



ITT

Engineered for life

Interconnect Solutions History

Cannon, VEAM & BIW



www.ittcannon.com

Cannon, VEAM, BIW

A Historical Achievement of Technology Leadership

Defining and Championing Innovation

Showcasing a portfolio of creativity, ITT's "Engineered For Life" execution embraces products which have become ubiquitous in a broad collection of markets including: Military/Aerospace, Civil Aircraft, Industrial Instrumentation, Medical, Oil & Gas, Energy, Transportation, Telecom/Handsets, Computer, Consumer, and Automotive.

ITT's rich interconnect history embraces contributions to both technological breakthroughs and social movements. With one of the industry's broadest product offerings, ITT's interconnect products have supported:

- Every Free World space mission, bringing the universe to our doorstep,
- Motion Picture, radio, and television equipment, serving laughter and entertainment to millions,
- Commercial and military communications systems, linking the voices of the world,
- Computerized tools, reshaping the information highway,
- Aircraft, rapid transit, and automobiles, mobilizing our expanding society,
- Oil and natural gas production, powering the world's economies,
- Agricultural equipment, attacking the roots of world hunger.

1910s



The Beginning

Founded by James Cannon in 1915, First "Cannon Plug" 4 Pole Power Connector.

1920s



Power, Film, Commercial

Cannon Pioneers sound and film connectors with the M Series.

1930s



Aviation

Cannon creates "K" series connectors for DC-1's.

Cannon develops the first aviation circular and rack & panel connectors.

1940s



Military

Cannon creates "AN" military plugs.

Cannon innovates the first microminiature audio connector.

1950s



Telecom

Cannon originates the first "D-Sub" connectors.

Cannon pioneers guided missile umbilical connectors.

1960s



Space

Cannon develops the first "Micro" connectors.

Cannon creates the first complete fiber optic assemblies.

1970s



Medical, Transportation

Cannon establishes an aviation milestone through the expansion of Rack and Panel connectors with the BKAD/E Series.

Cannon's first entry into the Medical Electronics market.

1980s



Growth

- Market alignment
- Product optimization
- Plant modernization

1990s



Strategic Expansion

- Lean manufacturing
- Internet deployed systems
- Pioneering technologies
- Engineered solutions
- Commercial product expansion

2000+



Defining Innovation

ITT Interconnect Solutions' Cannon, VEAM and BIW expand their offering with a new portfolio of products.

Interconnect Solutions drives customer value through Technology Innovation and Product Differentiation.



Most company histories begin by looking backwards. At ITT, our Interconnect Solutions business has a history of looking forwards. That's because we understand that technology is ever evolving, for us and most importantly for our valued customers.

Our company was founded in 1915 as a small electrical specialty shop housed in a backyard shed. Since then, we've been honored to provide customers with connectors, interconnect systems, cable assemblies, I/O card kits, LAN components, and highly engineered custom solutions. Today, you know us by the brands Cannon, VEAM, BIW, and Sealectro. Plus, you recognize many of the products, originally innovated by ICS, as ubiquitous staples of the interconnect industry. We have a truly global presence with operations in Europe, Asia, and the Americas.

Interconnect Solutions is part of ITT, a \$11.6 billion diversified high-technology engineering and manufacturing company that serves customers in more than 50 countries.

Interconnect Solutions is proud to embrace ITT's core vision and values built on the three pillars of respect, responsibility, and integrity.

We hope you will enjoy this history book. We welcome the opportunity to continue serving you, our customers, with new products extending the timeline of Cannon history and stretching the boundaries of future discoveries.

1910s - The Cannon Beginning...



The year was 1915. The world was embroiled in the First World War. Aviation was in its infancy. Automobiles were just beginning to replace the horse and buggy. Telephones were not yet a household staple. The history of ITT Cannon was just the beginning.

In 1915 the late James H. Cannon opened a small electrical specialty shop on a shoestring budget. The original Cannon operation began in a subleased room in downtown Los Angeles, a location that now houses the Los Angeles Stock Exchange. The pressures of a wartime economy put the Cannon Electric Co. and its owner heavily into debt by 1918. Forced to cutback on expenses, Mr. Cannon borrowed \$100 from a friend to finance his company's move to a 15 by 16 foot shed in his backyard. The company remained there until 1926.



James H. Cannon, founder and first president of Cannon Electric was imbued with the spirit of a pioneer, a flair for mechanical invention and the perseverance to overcome obstacles in his pursuit of excellence.



From an inauspicious beginning in 1915, a small electrical specialty shop housed in a backyard shed evolved into one of the world's largest manufacturers of multi-contact electrical connectors.

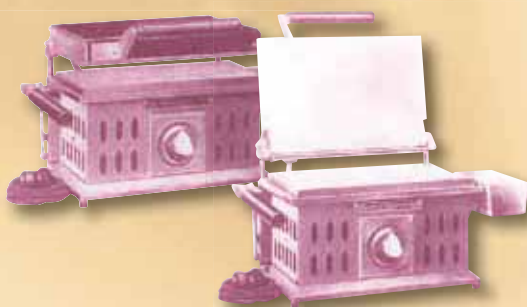
CANNON
PLUGS





The first years were basically an experiment in electronics. The variety of Cannon products included: a miniature automobile racetrack for an advertising agency display; an electric toaster; a seating board for theatres; a gas recorder for oil wells; an elapsed-time recorder for hospitals; a nurse call system; a foot-rail burglar alarm for banks; and a police/fire call box. During those years, Cannon built the first telegraphic fire system for the City of Los Angeles.

The first Cannon plug, the "M" type, was designed and built in 1923 for Young's Market Co. of Los Angeles as a quick method to ground the electrical motor on a portable meat grinder. Little did James Cannon know that his four-pole Cannon plug would become the catalyst for the revolutionary electronics industry. Nor did he foresee that a business, which started out as an extension of his hobby, would evolve into an international leader in electronic connectors and interconnect systems.



The Hot-'N-Hot toaster - a sandwich toaster used at lunchettes - was an early Cannon product and the first real money-maker for the fledgling company.



The first Cannon plug - a 4 pole, heavy duty cable connector - was designed and built in 1932 for Young's Market Company to transmit electricity to a portable meat grinder.



From the first "Cannon Plugs," the evolution of Cannon's design capability has provided over hundreds of thousands of connector configurations that have met and will continue to meet yesterday's, today's and tomorrow's application needs.



1920s - Cannon Plugs Aid in the Birth of the Entertainment Industry

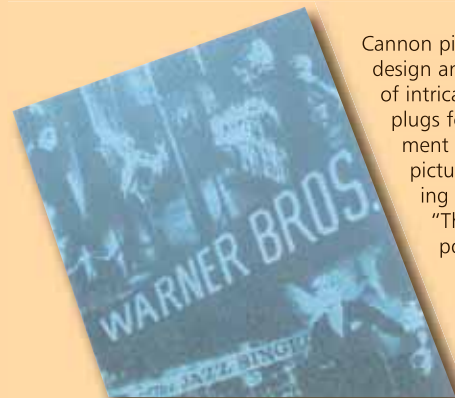
Hollywood has always been a source of fascination for the world but for Cannon that fascination became substance. The movie industry presented the first important application of the Cannon connector and opened the door to an association that has lasted over 80 years. James H. Cannon began developing equipment for "talkies" fifteen years before they became a reality. During that time he was successful in devising a synchronous motor drive for a motion picture projector and a phonograph, each remote from the other. The use of the M-1 connector permitted the new electrical camera to move freely about while "shooting" a scene.

When the movie studios began experimenting with sound pictures, they once again turned to Cannon Electric for help. Smaller versions of the M Series connectors were developed and incorporated in sound equipment used to make the first "talking" motion picture, "The Jazz Singer."

These audio connectors were soon followed by the "P" Series, developed for Paramount Studios. This series brought a giant step forward in plug design, incorporating many construction features still in use: diecast shells, molded pin inserts, and latch-locking devices.



When sound motion pictures went into production in the late 1920's, the M Series was used for synchronous motors, camera motors, flood-lights, microphone circuits and camera blimps.



Cannon pioneered the design and manufacture of intricate, multi-contact plugs for sound equipment for the motion picture studios, making the first talkie, "The Jazz Singer," possible.

Photo Courtesy of the Academy of Motion Picture Arts and Sciences



Soon Cannon Electric was supplying audio and video connectors to all emerging forms of entertainment. Cannon connectors made possible the first radio microphones, the first black-and-white television cameras as well as the first color television equipment. In fact, the use of Cannon connectors became so commonplace in the entertainment industry that the term "Cannon plug" became a generic term that is still used.

These early connector applications began a relationship between Cannon and the entertainment industry that remains strong today. The early Cannon connectors have spawned new generations of products that meet the needs of today's and tomorrow's sophisticated equipment, such as closed circuit television and teaching systems, audio visual communication circuits, radio controls, calculators, television sets, stereo equipment, video recorders, tape decks, and electronic games.



In the early days, Cannon designed and built signal annunciators and break glass fire alarms, many of which are still in use in Los Angeles hospitals and schools.



Type P-designed for Paramount Studios – was the first generation radio microphone plug, yet it is still used by many radio stations today. The Cannon name has become synonymous with audio connectors.



1930s - Cannon's Impact on Aircrafts

From boom to bust, that was the story in a nutshell of the American economy from the 1920's to the 1930's, Banks closing, massive unemployment, rampant business failures. Many of the companies that survived the Depression years did so on the determination of their owners and a little luck.

Cannon Electric was one of those survivors. At Cannon the early depression years of the 1930s were cushioned by a \$12 million signal equipment contract with the Los Angeles General Hospital in 1932 and by building speculative products that were never actually sold.

The year 1933 proved to be a historic year for both Cannon and the evolving aerospace industry. Out of the depths of the Depression came a market application that would keep Cannon afloat during the lean years and would outstrip all others in future revenues.

During that year, Cannon was contracted by Douglas Aircraft Company to develop connectors for use on the DC-1, the first of the large transports, and on the subsequent DC-2 and DC-3. One of Cannon's first aerospace customers, McDonnell Douglas Aircraft – as it became known – remained a key customer for Cannon throughout its existence as a separate company.

As another world war became imminent, airframe manufacturers began requesting Cannon connectors and the once-small company began volume production of multi-contact electrical connectors. In the late 1930s Lockheed requested similar connectors for 208 planes, which they were building for the British and French. By the end of 1939, every aircraft builder in the United States was using Cannon "plugs."



In 1931, the aircraft industry turned to Cannon for a quicker, cheaper and safer way to connect and disconnect scores of electrical wires, eliminating the need to solder and unsolder each wire.



Douglas' DC-1 contained an adaptation of Cannon's F Plugs – originally designed for Fox Studios. Subsequent DC models contained plugs specifically designed for aircraft with cable clamps replaced by threaded entries to accommodate flexible conduit.



Type "K" was a light weight aircraft plug used on commercial and military radios in the 1930s, as well as the first television cameras of the 1940s. A later version – the LKT – was used on the first color television equipment in the 1950s.



Type AF firewall connectors were one of several variations of Cannon's F connector (named for Fox Studios) that were used in the early DC-3 air transports. It is the grand daddy of hostile environment connectors.



Cannon's DP-dual panel connector was the first generation rack and panel plug, a forerunner to the industry's modern rack and panel connectors.



1940s - Answering the Call for Defense

As the world once again became embroiled in conflict and combat, U.S. industry was mobilized for the war effort. Cannon swiftly answered the U.S. government's call for national defense.

During the early 1940s, Cannon engineers developed the first Tri-Services connector – the AN Series – for Army and Navy aircraft. This design set the standard for military aircraft connections and is the father of modern day military specifications.

All corporate resources were diverted to meet the growing need of connectors by the Army, Air Force, Navy and Signal Corps. With labor in short supply, a predominately female workforce was recruited and trained to support the manufacturing volumes demanded by a wartime economy. They formed a tightly knit group dedicated to maximum productivity and supporting the U.S. war effort. In 1943, this team was awarded the first of several Army Navy E awards that Cannon would win.

The 1940s marked a period of rapid growth for Cannon Electric. Employment peaked at an all-time high and the physical plant underwent constant expansion. Operations spread to Canada, where a new subsidiary was formed to service the needs of the Canadian Armed Forces. In spite of this rapid development, the family feeling that had dominated Cannon's corporate culture remained strong.


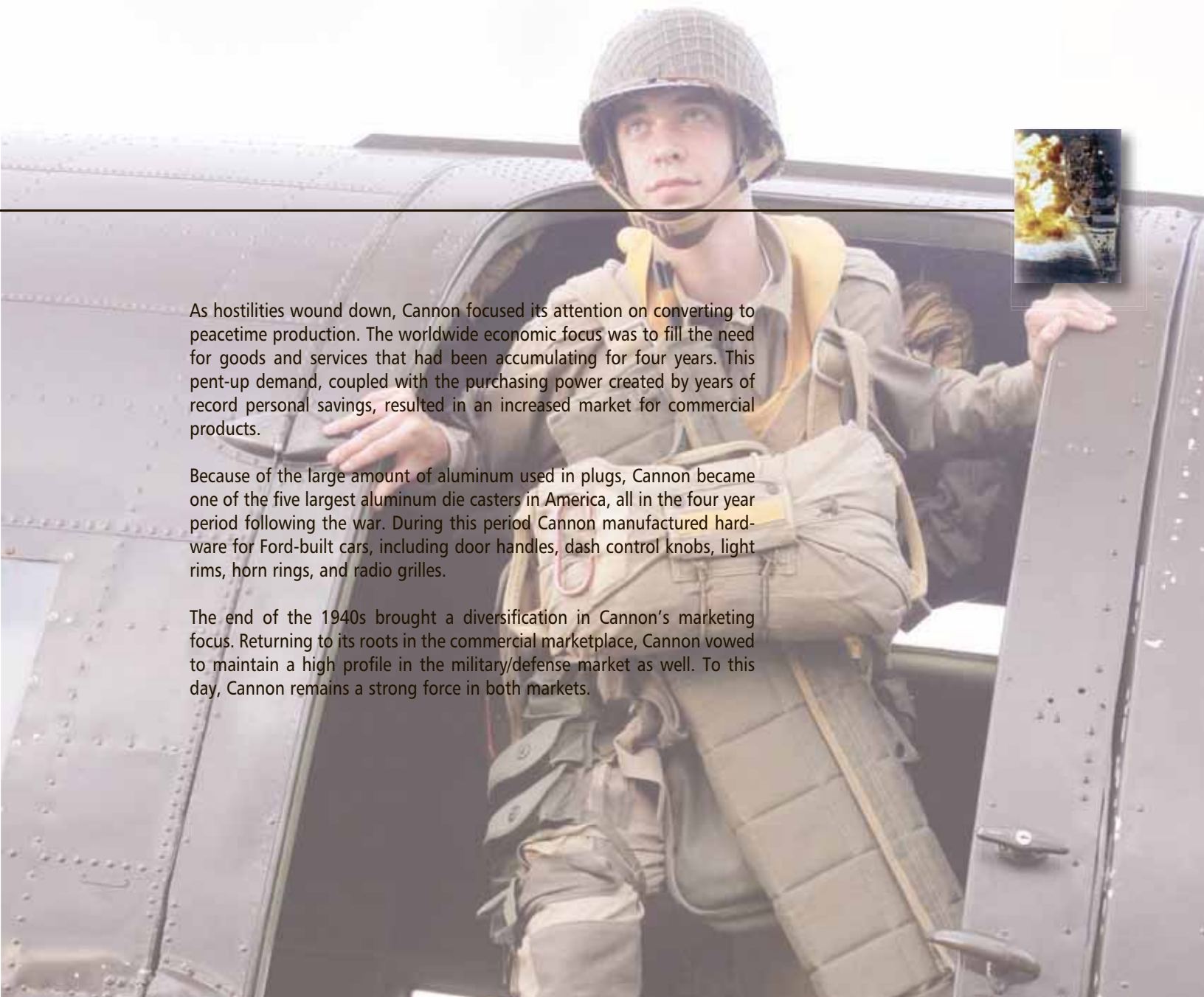


Cannon's early years of electrical experimentation laid the ground work for future product development, such as the 1940's Knight Light for desk or bedside use. It was so named because the rotation hood was thought to resemble a knight's visor.



During World War II Cannon women took to the production lines, manning drill presses, electric punch machines, and assembly/inspection stations, as part of the U.S. defense effort.






As hostilities wound down, Cannon focused its attention on converting to peacetime production. The worldwide economic focus was to fill the need for goods and services that had been accumulating for four years. This pent-up demand, coupled with the purchasing power created by years of record personal savings, resulted in an increased market for commercial products.

Because of the large amount of aluminum used in plugs, Cannon became one of the five largest aluminum die casters in America, all in the four year period following the war. During this period Cannon manufactured hardware for Ford-built cars, including door handles, dash control knobs, light rims, horn rings, and radio grilles.

The end of the 1940s brought a diversification in Cannon's marketing focus. Returning to its roots in the commercial marketplace, Cannon vowed to maintain a high profile in the military/defense market as well. To this day, Cannon remains a strong force in both markets.

Developed in the 1930s, Cannon's X was the first miniature audio connector. It was followed by the XL used in the 1940s by the first radio broadcast networks.



Cannon developed the AN Plug, the first Military Tri-Service connector, to provide a standard interface for Navy, Army, Air Corps and Bureau of Aeronautics applications. Cannon's connectors served the heroic actions of both our allies and our own military service people including the famous "Big Red One."



Celebrities were welcome visitors to Cannon's plant during the 1940s. Clark Gable personally thanked Cannon workers for their dedication and contribution to the U.S. defense effort.

1950s - A Decade of New Opportunities



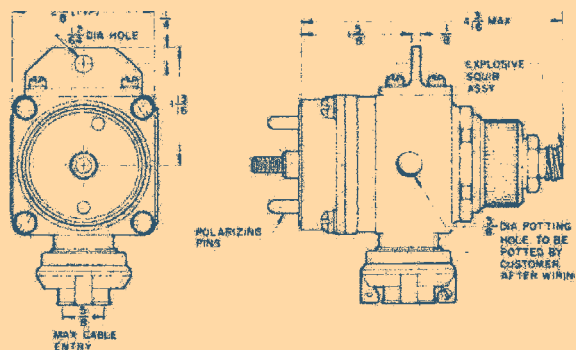
The decade of the 1950s brought new market opportunities for Cannon. Telecommunications, oil drilling, high performance engines, all offered new avenues for Cannon's products and engineering solutions. Additionally, the 1950s began Cannon Electric's push to become an international supplier of connectors and interconnections systems with its first move outside North American to Great Britain.

Perhaps the most profound market opportunity for Cannon during the 1950s was the beginning of the U.S. space program. The early guided missile staging and umbilical connectors were designed to meet the specialized needs of missile launchings ranging from small rockets to massive multi-stage vehicles. These connectors linked the on-board electronic systems together and to electronic complexes on the ground or master control point. At the time of launching, the umbilical plugs separated remotely, either by the action of the missile or from a master control point. Also, in flight, the staging connectors separated with the missile sections.

These products marked Cannon's first, but not last, association with the U.S. space program. In fact, Cannon connectors have been on every space mission in the Free World since the first countdown. Additionally, these connectors are being used in today's space shuttles and proposed space missions of tomorrow.



In the late 1950s land, sea, air and then space each presented environmental requirements that demanded ingenious connector designs. Cannon responded to the challenge with a broad family of hostile environment connectors that still dominate market use today.



At the time of Launching, Cannons original guided missile and umbilical connectors are designed to separate remotely, either by action of missile or from a master control panel.



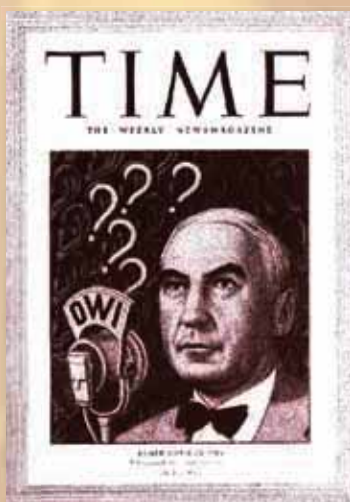
Several other significant technological breakthroughs occurred during the 1950s. For example, the introduction of an audio connector which expanded the capabilities of military communications and provided a base for sophisticated, durable sound equipment that is also used at today's rock concerts and in recording studios.

Additionally, the introduction of a telephone switching equipment connector provided the basis for Cannon's entry into the telecommunications marketplace. Today, ITT Cannon is the leading supplier of connectors to the European telecommunications industry.

Cannon's growth as an international supplier of connectors and interconnection systems accelerated in the 1950s. In 1958, Cannon Canada began to manufacture firewall connectors, the first of a broad line of connectors for hostile environments to come from this operation.

Expansion into the European marketplace began with the opening of manufacturing and sales operations in Great Britain in 1954. This was soon followed by the opening of facilities in Germany, France, Australia, and Japan. Today, the interchange of knowledge and expertise is routinely and constantly passed between facilities.

During the 1950's, Cannon widened its distribution capability by establishing the Cannon Authorized Plug Specialist (CAPS) program. Time Electronics received the first CAPS franchise in 1952. ITT Cannon-North America provides customers access to the largest network of stocking assembly distributors with locations in every major electronics center.



In 1943, Cannon hit the big time when its audio connector was graphically depicted on a cover of the newsweekly, which featured Elmer Davis, then head of the Office of War Information.



Cannon's original D-subminiature connectors were the industry's first multipurpose connectors. Since the first patent was awarded to Cannon in 1957, this connector design has become the most widely used in industry today.

1960s - The Race to Space



The 1960s have become known as the space years for Cannon. Continuing the push that began with the early missiles, Cannon became an important and valued supplier to the U.S. "Race for Space" effort.

Cannon's research efforts focused on developing more sophisticated connection systems for the launch vehicles of the Mercury, Gemini, and Apollo spacecrafts. In fact, the National Aeronautics and Space Administration (NASA) awarded Cannon the Medallion for Distinguished Service for its efforts in the first U.S. manned lunar landing.

Cannon connectors were used for a variety of space age applications. A special Microminiature K connector was developed for use on space suits. Located in the chest area, the connector connected wires for the biochemical circuit to monitor such items as the astronaut's pulse rate and heart-beat. The connector was required to pass strict tests in vibration, shock, temperature, and other reliability areas before it was used by Astronaut Edward H. White, pilot of the Gemini-Titan 4 space flight.

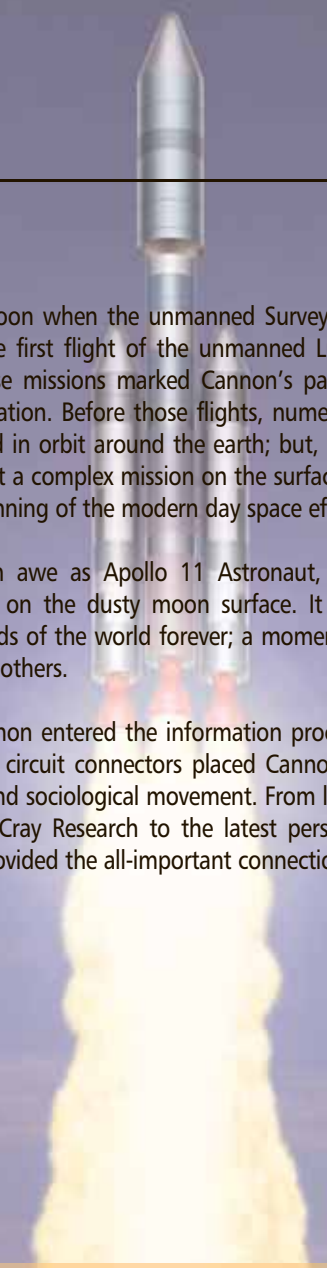
Cannon's extensive contributions to the Space Industry continue through this day and were recently recognized again when the United Space Alliance presented Interconnect Solutions with a certificate of appreciation for our efforts in supporting the shuttle and space station programs. The message was timely since ICS supplies various circular connectors that perform throughout the shuttle, as well as a number of custom electrical and fiber optic connectors used throughout the international space station. Orion, a manned mission to Mars, is planned for the future, and it is indeed exciting to know that our company will play a role in that pioneering effort.



The early 1960s marked an increased use of electronics and a subsequent demand for higher density interconnection packages. Then as now, ITT Cannon's line of microminiature connectors offer quality and reliability in a package measuring one-half the size of a postage stamp or much less.



Fitted with PK, KJ, and CV Cannon connectors, the Italian-made Macchi Trainers MB 339 are flown around the world by all nations.



In 1966, Cannon plugs reached the moon when the unmanned Surveyor 1 landed. This was soon followed by the first flight of the unmanned Lunar Excursion Module (LEM) in 1967. These missions marked Cannon's participation in a new phase of space exploration. Before those flights, numerous unmanned spacecrafts had been placed in orbit around the earth; but, until Surveyor and LEM, none had carried out a complex mission on the surface of an extraterrestrial body. It was the beginning of the modern day space effort.

In 1969, the entire world watched in awe as Apollo 11 Astronaut, Neil Armstrong took the "first giant step" on the dusty moon surface. It is a moment that will be etched in the minds of the world forever; a moment in Cannon history that will outshine many others.

The 1960s is also the decade that Cannon entered the information processing revolution. Edgeboard and printed circuit connectors placed Cannon at the ground level of this technological and sociological movement. From large mainframes such as the Cray 1 from Cray Research to the latest personal computers, Cannon connectors have provided the all-important connection.



Cannon connectors were there when the Explorer satellite was placed in orbit by Redstone rocket Jupiter, a historic event that started the US and Soviet race for space.



When Neil Armstrong communicated "That's one small step for a man, one giant leap for mankind" during his historic first step on the moon, Cannon was there.

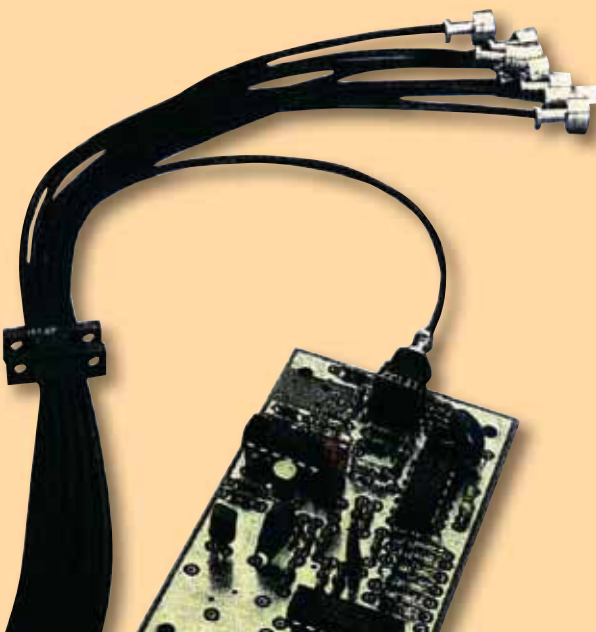
1970s - ITT Cannon Technology Excels



Technological innovation at ITT Cannon shone during the 1970s. Fiber optic and microminiature connectors became a reality, opening up numerous application possibilities in the medical electronics, telecommunications, transportation, information processing and aerospace markets.

This decade brought ITT Cannon's first entry into the medical electronics industry. The use of microminiature connectors on electronic prostheses to restore eyesight, hearing and other functions, broke new ground in medical research. New connection capabilities on medical instrumentation produced new respiratory monitors.

ITT Cannon accelerated its push into the telecommunications marketplace, armed with over 50 years of experience and a new technology – fiber optics. Linking sophisticated communications systems – from board level to network level – demanded experience, ingenuity and resources. It was a calling that the company was eager to answer.



The development of fiber optic technology at ITT Cannon in the 1970s opened up new military and commercial applications. In an early development, Cannon teamed with Honeywell and Dupont to produce one of the industry's first complete fiber optic interconnection systems.



Introduction of a versatile flat cable connector, the IDC, provided a fast and reliable termination solution for printed circuit board designers.



Today, ITT Cannon connectors and interconnection systems are performing the essential tasks of linking the vast and growing array of telecommunications devices, systems and networks around the world. In Europe, Cannon is one of the largest suppliers to the telecommunications industry with such clients as ITT's System 12 and STC in Great Britain.

The late 1970s saw the introduction of vehicular connections, opening up the transportation market for ITT Cannon. Heavy-duty durable connectors that withstand the temperature variations of high performance engines and adverse weather conditions have provided ITT Cannon with a commodity product for the transportation marketplace. ITT Cannon connectors have been a crucial part of the design of cars by BMW, Volvo, Ferrari, Porsche, Jaguar, General Motors, and Ford, to name a few.

Interconnecting a powerful array of microcomputers, miniaturized circuits, sensitive sensors and graphic display equipment in today's sophisticated vehicles is a key task that ITT Cannon continues to fulfill for today's and tomorrow's vehicles.



Though Cannon's association with rack and panel connectors dates back to the 1930s, the introduction of the BKAD/E Series represented a major milestone in rack and panel connector support of the air transportation market.



ITT Cannon VE and Sure Seal connectors were designed to satisfy the technological, environmental and performance challenges that automotive and transportation design engineers have faced over the decades.

When the first three Ferraris crossed the finish line for the 24 Hours of Daytona in 1967, Cannon passed a major test as an interconnection supplier to the transportation marketplace.



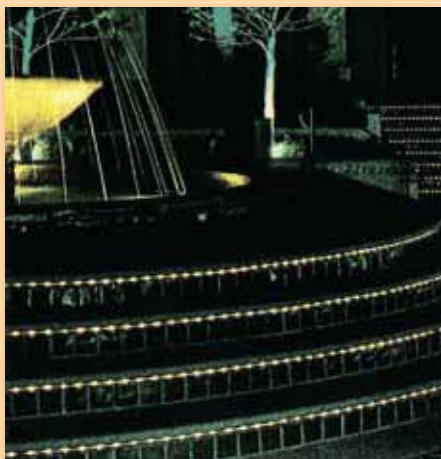
1980s - Growth Continues



The 1980s were years of constant change and growth for ITT Cannon. The recession that hit the electronics industry hard in 1982 stimulated a streamlining and strengthening of the ITT Cannon operation.

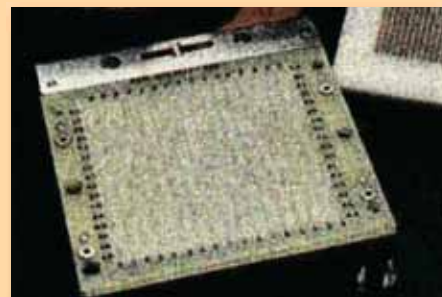
Market demand now guided the development and production of product. Divisionalization of operations along market lines reinforced the organization. A modernization of the physical plant improved cost margins, with far reaching benefits both internally and externally. In particular, Cannon opened an additional 176,000 square foot factory in Basingstoke, UK and established its Japan operations as a sole ownership entity of ITT. In 1988, ITT Cannon Germany celebrated its 25 year anniversary. To commemorate this event, the Mayor of Weinstadt named the street of our residence "Cannon Strasse."

The military market focus remained strong and a renewed push into the commercial and private industrial markets was underway. Target markets continued to be telecommunications, information processing, aerospace, entertainment, transportation, and medical electronics.



Under exclusive contract, ITT Cannon designed a micro-miniature recessed socket and keyed-to-fit adaptor for Tivoli Light Tubing products, which made exposed pin systems obsolete for this application.

Photo Courtesy of Tivoli Industries Incorporated



ITT Cannon's patented zero insertion force connector design was applied in the development of the ZIF pin array socket, an interconnection device for VLSI chip carriers.



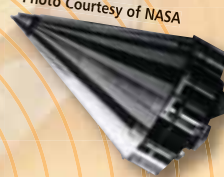
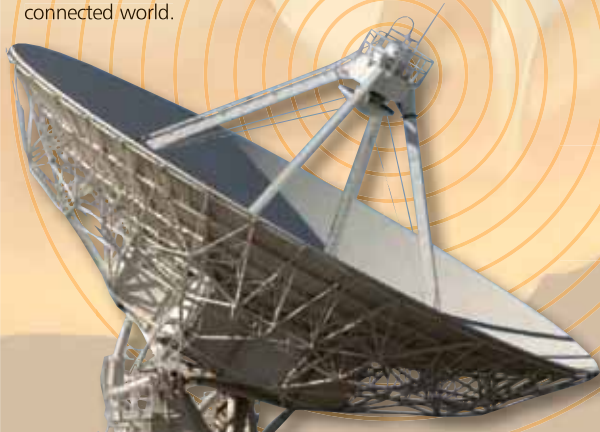
During the 1980's, Cannon exercised the opportunity to establish new products to expand its current product brands. In particular, Cannon launched the innovative DL product into the medical market. Years later, this product continues to enjoy a high degree of success with the demanding equipment needs of the medical market. With regards to additional product brands, in the late 1980's Cannon acquired the connector interests from BICC, including the Sealelectro brand of RF connectors for communications, industrial, and military applications and the associated facilities in the USA (CT) and the UK (St Helens and Portsmouth). To this day, Cannon enjoys one of the broadest portfolios of RF products including MMCX, SSMB, SMB, SMC, SMA, SMZ, BNC, TNC, and standard / custom cable assemblies.

In short, ITT Cannon connectors and interconnection systems supported the following:

- The next generation of computer products
- The aerospace industry transitioning to the next generation of electronically controlled "fly-by-wire" aircraft
- The military moving towards development of highly sophisticated, classified defense systems
- The transportation industry designing all-electronic automobiles
- The industrial marketplace revamping their factories with robotized assembly systems

The advent of global satellite deployment, expanding telecommunications technology, and convergence of voice and data transmission equipment served to realize, if slightly, the concept of a "Wired City." Cannon's connectors and interconnection systems strongly supported this gateway to a connected world.

Photo Courtesy of NASA



1990s - ITT Prepares for the Future



By the 1990s, ITT Cannon was a global full-line connector manufacturer offering hundreds of thousands of different connector types, with a continued emphasis on the telecommunications, information processing, transportation, medical electronics, and military aerospace markets. In particular, Cannon supported the wiring of the information age through the launching of our "Network Systems Group." This group focused on supplying systems and components to Local Area Network (LAN) infrastructure needs.

Cannon's extensive portfolio provided a unique opportunity for customers to single source their complete basket of connector needs from one supplier. Coupled with an extensive and innovative engineering expertise, Cannon supported its broad portfolio with a premier custom and value added product capability.

The end of the 1990's also witnessed the expansion of Cannon into additional product categories including switches, keypads, and dome arrays. This expansion supported the identification and grouping of synergistic products into the traditional markets served by Cannon. Later strategic decisions would necessitate the exit from these products and their corresponding markets.



ITT Cannon's hostile environment connectors shrug off continuous, daily exposure to elements such as sun, wind, water and heat in solar power systems developed by all the prime ERDA contractors, in down-hole and off-shore oil exploration, even in nuclear power reactors.



ITT Cannon's contribution and commitment to the space shuttle program as a supplier of both ground level and on-board inter-connection systems is a recognized commitment to the future of the world's space exploration.



The 1990's also witnessed the continued expansion of Cannon into the Asian markets. In early 1990, ITT launched a joint venture for Korea between Cannon Japan and the Korean Electric Device Company. Following this joint venture, Cannon opened the Zama facility in Japan, a facility which stands as ICS's primary office in Japan today. Addressing the needs of digital equipment peripherals, Cannon formed a joint venture with EDA in Shenzhen, China called "Cablecom." This joint venture represented a dedicated 26,000 square meter support area. Acknowledging the importance of the China marketplace, the ICS Shenzhen, China facility later became a fully owned ITT entity in the early 2000's



From Cannon's early grounding intercouplers that minimized the danger of operating room explosions to modern day electronic prosthesis and sophisticated monitoring equipment, ITT Cannon has been a major contributor in the emergence of the medical electronics market.

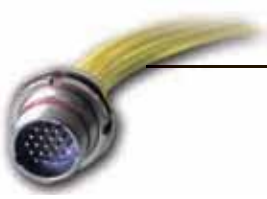


From early commercial airplanes to the latest defense aircraft, Cannon's engineering expertise continues to provide solutions to tough aircraft interconnection requirements.



Advances in information processing technology call for innovative VLSI interconnection solutions. ITT Cannon answered this call with leadless chip carrier socket solutions that provided ease of mating at low cost.

2000s - ITT Cannon Enhances Portfolio



The early 2000s saw the expansion of ITT into two different markets. In 2001, ITT filled a niche market not previously covered by purchasing BIW, an electrical power connector manufacturer primarily focused on enhanced oil recovery. In addition to their highly customized connectors for harsh environments, including downhole power and wellhead feedthrough and surface connectors, BIW also manufactures cables and harnessing, yet another unique addition to the ITT product offering. With the energy business growing in prominence and ITT dominating the petroleum and oil recovery business, BIW has nearly doubled in size since joining the ITT portfolio.

Just two years later in 2003, ITT purchased VEAM, a specialty power connector manufacturer serving the transportation, military and nuclear markets. VEAM's CIR Series connector features a unique circular design that is customizable to any customer specifications. With its high reliability and versatility, the multipin connector has even been adopted by NATO as the standard connector for ground fighting vehicles. Like BIW, VEAM has also nearly doubled since the acquisition by ITT and both acquisitions filled a void in markets ITT did not serve.

ITT's core markets also grew with the acquisitions of BIW and VEAM. BIW's shipboard casualty power connectors are employed in nearly all US Navy vessels while VEAM's connectors and assemblies are used extensively in mass transit applications, increasing the growth of ITT's core military and transportation businesses, respectively.



ITT Cannon's hostile environment connectors shrug off continuous, daily exposure to elements in harsh environments, down-hole, and off-shore oil exploration, even in nuclear power reactors. BIW's harsh environment connectors have proven industry leaders in enhanced oil recovery.



Providing a wide range of options and functionality, the VEAM CIR connectors have proven an industry leader in the global Mass Transportation markets.

ITT Interconnect Solutions: Defining Innovation



ITT Interconnect Solutions' Cannon, VEAM and BIW expanded their offering with a new portfolio of products. Premier technologies over the last several years have included ITT's PHD high density fiber optic connector, providing the industry's highest and most stable performance for multi-channel interconnects; breakaway and pogo pin connectors designed to meet the most demanding electrical and mechanical performance requirements; and Chip-on-Flex filter connectors, which have significantly advanced filter connector technology, improving performance and reliability.

Recently, ITT's Quadrax connector for Ethernet solutions is providing communications on land, at sea and in the air, while ITT's Stacking Interconnect technology is allowing maximum expandability in applications requiring power, LF and RF signals.

ITT's premier technologies have realized success and growth, with new interconnect solutions continually in development. Products such as the Composite 38999, Aquatica APD 19 Way, Micro Nano, and Mini Circulars Trinity & Nemesis will provide customers with a wider range of products and capabilities to choose from.

Premier interconnect technologies are made possible by ITT's state-of-the-art design and manufacturing facilities. ITT continuously strives for improvements through lean manufacturing, Six-Sigma design and value-based product development, while the Kan Ban system allows for more dedicated product lines in less space.



Interconnect Solutions enhances branding with both enhanced products and new products...



Even on the surface of Mars, Cannon has planted its feet. Supporting the Mars rovers are Cannon D-Sub's and Cannon Micro Nano's, ensuring the highest degree of reliability and performance.



Weinstadt continues its innovation in robotic manufacturing methods.



Cannon Connectors pioneering applications into the reaches of the 21st century...



When the new Orion spacecraft launches, Cannon will again accompany our Astronauts.

Photo Courtesy of NASA



Chip-on-Flex.



Breakaway and Pogo Pin.



Quadrax.



ITT Interconnect Solutions, Cannon, VEAM, BIW...Circles the Globe

With field application engineers, sales support personnel and worldwide manufacturing facilities, ITT's interconnect design centers of excellence and employees serve customers on a local level.

In addition to worldwide manufacturing sites, ITT's global presence supports rapid tooling and prototyping, fast time-to-market, high volume/high yield capacity, robust design and integrated product development, off-the-shelf availability of products through our worldwide distributor network, and lean process execution incorporating our Six-Sigma principles.

Supporting our global Channel Partners are innovative and industry leading Internet deployed configuration and process workflow systems. Be it product specifications, customer drawings, standard pricing, or customer specific quotations, we continually capture VOC to ensure the most efficient response capabilities to our customer's inquiries.

Whether the need is for a connector, cable assembly, I/O card kit, LAN component or highly engineered custom solution, ITT has the global resources and capability to respond...fast.



ITT Cannon...Means Teamwork



The ITT Cannon Educational Learning Center at the Santa Ana Zoo was sponsored by ITT Corporation as a part of its "Best Circle Idea" program.

We, at ITT, are committed to building a workforce that mirrors the world in which we do business. This will lead to improved creativity, innovation, decision-making, and customer service and is essential to achieving premier status.

Inclusion and Diversity Commitment

Our concepts of inclusion and diversity embrace differences in race, religion, gender, disability, nationality, age, sexual orientation, ethnic background and more. Our culture, work practices and programs will value and support the contribution of each individual that results from diverse work and life experiences.

The ITT Management System including our common Vision and Values will allow us to leverage differences and generate innovation that results from a diverse and inclusive culture and sustain our success in the global marketplace.



Many Cannoneers enjoy long historic careers at ITT Cannon.



Cal Cannon and his Cannoneers provided lunch-time concerts for employees during the 1940s.



Several Cannon "connectors" got into the spirit of the "Cannon Connects the World" float entered in the 1967 Bastingstoke Carnival Week.



James H. Cannon (right) set a standard of excellence that the ITT Cannon family has proudly maintained for the past 90 plus years.



Living Our Values

From the beginning, ITT's success has been based on a commitment to excellence. ITT's core values—respect, responsibility and integrity—are at the heart of every product, capability and relationship. ITT's employees are instrumental to the company's success, with teamwork playing a major role in instilling a winning culture in the past, present and future. Customer satisfaction is paramount, and ITT is committed to linking increased employee engagement at all levels with customer needs.

During the past decade, ITT has recommitted to technology innovation, believing strongly in a broad base of products and building customized variations on products to meet specific customer needs. Today, ITT is a focused company delivering innovative interconnect technologies and products with on time deliveries.

In addition to ITT's commitment to customer satisfaction, the company has always played a major role in community involvement by supporting Habitat for Humanity, orphanages, Special Olympics, women's shelters, and disaster relief. These are just a few of the organizations in which ITT employees are actively involved. Whether volunteering time or donating money, ITT and its employees are always giving back and demonstrating their value-based leadership both in the workplace and the community.

ITT established a winning culture in the early 1900s, and continues that momentum more than 90 years later. With value-based leadership, quality products, and a continued commitment to customer satisfaction, the ITT team will continue to lead the interconnect industry in the future.



Interconnect Solutions employees and Channel Partners support "bike builds" in California, benefiting the youth in our local communities.



ITT is participating with the local government in a community program called "Adopta Nogales" (Adopting Nogales). The local government and ITT employees are working together to teach the children about taking care of the environment, community and their school.



ITT employees visit "Contact the Elderly" in the UK to provide financial support and discuss how our staff may be able to assist them with visits in their own home and transportation to meetings.



South China cities experienced serious snow storms during the Chinese New Year in 2008. These storms damaged most of the electric, water, road and railway systems. ITT Shenzhen Human Resource team organized a donation activity to support those who were affected.



ITT



RESPECT

Treat others fairly
and courteously

Work as a team
help each other

Sustain a culture of
diversity and inclusion

Value different ideas,
opinions and
experiences

RESPONSIBILITY

Take ownership
of our words and
actions

Commit to quality

Provide a safe and
secure workplace

Care of the
environment and
our communities

INTEGRITY

Act ethically and honestly

Communicate with
candor and courage

Keep our promises

Be consistent in what
we say and do



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