 and 9 above. Subject to full maintenance fee such as rent and salaries which will be taken off from the Company Payments in section 2 and 9 above the Employee may prolong in writing the two months in which he will try to sell the Instant Power consumer battery business.

(d) In the event the Company maintains the Instant Power consumer battery business until October 30 2003 the Company, following the Employee written request, shall notify in writing its decision re the maintenance of the Instant Power consumer battery business and in the event the Company decision is not to continue the maintenance of the Instant Power consumer battery business the Employee shall have two months in which he may try to sell it according to subsection 10 c. To avoid any doubt in no event the employee shall have more than two months to sell and the Company may elect not to maintain the Instant Power consumer battery business after December 31 2003 or during 2003 after the two months given to the Employee for selling according to subsection10c-10d.

(e) The Company hereby declares that other than its obligations to the Office of the Chief Scientist, all assets to be pledged under section 10 (a) are free from any lien,

attachment or any other third party rights. The Company's obligations to the Chief Scientist are attached hereto as EXHIBIT E

(f) Upon the execution of this agreement the Company will execute a deed of pledge of the lien in favor of the Employee and/or Dr. J. Segev & Co.to be registared at the Registrar of Pledges and/or the Registrar of Companies. The pledge shall comply with all the obligations of the Company toward the Office of the Chief Scientist.

(g) The parties hereof acknowledge that the only debts which the Employee has to the Company that will continue in existence after the date of this Agreement are the debts in the principal total amount of US $957,966 ("Debts") for which the Employee has executed non-recourse promissory notes on December 28, 1998 and February 9, 2000 ("Promissory Notes"). The Promissory Notes are attached hereto as EXHIBIT F.

(h) The parties hereof acknowledge that the shares specified in each of the non-recourse Promissory Notes, respectively, are the sole security for the debts provided in sub-section (b) above; that the Debts will be governed only according to the provisions and conditions set forth in each of the Promissory Notes, respectively; that the recourse of the Debts under each of the non-recourse Promissory Notes shall only be the pledged shares specified in each of the Promissory Notes, respectively; and that the Debts will not be released by this Agreement.

(i) Upon any event that the Company becomes adjudged insolvent or a trustee, receiver or similar officer shall be appointed for the Company or any substantial part of its property; or any bankruptcy, reorganization, debt arrangement, recovery process or other proceeding under any bankruptcy or insolvency law or any dissolution or liquidation proceedings shall be instituted by or against the Company, all remaining payments set forth in sections 2 and 9 above will mature immediately and it will enable the Employee and/or Dr. J. Segev & Co. to realize the Lien immediately.

11. Binding Effect. This Agreement be binding upon or injure to the benefit of the successors and assigns of the Company and the Employee and his personal representative(s).

12. Binding Arbitration.

(a) This Agreement, the performance thereof and all matters arising from and connected with the Agreement, shall be governed by and construed, solely and exclusively, in accordance with the laws of Israel.

(b) Any dispute hereunder shall be finally settled by a binding arbitration held in Tel Aviv, Israel, in the Hebrew language (except that witnesses shall be permitted to speak in English), by one arbitrator, a retired judge with commercial background to be chosen by the parties and if the parties do not consent about the arbitrator, the arbitrator will be appointed by the president of the Israeli Chamber of Certified Accountants. This section constitutes an arbitration agreement.

(c) The decision or award of the arbitrators shall be published to each party and will be final and binding upon all of the parties. Each of the parties hereby irrevocably and expressly agrees to comply promptly and in good faith with any and all such decisions or awards.

(d) The arbitration hereunder shall be the exclusive and conclusive method for resolving disputes under this Agreement and no court shall have the power to adjudicate such disputes.

(e) The costs of the arbitration, including without limitations attorneys fees, shall be borne by the non-prevailing party.

13. Severability. If one or more of the provisions of this Agreement or any application thereof shall be invalid, illegal, or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions thereof shall in no way be affected or impaired.

14. Entire Agreement. The foregoing contains the entire agreement of the parties and may not be altered, amended, or terminated except by an instrument in writing signed by the parties hereto.

15. Joint and Several Obligations. The obligations and liabilities of each company hereunder (EFC and EFL) shall be joint and several with the obligations and liabilities of the other company hereunder.

16. Execution in counterparts. This agreement may be executed in any number of separate counterparts, each of which shall together be deemed an original, but the several counterparts shall together constitute but one and the same agreements of the parties hereto.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

ELECTRIC FUEL CORPORATION

By:

Name: Robert S. Ehrlich
Title: Chairman, President and CEO

ELECTRIC FUEL (E.F.L.) Ltd.

By:

Name: Robert S. Ehrlich
Title: Chairman, President and CEO

Yehuda Harats

Exhibit 10.69.1

PARKWAY POINT

COMMERCIAL LEASE AGREEMENT

COMMERCE SQUARE ASSOCIATES, L.L.C.
A Colorado limited liability company
"LANDLORD or LESSOR"

AND

I.E.S. ELECTRONICS INDUSTRIES U.S.A., INC.,
a Delaware corporation
"TENANT or LESSEE"

Date: September 24, 1997
(For reference purposes only)

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Exhibit F - Commencement of Lease Term and Estoppel Certificate

COMMERCIAL LEASE AGREEMENT

ARTICLE 1

BASIC LEASE TERMS

1.0 Basic Lease Terms

1.01 Parties. This lease agreement ("Lease") is entered into by and between the following Lessor and Lessee:

COMMERCE SQUARE ASSOCIATES L.L.C. ("Landlord or Lessor") a Colorado limited liability company

I.E.S. ELECTRONICS INDUSTRIES U.S.A., INC. ("Tenant or Lessee") a Delaware corporation

1.02 Leased Premises. In consideration of the rents, terms, provisions and covenants of this Lease, Lessor hereby leases, lets and demises to Lessee the following described premises ("Leased Premises" or "Premises"):

approximately 5,700 square feet
8250 Park Meadows Drive, Suite 110
Lone Tree, Colorado 81024

1.03 Term. Subject to and upon the conditions set forth herein, the term of this Lease shall commence on October 1, 1997 and shall terminate thirty-six (36) months thereafter on September 30, 2000.

1.04 Base Rent and Security Deposit. Lessee shall pay to Lessor Total Base Rent of One Hundred Thirty-Six Thousand Eight Hundred and 00/100 Dollars ($136,800.00) payable as follows:

<TABLE>
<CAPTION>

PERIOD	DATES	BASE RENTAL RATE/RSF/YR NNN	MONTHLY BASE RENT NNN	TOTAL BASE RENT FOR PERIOD NNN
<S>	<C>	<C>	<C>	<C>
12 months	10/1/1997 - 9/30/1998	$8.00	$3,800.00	$45,600.00
12 months	10/1/1998 - 9/30/1999	$8.00	$3,800.00	$45,600.00

12 months	10/1/1999 - 9/30/2000	$8.00	$3,800.00	$45,600.00

</TABLE>

Security Deposit is Three Thousand Eight Hundred and 00/100 Dollars ($3,800.00),

1.05 Addresses.

Lessor's Address:	Lessee's Address:
Integrated Property Management, Inc.	I.E.S. ELECTRONICS INDUSTRIES U.S.A., INC.
455 Sherman Street, Suite 140	8250 Park Meadows Drive, Suite 110
Denver, Colorado 80203	Lone Tree, Colorado 80124

1.06 Permitted Use. General office and warehouse use for a high tech computer software and hardware design and development company.

ARTICLE 2

RENT

2.0 Rent

2.01 Base rent. Lessee agrees to pay monthly as base rent during the term of this Lease the sum of money set forth in section 1.04 of this Lease, which amount shall be payable to Lessor at the address shown above. One monthly installment of rent shall be due and payable on the date of execution of this Lease by Lessee for the first month's rent and a like monthly installment shall be due and payable on or before the first day of each calendar month succeeding the commencement date or completion date during the term of this Lease; provided, if the commencement date or the completion date should be a date other than the first day of a calendar month, the monthly rental set forth above shall be prorated to the end of the calendar month, and all succeeding installments of rent shall be payable on or before the first day of each succeeding calendar month during the term of this Lease. Lessee shall pay, as additional rent, all other sums due under this Lease.

2.02 Operating Expenses. Lessee shall also pay as additional rent Lessee's pro rata share of the operating expenses of Lessor for the building and/or project of which the leased premises are a part. Lessor may invoice Lessee monthly for Lessee's pro rata share of the estimated operating expenses for each calendar year, which amount shall be adjusted each year based upon anticipated operating expenses. Within nine (9) months following the close of each calendar year, Lessor shall provide Lessee and

accounting showing in reasonable detail all computations of additional rent due under this section. In the event the accounting shows that the total of the monthly payments made by Lessee exceeds the amount of additional rent due by Lessee under this section, the accounting shall be accompanied by a refund. In the event the accounting shows that the total of the monthly payments made by Lessee is less than the amount of additional rent due by Lessee under this section, the accounting shall be accompanied by an invoice for the additional rent. Notwithstanding any other provision in the Lease, during the year in which this Lease terminates, Lessor, prior to the termination date, shall have the option to invoice Lessee for Lessee's pro rata share of operating expenses based upon the previous year's operating expenses. If this Lease shall terminate on a day other than the last day of calendar year, the amount of any additional rent payable by Lessee applicable to the year in which the termination shall occur shall be prorated on the ratio that the number of days from the commencement of the calendar year to and including such termination date bears to 365. Lessee shall have the right, at its own expense and within a reasonable time, to audit Lessor's books relevant to the additional rent payable under this section. Lessee agrees to pay any additional rent due under this section within ten days following receipt of the invoice or accounting showing the additional rent due. The current estimate of Lessee's share of operating expenses is Two and 95/100 Dollars ($2.95) per square foot of the Leased Premises which shall be paid in addition to and along with base rent. Lessee's prorated share of the projects operating expenses shall be 6.31%.

2.03 Definition of Operating Expenses. The term "operating expenses" includes all expenses incurred by Lessor with respect to the maintenance and operation of the building of which the Leased Premises are a part, including, but not limited to, the following: maintenance, repair and replacement costs; security; management fees, wages and benefits payable to employees of Lessor whose duties are directly connected with the operation and maintenance of the building; all services, utilities, supplies, repairs, replacements or other expenses of maintaining and operating the common parking and plaza areas; the cost, including interest, amortized over its useful life, or the costs (amortized over their useful life) of capital improvements are

structural repairs and replacements made in or to the building (including finance costs) in order to conform to any applicable laws, ordinances, rules, regulations, or orders of any governmental or quasi-governmental authority having jurisdiction over the building; the cost, including interest, amortized over its useful life, of installation of any device or other equipment which improves the operating efficiency of any system with the Leased Premises and thereby reduces operating expenses; all other expenses which would generally be regarded as operating and maintenance expenses which would reasonably be amortized over a period not to exceed five (5) years; all real property taxes and installments of special assessments, including dues and assessments by means of deed restrictions and/or owners' associations which accrue against the building of which the Leased Premises are a part during the term of this Lease; and all insurance premiums Lessor is required to pay or deems necessary to pay, including public liability insurance, with respect to the building. The term operating expenses does not include the following: repairs, restoration or other work occasioned by fire, wind, the elements or other casualty; income and franchise taxes of Lessor; expenses incurred in leasing to or procuring of Lessees, leasing commissions, advertising expenses and expenses for the renovating of space for new Lessees; interest or principal payments on any mortgage or other indebtedness of Lessor, compensation paid to any employee of Lessor above the grade of property manager; and depreciation allowance or expense; or operating expenses which are the responsibility of Lessee.

2.04 Late Payment Charge. Other remedies for nonpayment of rent notwithstanding, if the monthly rental payment is not received by Lessor on or before the fifth (5th) day of the month for which the rent is due, or if any other payment due Lessor by Lessee is not received by Lessor on or before the fifth (5th) day of the month next following the month in which Lessee was invoiced, a late payment charge of five percent (5%) of such past due amount shall become due and payable in addition to such amounts owed under this Lease.

2.05 Interest Due. If any amount due from Lessee to Lessor hereunder whether it be rental or other charges, is not paid within five (5) days of when due, Lessee shall pay

Lessor an amount equal to eighteen percent (18%) per annum of the total amount due Lessor, from the original due date until paid. Interest charges shall be in addition to, and not in substitution of, late charges imposed. Notwithstanding the foregoing, and no more than two (2) times in a given twelve (12) month period under this Lease, (but not more often than a total of four (4) times over the term of the Lease), Landlord will give Tenant written notice that a payment is late and provide Tenant with an opportunity to make such late payment without being considered to be in default of the Lease, and without such payment being subject to a late payment charge or interest, as long as (i) such late payment is received not more than seven (7) days after the date notice is given; and (ii) (except for the payment of rent as previously described in this paragraph), at no time since the Commencement Date has there been more than one (1) event of default on any twelve (12) month period under this Lease.

2.06 Increase in Insurance Premiums. If any increase in any insurance premiums paid by Lessor for the building is caused by Lessee's use of the Leased Premises in a manner other than as set forth in section 1.06, or if Lessee vacates the Leased Premises and causes an increase in such premiums, then Lessee shall pay as additional rent the amount of such increase to Lessor.

2.07 Security Deposit. The security deposit set forth above shall be held by Lessor for the performance of Lessee's covenants and obligations under this Lease, it being expressly understood that the deposit shall not be considered an advance payment of rental or a measure of Lessor's damage in case of default by Lessee. Upon the occurrence of any event of default by Lessee or breach by Lessee of Lessee's covenants under this Lease, Lessor may, from time to time, without prejudice to any other remedy, use the security deposit to the extent necessary to make good any arrears of rent, or to repair any damage or injury, or pay any expense or liability incurred by Lessor as a result of the event of default or breach of covenant, and any remaining balance of the security deposit is so used or applied, Lessee shall upon ten (10) days written notice from Lessor, deposit with Lessor by cash or cashier's check an amount sufficient to restore the security deposit to its original amount.

2.08 Holding Over. In the event that Lessee does not vacate the Leased Premises upon the expiration or termination of the Lease, Lessee shall be a tenant-at-will for the holdover period and all of the terms and provisions of this Lease shall be applicable during that period, except that Lessee shall pay Lessor as base rental for the period of such holdover an amount equal to two times the base rent which would have been payable by Lessee had the holdover period been a part of the original term of this Lease. Lessee agrees to vacate and deliver the Leased Premises to Lessor upon Lessee's receipt of notice from Lessor to vacate. The rental payable during the holdover period shall be payable to Lessor on demand. No holding over by Lessee, whether with or without the consent of Lessor, shall operate to extend the term of this Lease.

ARTICLE 3

OCCUPANCY AND USE

3.0 Occupancy and Use

3.01 Use. Lessee warrants and represents to Lessor that the Leased Premises shall be used and occupied only for the purpose as set forth in section 1.06. Lessee shall occupy the Leased Premises, conduct its business and control its agents, employees, invitees and visitors in such a manner as is lawful, reputable and will not create a nuisance. Lessee shall not permit any operation which emits any odor or matter which intrudes into other portions of the building, use any apparatus or machine which makes undue noise or causes vibration in any portion of the building or otherwise interfere with, annoy or disturb any other Lessee in its normal business operations or Lessor in its management of the building.

Lessee shall neither permit any waste on the Leased Premises nor allow the Leased Premises to be used in any way which would, in the opinion of Lessor, be extra hazardous on account of fire or which would in any way increase or render void the fire insurance on the building. Lessee warrants to Lessor that the insurance questionnaire (filled out by Lessee, signed and presented to Lessor prior to the executing of this Lease, accurately reflects Lessee's original intended use of the Leased Premises. The insurance questionnaire is made a part of this Lease by reference as though full copied herein. If at any time during the term of this Lease the State Board of Insurance or other insurance authority disallows any of Lessor's sprinkler credits or imposes an additional penalty or surcharge in Lessor's insurance premiums because of Lessee's original or subsequent placement of use of storage racks or bins, method of storage or nature of Lessee's inventory or any other act of Lessee, Lessee agrees to pay as additional rent the increase (between fire walls) in Lessor's insurance premiums.

3.02 Signs. No sign of any type or description shall be erected, placed or painted in or about the Leased Premises or project except those signs submitted to Lessor in writing and approved by Lessor in writing, and which signs are in conformance with Lessor's sign criteria established for the Project.

3.03 Compliance with Laws, Rules, and Regulations. Lessee shall not use the Premises or permit anything to be done in or about the Premises which will in any way conflict with any law, stature, ordinance or governmental rule or regulation now in force or which may hereafter be enacted or promulgated. Lessee shall at its sole cost and expense promptly comply with all laws, statues, ordinances or governmental rules, regulations and requirements now in force or which may hereafter be in force and with the reasonable requirements of any insurer, underwriter or other similar entity now or hereafter relating to or affecting the condition, use or occupancy of the Premises, excluding structural changes not related to or affected by Lessee's improvements or acts. Lessee shall be solely responsible for compliance with the provisions of the Americans with Disabilities Act (the "ADA") as it applies to Lessee's business and the Premises. Lessor shall be solely responsible for compliance with the provisions of the ADA as it applies to the Building. Lessor makes no warranty express of implied that Lessee's intended use of the Premises is suitable or allowable under any applicable governmental code, statue or regulation. Lessee, at Lessee's sole cost and expense, shall comply with all laws, ordinances,

orders, rules and regulations of state, federal, municipal or their agencies or bodies having jurisdiction over use, condition and occupancy of the Leased Premises.

Lessee will comply with the rules and regulations of the building adopted by Lessor which are set forth on a schedule attached to this Lease. Lessor shall have the right at all times to change and amend the rules and regulations in any reasonable manner as may be deemed advisable for the safety, care, cleanliness, preservation of good order and operation or use of the building or the Leased Premises. All changes and amendments to the rules and regulations of the building will be sent by Lessor to Lessee in writing and shall thereafter be carried out and observed by Lessee.

3.04 Warranty of Possession. Lessor warrants that it has the right and authority to execute this Lease, and Lessee, upon payment of the required rents and subject to the terms, conditions, covenants and agreements contained in this Lease, shall have possession of the Leased Premises during the full term of this Lease as well as any extension or renewal thereof. Lessor shall not be responsible for the acts or omissions of any other Lessee or third party that may interfere with Lessee's use and enjoyment of the Leased Premises.

3.05 Inspection. In the event of an emergency, Lessor or its authorized agents shall at any and all reasonable times have the right to enter the Leased Premises at any time. When an emergency situation does not exist, and provided Lessee is not in default of the Lease, Lessor will attempt to provide Lessee with forty-eight (48) hour advance notice before entering the Premises to inspect the same, to supply janitorial service or any other service to be provided by Lessor, to show the Leased Premises to prospective purchasers or Lessees, and to alter, improve or repair the Leased Premises or any other portion of the building. Lessee hereby waives any claim for damages for injury or inconvenience to or interference with Lessee's business, any loss of occupancy or use of the Leased Premises, and any other loss occasioned thereby. Lessor shall at all times have and retain a key with which to unlock all of the doors in, upon and about the Leased Premises.

Lessee shall not change Lessor's lock system or in any other manner prohibit Lessor from entering the Leased Premises. Lessor shall have the right to use any and all means which Lessor may deem proper to open any door in an emergency without liability therefore.

ARTICLE 4

UTILITIES AND SERVICE

4.0 Utilities and Service

4.01 Building Services. Lessor shall provide the normal utility service connections to the building. Lessee shall pay the cost of all utility services, including, but not limited to, initial connection charges, all charges for gas, electricity, water, sanitary and storm sewer service, and for all electric lights. However, in a multi-occupancy building, Lessor may provide water to the Leased Premises, in which case Lessee agrees to pay to Lessor its pro rata share of the cost of such water. Lessee shall be responsible for the installation and maintenance of any dilution tanks, holding tanks, settling tanks, sewer sampling devices, and sand traps, grease traps or similar devices as may be required by any governmental subdivision for Lessee's use of the sanitary sewer system. If the Leased Premises are in a multi-occupancy building, Lessee shall pay all surcharges levied due to Lessee's use or sanitary or waste removal services insofar as such surcharges affect Lessor or other Lessees in the building. Lessor shall not be required to pay for any utility services, supplies or up keep in connection with the Leased Premises or building.

4.02 Theft or Burglary. Lessor shall not be liable to Lessee for losses to Lessee's property or personal injury caused by criminal acts or entry by unauthorized persons into the Leased Premises or the building.

ARTICLE 5

Repairs and Maintenance

5.0 Repairs and Maintenance

5.01 Lessor Repairs. Lessor shall not be required to make any improvements, replacements or repairs of any kind or character to the Leased Premises or the project during the term of this Lease except as are set forth in this section. Lessor shall maintain (in a first class manner similar to the level of service provided in comparable properties in the area) only the roof, foundation, parking and common areas, and the structural soundness of the exterior walls (excluding windows, windowglass, plate glass and doors) Lessor's costs of maintaining the items set forth in this section are subject to the additional rent provisions in section 2.02. Lessor shall not be liable to the Lessee, except as expressly provided in this Lease, for any damage or inconvenience, and Lessee shall not be entitled to any abatement or reduction of rent by reason of any repairs, alterations or additions made by the Lessor under this Lease.

5.02 Lessee Repairs. Lesee shall, at its sole cost and expense, maintain, repair and replace all other parts of the Leased Premises in good repair and condition, including, but not limited to heating, ventilating and air conditioning systems ("HVAC Systems") notwithstanding the foregoing, and provided Tenant has properly maintained the same, if any part of the HVAC System serving the Premises needs to be replace, the cost for such replacement part shall be amortized over the part's expected reasonable useful life and Tenant shall be responsible for the pro rata cost of the part according to the remaining term of Tenant's Lease. By way of example, if at the end of the first year of the lease term, (therefore Tenant has two (2) years remaining on the Lease) a rooftop unit needs to be replaced with a new unit that has an expected useful life of ten (10) years, the Tenant would be responsible for two-tenths (2/10) or twenty percent (20%) of the cost. However, Landlord shall not be responsible for the cost of any equipment purchased by Tenant that will have a useful life beyond the remaining term of the Tenant's lease unless Tenant has received the Landlord's prior written

consent before the equipment is purchased and installed, dock dumpers, trash pick-up and removal. For Lessees Premises. Lessee shall repair and pay for any damage caused by any act or omission of Lessee or Lessee's agents, employees, invitees, licensees or visitors. If the Leased Premises are in a multi-occupancy building or project, Lessor shall perform, on behalf of Lessee, lawn maintenance, and exterior painting, and common area trash pick-up and removal; Lessee agrees to pay Lessor, as additional rent, Lessee's pro rata share of the cost of such services within ten (10) days from receipt of Lessor's invoice, or Lessor may by monthly invoice direct Lessee to prepay the estimated costs for the current calendar year, and such amount shall be adjusted annually. If Lessee fails to make the repairs of replacements promptly as required herein, Lessor may, at its opinion, make the repairs and replacements and the cost of such repairs and replacements shall be charged to Lessee as additional rent and shall become due and payable to Lessee within ten (10) days from receipt of Lessor's invoice. Costs incurred under this section are the total responsibility of Lessee and do not constitute operating expenses under section 2.02.

5.03 Request for Repairs. Except for emergency repair, all requests for repairs or maintenance that are the responsibility of Lessor pursuant to any provision of this Lease must be made in writing to Lessor at the address in section 1.05. Lessor shall have ten (10) days after written notice to complete the repair, or if repairs cannot reasonably be completed within ten (10) days, additional time will be allowed provided Landlord diligently pursues a cure through completion.

5.04 Lessee Damages. Lesee shall not allow any damage to be committed on any portion of the Leased Premised or building, and at the termination of this Lease, by lapse of time or otherwise, Lessee shall deliver the Leased Premises to Lessor in as good condition as existed at the commencement date of this lease, ordinary wear and tear excepted. The cost and expense of any repairs necessary to restore the condition of the Leased Premises shall be borne by Lessee.

5.05 Maintenance Contract. Lessee shall, at its sole cost and expense during the term of this Lease maintain a regularly scheduled preventative maintenance/service contract with a maintenance contractor for the servicing of all hot water, heating and air conditioning systems and equipment within the Leased Premises. The maintenance contractor and contract must be approved by Lessor and must include quarterly servicing, replacement of filters, replacement or adjustment of drive belts, periodic lubrication and oil change and any other services suggested by the equipment manufacturer.

ARTICLE 6

ALTERATIONS AND IMPROVEMENTS

6.0 Alterations and Improvements

6.01 Lessor Improvements. If construction to the Leased Premises is to be performed by Lessor prior to or during Lessee's occupancy, Lessor will complete the construction of the improvements to the Leased Premises, in accordance with plans and specification agreed to by Lessor and Lessee, which plans and specifications are made a part of this Lease by reference. Lessee shall execute a copy of the plans and specifications and change orders if applicable, setting forth the amount of any costs to be borne by Lessee within seven (7) days of receipt of the plans and specifications. In the event Lessee fails to execute the plans and specifications and change orders with the seven (7) day period, Lessor may at its sole option, declare this Lease canceled or notify Lessee that the base rent shall commence on the completion date even though the improvements to be constructed by Lessor may not be complete. Any changes or modifications to the approved plans and specifications shall be made and accepted by written change order or agreement signed by Lessor and Lessee and shall constitute an amendment to this Lease.

6.02 Lessee Improvements. Lessee shall not make or allow to be made any alterations or physical additions in or to the Leased Premises without first obtaining the written consent of the Lessor, which consent will not be unreasonably withheld or delayed. However, Landlord will require that any alterations, additions, or improvements be performed by a licensed, properly insured contractor approved by Lessor and all work shall be done in accordance with all applicable governmental rules and regulations. Any alterations, physical additions or improvements to the Leased Premises made by the Lessee shall at once become the property of Lessor and shall be surrendered to Lessor upon the termination of this Lease; provided, however at the time Lessor consents to the improvements, Lessor may notify Lessee that Lessee must remove any physical additions and/or repair any alterations in order to restore the Leased Premises to the condition existing at the time Lessee took possession, all costs of removal and all alterations to be borne by Lessee. This clause shall not apply to moveable equipment or furniture owned by Lessee, which may be removed by Lessee at the end of the term of this Lease if Lessee is not then in default and if such equipment and furniture are not then subject to any other rights, liens and interests of Lessor.

6.03 Mechanics Lien. Lessee will not permit any mechanic's or materialman's lien(s) or other lien to be placed upon the Leased Premises or the building and nothing in this Lease shall be deemed to constructed in any way as constituting the consent or request of Lessor, express or implied, by interference or otherwise, to any person for the performance of any labor or the furnishing of any materials to the Leased Premises, or any part thereof, nor as giving Lessee any right, power, or authority to contract for or permit the rendering of any services of the furnishing of any materials that would give rise to any mechanic's materialman's or other lien against the Leased Premises. In the vent any such lien is attached to the Leased Premises, then, in addition, any other right or remedy of Lessor may, but shall not be obligated to, obtain the release of or otherwise discharge the same. Any amount paid by Lessor for any of the aforesaid purposes shall be paid by Lessee to Lessor on demand as additional rent.

ARTICLE 7

CASUALTY AND INSURANCE

7.0 Casualty and Insurance

7.01 Substantial Destruction. If the Leased Premises should be totally destroyed by fire or other casualty, or if the Leased Premises should be damaged so that rebuilding cannot reasonably be completed within ninety (90) working days after the date of written notification by Lessee to Lessor of the destruction, this Lease shall terminate and the rent shall be abated for the unexpired portion of the Lease, effective as of the date of the written notification. Notwithstanding the foregoing there shall be no abatement of rent in the event Tenant is responsible in whole or in part of the casualty or destruction.

7.02 Partial Destruction. If the Leased Premises should be partially damaged by fire or other casualty, and rebuilding or repairs can reasonable be completed within ninety (90) working days from the date of written notification by Lessee to Lessor of the destruction, this Lease shall not terminate, and Lessor shall at its sole risk and expense proceed with reasonable diligence to rebuild or repair the building or other improvements to substantial the same condition in which they existed prior to the damage. If the Leased Premises are to be rebuilt or repaired and are untenatable in whole or in part following the damage, and the damage or destruction was not caused or contribute to by act or negligence of the Lessee, its agents, employees, invitees, or those for whom Lessee is responsible, the rent payable under this Lease during the period for which the Leased Premises are untenantable shall be adjusted to such an extent as may be fair and reasonable under the circumstances. In the event if the Lessor fails to complete the necessary repairs or rebuilding within ninety (90) working days from the date of written notice of termination to Lessor whereupon all rights and obligations under this Lease shall cease to exist.

7.03 Waiver of Subrogation. Anything in this Lease to the contrary notwithstanding, Lessor and Lessee hereby waive and release each other of and from any and all right of recovery, claim, action or cause of action, against each other, their agents, officers and employees, for any loss or damage that may occur to the Leased Premises, improvements to the building of which the Leased Premises are a part, or personal property within the building, by reason of fire or the elements, regardless of cause of origin, including negligence of Lessor or Lessee agree immediately to give their respective insurance companies which have issued policies of insurance covering all risk of direct physical loss, written notice of the terms of the mutual waivers contained in this section, and to have the insurance policies property endorsed, if necessary, to prevent the invalidation of the insurance overages by reason of the mutual waivers.

7.04 Hold Harmless. Lessor shall not be liable to Lessee's employees, agents, invitees, licensees or visitors, or to any other person, for any injury to any other person, for any injury to person or damage to property on or about the Leased Premises caused by any act or omission Lessee, its agents, servants or employees, or of any other person entering upon the Leased Premises under express or implied invitation by Lessee, or caused by the improvements located on the Leased Premises becoming out of repair, the failure or cessation of any service provided by Lessor (including security service and devices), or caused by leakage of gas, oil, water or steam or by electricity emanating from the Leased Premises. Lessee agrees to indemnify and hold harmless Lessor of and from any loss, attorney's fees, expenses or claims arising out of any such damage or injury.

Landlord, its agents and employees shall not be liable, and Tenant hereby waives its right, if any, to claim for any damage or loss as a result of any failure of the Building to comply strictly with ADA as applies to the Building. Tenant hereby agrees to save, hold harmless and defend Landlord from any claims, suits or liabilities made against the Landlord by any of Tenant's existing or prospective clients, employees, agents, servants or invitees as a result of or in connection with any non-compliance of the Building with the ADA. In the event of any failure substantially interferes with the operation of Tenant's business in the Premises, Tenant's sole remedy shall be for termination of this Lease, provided that, Tenant shall have no claim for termination of this Lease, based on the non-compliance with the ADA by the Building unless Tenant (i) promptly gives notice of any such non-compliance and allows Landlord a reasonable time to correct any such non-compliance, and (ii) if any such compliance is not effected within a reasonable time, Tenant gives no less than ninety (90) days prior written notice of the termination date, Tenant actually vacates the Premises on or before such termination date, and Tenant is in compliance with its obligations under this Lease on the date the notice is given and on the termination date.

In case any claim, demand, action or proceeding is made or brought against Landlord, its agents or employees, as a result of Tenant's default or alleged default of any obligation on Tenant's part to be performed under the terms of this Lease, or arising from any act, omission or negligence of Tenant, its agents or employees, or which gives rise to Tenant's obligation to indemnify Landlord, Tenant shall be responsible for all costs and expenses, including by not limited to reasonable attorney's fees incurred in defending or prosecution of the same, as applicable.

7.05 Tenant's Insurance. Tenant shall, at its own cost, at all times during the term of this Lease and any extensions hereof, procure and maintain special covered causes of loss insurance on Tenant's Property and the contents of the Premises in an amount equal to full replacement cost thereof. Tenant shall also maintain workers' compensation and employers' liability insurance in the minimum statutory amount and including a waiver of subrogation in favor of the Landlord and Landlord's insurer, and commercial general liability insurance on an occurrence basis, including coverage for bodily injury, property damage, personal injury products and completed operations, liability assumed under and insured

contract host liquor legal liability and cross liability with the following limits of liability; One Million Dollars ($1,000,000) combined single limit for each occurrence of bodily injury and property damage and personal injury. Two Million Dollars ($2,000,000) aggregate for bodily injury and property damage for products and completed operations. Tenant shall further, at its own cost, at all times during the term of this Lease and any extensions hereof, procure and maintain insurance for automobile liability including coverage for bodily injury and property damage for owned and hired autos with the following limits and liability; One Million Dollars ($1,000,000) combined single limit for each occurrence of bodily injury and property damage. Tenant shall also maintain business interruption insurance in an amount sufficient to reimburse Tenant for direct and indirect loss of earnings attributable to prevention of access to the Building or Premises as a result of such perils, and such other forms and amounts of insurance as Landlord or its mortgage may reasonably require from time to time. All such insurance shall be procured from a reasonable insurance company or companies authorized to do business in the State where the Premises are located, with general policyholder's ratings of not less than "A-" and a financial rating of not less than "VI" in the most current available bent's Insurance Reports, and shall be otherwise reasonably satisfactory to Landlord. All such policies except Workers Compensation shall name Landlord and Landlord's property management agent as additional insureds, and shall provide that the same may not be cancelled except upon thirty (30) days prior to the annual renewal date thereof and upon request from time to time and such certificate(s) shall disclose that insurance names Landlord and Landlord's designated property management agent as an additional insured, in addition to the other requirements set forth herein. The time limits of such insurance shall not, under any circumstances, limit the liability of Tenant hereunder.

Should Tenant fail to procure such insurance within the time period hereinbefore specified, Landlord may, at its opinion, but Landlord shall have no obligation to do so, procure such insurance and pay the premiums therefore and Tenant agrees to reimburse Landlord for the cost thereof plus interest thereon at the rate of eighteen percent (18%) per annum (but in no event in excess of the maximum rate permitted under law), as Additional rent on the first day of the calendar month following the rendition of the bill or bills therefore and Landlord shall have the same rights and remedies in enforcing the payment of such additional rent as in the case of Tenant's failure to pay the rent herein reserved.

7.06 Landlord's Insurance. Landlord agrees to carry and maintain the following insurance during the term of his Leas and any extension hereof; general public liability insurance against claims for personal injury, including death and property damage in or about the Premises and the Building or the Building Complex (excluding Tenant's Property), such insurance to be in an amount not less than One Million Dollars ($1,000,000) combined single limit. Landlord shall also carry fire and a casualty insurance covering the Building in an amount not less than eighty percent (80%) of the replacement cost of same. Such insurance may expressly exclude property paid for by tenants or paid for by Landlord for which tenants have reimbursed Landlord located in, or constituting a part of the Building or Building complex. Such insurance hall afford coverage for damages resulting from (a) fire, (b) perils covered by extended coverage insurance, and (c) explosion of steam and pressure boilers and similar apparatus located in the Building or the Building Complex. Landlord may carry such other additional insurance coverage, as Landlord or Landlord's mortgage deems appropriate including coverage for loss of rents. All such insurance shall be procured from a responsible insurance company or companies authorized to do business in the State where the Premises are located, with general policyholder's rating of not less than "A-" and a financial rating of not less than "XI" in the most current available Best's Insurance Reports.

ARTICLE 8

CONDEMNATION

8.0 Condemnation

8.01 Substantial Taking. If all or a substantial part of the Leased Premises are taken for any public or quasi-public use under any governmental law, ordinance or regulation, or by right or by right of eminent domain or by purchase in lieu thereof, and the taking would prevent or materially interfere with the use of the Leased Premises for the purpose for which it is then being used, this Lease shall terminate and the rent shall be abated during the unexpired portion of this Lease effective on the date physical possession is taken by the condemning authority. Lessee shall have no claim to the condemnation award or proceeds in lieu thereof.

8.02 Partial Taking. If a portion of the Leased Premises shall be taken for any public or quasi-public use under any governmental law, ordinance, or regulation, or by right of eminent domain or by purchase in lieu thereof, and this Lease is not terminated as provided in Section 8.01 above, Lessor shall at Lessor's sole risk and expense, restore and reconstruct the building and other improvements on the Leased Premises to the extent necessary to make it reasonable tenantable. The rent payable under this Lease during this unexpired portion of the term shall be adjusted to such an extent as may be fair and reasonable under the circumstance. Lessee shall have no claim to the condemnation award or proceeds in lieu thereof.

ARTICLE 9

ASSIGNMENT OR SUBLEASE

9.0 Assignment or Sublease

9.01 Lessor Assignment. Lessor shall have the right to sell, transfer or assign, in whole or in part, its rights and obligations under this Lease and in the building. So long as an assignee of Lessor is capable of performing and assumes Lessor's rights and obligations hereunder, any such sale, transfer or assignment

shall operate to release Lessor from any and all such liabilities under this Lease arising after the date of such sales, assignment or transfer.

9.02 Lessee Assignment. Lessee shall not assign, in whole or in part, this Lease, or allow it to be assigned, in whole or in part, by operation of law or otherwise (including without limitation by transfer of a majority interest of stock, merger, of dissolution, which transfer of majority interest of stock, merger or dissolution shall be deemed an assignment) or mortgage or pledge the same, or sublet the Leased Premises, in whole or in part, without the prior written consent of Lessor (which consent shall not be unreasonably withheld or delayed), and in no event shall any assignment or sublease ever release Lessee or any guarantor from any obligation or liability hereunder. No assignee or sub lessee of the Leased Premises or any portion thereof may assign or sublet the Leased Premises or any portion thereof.

9.03 Condition of Agreement. If Lessee desires to assign or sublet all or any part of the Leased Premises, it shall so notify Lessor at least thirty (30) days in advance of the date on which Lessee desires to make such assignment or sublease. Lessee shall provide Lessor with a copy of the proposed assignment or sublease and such information as Lessor might request concerning the proposed sublessee or assignee to allow Lessor to make informed judgments as to the financial condition, reputation, operations and general desirability of the proposed sublessee or assignee. Within fifteen (15) days after Lessor's receipt of Lessee's proposed assignment or sublease and all required information concerning the proposed sublessee or assigner, Lessor shall have the following options: (1) cancel this Lease as to the Leased Premises or portion thereof proposed to be assigned or sublet; (2) consent to the propoed assignment or sublease, and, if the rent due and payable by any assignee or sublessee under an such permitted assignment or sublease (or a combination f the rent payable under such assignment of the sublease plus any bonus or any other consideration or any payment incident thereto) exceeds the rent payable under this Lease for such space, Lessee shall pay to Lessor one half (1/2) of such excess rent and other

excess consideration within ten (10) days following receipt thereof by Lessee; or (3) refuse, in its reasonable judgment, to consent to the proposed assignment or sublease which refusal shall be deemed to have been exercised unless Lessor give Lessee written notice providing otherwise. Upon the occurrence of an event of default, if all or any part of the Leased Premises are then assigned or sublet, Lessor in addition to any other remedies provided by this Lease or provided by law, may, at its option, collect directly from the assignee or sublessee all rents becoming due to Lessee by reason of the assignment or sublease, and Lessor shall have a security interest in all properties on the Leased Premises to secure payment of such sums. Any collection directly by Lessor from the assignee or sublessee shall not be construed to constitute a novation or release of Lessee or any guarantor from the further performance of fits obligation under the lease.

9.04 Subordination. Lessee accepts this Lease subject and subordinate to any record mortgage or deed o trust lien presently existing or hereafter created upon the building or project and to all existing recorded restrictions, covenants, easements and agreements with respect to the building or project. Lessor is hereby irrevocably vested with full power and authority to subordinate Lessee's interest under this Lease to any first mortgage or deed of trust lien hereafter placed on the Leased Premises, and Lessee agrees upon demand to execute additional instruments subordinating this Lease as Lessor may require. If the interests of Lessor under this Lease shall be transferred by reason of foreclosure or other proceedings for enforcement of nay first mortgage or deed of trust lien on the Leased Premises. Lessee shall be bound to the transferee (sometimes call the "Purchaser") at the opinion of the Purchaser, under the terms, covenants and conditions of this Lease for the balance of the term remaining, including any extensions or renewals, with the same force and effect as if the Purchaser were Lessor under this Lease, and, if requested by the Purchaser, Lessee agrees to attorn to the Purchaser, including the first mortgagee under any such mortgage if it be the Pruchase, as its Lessor. Lessee shall have the right to quiet enjoyment.

9.05 Estoppel Certificates. Lessee agrees to furnish, from time to time, within ten (10) days after receipt of a request from Lessor or

Lessor's mortgagee, a statement certifying, if applicable, the following: Lessee is in possession o f the Leased Premises; the Leased premises are acceptable; the Lease is in full force and effect, the lease is unmodified; Lessee claims no present charge, lien, or claim of offset against rent; the rent is paid for the current month, but is not prepaid for more than one (1) month and will not prepaid for more than one (1) month in advance; there is no existing default by reason of some act or omission by Lessor or Lessor's mortgagee. Lessee's failure to deliver such statement, in addition to being a default under this Lease, hall be deemed to establish conclusively that this Lease is In full force and effect except as declared by Lessor, that Lessor is not in default of any of its obligations under this Lease, and the Lessor has not received more than one month rent in advance.

ARTICLE 10

LIENS

(Deleted in Original)

ARTICLE 11

DEFAULT AND REMEDIES

11.0 Default and Remedies

11.01 Default by Lessee. The following shall be deemed to be events of default by Lessee under this Lease: (1) Lessee shall fail to pay when due any installment of rent of any other payment required pursuant to this Lease; (2) Lessee shall abandon any substantial portion of the Leased Premises ; (3) Lessee shall fail to comply with any term, provision or covenant of this Lease, other than the payment of rent, and the failure is not cured within ten (10) days after written notice to Lessee, of if repairs cannot reasonably to be completed within ten (10)days, additional tine will be allowed provided Tenant diligently pursues a cure through completion; (4) Lessee shall file a petition or be adjudged bankrupt or insolvent under any applicable federal or state bankruptcy or insolvent law or admit that it cannot meet its financial obligations as they become due; or a receiver or trustee shall be appointed for all or substantially all of the assets of lessee' or Lessee shall make a transfer in fraud of creditors or shall make an assignment for the benefit of creditors; (5) Lessee shall do or permit to be done any act which results in a lien being filed against the Leased Premises or the building and /or project of which the Leased Premises are a part.

11.02 Remedies for Lessees Default. Upon the occurrence of any event of default set forth in this Lease. Lessor shall have the option to pursue any one or more of the remedies set forth herein (to the extent they are in accordance with Colorado law) without any notice or demand. (1) Lessor may enter upon and take possession of the Leased Premises, by

picking or changing locks if necessary, and lock out, expel or remove Lessee and any other person who may be occupying all or any part of the Leased Premises without being liable for any claim for damages, and relet the Leased Premises on behalf of Lessee and all or any party of the Leased Premises without being liable for any claim for damages, and relet the Leased Premises on behalf of Lessee and receive the rent directly by reason of the reletting. Lessee agrees to pay Lessor on demand any deficiency that may arise by reason of any reletting of the Leased Premises; further, Lessee agrees to reimburse Lessor for any expenditure made by it in order to relet the Leased Premises including, but not limited to remodeling and repair costs. (2) Lessor may enter upon the Leased Premises, by picking or changing locks if necessary, without being liable for any claim for damages, and do whatever Lessee is obligated to do under the terms of this Lease. Lessee agrees to reimburse Lessor on demand for any expenses which Lessor may incur in effecting compliance with Lessee's obligations under this Lease; further, Lessee agrees that Lessor shall not be liable for any damages resulting to Lessee from effecting compliance with Lessee's obligations under this Lease caused by the negligence of Lessor or otherwise. (3) Lessor may terminate this Lease, in which event Lessee shall immediately surrender the LEASED PREMISES to Lessor and if Lessee fails to surrender the LEASED PREMISES, Lessor may, without prejudice to any other remedy which it any have for possession of arrearages in rent, enter upon and take possession of the LEASED PREMISES, by picking or changing locks if necessary, and lock out, expel or remove Lessee and any other person who; may be occupying all or any part of the LEASED PREMISES without being liable for any claim for damages. Lessee agrees to pay on demand the amount of all loss and damage which Lessor may suffer by reason of the termination of this Lease under this section, whether through inability to relet the upon satisfactory terms or otherwise. Notwithstanding any other remedy set forth in this Lease, in the event Lessor has made rent concessions of any type of character, or waived any base rent, and Lesee fails to take possession of the Leased Premises on the commencement or completion date or otherwise defaults at any time during the term of this Lease, the rent concessions including any waived base rent, shall be cancelled and the amount of the base rent or other rent concessions shall be due and payable immediately as is no rent concessions or waiver of any base rent had ever been granted.

A rent concession or waiver of the base rent shall nor relieve Lessee of any obligation to pay any other charge due and payable under this Lease including without limitation any sum due under Section 2.02. Notwithstanding anything contained in this Lease to the contrary, this Lease may be terminated by Lessor only by mailing or delivering written notice of such termination to Lessee, and no other actor omission of Lessor shall be construed as a termination of this lease.

ARTICLE 12
RELOCATION
Deleted in original

ARTICLE 13
DEFINITIONS

13.0 Definition

13.01 Abandon. "Abandon" means the vacating of all or a substantial portion of the LEASED PREMISES by Lessee, whether of not Lessee is in default of the rental payments due under this Lease.

13.02 Act of God or Force Majeur. An "act of God " or "force majeur" is defined for purposes of this Lease as strikes, lockouts sitdowns, material or labor restrictions by any governmental authority, unusual transportation delay, riots floods, washouts, explosions, earthquakes, fire, storms, weather (including wet grounds or inclement weather which prevents construction), acts of the public enemy, wars, insurrections and any other cause not reasonably within the control of Lessor and which by the exercise of due diligence Lessor is unable wholly or in part , to prevent or overcome.

13.03 Building or Project. "Building or Project" as used in this Lease means the building and /or project described in Section 1.02 including the LEASED PREMISES and the land upon which the building or project is situated.

13.04 Commencement Date. Completion Date shall be the date on which the improvements erected and to be erected upon the LEASED PREMISES shall have been completed in accordance with the plans and specification described in Article 6.00. The completion date shall constitute the commencement of the term of this Lease for all purposes, whether or not Lessee has actually taken possession.

13.05 Completion Date. "Completion date" shall be the date on which the improvements erected and to be erected upon the Leased Premises shall have been completed in accordance with the plans and specification described in Article 6.00. The completion date shall constitute the commencement of the term of this Lease for all purposes, whether or not Lessee has actually taken possession. Lessor shall use its best efforts to establish the completion date as the date set forth in Section 1.03. In the event that the improvements have not in fact been completed as of that date, Lessee shall notify Lessor in writing of its objections. Lessor shall have a reasonable time after delivery of the notice in which to take such corrective action as may be necessary and shall notify Lessee in writing as soon as it deems such corrective action has been completed and the improvements are ready for occupancy. Upon completion of construction. Lessee shall deliver the Lessor a letter accepting the Leased Premises as suitable for the purposes for which they are let, and the date of such letter shall constitute the commencement of the term of this Lease. Whether or not Lessee has executed such letter of acceptance, taking possession of the Leased Premises by Lessee shall be deemed to establish conclusively that the improvements have been competed in accordance with the plans and specification, are suitable for the purposes for which the Leased Premises are let and that the Leased Premises are in good and satisfactory condition as to the date possession was so taken by Lessee, except for latent defaults if any.

13.06 Square Feet. "Square Feet" as used in this Lease includes the area contained within the Leased Premises together with a common area percentage factor of the Leased Premises proportionate to the total building area.

ARTICLE 14

MISCELLANEOUS

14 Miscellaneous

14.01 Waiver. Failure of Lessor to declare an event of default immediately upon its occurrence, or delay in taking any action in connection with an event of default, shall not constitute a waiver of the default, but the Lessor shall have the right to declare the default at any item and take such action as is lawful or authorized under this one or more of the other remedies provided elsewhere in this Lease or provided by law, nor shall pursuit of any remedy constitute forfeiture or waiver if any rent f damaged according to Lessor by reason of the violation of any of the terms, provisions or covenants of this Lease. Failure by Lessor to enforce one or more of the remedies provided upon an event of default shall not be deemed or construed a waiver of the default or of any other violation or breach of any of the terms, provisions and covenants in this Lease.

14.02 Act of God. Lessor shall not be required to perform any covenant or obligation in this Lease, or be liable in damages to Lessee, so long as the performance or non-performance of the covenant of obligation is delayed, caused or prevented by an act of God, force majeure or by Lessee.

14.03 Attorney's Fees. In the event Lessee defaults in the performance of any of the terms covenants. Agreements or conditions contained in this Lease and Lessor places in the hands of an attorney the enforcement of all or any part of this Lease, the collection of any rent die or to become due, or recovery of the possession of the Leased Premises. Lessee agrees to pay Lessor's costs of collection, including reasonable attorney's fees for the services of the attorney, whether suit is actually filed or not.

14.04 Successors. This Lease shall be binding upon and inure to the benefit of the Lessor and Lessee and their respective heirs, personal representative, successors and assigns. It is hereby covenanted and agreed that should Lessor's interest in the LEASED PREMISES cease to exist for any reason during the term of this Lease, then notwithstanding the happening of such event this Lease nevertheless shall remain unimpaired and in full force and effect, and Lessee hereunder agrees to attorn to the then owner of the LEASED PREMISES.

14.05 Rent Tax. If applicable in the jurisdiction where the LEASED PREMISES are situated, Lessee shall pay and be liable for all rental, sales and use taxes or other similar taxes, if any, levied or imposed by any city, state, county or other governmental body having authority such payments to be in addition to all other payments required to be paid to Lessor by Lessee under the terms of this Lease. Any such payment shall be paid concurrently with the payment of the rent. Additional rent, operating expenses or other charges upon which the tax is based as set forth above.

14.06 Captions. The captions appearing in this Lease are inserted only as a matter of convenience and in no way define, limit, construe or describe the scope of intent of any section.

14.07 Notice. All rent and other payments required to be made by Lessee shall be payable to Lessor at the address set forth in Section 1.05. All payments required to be made by Lessor to Lessee shall be payable to the Lessee at the address set forth in Section1.05 or at any other address within the United States as Lessee may specify from time to time by written notice. Any notice or document required or permitted to be delivered by the terms of this Lease shall be deemed to be delivered (whether or not actually received) when deposited in the United States Mail, postage prepaid, certified mail, return receipt requested, addressed to the parties at the respective address set forth in Section 1.05

14.08 Submission of Lease. Submission of Lease to Lessee for signature does not constitute a reservation of space or an option to lease. This Lease is not effective until execution by and delivery to both Lessor and Lessee.

14.09 Corporate Authority. If Lessee executes this Lease as a corporation, each of the persons executing this Lease on behalf of Lessee does hereby personally represent and warrant that Lessee is a duly authorized and existing corporation, that Lessee is qualified to do business in the state in which the LEASED PREMISES are located, that the corporation has full right and authority to enter into this Lease and that each person signing in behalf of the corporation is authorized to do so. In the event any representation or warranty is false, all persons who execute this Lease shall be liable, individually, as Lessee.

14.10 Severability. In any provision of this Lease or the application thereof to any person or circumstance shall be invalid or unenforceable to any extent, the remainder of this Lease and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

14.11 Lessor's Liability. If Lessor shall be in default under this Lease and, if as a consequence of such default, Lessee shall recover a money judgment against Lessor such judgment shall be satisfied only out of the right, title and interest of Lessor in the building as the same may them be encumbered and neither Lessor not any person or entity comprising Lessor shall be liable for any deficiency. In no event shall Lessee have the right to levy execution agents any property of Lessor other than its interest in the building as herein expressly provided.

14.12 Indemnity. Lessor agrees to indemnify and hold harmless Lessee from and against any liability or claim, whether meritorious or not, arising with respect to any broker whose claim arises by, through or on behalf of Lessee. If the Building is, at the execution hereof or at any time during the term hereof, subject to a mortgage or deed of trust, the Lessee agrees to give the holder thereof (the "Note Holder") written notice of each and every alleged default within ten (10) days after the time for cure thereof allotted to the Lessor under the forging subparagraph or within such longer period as may be reasonably necessary if such default cannot be cured within such (10) days. The Tenant understands that the Note Holder shall have the right but not the obligation or duty to cure any such default by the Lessor.

14.13 Hazardous Waste. Lessee shall not bring or allow any of its agents. Employees, contractors or invitees to bring, onto or about the Leased Premises or the Building, any Hazardous Materials. For purposes of this Lease, the term "Hazardous Materials" shall mean any one or more of the following: (a) any "hazardous waste" as defined by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 6901 et seq.), as amended from time to time, and regulations promulgated thereunder; (b) any "hazardous substance, as defined by the Comprehensive Environmental Response. Compensation and Liability Act 1980 (42 U.S.C. Section 9601 et seq.) ("CERCLA"), as amended from time to time and regulations promulgated thereunder' (c) any other substance, in a quantity which, by, any governmental rules, statutes or regulations, requires special handling or notification of any federal, state or local governmental entity in its collection, storage, treatment or disposal.

Each party herein shall immediately advise the other in writing, in the event such party becomes aware that there is located in or about the Leased Premises or the Building, or that such party or there lessee or any other person intends or may bring onto or about the Leased Premises or the Building any Hazardous Materials without being in full compliance of all governmental rules and regulations regarding Hazardously Materials. Each party herein shall save, hold harmless and indemnify the other form all claims, suits, and liabilities which may be brought as a result of the use, storage or transportation of any Hazardous Materials in our about the Leased Premises or the Building by such party, its agents. contractors or invitees.

ARTICLE 15

AMMENDMENT AND LIMITATION OF WARRANTIES

15.0 Entire Agreement. IT IS EXTRESSLY AGREED BY LESSEE, AS A MATERIAL CONSIDERATION FOR THE EXECUTION OF THIS LEASE, THAT THIS LEASE, WITH THE SPECIFIC REFERNCES TO WRITTEN EXTRINSIC DOCUMENTS. is THE ENTIRE AGREEMENT OF THE PARTIES;

THAT THERE ARE, AND WERE, NO VERBAL REPRESENTATIONS, WARRANTIES, UNDERSTANDINGS, STIPULATIONS. AGREEMENTS OR PROMISES PERTAINING TO THIS LEASE OR TO THE EXPRESSLY MENTIONED WRITTEN EXTRINSIC DOCUMENTS, IS NOT INCORPERATED IN WRITING IN THIS LEASE.

15.02 Amendment. THIS LEASE MAY NOT BE ALTERED. WAIVED AMENDED OR EXTEDNED EXCEPT BY AN INSTRUMENT IN WRITING SIGNED BY LESSOR AND LESSEE.

15.03 Limitation of Warranties. LESSOR AND LESSEE EXPRESSLY AGREE THAT THERE ARE AND SHALL BE NO IMPLIED WARRANTIES OF MERCHTABILITY, HABITABILITY, FITNSS FOR A PARTICULAR PURPOSE OR OF ANY OTHER KIND ARISING OUT OF THIS LEASE, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THIS EXPRESSLY SET FORTH IN THIS LEASE.

ARTICLE 16

OTHER PROVISIONS

16.0 Other Provisions

Lessor's Contribution Towards Lessee's improvements. If, during the first twelve (12) months of the term of the lease. Lessee recarpets and repairs the office portion of the Leased premises when upon the satisfactory completion of the work and receipt by Lessor of copies of invoices for this work that have been paid by Lessee. The Lessor shall reimburse the Lessee for the cost of the work to recarpet and repaint the Leased Premises up to a maximum contribution of Lessor of Three Thousand Five hundred and 00/100 Dollars (3,500.00). This reimbursement by Lessor shall be in the form of a credit against the next months Base Rent due from Lessee

If within the first twelve (12) months of the Lease, Lessee desires to make alterations to the Premises in accordance with Section 6.02 of this Lease, and these alterations require the purchase and installation of a new HVAC rooftop unit and receipt by Lessor of copies of invoices for this work that have been paid by Lessee, the Lessor shall reimburse the Lessee an amount equal to seventy percent (70%)of the cost of the HVAC rooftop unit up to a maximum contribution of Lessor of Four Thousand Five Hundred and 00/100 dollars (4,500,00). This reimbursement by Lessor shall be in the form of a credit against the next months' Base Rent due from Lessee.

ARTICLE 17

SIGNATURES

17.0 Signatures

LESSOR:	LESSEE:
COMMERCE SQUARE ASSOCIATES L.L.C.	I.E.S. ELECTRONICS INDUSTRIES U.S.A.,
A Colorado Limited liability Company	INC., a Delaware corporation
By: ______________________	By: ______________________
Name:	Name: David Spitz

Title: Manager   Title: President and CEO
Date: 09/27/97   Date: 09/26/97

EXHIBIT A - Rules and Regulations

RULES AND REFULATIONS

1. Lessor agrees to furnish Lessee two keys without charge. Additional keys will be furnished at a nominal charge. Lessee shall not change locks or install additional locks in doors without prior written consent of Lessor. Lessee shall not make or cause to be made duplicates of keys procured from Lessor without prior approval of Lessor. All keys to Leased Premises shall be surrendered to Lessor upon termination of this Lease.

2. Lessee will refer all contractors, contractor's representatives and installation technician rendering any services on or to the LEASED PREMISES for Lessee to Lessor for Lessor's approval before performance of any contractual service. Lessee's contractors and installation technicians shall comply with Lessor's rules and regulations pertaining to construction and installation. This provision shall comply with Lessor's rules and regulations pertaining to construction and installation. This provision shall apply to all work performed on or about the Leased Premises or project, including installation of telephones. Telegraph equipment, electrical devices and attachments and installations of any nature affecting floors, walls, woodwork, trim, windows, ceilings and equipment or any other physical portion of the Leased Premises or project

3. Lessee shall not at any time occupy any part of the OP or project as sleeping or lodging quarters.

4. Lessee shall not place, install or operate in the Leased Premises or in any part of the building any engine, stove or machinery, or conduct mechanical operations or cook thereon or therein, or place or use in or about the Leased Premises or project any explosives, gasoline, kerosene, oil, acids, caustics, or nay flammable explosive or hazardous material without written consent.

5. Lessor will not be responsible for lost or stolen personal property, equipment, money or jewelry from the Leased Premises or the project regardless of whether such loss occurs when the area is locked against entry or not.

6. No dogs, cats, fowl or other animals shall be brought in or about the Leased Premises or project.

7. Employees of Lessor shall not receive or carry messages for or to any Lessee to other person or contract with or render free or paid services to any Lessee or to any of Lessee's agents, employees or invitees.

8. None of the Parking, plaza recreation or lawn area, entries, passages, doors, elevators, hallways or stairways shall be blocked or obstructed or any rubbish, litter, trash, or material of any nature placed, emptied or thrown into these areas or such area used by Lessee's agents, employees or invitees at any time for purposes inconsistent with their designation by Lessor.

9. The water closets and other water fixtures shall not be used for any purpose other that those for which they were constructed, and any damage resulting to them from noise or by the defacing or injury of any party of the building shall be borne by the person who shall occasion it. No person shall waste water by interfering with the faucets or otherwise.

10. No person shall disturb occupants of the building by the use of any radios, record players, tape recorders, musical instruments, the making unseemly noises or any unreasonable use.

11. Nothing shall be thrown out of the windows of the building or down the stairways or other passages.

12. Lessee and its employees, agents and invitees shall park their vehicles only on those parking areas designated by Lessor. Lessee shall furnish Lessor with state automobile license numbers of Lessee's vehicles and its employees' vehicles within five (5) days after taking possession of the Leased Premises and shall notify Lessor of any changes within five (5) days after such change occurs. Lessee shall not leave any vehicle in a state of disrepair (including without limitation, flat tires, out of date inspection stickers or license plates) on the Leased Premises or project. If Lessee or its employees, agents or invitees park their vehicles in

areas other than the designated parking areas or leave any vehicle in a state of disrepair, Lessor after giving written notice to Lessee of such violation, shall have the right to remove such vehicles at the Lessee's expense.

13. Parking in a parking garage or area shall be in compliance with all parking rules and regulations including any sticker or other identification system established by Lessor. Failure to observe the rule and regulations shall terminate Lessee's right to use the parking garage or area and subject the vehicle in violation of the parking rules and regulations or removal and impoundment. No termination of parking privileges or removal of impoundment of a vehicle shall create any liability on Lessor or be deemed to interfere with Lessee's right to possession of its Leased Premises. Vehicles must be parked entirely within the stall lines and all of its directional signs, arrows and posted speed limits must be observed. Parking is prohibited in areas not striped for parking, in aisles, where "No Parking" signs are posted, on ramps, in cross hatched areas, and in other areas as may be designated by Lessor. Parking stickers or other forms of identification supplied by Lessor shall remain the property of Lessor and not the property of Lessee and are not transferable. Every person is required to park and lock his vehicle. All responsibly of damage to vehicles or persons is assumed by the owner of the vehicle or its driver

14. Movement on or out of the building of furniture or office supplies and equipment, or dispatch or receipt by Lessee of any merchandise or or materials which requires use of elevators or stairways, or movement throughout the building entrances or lobby shall be restricted to hours designated by Lessor. All such movement shall be under supervision of Lessor and carried out in the manner agreed between Lessee and Lessor by prearrangement before performance. Such prearrangements will include determination by Lessor of time, method, prohibit any article, equipment or any other item from being brought into the building Lessee assumes, and shall indemnify Lessor against, all risks and claims of damage to persons and properties arising in connection with any said movement.

15. Lessor shall not be liable for any damages from the stoppage of elevators for necessary or desirable repairs or improvements or delays of any sort of duration in connection with the elevator service.

16. Lessee shall not lay floor covering within the Leased Premises without written approval of the Lessor. The use of cement or other similar adhesive materials in not easily removed with water is expressly prohibited.

17. Lessee agrees to cooperate and assist Lessor in the prevention of canvassing, soliciting and peddling within the building or project.

18. Lessor serves the right to exclude from the building or project between the hour of 6:00 p.m. and 7:00 a.m. on weekdays and at all hours on Saturday, Sunday and legal holidays, all persons who are not known to the building or project security personnel and who do not present a pass to the building signed by the Lessee. Each Lessee shall be responsible for all persons for whom he supplied a pass.

19. It is Lessor's desire to maintain in the building or project the highest standard of dignity and good taste consistent with comfort and convenience for Lessee's. Any action or condition not meeting this high standard should be reported directly to Lessor. Your cooperation will be mutually beneficial and sincerely appreciated. Lessor reserves the right to make such other and further reasonable rules and regulations as in its judgment may from time to time be necessary, for the safety, care and cleanliness of the LEASED PREMISES and for the preservation of good order therein.

Exhibit B - Description of the Leased Premises

DESCRIPTION OF THE LEASED PREMISES

Suite 110 - 5,700 square feet

8250 Park Meadows Drive
Lone Tree, Colorado 80124

(Graphic image omitted)

Exhibit C - Work Letter

WORK LETTER

The Exhibit C is dated September 24, 1997 between COMMERCE SQUARE ASSOCIATES L.L.C., a Colorado limited liability company ("Landlord") and I.E.S. ELECTRONICS INDUSTRIES U.S.A. INC., a Delaware corporation ("Tenant").

1. This Exhibit C is attached to and forms a part of that certain commercial lease agreement dated September 24, 1997, (the "Office Lease") pursuant to which Landlord has leased to Tenant office space in the building located t 8250 Park Meadows Drive, Lone Tree, Colorado 80124 (the "Building").

2. Tenant agrees to accept the Premises in its current "as is" condition.

This Exhibit C is executed by Landlord and Tenant below:

LANDLORD:	TENANT:
COMMERCE SQUARE ASSOCIATES L.L.C.	I.E.S. ELECTRONICS INDUSTRIES U.S.A.,
A Colorado Limited liability Company	INC., a Delaware corporation
By: -------------------------------------	By: ----------------------------------
Name:	Name: David Spitz
Title: Manager	Title: President and CEO
Date: 09/27/97	Date: 09/26/97

Exhibit D - Agreement for Signage

AGREEMENT FOR SIGNAGE

THIS AGREEMENT FOR SIGNAGE is dated this 24th day of September, 1997 between COMMERCE SQUARE ASSOICATES L.L.C. a Colorado limited liability company, (the "Landlord") and I.E.S. ELECTRONIC INDUSTIRES U.S.A., INC., a Delaware corporation (the "Tenant")

W I T N E S S E T H

A. By Commercial lease agreement dated September 24, 1997, Landlord leased to Tenant certain space located at 8250 park Meadows Drive, Lone Tree, Colorado 80124.

B. Landlord is willing to provide signage to Tenant pursuant to the terms and conditions contained herein.

NOW, THEREFORE, the parties agree as follows:

1. Building standard identification showing the Tenant's name and suite number will be displayed on the entry door. This building standard identification will be provided by the Landlord at the Landlord's expense upon written request by the Tenant. Any additional suite and/or building signs will be at Tenant's expense and will be consistent with existing building signage and will require the prior written approval of Landlord which will not be unreasonably withheld.

2. Default. Tenant shall be in default under this Agreement upon the occurrence of any of the following events:

2.1 Tenant is in default for any reason pursuant to the terms and conditions of the Commercial Lease Agreement

3. Remedies. Upon the occurrence of ay event of default, Landlord shall be entitled to declare this Agreement terminated, to terminate the rights of Tenant to utilize the signage, and seek whatever damages Landlord may deem reasonable and proper including, without limitation, its fees and expenses (including attorney's fees) incurred in pursing such action.

IN WITNESS WHEREOF, the Landlord and Tenant have executed this statement on the date above written.

LANDLORD: COMMERCE SQUARE ASSOCIATES L.L.C. A Colorado Limited liability Company	TENANT: I.E.S. ELECTRONICS INDUSTRIES U.S.A., INC., a Delaware corporation
By: -------------------------------------	By: ---------------------------------
Name:	Name: David Spitz
Title: Manager	Title: President and CEO
Date: 09/27/97	Date: 09/26/97

Exhibit E - Agreement for Parking

AGREEMENT FOR PARKING

This AGREEMTN FOR PARKING is dated this 24th day of September, 1997 between COMMERCE SQUARE ASSOCIATES L.L.C., a Colorado limited liability company, ("Landlord') and I.E.S. ELECTRONICS INDUSTRIES U.S.A. INC., a Delaware corporation ("Tenant").

W I T N E S S E T H

A. By commercial lease agreement dated September 24th 1997, Landlord, leased to Tenant certain office building space located at 8250 Park Meadows Drive, Lone Tree, Colorado 80124 (the "Building").

B. Appurtenant to the Building are uncovered parking spaces. Tenant desires to lease from Landlord parking spaces in said areas.

C. Landlord is willing to let certain parking spaces to Tenant pursuant to the terms and conditions contained herein.

NOW, THEREFORE, the parties agree as follows:

1. Lease of Parking Spaces. Landlord herby leases to Tenant eleven (11) parking spaces located in the parking area adjacent to and around the building. Said Lease shall be for a period concurrent with the term of the Lease.

2. Nonexclusive. This Lease creates a license to utilize the parking spaces above-referenced. It is not a Lease of specific parking spaces and no parking spaces shall be reserved for the use of the Tenant.

3. Operation of Parking Spaces. Tenant agrees to comply with all rules and regulations imposed by Landlord for the operation, utilization and maintenance of the parking spaces. Tenant shall not undertake any activity, which will increase Landlord's insurance or create a disturbance or waste to the parking spaces. Landlord shall have the right, at any time and from time to time by written notice to Tenant, to designate specific

parking spaces for use by Tenant, its agents, employees and invitees, in which case Tenant shall use, and shall require its agents, employees and invites, in which case Tenant shall use, and shall require its agents, employees and invites to use only such spaces.

4. Default. Tenant shall be in default under this Agreement upon the occurrence of any of the following events:

4.1 Failure to pay the rental described herein when due

4.2 Tenant in its default for any reason pursuant to the terms and conditions of the Office Lease.

5. Remedies. Upon the occurrence of an event of default, Landlord shall be entitled to declare this Agreement terminated, to terminate the rights of Tenant to utilize the parking spaces, and seek whatever damages Landlord may deem reasonable and proper including, without limitation, its fees and expenses (including attorney's fees) incurred in pursuing such action.

IN WITNESS WHEREOF, the Landlord and Tenant have executed this statement on the date above written.

LANDLORD:	TENANT:
COMMERCE SQUARE ASSOCIATES L.L.C.	I.E.S. ELECTRONICS INDUSTRIES U.S.A.,
A Colorado Limited liability Company	INC., a Delaware corporation
By: -------------------------------------	By: ---------------------------------
Name:	Name: David Spitz
Title: Manager	Title: President and CEO
Date: 09/27/97	Date: 09/26/97

Exhibit F - Commencement Letter

COMMENCEMENT OF LEASE TERM AND ESTOPPEL CERTIFICATE

THIS COMMENCEMENT OF LEASE TERM AND ESTOPPEL CERTIFICATE dated this 24th day of September, 1997, by and between COMMERCE SQUARE ASSOCIATES L.L.C., a Colorado limited liability company, ("Landlord"), whose address is 455 Sherman Street, suttee 140, Denver, Colorado 80203 and I.E.S. ELECTRONICS INDUSTIRES U.S.A. INC,. a Delaware corporation (the "Tenant") whose address is 8250 Park Meadows Drive, Suite 110, Lone Tree, Colorado 80124.

W I T N E S S E T H

WHEREAS, the landlord and Tenant, entered into a commercial lease agreement dated September 24, 1997, (the Lease") which lease demised the Premises located at 8250 Park Meadows Drive, Lone Tree, Colorado 80124, described in Exhibit B to the Lease.

WHEREAS, the parties desire to reaffirm and/or amend and certify to certain provisions of the Lease; and WHEREAS, the parties desire that the matters set forth herein be conclusive and binding on the parties

NOW, THEREFORE, for a good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. The Lease Commencement Date is deemed and agreed to be October 1, 1997, and the Lease Termination Date is agreed and deemed to be September 30, 2000, unless sooner terminated, as provided therein.

2. Tenant's first installment of Base Rent in the amount of Three Thousand Eight Hundred and 00/100 Dollars ($3,800.00) for the month of October, 1997 is due upon execution of the Lease.

3. Tenant's first installment of Tenant's Pro Rate Share of Operating Expenses in the amount of One Thousand Four Hundred One and 25/100 Dollars ($1,401.25) for the month of October, 1997 is due upon execution of the Lease.

4. Tenant Security Deposit of Three Thousand Eight Hundred and 00/100 Dollars ($3.800.00) is due upon execution of the Lease.

5. By execution hereof, Tenant acknowledges and agrees that all improvements or work required of Landlord has been satisfactorily performed.

6. Except as may be amended herein, all terms and conditions of the lease shall continue in full force and effect and are hereby republished and reaffirmed in their entirety.

7. This Certificates shall be binding upon and may be relied upon by the parties hereto and their respective legal representatives, successors and assigns.

IN WITNESS WHEREOF, the Landlord and Tenant have executed this statement on the date above written

LANDLORD:	TENANT:
COMMERCE SQUARE ASSOCIATES L.L.C.	I.E.S. ELECTRONICS INDUSTRIES U.S.A.,
A Colorado Limited liability Company	INC., a Delaware corporation
By: -------------------------------------	By: ---------------------------------
Name:	Name: David Spitz
Title: Manager	Title: President and CEO
Date: 09/27/97	Date: 09/26/97

Exhibit 10.69.2

FIRST AMENDMENT TO LEASE

(]I.E.S. Electronics Industries U.S.A. , Inc., Parkway Point)

THIS FIRST AMENDMSENT TO LEASE ("Amendment") is dated effective as of May1, 2000, by and between Principle Life Insurance Company, Iowa Corporation ("Lessor"), and I.E.S. Electronics Industries U.S.A., Inc., a Delaware corporation (Lessee).

RECITALS:

WHEREAS, Lessor and Lessee entered into that certain Commercial Lease Agreement dated September 24,1997 ("Lease"), pertaining to the premises currently comprised of a total of approximately 5,700 rentable square feet of space (`Original Leased Premises") located at 8250 Park Meadows Drive, Suite 110, Lone Tree, Colorado, in the building commonly referred to as Parkway Point ("Building"); and

WHEREAS, Lessor and Lessee desire to enter into this Amendment to extend the term of the Leasee, expand the area of the Leased Premises, establish the terms of a right o offer and renew option, and provide for certain order matters as more fully set forth herein;

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants contained herein, the parties agreed that the Lease shall be amended in accordance with the terms an conditions set forth below.

1. Definitions

(a) Generally. The capitalized terms used herein shall have the same definition as set forth in the Lease, unless otherwise defined herein.

(b) Expansion Premises. The term "Expansion Premises" is hereby defined to be and to mean that certain space located on the first floor of the Building commonly referred to as Suite 100, consisting of approximately 3,200 rentable square feet of space, as outlined on Exhibit A attached hereto and incorporated herein by this reference.

(c) Expansion Commencement Date. The term "Expansion Commencement Date" is hereby defined to be and to mean May 1, 2000.

(d) Adjusted Leased Premises. The term "Adjusted Leased Premises" is hereby defined to be and to mean the Original Leased Premises and the Expansion Premises collectively. Effective as of the Expansion Commencement Date, the Adjusted Leased Premises shall be the Leased Premises, as defined in Section 1.02 of the Lease. The Adjusted Leased Premises consists of a collective total approximately 8,900 rentable square feet of space.

(e) Expansion Term. The term "Expansion Term" is hereby defined to be and to mean that period of time commencing on the Expansion Commencement Date and expiring contemporaneously with the Lease on the Renewal Expiration Date.

(f) Renewal Commencement Date. The term "Renewal Commencement Date" is hereby defined to be and to mean October 1, 2000.

(g) Renewal Expiration Date. The Term "Renewal Expiration Date" is hereby defined to be and to mean September 30, 2005.

(h) Renewal Term. The term "Renewal Term" is hereby defined to be and to mean that period of five (5) years commencing on the Renewal Commencement Dated and expiring on the Renewal Expiration Date.

2. Renewal. The parties hereby acknowledge and agree that the initial term of the Lease expires on September 20, 2000. However, Lessor and Lessee desire to extend the term of the Lease on the terms and conditions set forth herein. Accordingly, subject to the terms and conditions set forth in this Amendment, the term of the Lease is hereby extended for the Renewal Term.

3. Expansion of the Original Leased Premises. Effective on the Expansion Commencement Date, Lessor hereby leases to Lessee and Lessee herby leases from Lessor, on the terms and conditions set forth in the Lease and herein, the Expansion Premises. Lessee hereby accepts the Expansion Premises in its present "as is" condition.

4. Monthly Base Rental. During the Expansion Term, Lessee shall pay to Lessor Base Rent for the Leased Premises in the total amount of approximately Five Hundred Thirty-Nine Thousand Six Hundred Thirty Three and 39/100ths Dollars

($539,633.39) payable in monthly installments as follows:

<TABLE>
<CAPTION>

EXPANSION PREMISES

Dates	Base rent for Period	Monthly Base Rental
<S>	<C>	<C>
5/1/00 - 9/30/00	$13,333.35	$2,666.67
10/1/00 - 9/30/01	$32,000.04	$2,666.67
10/1/01 - 9/30/02	$34,400.00	$2,866.67
10/1/02 - 9/30/03	$35,200.00	$2,933.33
10/1/03 - 9/30/04	$39,200.00	$3,266.67
10/1/04 - 9/30/05	$41,600.00	$3,466.67

ORIGINAL Leased Premises

Dates	Base rent for Period	Monthly Base Rental
5/1/00 - 9/30/00	$19,000.00	$3,800.00
10/1/00 - 9/30/01	$57,000.00	$4,750.00
10/1/01 - 9/30/02	$61,275.00	$5,106.25
10/1/02 - 9/30/03	$62,700.00	$5,225.00
10/1/03 - 9/30/04	$69,825.00	$5,818.75
10/1/04 - 9/30/05	$74,100.00	$6,175.00

</TABLE>

Except as otherwise expressly set forth herein, Base Rent shall be payable pursuant to the terms and conditions of the Lease.

5. Lessee's Prorata Share. Beginning on the Expansion Commencement Date, Lessee's prorata share of operating expenses, as set forth in section 2.02 of the Lease, shall be increased from 6.31% to 9.865%.

6. Lessee's Parking Spaces. The number of parking spaces, as set forth in Section 1 of Exhibit E of the Lease, shall be increased from eleven (11) to twenty (20) undesignated parking spaces on the Expansion Commencement Date.

7. Improvements and Allowance. Lessor shall contribute to any improvements to the Leased Premises Lessee desires to make in accordance with the terms and conditions of the Lease, including without limitation, Article 6 thereof, in an amount equal to the lesser of Twenty-Two Thousand Two Hundred Fifty No/100ths Dollars ($22,250.00) or the actual cost of such improvements ("Allowance"). Lessor shall pay the Allowance, or applicable Lien waivers, as built drawings, paid invoices, certificates

of occupancy and such other evidence as Lessor may reasonably require. Lessee shall not make more than one request for any portion of the Allowance during any thirty (30) day period. Any such requests for the Allowance must be given to Lessor in writing prior to October 1, 2002.

8. Lessee's Right of Offer for Expansion Space

(a) Expansion Space. The term "Offer Space" is hereby defined to mean that space contiguous to the Leased Premises containing approximately 10,275 rentable square feet commonly referred to as Suite 150 and as depicted on Exhibit B, attached hereto and incorporated herein by this reference. If at any time during the initial three (3) years of the Expansion Term, Lessor desires to accept an offer to lease all or any portion of the Offer Space, Lessor shall give Lessee prior written notice ("Offer Space Notice") of such event. Within five (5) business days after the date the Office Space Notice is given to Lessee, the time of giving of such notice to be of the essence of this Section, Lessee shall give Lessor written notice ("Offer Acceptance Notice") of its election to lease the entire Office Space.

(b) Amendment After receipt of any such Offer Acceptance Notice, Lessor and Lessee shall enter into an amendment to the Lease acceptable to Lessor and Lessee to provide that from and after the offer space Commencement Date (as defined below), the Lease shall be deemed modified as follows:

(1) The term "Leased Premises" shall be deemed to include the Offer Space.

(2) Base Rent payable for the Offer Space shall be equal to the prevailing Market Rental Rate, as calculated in accordance with Subsections (c) and (d) below, but in not event less than the Monthly Base Rent in effect from time-to-time applicable

to the Leased Premises on per-square foot basis;

(3) Lessee's prorata share of operating expenses as set forth in Section 2.02 of the Lease, shall be amended to reflect the increase in the area of the Leased Premises, as reasonably calculated by the Lessor;

(4) Lessee shall accept the Offer Space "as is"; and

(5) The Offer Space Commencement Date shall be thirtieth (30th) day following Lesor's receipt of Offer Acceptance Notice.

Except as set forth above, the terms and conditions of the Lease as they apply to the Leased Premises shall govern Lessee's lease of the Offer Space.

(c) Broker Determination. No later than five (5) business days following Lessor's receipt of the Offer Acceptance Notice, Lessor and Lessee shall meet in an effort to negotiate, in good faith, the market Rental Rate applicable to the offer Space as of the date of the Offer Acceptance Notice. If Lessor and Lessee have not agreed upon the Market Rental Rate applicable to the Leased Premises within such five (5) day period, then Lessor and Lessee shall attempt to agree in good faith, upon a single broker not later than ten (10) days following Lessor's receipt of the offer Acceptance Notice who shall determine the market Rental Rate for the Offer Space. If Lessor and lessee are unable to agree upon a single broker within such time period, then Lessor and Lessee shall each appoint one broker not later than fifteen (15) days following Lessor's receipt of the Offer Acceptance Notice. Not later than twenty (20) days following Lessor's receipt of the Offer Acceptance Notice the two appointed brokers shall appoint a third broker. If either Lessor or Lessee fails to appoint a broker within the prescribed time period, the single broker appointed shall determine the Market rental Rate. If both parties fail to appoint brokers with the prescribed time periods, then the first broker thereafter selected by a party shall determine the Market Rental Rate. Otherwise, the Market Rental Rate shall be the arithmetic average of two (2) of the three (3) determinations which are the closest in amount, and the third determination shall be disregarded. Lessor and Lessee shall instruct the brokers to complete their determination of the Market Rental Rate not later than thirty (30) days following Lessor's receipt of the Offer Acceptance Notice. Each party shall bear the costs of its own broker, and the parties shall share equally the cost of the single or third broker if applicable. Each broker shall have at least five (5) year's experience in the leasing of commercial office buildings in the submarket in which the Building is located and shall be a licensed real estate broker.

(d) Market Rental Rate For the purposes of this Section 8 only, the term "Market Rental Rate" per square foot of area shall mean the annual rate of Monthly Base Rent reasonably determined to be the prevailing market rental rate in the submarket in which the Building is located for comparable office space for terms commencing on or about the Offer Space Commencement Date and shall take into its consideration (i) the duration of the term for which such space is being leased, (ii) location within the applicable building, (iii) when the applicable first rate becomes effective, (iv) other concessions customarily given to other tenants including, without limitation, rent abatement and tenant improvement allowances, but assuming the leasing of the space is "as is" on the Offer Space Commencement Date, and (v) other comparable factors. Bona Fide written offers to lease comparable space in the Building received by lessor from third parities (at arm's length) and consummated between Lessor and such third party within six (6) months prior to the date of the Offer Acceptance Notice may be used by Lessor or Lessee as an indication of the Market Rental Rate. The components of the market Rental Rate may include, among other

items, the components of rent, periodic adjustments or additions to a fixed Monthly Base Rent upon a share of real estate taxes and other expenses and increases to adjust for inflation then customary in the submarket in which the Building is located.

(e) Failure to Exercise. In the event that Lessee fails to exercise its right as aforesaid within five (5) business days of the date of the Offer Space Notice is given to Lessee or, in the event Lessee shall have exercised its right and Lessee shall not have executed an amendment of the ease as aforesaid within five (5) business days from the date of the Lessee is given such an Amendment, Lessee shall be deemed to have waived its right under this Section with respect to the Offer Space.

(f) Subordination Lessee's right to offer granted hereunder shall be subordinate to any and all existing rights or interests conferred to other tenants for all any portion of the offer Space, as contained in any lease, or otherwise, in effect on the date of execution of the Lease including without limitation, (i) options or right regarding renal, extensions or expansion, (ii) subleases and (iii) assignments.

(g) Not Transferable. Lessee acknowledges and agrees that any right of offer granted herein shall be deemed personal to Lessee subleases, assigns or otherwise transfers any interests under the Lease prior to the exercise of any right to offer granted under this Section, such right shall lapse and be of no other force or effect.

(h) No Default. Lessee may exercise its right under this Section, and such an exercise shall be effective, only if at the time of Offer Acceptance Notice and on the Offer Space Commencement Date (i) the Lease is in full force and effect, (ii) Lessee is not in default of any applicable notice or the passage of time, would constitute such a default.

9. Extension Option. Any and all other rights under this Section, and such an exercise shall be effective, only if at the time of Offer Acceptance Notice and on the Offer Space Commencement Date (i) the Lease is in full force and effect, (ii) Lessee is not in default of any term or condition of the Lease, and (iii) no event has occurred, which, which, with the giving of any applicable notice or the passage of time, would constitute such a default.

(a) Extension Option. Subject to the provisions hereinafter set forth, Lessor hereby grants to Lessee an option ("Extension Option") to extend the Renewal Term on the same terms, conditions and provisions as contained herein, except as otherwise provided below, for one (1) additional period of five

(5) years ("Extension Term"), which Extension Term shall commence on October 1, 2005 ("Extension Commencement Date") and end on September 30, 2010 ("Extension Expiration Date")

(b) Extension Notice. The Extension Option shall be exercisable by written notice ("Extension Notice") from Lessee to Lessor of Lessee's election to exercise the Extension Option, which Extension Notice must be given no earlier than October 1, 2004 nor later than December 31, 2004. If Lessee fails to deliver to Lessor the Extension Notice within the prescribed time period, the Extension Option shall lapse and be forever waived.

(c) Base Rent During the Extension Term. Base Rent for the Leased Premises payable during the Extension Term shall be equal to the prevailing Market Rental Rate, as hereinafter defined, but in no event less than the Monthly Base Rent in effect immediately prior to the Extension Commencement Date.

(d) Broker Determination. No later than ten (ten) days following Lessor's receipt of the Extension Notice, Lessor and Lessee shall meet in an effort to negotiate, in good faith, the Market Rental Rate applicable to the Leased Premises. If Lessor and Lessee have not agreed upon the Market Rental Rate applicable to the Leased Premises within such (10) day period, then Lessor and Lessee shall attempt to agree, in good faith, upon a single broker, not later than fifteen (15) days following Lessor's receipt of the Extension Notice who shall determine the Market Rental Rate for the Leased Premises. If Lessor and lessee are unable to agree upon a single broker within such a time period, then Lessor and Lessee shall each appoint one broker not later than twenty (20) days following Lessor's receipt of the Extension Notice. Not later than twenty-five (25) days following Lessor's receipt of the Extension Notice, the two appointed brokers shall appoint a third broker. If either Lessor or Lessee fails to appoint a broker within the prescribed time period, the single broker shall determine the Market Rental Rate. If both parties fail to appoint brokers with the prescribed time periods, then the first broker thereafter selected by a party shall determine the Market Rental Rate. If a single is chosen, then such broker shall determine the market Rental Rate applicable to the Leased Premises. Otherwise, the Market Rental Rate shall be the arithmetic average of two (2) of the three (3) determinations which are the closest in amount, and the third determination shall be disregarded. Lessor and Lessee shall instruct the brokers to complete their determination of the Market Rental Rate not later than forty (40) days following Lessor's receipt of the Extension Notice. Each party shall bear the costs of its own broker, and the parties shall share equally the cost of the single or third broker if applicable. Each broker shall have at least five (5) years' experience in the leasing of commercial office buildings in the submarket in which the Buildings is located and shall be a licensed real estate broker.

(e) Market Rental Rate. For the purposes of this sections only, the term "Market Rental Rate" per square foot of area shall mean the annual rate Monthly Base Rent reasonably determined to be the prevailing market rental rate in the submarket in which the Building is located as determined by Lessor, for comparable office space for terms commencing on or about the Extension

Commencement Date and Shall take into its consideration (i) the duration of the term for which such space is being leased, (ii) location within the applicable building (iii) when the applicable rate first becomes effective, (iv) other concessions customarily given to other tenants including, without limitation, rent abatement and tenant improvement allowances, but assuming the leasing of the space "as is" on the Extension Commencement Date, and (v) other comparable factors. Bona fide written offers to lease comparable space in the Building received by Lessor from third parties (at arms's length) and consummated between Lessor and such third parties within six (6) months prior to the date of the Extension Notice may be used by Lessor or Lessee as an indication of the Market Rental Rate. The components of the Market Rental Rate may include, among other items, the components of rent, periodic adjustments or additions to a fixed Monthly Base Rent based upon a share of real estate taxes and other expenses and increases to adjust for inflation then customary in the applicable submarket.

(f) Amendment to Lease. If Lessee validly exercised the Extension Option, Lessor and Lessee shall enter into a written amendment to the Lease confirming the terms, conditions and provisions applicable to the Extension Term, as determined in accordance herewith, with such revisions to the rental provisions as may be necessary to conform such provisions to the Market Rental Rate.

(g) No Default. Lessee may exercise the Extension Option, and an exercise thereof shall be effective only if at the time of Lessee's exercise of the Extension Option and on the Extension Commencement Date (i) the Lease is in full force and effect, (ii) Lessee is not in default of any term or condition of the Lease and (iii) no event has occurred which, with the giving of any applicable notice or passage of time, would constitute such a default.

(h) Not Transferable. Lessee acknowledges and agrees that the Extension Option shall be deemed to be personal to Lessee and if Lessee subleases, assigns or otherwise transfers any interest hereunder prior to the exercise of the extension Option, such option shall lapse.

(i) No Commission Paid. Lessee hereby acknowledges and agrees that that Lessor shall have no liability to Lessee and/or any broker acting by, through or under Lessee for any brokerage commission or fee relating t the Extension Option.

10. Brokers. Lessee hereby represents and warrants to Lessor that Lessee has not dealt with any real estate brokers or leasing agents, except Trammwell Crow of Denver, Inc. (`Broker"), in the negotiations of this Amendment, and that no commissions are now payable to any party claiming through Lessee as a result of the consummation of the transaction contemplated by this Amendment, except to broker, if applicable. Lessee hereby agrees to indemnify and hold Lessor harmless from any and all loss, costs, damages or expenses, including, without limitation, all attorney's fees and disbursements by reason of any claim of or liability to any other broker, agent, entity, or person claiming through Lessee (other than Broker) and arising out of or in connection with the negotiation and execution of this Amendment.

11. Incorporation of Lease Terms. With the exception of those matters set forth in this Amendment, Lessee's leasing of the Leased Premises shall be subject to all terms, covenants and conditions of the Lease. In the event of any express conflict or inconsistency between the terms of this agreement and the terms of the Lease, the terms of this Amendment shall control and govern.

12. Relocating. Except as expressly modified by this Amendment, all other terms and conditions of the Lease are hereby ratified and affirmed.

13. Validity of Lease. The parities acknowledge that the Lease is a valid and enforceable agreement and that Lessee holds no claims against Lessor or its agents which might serve as the basis of any other set-off against accruing rent and other charges or any other remedy at law or equity.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, this First Amendment to Lease is dated effective as of the date and year first above written.

<TABLE>
<CAPTION>

Lessor:	Lessee:
<S>	<C>
PRINCIPAL LIFE INSURANCE COMPANY	I.E.S. ELECTRONICS INDUSTRIES

U.S.A., INC., a Delaware corporation

An Iowa Corporation

</TABLE>

By: Principal Capital Management, LLC
A Delaware limited company
Its authorized signatory

By: ____________________________________	By: ___________________________
Name: Doug Mintzle	Name: David Sitz
Its: Director	Its:

Exhibit A
(Expansion Premises)

8250 E Park Meadows Drive
Suite 100-110
8,8900 sq ft

[Graphic image omitted]

Exhibit B
(Offer Space)

8250 E Park Meadows Drive
Suite 100-110
8,8900 sq ft

[Graphic image omitted]

Exhibit 10.70

[ENGLISH SUMMARY OF THE HEBREW ORIGINAL]

AGREEMENT OF LEASE DATED DECEMBER 6, 2000
BETWEEN
JANET NISSIM ET AL.
AND
M.D.T. PROTECTIVE (2000) LTD.

Summary of a Rental Agreement made and entered into in Jerusalem on the 6th day of December 2000 between Janet Nissim and Moshe Plomo (the "Lessor") and M.D.T Protective (2000) Ltd. (the "Lessee").

1. Demised Premises. 1,150 square meters zoned for industrial, workshop and storage use from the Israel Lands Authority according to the agreement signed with them on June 3, 1991, as outlined in appendix A.

2. Rental Period. The rental period will be for a period of two years from March 6, 2001 until March 5, 2003 in accordance with the conditions set out in the agreement. The Lessee has the right to extend the rental period under the same conditions for an additional two years, which will automatically renew unless the Lessee sends a letter in writing to the Lessor 60 days before the end of the lease to cancel.

3. Rent. The rent for the contractual period will be $4,500 in equivalent New Israeli Shekels plus VAT per month, of which three months rent is payable in advance.

4. Renovations, Etc. The Lessor will be responsible for basic renovations in infrastructure such as sewage systems, water, and electricity. Lessor pays all purchase tax and/or any other taxes that are the legal responsibility of the owner. The Lessee pays all other taxes and all local authority fees during the rental period. The Lessor pays for the day-to-day upkeep of the building, such as water according to the meter and according to the industrial rate, electricity, etc., and will give copies to the Lessee for reimbursement.

5. Security Deposit. The Lessee will provide the Lessor with a letter of guarantee for $5,000,which will be held in escrow by Adv. Daniel Azriel and will not be used prior to a warning period of 15 days from the day of the breach.

6. Miscellaneous. All correspondence will be sent by registered mail, according to the addresses set out in this contract above and will be used for all legal transaction, warning, or warning or request which could arise out of this contract. Each side pays its own legal fees.

Exhibit 10.71

[ENGLISH SUMMARY OF THE HEBREW ORIGINAL]

AGREEMENT OF LEASE DATED AUGUST 22, 2001
BETWEEN
AVIOD BUILDING AND EARTHWORKS COMPANY LTD. ET AL.
AND
M.D.T. PROTECTIVE INDUSTRIES LTD.

Summary of a Rental Agreement made and entered into in Tel Aviv on the 27th day of August 2001 between Aviud Building and Earthworks Company Ltd et al. (the "Lessor") and M.D.T. Protective Industries Ltd. (the "Lessee").

1. Demised Premises. The section of land 1 and 2 in section 3990, found in the Northern Industrial Park, Lod, totaling 847 square meters.

2. Rental Period. The rental period will be for a period of 18 months from the date, starting on the date of exchange in according to the conditions set out in the agreement. The Lessee has the right to extend the rental period under the same conditions for an additional two 12-month periods, which will renew automatically, unless the Lessee sends a letter in writing to the Lessor 90 days before the end of the first rental period, before the end of the lease. Prior to the cessation of the relevant rental period the Lessee has to ensure that the guarantees that were given at the beginning of the period will cover the extended period. This includes post-dated checks for the rent. The Lessor agrees that it will release the property no later than 15 days from the date agreed

3. Rent. Rent payable for the contractual period is $5.313 (equivalent in New Israeli Shekels, based on the Bank of Israel exchange rate) per square meter ($4,500). In addition to the rent payable, the Lessee is obligated to pay all other taxes and all local authority fees during the rental period in addition to all amenities, water, gas, electricity etc. including insurance. The Lessee will also pay the management company should it exist and should payment to them be necessary.

4. Renovations, Etc. The Lessor is responsible for any basic renovations in infrastructure as outlined. The Lessee or their representative is obligated not to interfere with these works till they have been completed. The Lessee is responsible for all the internal renovations and plans shall be provided to the Lessor ahead of time for their approval.

5. Guarantees. The Lessee will provide the Lessor with a bank guarantee and a personal guarantee.

6. Miscellaneous. All correspondence will be sent according to the addresses set out in this contract above and will be used for all legal transactions, or warning or request which could arise out of this contract. Cancellation of the lease is 14 days ahead, whereby the Lessee informs the Lessor to remove itself from the building and return the property to the Lessor in each one of the following conditions: there is a breach of contract; the Lessor breached the contract and did not rectify the breach within the 14 day period; the Lessor or one of the parties dies or declares bankruptcy.

Exhibit 21

SUBSIDIARIES OF THE REGISTRANT

Name of Subsidiary	Jurisdiction
Electric Fuel (E.F.L.) Ltd.	Israel
Electric Fuel B.V.	Netherlands
Electric Fuel GmbH	Germany
Electric Fuel (UK) Ltd.	United Kingdom
Electric Fuel Transportation Corp.	Delaware
Instant Power Corporation	Delaware
IES Interactive Training, Inc.	Delaware
I.E.S. Defense Services, Inc.	Delaware
MDT Protective Industries	Israel

Exhibit 23

CONSENT OF INDEPENDENT AUDITORS

We consent to the reference to our firm under the caption "Selected Financial Data" and to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 33-81044, 333-19753, 333-59902, 333-74197 and 333-86728) (pertaining to the 1991 Qualified Stock Option Plan, the Amended and Restated 1993 Stock Option and Restricted Stock Purchase Plan, the 1995 Amended and Restated Non-Employee Director Stock Option Plan and the 1998 Non-Executive Employee Stock Option and Restricted Stock Purchase Plan) and Form S-3 (Nos. 333-95361, 333-33986, 333-37630, 333-45818, 333-49628, 333-59346, 333-63514, 333-99559, and 333-99673) of our report dated February 27, 2003 with respect to the consolidated financial statements of Electric Fuel Corporation for each of the three years included in the period ended December 31, 2002 included in this Annual Report (Form 10-K) for the year ended December 31, 2002.

/s/ Kost Forer & Gabbay

Kost Forer & Gabbay
A Member of Ernst & Young Global

Tel-Aviv, Israel
March 31, 2003

Exhibit 99.1

WRITTEN STATEMENT

In connection with the Annual Report of Electric Fuel Corporation (the "Company") on Form 10-K for the year ended December 31, 2002 filed with the Securities and Exchange Commission (the "Report"), I, Robert S. Ehrlich, Chairman, President and Chief Executive Officer of the Company, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that to my knowledge, the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement required by Section 906 has been provided to Electric Fuel Corporation and will be retained by Electric Fuel Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

By: /s/ Robert S. Ehrlich

Robert S. Ehrlich, Chairman,
President and CEO
(Chief Executive Officer)

Date: March 31, 2003

Exhibit 99.2

WRITTEN STATEMENT

In connection with the Annual Report of Electric Fuel Corporation (the "Company") on Form 10-K for the year ended December 31, 2002 filed with the Securities and Exchange Commission (the "Report"), I, Avihai Shen, Vice President - Finance and Chief Financial Officer of the Company, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that to my knowledge, the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement required by Section 906 has been provided to Electric Fuel Corporation and will be retained by Electric Fuel Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

By: /s/ Avihai Shen

Avihai Shen, Vice President -
Finance and CFO
(Chief Financial Officer)

Date: March 31, 2003