



GOODYEAR

GOODYEAR
AIRCRAFT
CORPORATION

Arizona Division Goodyear Aircraft Corporation



The Arizona Division of Goodyear Aircraft is located at Litchfield Park, near Phoenix, within easy reach of the important aircraft centers on the Pacific Coast. Physically, in manpower, and in productivity, the Arizona Division is a scaled-down version of the main plant, about one-third the size of the Akron facility.

The Division is an important supplier of large subassemblies and specialized products to the aircraft industry. Hundreds of aircraft have undergone major and minor modifications in its plant. Being located adjacent to a modern airport and enjoying round-the-year good weather, the Division is important to GAC as a base for flight testing.

Arizona engineers do much original research and development, and work with other companies on the designs for components for a wide variety of today's and tomorrow's aircraft. These concepts are then fabricated in shops equipped with the very best and newest equipment.

Akron Facility

Wingfoot Lake



One of the world's finest antenna test facilities is the GAC Wingfoot Lake installation near Akron. The 1500 acre site (700 acres are lake) is used to test antennas operating at frequencies from vhf through the K_u bands, with apertures from the small, flush-mounted type to the 150-foot, long-range search type. Portable test facilities include use of airships and a mobile receiver-transmitter. Wingfoot Lake also has extensive manufacturing facilities

GAC Services

Field

Adequate, expert field service is maintained wherever required for GAC products, whether in use domestically or overseas.

Field service representation is maintained on a permanent basis at four Navy Air Stations (where airships are based) and two Air Force bases (Holloman and Orlando). GAC servicemen are frequent visitors to two other AF bases, Warner-Robins and Lowry. When Goodyear Aircraft products go overseas, competent servicemen may accompany the operation.

Staffs of all-around men and specialists are currently in the field for servicing airships, missile ground support equipment, ATRAN electronic missile guidance systems, GEDA electronic computers, operational flight trainers, and other products for which GAC is the prime contractor. A GAC field service representative was the only man who made both record-breaking flights made within recent years by airships - one flight of over 200 hours, the other of 260 hours' duration.

A steady flow of field service reports to the factory makes possible quick discovery of and fixes for discrepancies that may turn up in service. Technical information is sent on a frequent, regular schedule to the service men so they may keep abreast of new developments.

GAC field service men are more than sources of information and advice - they are operating participants in the performance of GAC products, whether installed on land, or for sea or air duty.

GAC Services

Computation



←
Portion of the GEDA computation
room

The already extensive analog and digital computing facilities at Goodyear Aircraft have been undergoing a modernization and expansion program. The analog facilities now contain 400 d-c amplifiers, 30 electronic and servo amplifiers, 10 arbitrary function generators and their associated equipment: recorders, plotters, random noise generators, and an analog-to-digital converter. This analog equipment is largely designed and built

by Goodyear Aircraft and is sold to industry under the trade name GEDA.

Equipment in the digital computing facility includes the most modern storage units with an ultimate total capacity of 2,246,060 words. One set-up with four tape memory units and associated equipment has a capacity of 1,824,000 ten-digit words, while a second has a capacity of 600,000 words.



→
Part of the digital computation
equipment

GAC Services

Technical

Working closely with production is the Technical Services Department, whose functions include establishment of standards, study of improvement of product and advance of the art, and maintenance of liaison with vendors, engineering, and electronics in the fields of welding, paints and finishes, and metallurgy.

While the bulk of work in the department is concerned primarily with improved methods and quality in production, vendors running into problems may call upon Technical Services for assistance. The department will also undertake study contracts for the establishment of procedures and standards. The metallurgical section operates its own pilot foundry and the department makes use of the many laboratories covering almost every scientific field.

Another technical service for GAC customers is the preparation of reports, manuals, and other handbooks for field maintenance, overhaul, service, operation, erection, and changes in GAC products. Parts lists and illustrated parts breakdowns are prepared by a large staff of professional technical writers and editors, artists, and cartographers. Complete still and motion picture facilities are maintained. In color and with sound, documentary and progress report films are prepared for many programs. Customer training, both at the factory and in the field, is furnished to any level required.

GAC Flight Test Facilities

GAC flight test teams roam far and wide. Static and flight tests are usually conducted in or near the plant in Akron, but when a team packs up to go into the field, it may be heading for the sea, for one of the military test ranges scattered from the Arctic to the warm tropics, or almost anywhere else.

Aircraft, missiles, rockets, or components must undergo complete field tests under exacting standards before any Goodyear Aircraft product is ready to turn over to a customer for his own evaluation program.

Within the Flight Test Department are specialists in every field covered by departmental activities. Complete instrumentation is provided for whatever piece or hardware is under test, whether it be flying or ground support equipment. An advanced mobile recording and data reduction van is available to record information from the object under test.

Flight Test also makes full use of the extensive environmental laboratories at Akron and every other facility required to make a complete evaluation. When the final report is written, there is little about the performance, capability, and reliability of a GAC product that is not known.



On rough terrain made even rougher with stones, ruts and logs, Flight Test team gives workout to very low pressure TERRA-TIRES*



When ATRAN-guided missiles undergo field tests, GAC team is there to see that everything goes well, instruct ultimate users



At sea, GAC Flight Test team conducts an in-flight re-manning and refuelling demonstration with a ZSG-4 airship and a carrier

*TM, The Goodyear Tire and Rubber Co., Akron, Ohio.

Goodyear Aircraft Corporation

Quality Control

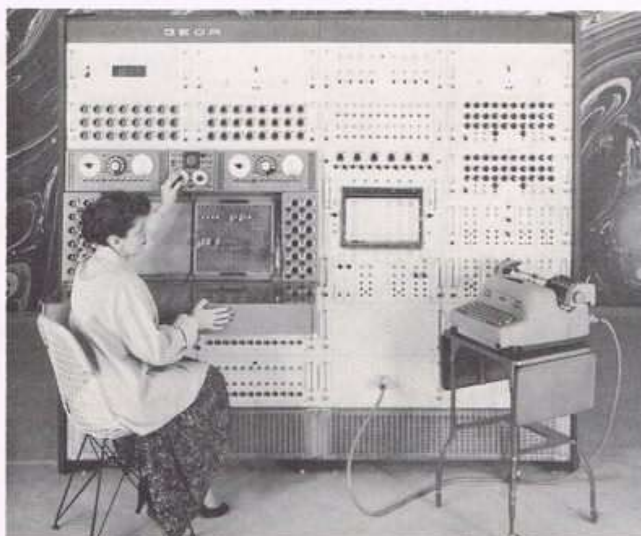
Goodyear Aircraft maintains a quality control organization that reports directly to the company president. This organization is responsible for all types of inspection of materials, parts, and subassemblies, Goodyear-produced or purchased from subcontractors. The quality control organization also maintains and operates quality control and reliability laboratories, fully equipped gage laboratories, and performs all quality control engineering functions, such as outside quality control, statistical analysis, and inspection planning.

Goodyear Aircraft's quality control system has been approved by the Bureau of Aeronautics as being in compliance with Specification MIL-5923C, General Quality Control Requirements. BuAer inspectors are resident at Goodyear Aircraft.

The quality control system also has been approved by Army Ordnance as being in compliance with MIL-G-14461, General Quality Control Requirements for Ordnance Material. An Army Ordnance Resident Inspector and staff are stationed in the rocket facility.

GAC Products

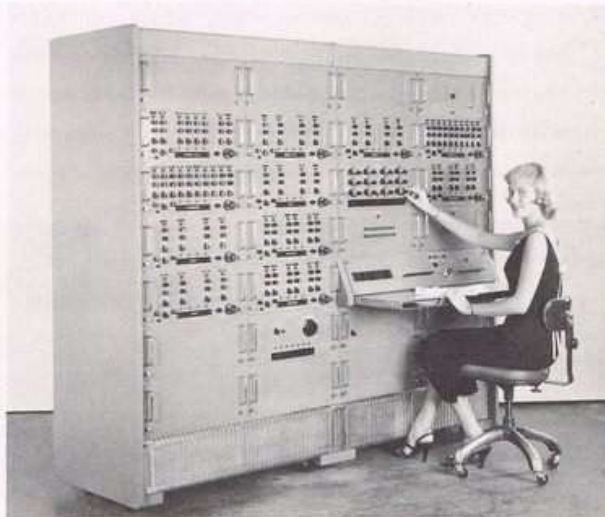
Computers



← Typical type A14 GEDA computer, medium size. This particular unit has been shown at many exhibitions throughout the country and new ideas are "plugged in" at the factory for testing. While GEDAs are analog computers, they may be had with digital control

Goodyear Aircraft is a leader in the design and manufacture of electronic computing equipment of many types that are sold under the trade name GEDATM. Computers are, of necessity, designed and built to order to fulfill the peculiar needs of the individual user. Sizes vary greatly.

→ Economic power dispatch computer built for the Ohio Edison Company. Each station in system has its own module, into which is fed all operating costs and power transmission losses. Computation shows most efficient stations and pinpoints economical operation. This is one of many types of special-purpose GEDA computers built by GAC



TM, Goodyear Aircraft Corporation, Akron 15, Ohio.

GAC Products

Flight Simulators



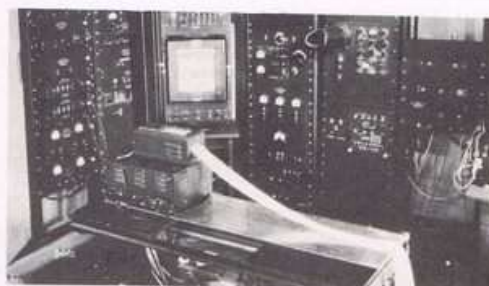
Typical mobile van for flight simulators built by GAC Console for training crewmen for ASW airship operation

Electronic, aerodynamic, mechanical, and electrical engineers as well as personnel qualified in biomechanical engineering, cooperate to produce the many flight training devices Goodyear Aircraft has made over the years. Simulators are now in use or under development for several of the newest aircraft of the Navy.

A simulator for the ZSG-4 airship enables two instructors to train a crew of seven men; simulators for the F3H fighter cover every possible contingency in flight and combat, while another device is for the P6M-2 seaplane. Sparrow and Sidewinder III missile simulation is included in tactics trainers designed and developed by GAC engineers, working in cooperation with the U.S. Navy Training Devices Center.



Earlier simulators by GAC were for Talos . . .



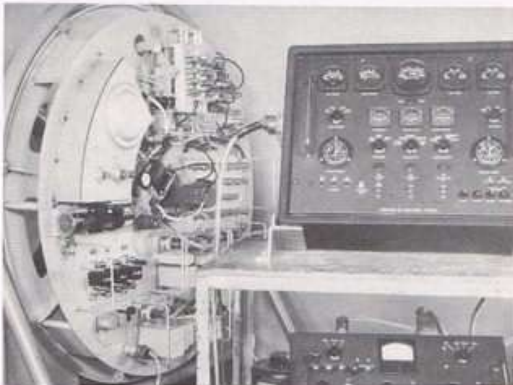
. . . and Triton missiles

GAC Products

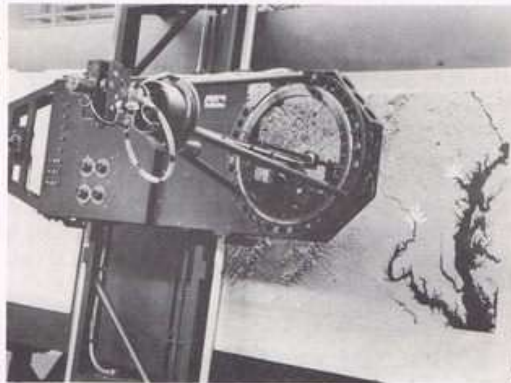
ATRAN and PINPOINT

The GAC-developed ATRAN electronic guidance system for missiles is a marvel of engineering ingenuity and precision manufacture that unerringly guides an aerial weapon to its target.

Just how ATRAN works cannot be revealed, but it was brought to its present high state of performance only after more than 10 years of research and development that involved over 20 different types of systems, and



All the subsystems of ATRAN are mounted on the ring at left, and are shown undergoing test



An important part of the ATRAN system is in the laboratory — a device for simulating terrain

2000 flights totaling 1,000,000 miles in both manned and unmanned aircraft.

ATRAN is the heart of the TM-76A missile system now operational with the Air Force. It has on many occasions guided the pilotless aircraft over 600 miles, although that is far from being its limit.

PINPOINT^{*} is a further refinement of ATRAN with many uses. Chief among these is a bomb-nav system applicable to relatively slow aircraft on bombing missions. Since these aircraft are more likely to effect penetration at altitudes of 500 feet or below, PINPOINT can be integrated into aircraft systems to assure accurate guidance to target. At such low altitudes, radar detection in time to effect countermeasures is almost impossible. PINPOINT can give the required guidance more accurately than can a human pilot.

^{*} TM, Goodyear Aircraft Corporation, Akron 15, Ohio.

GAC Products

Bondolite

Goodyear Aircraft has for years been a leader in the design and manufacture of lightweight, high-strength honeycomb construction materials that have many applications as both primary and secondary structures in aircraft and missiles, and in commercial use.

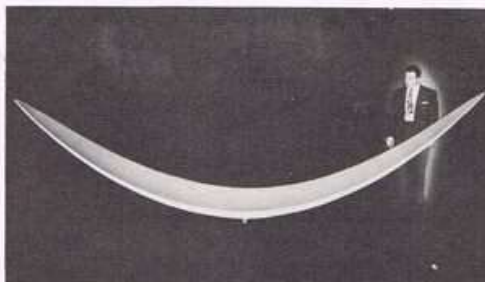
Sold under the name BONDOLITE^{*}, this versatile material is built with varying thicknesses of the honeycomb center (depending on the ultimate strength required), may be faced with aluminum, stainless steel, plastics, or almost any flat sheet material. Already capable of withstanding elevated temperatures, BONDOLITE will in the near future be able to withstand even higher temperatures due to GAC developments in the field of ceramic adhesives.

In aircraft, BONDOLITE has such applications as control surfaces, wings, empennage sections, entrance doors, flooring, bomb bay doors, bulkheads, and a myriad of other structures. BONDOLITE has been or is in use on such aircraft as the F-101, F-102, B-52, H21C, F11F, TF-1, and S2F.



Forming honeycomb sandwich construction panel

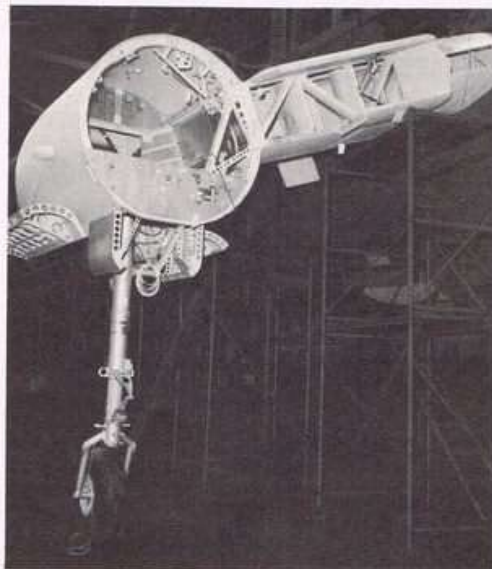
* TM, Goodyear Aircraft Corporation, Akron 15, Ohio.



This 17½-foot antenna is made of tapered BONDOLITE. Reflector is three inches in diameter at center, one-half inch at ends



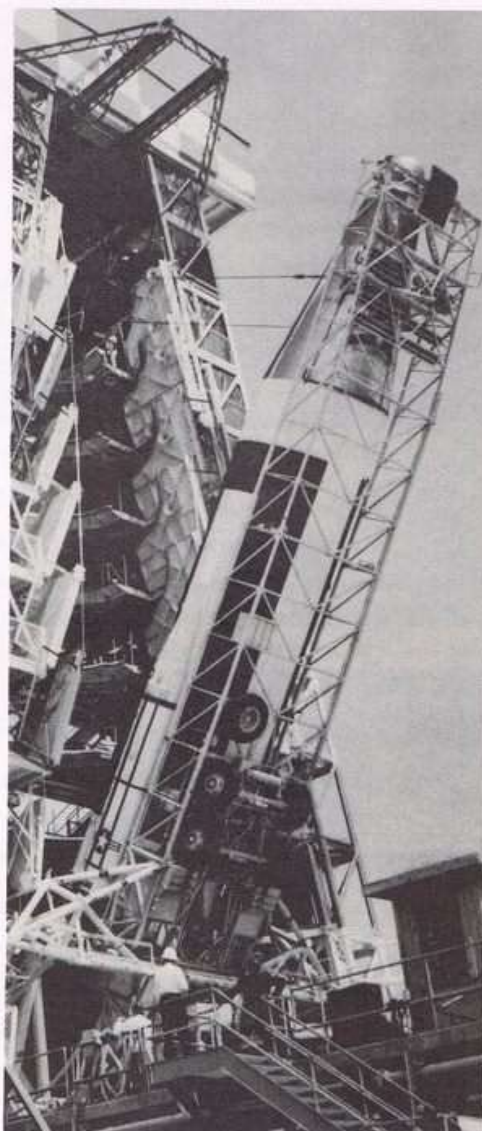
BONDOLITE component assembly



The outriggers and much of the engine nacelles on the ZPG-3W airships are built of rugged BONDOLITE

GA Products

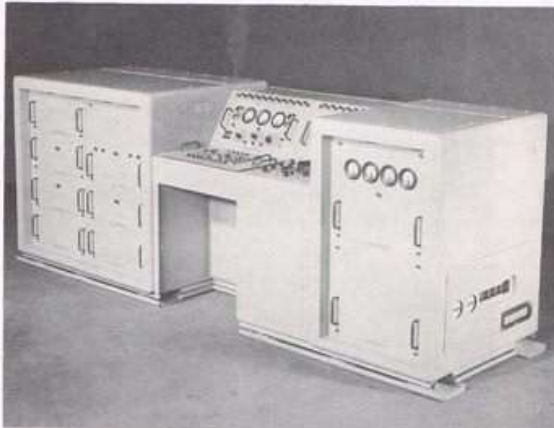
Ground Support Equipment



More than 30 types and sizes of ground support equipment directly useable or readily adaptable to a wide variety of weapon systems are now being supplied by Goodyear Aircraft. Top left is a crane pack with 27-foot boom and maximum capacity of over 11,000 pounds; in center are power pack and test van; in lower left, quickly erected field antenna for communications work. All use standard MM-1 truck chassis. On right is trailer on which Atlas ICBM is transported from California to Cape Canaveral, Fla., launch site, being further used to erect missile in gantry.

GAC Products

Ground Support Equipment



Typical ground service equipment: ATRAN nose checker (left), and work stand-shelter for C-130

As developed over the years, GAC philosophy on ground-support equipment for weapon systems has several important requirements: there must be a minimum number of types of equipment and a minimum number of each type; the equipment must be completely mobile and transportable by air; crew requirements must be small; the system must have all-weather capabilities; the check-out equipment must be fast, automatic, and accurate; the system must have a high degree of reliability.

GAC began many years ago to develop ground-support equipment for lighter-than-air craft - years before the currently accepted theory and practice of weapon system operation.

Through the GREBE weapon system for the Navy; an aerial tow target, the MB-1; and the current TM-61B and TM-76A missile systems for the USAF, GAC has followed its philosophy with marked success.

Goodyear Aircraft does not, however, confine its ground support equipment activities to complete weapon systems. Its engineering and manufacturing facilities are available for the design and fabrication of specialized equipment for all types of aerial or ground systems, manned or unmanned.

GAC Products

Fiberglass

Use of glass fibers properly mixed with resins and stiffeners is proving a boon to many industries by making possible stronger, lighter, less expensive components for autos, trucks, trailers, farm machinery, boats, and a host of other end products.

Goodyear Aircraft's integrated design concept makes volume production of plastic vehicles practicable. Careful structural analysis makes every part a load-bearing part, and integration minimizes secondary bonding and assembly problems. The shock and noise absorbing qualities inherent in plastics promise smoother, quieter riding.

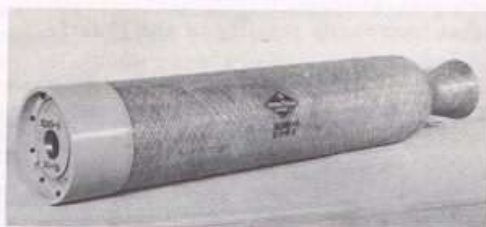
With its years of research, development, and manufacturing know-how of plastic materials of all types, GAC is in an enviable position to produce plastic components for many uses, military and civilian. In fact, plastics made to order for a particular use are a regular thing rather than an exception at GAC.



Boat hull made at GAC of fiberglass



GAC made auto panels and tops



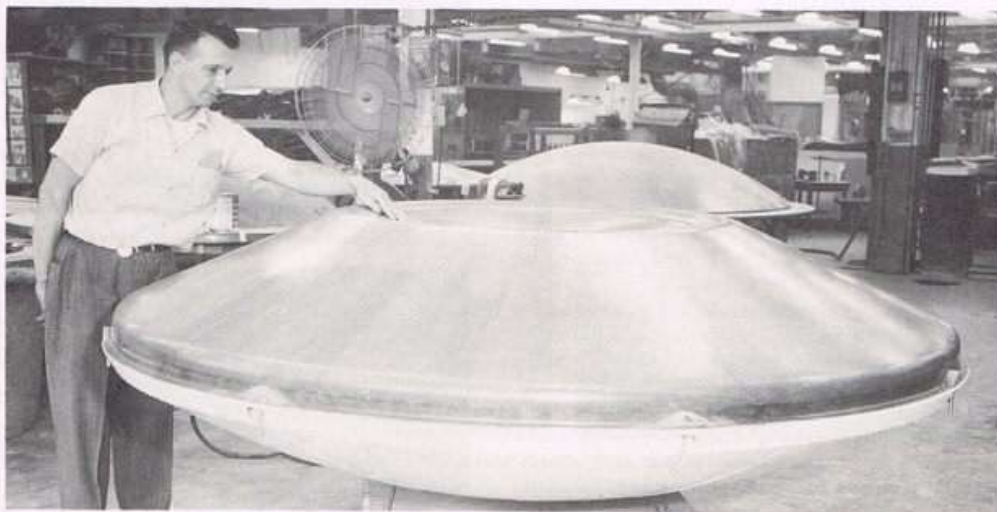
Two examples of the use of fiberglass at GAC — rocket motor cases (braided at top, reinforced at bottom)



Fertilizer hoppers for the farm machine trade

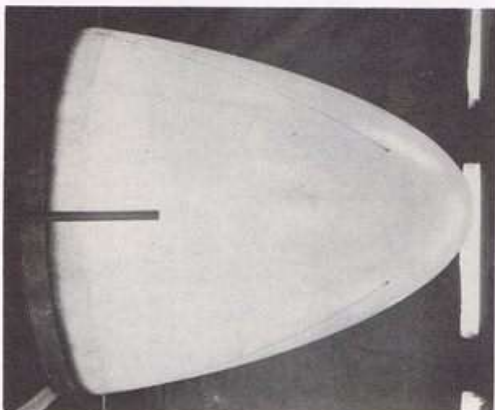
GAC Products

Honeycomb

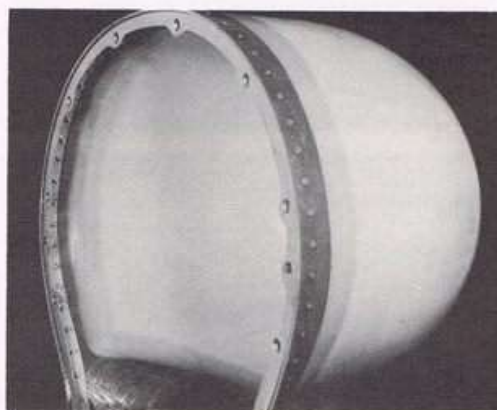


Ninety-two-inch honeycomb reflector built for Western Electric

"Foamed-in-place" honeycomb radomes developed by Goodyear Aircraft set a new standard for the industry, although the process has many other applications. This type construction presents an erosion-resistant surface, high strength and weathering resistance, low water absorption - all meaning added service life. They're translucent, thus easy to inspect for quality. To decrease rain-erosion during high-speed flight, GAC developed a coating of air-curing neoprene that increases the life of the plastic by as much as 100 times.



Honeycomb nose radome for the TM-61 missile



Foamed-in-place sandwich radome for the B-66

GAC Products

Plastics - Transparent and Reinforced

The Plastics Department at Goodyear Aircraft is one of the largest of its kind. Reinforced and transparent plastics with many applications are engineered and manufactured in the GAC shops. Use of plastic tooling for short-run production has long since proved to be time and money-saving. Fiberglass, honeycomb construction material, and many other types of plastics are under constant study and development by a competent staff of engineers with many years' experience.

Among notable achievements by GAC engineers in the plastics field are high quality, void-free reinforced plastic laminates; foamed-in-place isocyanate radomes, Neoprene rain erosion resistant coatings, centrifugally formed transparent canopies, stretch-formed canopies and windows, and high-temperature laminates capable of withstanding severe thermal shock and extreme heat flux.

Plastic products that have been designed, developed, and manufactured at GAC are: B-50 nose windows, B-47 canopies and frames, submarine snorkels, antenna masts, 50-foot boat deck sections; automobile body panels; radomes for B-52, F7U, B-47, B-66 aircraft, Sparrow, Talos missiles, among others.



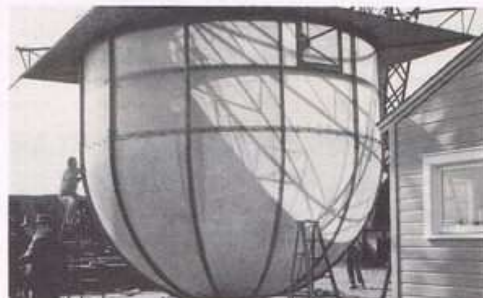
Giant 68-foot rigid radome. This type construction is being studied for domes to 150 feet in diameter



Stretched canopy for the F-100A



Matched temperature dies of epoxy resin



Rigid radome, 20 feet in diameter, built for GE



Airship fuel and ballast tank of cloth laminate

GAC Products

Rocket Motors



← Interior of GAC rocket motor facility

Goodyear Aircraft's position in the rocket field is easily and quickly stated: GAC has built more large rocket motor cases than any other manufacturer. One plant is devoted entirely to rocket motor production. Rocket motors are or have been built for the Nike Ajax, Nike Hercules, Matador, Mace, Hawk, Recruit, Grebe, and Terrier, among others. On this page are pictures of the facility and some of its products.



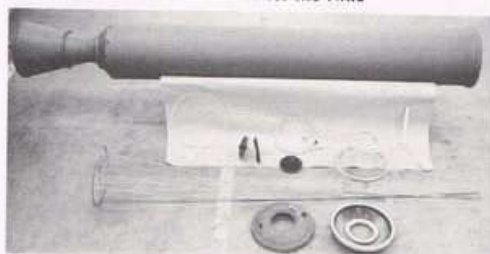
Booster for the Matador



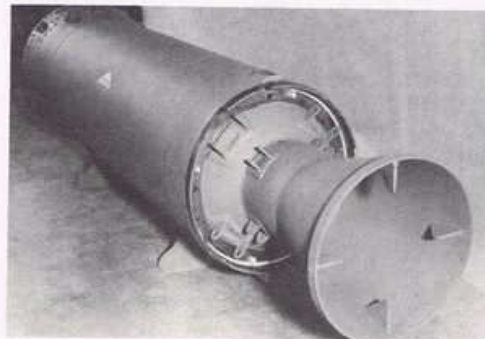
Experimental case over 60 inches in diameter



Plastic booster for the Nike



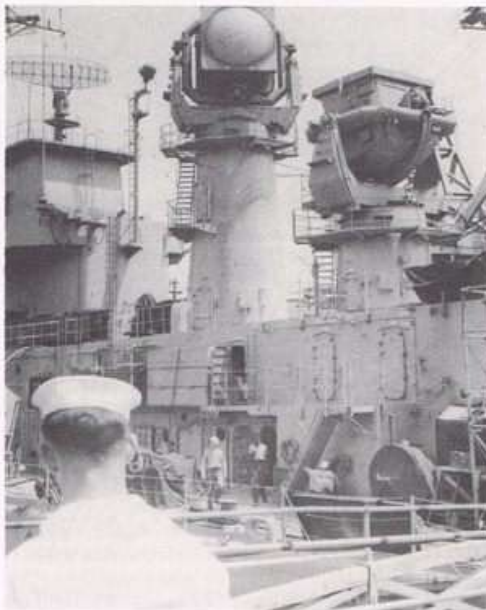
Complete M-5 Nike booster assembly



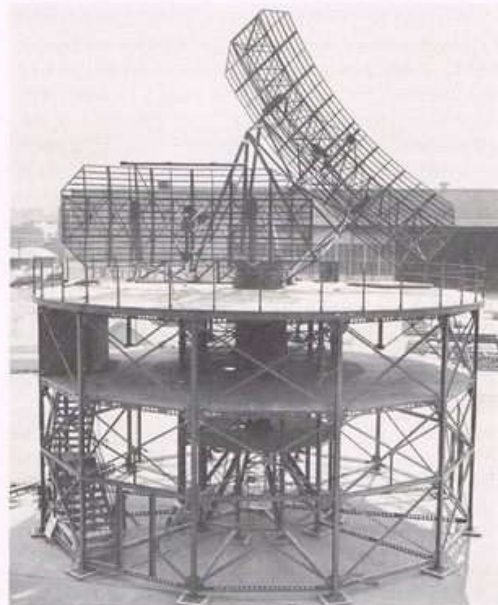
The Yardbird rocket motor

GAC Products

Antenna Structures



The Sperry AN/SPG-49 - AN/SPQ-5 heavy duty shipboard missile tracking and guidance radar weighs 26,000 pounds and is strongly built of aluminum and steel



This 63,000-pound structure and antenna was built for General Electric. The antennas shown are for search and height. A third sail was added later for DEW line

In support of its antenna manufacturing program, GAC also designs and fabricates the necessary structures for antennas used in microwave transmission, radar, aircraft early warning, missile tracking and guidance, and fire control systems.

Structures may be light weight (as used in airships); or massive, heavy-duty frames made to withstand the strains imposed by sea duty, or land-based structures like those used on the DEW line. Two examples of the large, heavy type are illustrated.

Antennas and structures have been built by GAC for General Electric, Bendix, Sperry, Bell Telephone Laboratories, and Western Electric, among others.

GAC Products

Antennas

Fifteen years experience in the antenna field, combined with expert electronic and structural engineering, exacting metal working skills, and extensive fabrication facilities, permit Goodyear Aircraft to build antennas to the closest contour tolerances for the most difficult installations.

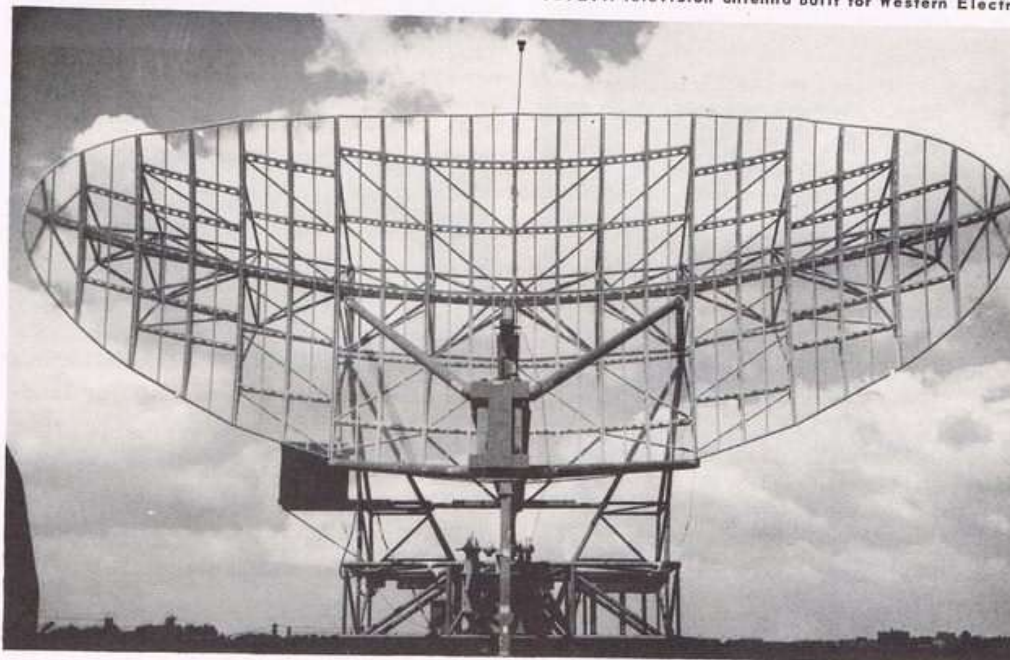
GAC makes antennas from the largest airborne installation (on the ZPG-2W airship) to some of the smallest flush-mounted helical types. Since 1948 Goodyear Aircraft has conducted experiments on weight-saving laminates and plastic materials for antenna applications, the result being the present availability of complete facilities for volume production.



AN/FP56 antenna for GE under test



TD/2TH television antenna built for Western Electric



Typical large GAC-designed and built antenna - the FPS-3A for Bendix Radio

Goodyear Products

Heavier-than-Air Craft



INFLATOPLANE ready for inflation

Three unusual concepts in small, multi-purpose aircraft are currently undergoing flight tests at Goodyear Aircraft - the INFLATOPLANE,* the DRAKE,* and the GIZMO.*

The INFLATOPLANE is a unique aircraft - except for the engine, engine mounts, and a few instruments, the entire airplane is built of neoprene-impregnated cloth and depends for its configuration on internal air pressure. In deflated condition, wings, body, and empennage fold around the engine so the airplane can be boxed and handled on a wheel barrow. Complete fueled, the airplane can be dropped to a downed pilot, inflated from a bottle of compressed air (the engine supplies air after it is started), take off from almost any terrain with a short run and fly back to base. One- and two-place versions are now flying, while larger aircraft are under study - a truly remarkable, versatile ship for rescue work, observation, transport, and many other uses.

The DRAKE is a small amphibian aircraft also intended primarily for rescue operations, but capable of many other missions with the military services or in private flying.

The GIZMO is an inexpensive means of quickly transporting one man or a group when mobility and speed are important. Its flight tests have been highly successful.



INFLATOPLANE making ski landing on water



Two-place INFLATOPLANE



The DRAKE amphibian

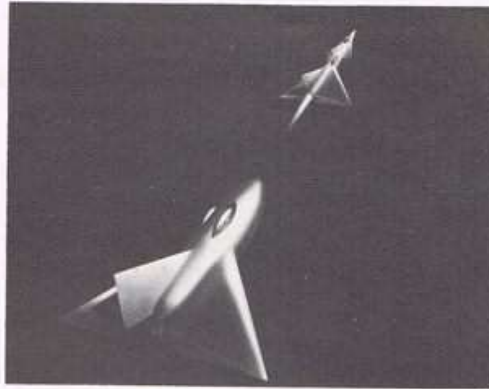


One-man helicopter, the GIZMO

*TM, Goodyear Aircraft Corporation, Akron 15, Ohio.

Artist's idea of what will happen 35 miles up when first and second stages of METEOR JR separate

Astronautics



Management at Goodyear Aircraft many years ago attached significant importance to the coming age of space flight, even though at the time the subject was publicly regarded as fantastic and not worthy of serious consideration.

A small group of scientists was given the task of making preliminary engineering studies of the problems of space flight: equipment needs, requirements for man's survival, earth satellites, moon probes, and other objectives heretofore existing mainly in the minds of science-fiction writers.

Early conclusions were that a manned earth-satellite must be established quickly and ways found to return man safely to earth. Working from an orbit 300 to 500 miles up, further explorations into outer space would be greatly simplified.

The astronautics section, now under the Weapon Systems Division, has expanded since its inception and it has made studies, many at government request, into a wide variety of problems and possibilities in space travel and related subjects.

Most widely known project is called METEOR,* a concept for establishing a manned earth station, in which the two booster stages are built like delta-wing aircraft, are manned, and flown back to earth in hypersonic-ballistic glide, to be recovered and reused time and time again. The third stage may be either returned in a similar manner or remain in orbit and its parts used in construction of a manned satellite. Several variations of the METEOR theme have been presented, largely differences in size.

GAC feels that its knowledge of the requirements of astronautics is among the best in the industry, and its engineering staff among the most competent to solve the many perplexing problems of this field in the years ahead.

*TM, Goodyear Aircraft Corporation, Akron 15, Ohio.

GAC Products

Rescue and Recovery Systems

GAC engineers have investigated a number of methods of pilot escape and recovery from future high-performance aircraft, and have developed a capsule system that promises safe recovery at speeds over Mach 2 or on the runway.

To establish a design compatible with current aircraft and configurations in the foreseeable future, and to gain the necessary experience and insight, the engineering staff worked with ejection devices, supersonic track testing, pressurization and seal systems, made structural material evaluations, and sought the counsel of aero-medical authorities.

Both the Navy and USAF have sponsored this far-reaching program, which has been given whole-hearted cooperation by airframe manufacturers of high-performance aircraft.

Studies have likewise been made of the use of balloons for recovery at high altitudes.



Artist shows how pilot would return safely to earth in GAC capsule after ejection at high altitude



Inflatable glider pack for rescue at sea



"Pilot" in mockup of GAC escape capsule

Goodyear Aircraft Corporation

Weapon Systems Management Capabilities

Goodyear Aircraft early recognized the importance of the weapon system concept, and maintains a Weapon Systems Division reporting directly to management. Purpose of the division is to keep management informed on weapon system developments, to advise management on military policy and procedures, and to coordinate the many capabilities throughout the company applicable to weapon systems design, development, and production.

The Weapon Systems Division prepares proposals and concepts for complete systems and subsystems in response to government request; and makes proposals on its own initiative for projects it feels are in the interests of the national security. From concept to hardware, weapon systems and subsystems are under the direct supervision and control of the division.

GAC is currently playing an important part in the development and manufacture of weapons systems. In addition to the work shown on other pages of this brochure, the company has been given management responsibility as prime contractor for the development, engineering and test of Subroc, and advanced underwater-to-underwater anti-submarine missile for the Navy's Bureau of Ordnance.

The company is also programmed to play an important part in the development of Dyna-Soar, the Air Force's proposed boost-glide aircraft, and has been assigned to the task of developing long-range acquisition antennas and transmitters for the Army's Nike Zeus anti-missile missile system.

Management at the parent Goodyear Tire and Rubber Company is also keenly interested in weapon systems management, and the full resources of this world-wide organization will back up fulfillment of any contract in this field undertaken by Goodyear Aircraft.

GAC Products

TM-76A



MM-1 prime mover, TM-76A missile, and TRANSLAUNCHER

Widely regarded as the most sophisticated weapon system in operational status today is the TM-76A Mace, the concept for which was developed by Goodyear Aircraft.

Heart of the TM-76A is the electronic guidance system, a GAC development called ATRAN,* making possible the unerring guidance of unmanned aircraft for hundreds of miles. A TRANSLAUNCHER* three-purpose vehicle (assembly fixture, roadable transport, and zero-length launcher); the MM-1 truck, a single source of power for transport and, with pick-off, electricity; very low pressure tires for rugged terrain, vans and other auxiliary equipment, are all GAC concepts. The complete nose section containing the ATRAN guidance, TRANSLAUNCHERS, and a great deal of the other equipment are built by Goodyear Aircraft and furnished the USAF as GFE.

One primary objective achieved was that everything in the system can be air transported.



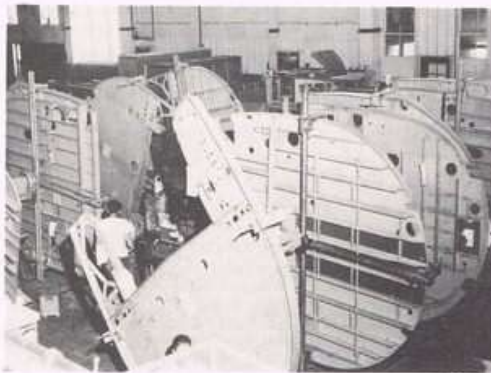
TRANSLAUNCHER easily goes through clamshell doors on USAF transport

* TM, Goodyear Aircraft Corporation, Akron 15, Ohio.

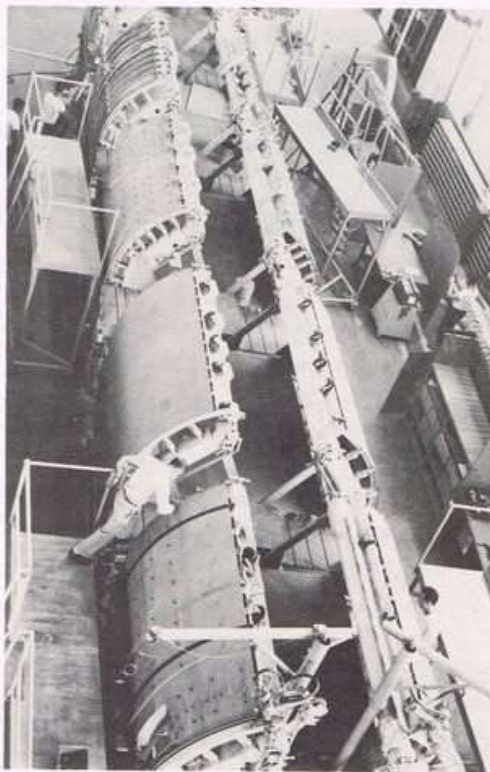
GAC Products

Airframes, Major Components by Subcontract

GAC facilities at both the main plant in Akron and the Arizona Division have long been known as major suppliers of large assemblies and components to the aircraft industry. Facilities and manpower at both plants are ideally suited for this work, and engineering staffs will co-operate with the prime contractor, if desired, on design and production problems. Only three current items are pictured on this page, but the list of similar subcontracts is long and includes work on most of the military and commercial aircraft built in this country in recent years.



B-52 bulkheads in mass production



Side panels for the B-52 intercontinental bomber



GAC-built wing and landing gear for the T-28

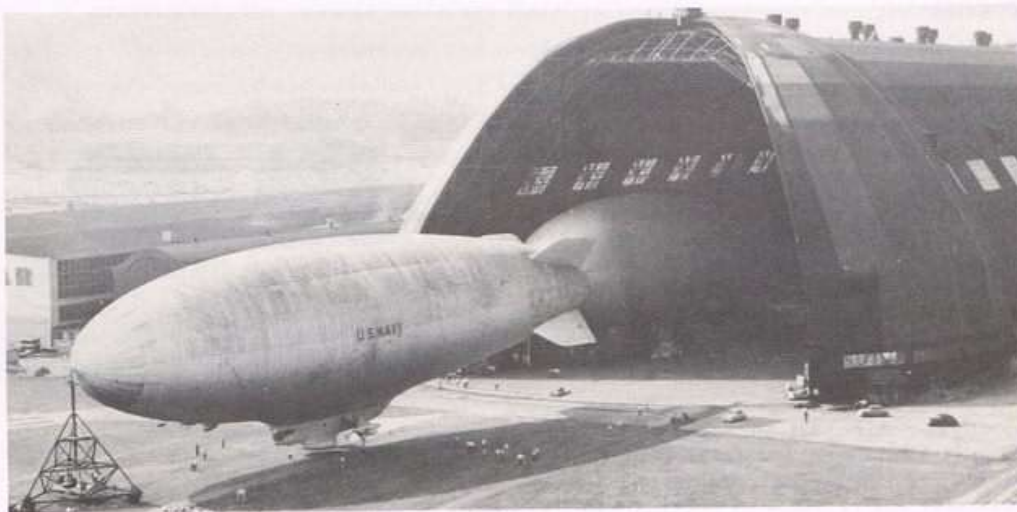
GAC Products

Airships • ASW

Big, graceful, dangerous -
ASW blimp on patrol



Airships are one of America's finest weapons against enemy submarines. Since the beginning of World War II, GAC has developed seven different lines of airships for the Navy and during the war built 155 blimps for convoy duty. The record there is clear: Not a ship in convoy was lost when blimps were on escort duty. Naturally, with improvements in design, better electronic gear, and more efficient weapons, today's blimp is an even greater deterrent to enemy submersibles. In the rough and tumble of undersea warfare, the blimp is one of the most efficient of America's weapons.



ASW blimp is towed from airdock in Akron, where it was erected

GAC Products

Airships - AEW



Like a missile, the airship is the heart around which is built a weapon system. The mooring mast and mechanical mule shown with this ZPG-3W airship form a part of the ground handling equipment, which has reduced manpower requirements to almost zero

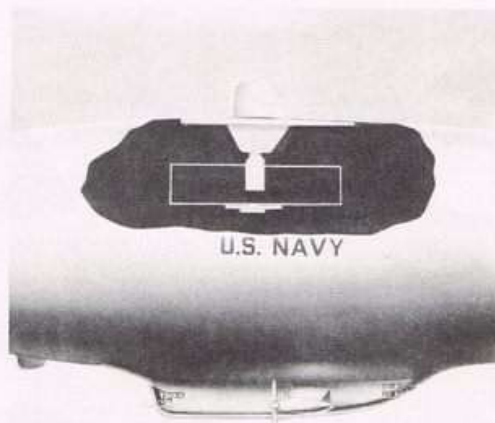
High in the sky, far out over the Atlantic, are some of America's most efficient "eyes" against aerial attack, able to spot an enemy hundreds of miles away. The eyes are nonrigid airships or blimps, carrying huge search radar sets on their constant vigil.

GAC and LTA (Lighter Than Air) are almost synonymous. From free balloons through the huge rigid dirigibles Akron and Macon and into the present blimps serving many purposes, Goodyear and LTA have been together.

Blimps have several advantages for Aircraft Early Warning service: they can stay aloft and on station for days without refueling, they can weather the toughest storms, they can carry larger, more powerful search radar than airplanes, and crews have more room and comforts while on duty.

Goodyear Aircraft engineers are constantly searching for finer fabrics for airships, lighter, stronger, with less leakage; better ways of making seams; more efficient cars for crew and gear,

more powerful electronic equipment for AEW duty, and countless other improvements. Airships are not so numerous or widely scattered as airplanes, but they are performing an important link in America's vast warning system.



Cutaway shows how search radar antenna is mounted on inside of helium-filled bag of AEW airship

This is

Goodyear Aircraft Corporation

Manpower

All phases of activity at Goodyear Aircraft Corporation are staffed with skilled, experienced personnel, most of them with backgrounds rooted deep in the traditions and intricacies of the aeronautical industry.

Among the hundreds of engineers of college level may be found, in depth, men with years of experience in every science connected with aviation. Many of these engineers have continued their postgraduate education for their Master's and Doctor's degrees. Their efforts are backed by a top-flight group of skilled technicians and personnel adept in the translation of rough engineering drawings into operating prototypes of concepts from the simple to the most complex.

With product design firm and ready for mass manufacturing, skilled craftsmen take over to make the finished hardware to the specifications of the engineering drawings and to meet the high standards of quality always expected and obtained from Goodyear Aircraft products. Northeastern Ohio has a large pool of skilled and semiskilled labor upon which the company can draw, but should there be a shortage of a particular skill, on-the-job training is provided to GAC standards so the flow of production will not be slowed nor the quality decreased.

This is

Goodyear Aircraft Corporation

Introduction

The name Goodyear has been associated with aviation almost from the time man first flew in a heavier-than-air machine, as The Goodyear Tire and Rubber Company began supplying equipment to the fledgling industry only a few short years after Kitty Hawk.

As the requirements of the industry grew and the equipment became more intricate, it was natural that a separate subsidiary should be established - one with the engineering know-how and the production facilities and skills to make itself outstanding in a highly competitive, complex industry. Such an organization is Goodyear Aircraft Corporation.

Goodyear Aircraft is proud of its many contributions to the national defense and to industry. Its engineering staff has developed outstanding devices in a wide variety of fields, particularly avionics, electronics, and weapon systems.

Backing up the imagination and skills of hundreds of engineering graduates in every scientific field are all the facilities and test equipment to prove the engineering designs. Laboratory, flight, and field tests are exhaustive before the stamp of approval is placed on any GAC product.

Finally, thousands of skilled craftsmen, working in modern factories, with the newest equipment and production machinery for fast, economical, quality production, are able to manufacture on even tight schedules the concepts of engineering.

This brochure presents briefly GAC facilities and personnel and highlights of current and recent production. Avionics, electronics, and weapon systems are emphasized because so much of America's defensive capabilities are due to these devices, many of which are from the brains and hands of the thousands of people who make up Goodyear Aircraft.

Akron Facility

Goodyear Aircraft Corporation



Looking north at main plant of Goodyear Aircraft Corporation, adjoining Municipal Airport, Akron, Ohio. Derby Downs, home of world-famous Soap Box Derby finals, and Rubber Bowl are in upper right

Other Locations at:

Wingfoot Lake, Ohio
Litchfield Park, Arizona
(See inside back cover)

GOOD YEAR



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