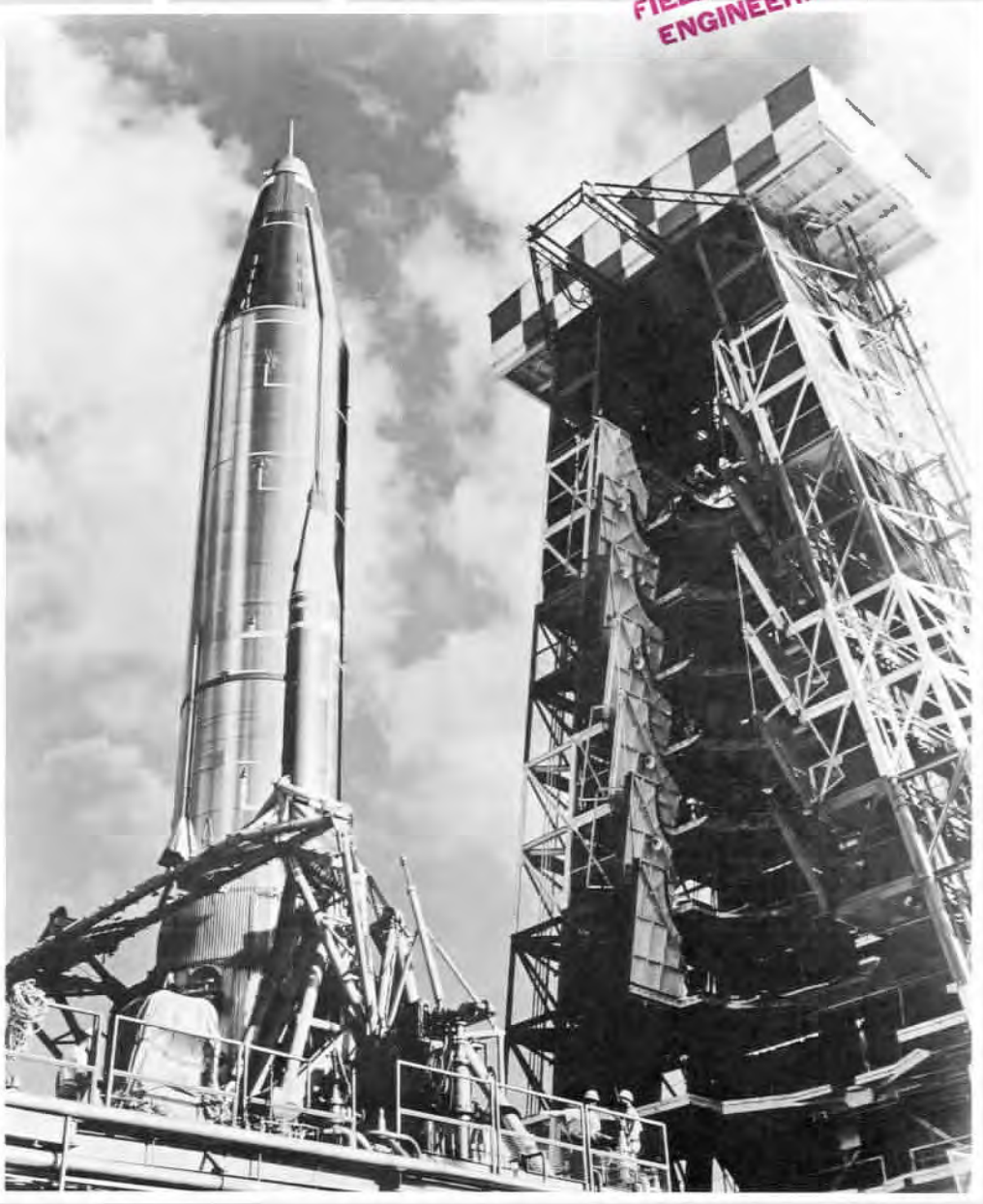
SERVICE

AN RCA FAMILY PUBLICATION

GLOBAL
FIELD ENGINEERING
(See pages 10, 11, 12)



THE ATLAS *(Official U. S. Air Force Photo)*

JULY-AUGUST, 1959

RCA SERVICE COMPANY

RCA SERVICE

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Editor
J. GRUBE

Personnel Dept., Bldg. 201-1
Cherry Hill, Del. Twp., Camden 8, N. J.

THE COVER

The ATLAS missile towers aloft on its launching stand as the gantry service tower is moved a short distance away. The steel-helmeted missilemen standing on the corner of the pad are dwarfed by this modern day example of our nation's technological advances—used on our cover this month to represent the magnitude of our Government Service Department's contribution to the Armed Forces.

SERVICE TALK

Plagiarism

Stolen word for word from Detroit-Leland Hotel stationery: "Our aim is to render service a little more complete—more hospitable—more pleasing—than even the most exacting guest expects." Substitute the word "customer" in place of "guest," and you have this month's message to all DSA contenders.

A New Era

The era of trans-Atlantic TV newscasting was opened in June when NBC-TV Network transmitted two minutes of film on the trans-Atlantic telephone cable and telecast same on a special experimental program. Subject: Queen Elizabeth departing for her Canadian tour.

Like Yeah!

From a satisfied customer in Chicago: "We would buy RCA products eveo if they were inferior because of the integrity and quality of its service organization. Time and again we have been impressed by the service men who come into our home. We don't even know their names but we always feel that the money is very worth while."

You Can Take it With You

Now the touring lecturer, campaigning politician or traveling salesman can carry his own sound system with him wherever he goes.

The recently announced RCA portable "lectern," which also serves as a self-contained sound system, is all in a 35-pound case scarcely larger than the average suitcase.

One side nf the case is elevated to provide a lectern "desk top." A miniature RCA Dynamic Microphone can he attached to a flexible gooseneck beside the "desk top," or worn around the neck of a speaker who has need for greater mobility.

Split

In the interest of improved operation, Consumer Products Midtown Branch in New York City reorganized to form Up- and Downtown Branches, effective June 28. The Downtown, with a new address at 151 East 25th Street, retains M. H. Rubin as its Manager. Uptown, at 659 West 158th Street, is headed by Branch Manager R. L. Maier, former Midtown Service Manager. Other promotions in the transfer are: A. Martin, Uptown Branch Service Manager, F. Lipari, Chief Clerk, C. Schad, Branch Sales Manager.

HEADQUARTERS

AIR FORCE MISSILE TEST CENTER

AIR RESEARCH AND DEVELOPMENT COMMAND

UNITED STATES AIR FORCE

Patrick Air Force Base, Florida

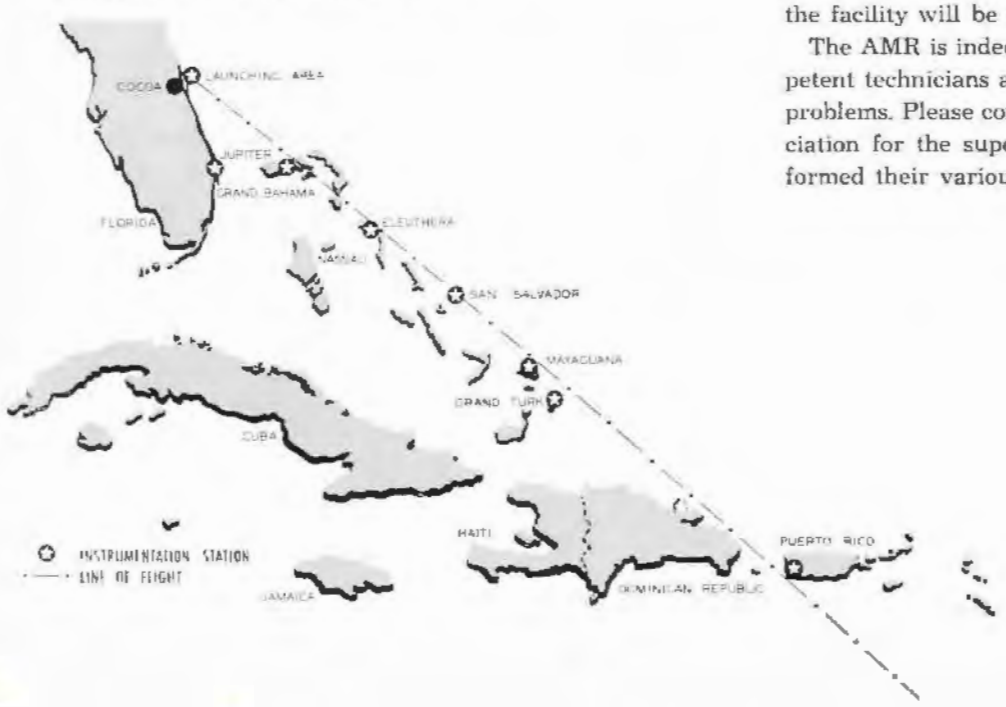
A LETTER OF COMMENDATION from the Commander of the United States Air Force to a Vice President of the Pan American World Airways, Inc., was transmitted to K. M. McLaren, Vice President, Missile Test Project, RCA Service Company. A tribute to the achievements of "MTP Engineering" personnel, it is reprinted here in its entirety.

I wish to commend the Telemetry Engineering Group of your sub-contractor, the RCA Service Company, for a consistently outstanding performance and for invaluable services to this Center.

Functioning as a unit under the leadership of Mr. E. H. Broome, this group of highly competent technical personnel has made the telemetry facilities at this Center among the most efficient and reliable to be found at any Department of Defense test range. Through their effective operation, they have enabled the Center to perform its mission in the telemetry field in such a manner as to command the respect of all the range users to whom we provide this service.

A few specific examples of this group's outstanding achievements are cited below:

a. *Development of an Airborne Telemetry Receiving and Recording System.* During the development phases, the Telemetry Engineering Group performed extensive research prior to the formulation of final system design. As a result, the airborne telemetry system at the Atlantic Missile Range is an outstanding achievement. This system is obtaining superior data and is compiling a notable record of reliability. Reception of telemetered warhead impact functions has been solved, and currently more than 92% of required data have been received.



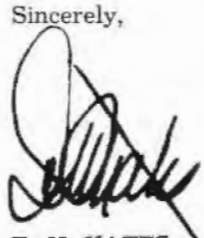
b. *Development of a Real-Time Telemetry Capability.* One year ago a large telemetry "quick-look" capability was planned as a necessity to satisfy the ballistic missile program. It was agreed at Center level to consolidate these functions at the Telemetry Receiving Station. The Telemetry Engineering Group planned this consolidation so effectively that the move was accomplished without inconvenience to any range user. In addition, multiple magnetic tape recordings may now be made, thus providing original quality data. The above efforts have been accomplished with a decrease in operational manpower.

c. *Development of a Telemetry Diversity Combiner.* This device combines the data outputs from several telemetry recordings onto one magnetic tape. It will save manpower and funds, not only at this Center, but at customers' data reduction centers. Considerable interest and comment from other Centers and from industry have resulted from this development.

d. *Development of a Multiple Frequency Capable for the TLM-18 Antenna.* The requirements for the development of a multiple frequency receiving and recording capability for Space Track were received on 2 April 1959—the need date was 1 June 1959. At this time the majority of the engineering has been accomplished and all procurements have been initiated. There is every reason to believe that the facility will be ready by the required date.

The AMR is indeed fortunate to have this group of competent technicians available to solve these highly technical problems. Please convey to each of them my sincere appreciation for the superior manner in which they have performed their various assignments.

Sincerely,



D. N. YATES
Major General, USAF
Commander

All-transistor RCA 501 electronic data processing system at right; meeting room area at left. Initially the installation will handle Fidelity-Philadelphia Trust Company paper work, until the bank's own RCA-501 goes into operation.

RCA-501 Center Opened at Cherry Hill

Pioneer in a new concept of data-processing, the Center is the first of several planned.

At Cherry Hill, on June 29th, RCA President John L. Burns pressed a control button on a 501 console to inaugurate the first of a series of RCA Computer Service Centers, planned to put electronic data processing within the reach of thousands of business firms and financial institutions.

President Burns said in his address that the day may not be far off when it will be as easy for a small business man to make use of a data-processing center as it is for a housewife to use a laundromat.

"At the outset," he explained, "this (Cherry Hill) Computer Service Center, as a showcase for the RCA 501, will process and analyze problems of future customers and extend help in training business people who will operate the system. Later on, the service of the Center—and other RCA Centers like it—will be expanded gradually to companies in the area and to smaller business establishments."

Companies being served by the Center will be linked to it by normal methods of communication. Ultimately, however, electronic devices in the plant or office will permit the transmission of data to the computer in coded form, with the processed information flowing back by the same channels to the high-speed "Plain English" printer in the customer's office.

Around the Clock

The RCA 501 at Cherry Hill will be on around-the-clock service, under conditions which closely approximate those in an actual office or plant installation.

In a setting of carpeted floors and colorful decor, the data-processing system occupies the center's main display and observation area. The computer and companion equipment are viewed through a glass floor-to-ceiling partition, with two-way communications between the operator and the receptionist-guide.

In addition, there are separate lecture areas where RCA instruetors will indoctrinate future users in the art of electronic data-processing. Executive seminars will also be conducted in this area for representatives of business and government agencies.

Card punchers, card transcribers, high-speed printers and other peripheral equipment are housed in a third section of the center.

Standby Service

A group of Service Company engineers, specialists and technicians are now permanently assigned to the Cherry Hill 501 location. Working on the premises, in a combined office and "work-shop" which includes a stock of spare parts, they provide preventive maintenance and servicing as required. They also assisted in the installation of the System.

L. Gallo of Tech. Products directs this servicing activity. Associated with RCA for the past eighteen years, he is a veteran of the original corps of RCA computer- specialists.

He and 501 Service Engineer Don Phelps are also former instructors from Service Company's "school" for newly-hired Electronic Data Processing trainees, who are given a

thorough seven-months grounding in the servicing of RCA 501 before they are assigned to specific installations.

Classes outgrew the original accommodations in an RCA-leased building in Pennsauken, New Jersey; are now being conducted at the Delaware Township High School, near the RCA Cherry Hill home offices, until new and enlarged facilities at Pennsauken are completed for early fall occupancy.

Wall Street Installation

A similar ceoter in the Wall Street financial district is planned for this fall, to ease the mammoth paper work problems of New York brokerage houses.

Two RCA 501 systems will be installed to haodle customers' records, margin accounts and various other forms of paper work involved in the conduct of a brokerage firm.

The data will be fed into the computers by wire from the individual brokerage houses, with the information contained either on perforated paper tape or punched cards. The processed data will be speeded back to the originating point over the same wire hook-up, or reels of magnetic tape on which the data is recorded will be taken back to the brokerage office. With installation to start in October, the system is scheduled to begin operation early in 1960.

A Matter of Minutes

To illustrate what work the RCA 501 can do—at the lowest cost per transactiun in the world:

In a bank application: Working with 300 accounts, the 501 has a proven capability of posting 5,600 normal banking transactions within 3½ minutes.

In a utility operation: It can match 36,000 daily cash items to a cash sequence file containing 567,000 accounts in only 20 minutes.

In inventory updating: A company's 5,000 daily transactions are entered into a master file containing complete product information on 3,000 stock items located in thirty warehouses and three factories, providing an up-to-date status report on the inventory in just 6 minutes.

Service Company's Lou Gallo (right) and Ivan Bengtson discuss 501 tape drive performance at Cherry Hill.

William Gitt (left) and Don Phelps check out the B-level switching unit.

RCA-501 uses 50% less tape, compared to predecessor systems.

A supervisor instructs an operator at the RCA-501 control console.

RCA-501 logic system, checked-out by IEP technicians at the Camden plant.

Fact Sheet on the RCA-501

WHAT IT IS

The RCA 501 is a general-purpose business oriented data-processing system of moderate size and cost designed to bridge the gap between the giant electronic brain and electro-mechanical accounting machines, bringing full-scale data-processing within the reach of the small company as well as the large corporation.

MODULAR DEVELOPMENT

The RCA 501 is designed on the "building-block" concept to permit easy future expansion. The system employs a common main electronic circuit that permits gradual expansion without replacement of original equipment or change in programming approach.

TRANSISTORS CUT SIZE

The RCA 501 is the first business-type electronic data-processing system that employs transistors throughout all companion equipment as well as the computer itself. Thanks to this all-transistorized system, a room 25 by 30 feet can accommodate a basic 501 unit.

NEW METHOD SAVES TAPE

The RCA 501, through a new variable-length tape-recording system, uses the exact amount of magnetic tape needed to record a memory entry. In the commonly used fixed-length method, a pre-determined amount of tape is required for an entry regardless of length, be it "John Doe" or "Peter Ilich Tchaikovsky." Thus the 501 method can save literally miles of tape and hours of machine time.

TWO-WAY TAPE READING

Further hours of machine time can be saved by the RCA 501's ability to read the magnetic tape whether the reel is being run forward or backward. Instead of having to wait until the reel has been reversed past an entry and run forward to record it, the 501 reads the entry as the tape passes the reading head in either direction.

TIME-SHARED ELECTRONICS

Additional hours of machine time can be saved by the 501's ability to perform various combinations of operations—for example, to read tape and compute at the same time.

COMPUTER

This main control unit processes data from up to sixty-three magnetic tape stations as well as from its own high-speed magnetic core storage and a supplementary random access drum storage that can be added. The computer console is only 42 inches high, 72 inches wide and 31 inches deep and weighs 500 pounds. The main control push buttons are arranged in a panel 10 by 12 inches.

HIGH-SPEED MEMORY STORAGE UNIT

This is a basic unit of the computer, storing 16,384 data characters—letters, numerals or punctuation marks—for prompt use in the system. As many as sixteen supplemental storage units can be added to give the computer a readily available "reservoir" of 262,144 characters.

TAPE STATIONS

Up to sixty-three of these can be included in an RCA 501 system each capable of "remembering" over 9,000,000 characters on its 2,400-foot reel of magnetic tape. The data is recorded in dual track form to minimize dust and humidity interference, since the computer can read either track without interruption. The tape stations can feed back to the computer information at the rate of 33,000 characters a second.

RANDOM ACCESS FILE

One and a half million characters can be stored in this drum-shaped unit to provide an additional library of data. Up to 200 such units can be incorporated in an expanded system. A drum file can be operated under automatic program control with an average random access time of 192 milli-seconds, including 25 milli-seconds switching time.

ADDITIONAL UNITS

Other units are available which make possible the use of various input media forms.

Electronics Aid Graphic Arts Industry

RCA's announcement of a new line of electronic and electro-mechanical automation, equipment was a move of major significance to the entire publishing industry—aimed at providing dollar and time-saving solutions to the problem of producing newspapers and other publications more efficiently and economically.

Current electronic products for the printing profession include a flexible, high-speed conveyer system designed to carry newspapers, magazines or other printed material from pressroom to mailing room.

It can carry a load over any desired route, turning sharp corners and twisting a full 360 degrees without smudging fresh ink or losing its grip on the printed copies.

Newspapers of virtually any size, from one to 128 pages can be transported at a rate in excess of 60,000 papers per hour.

Another electronic aid; the RCA transistorized counter, is a multiple source unit which can total simultaneously the output of forty production, processing and packaging operations, counting up to 120,000 units per minute. The counter not only records the number of papers passing it but can be used to regulate production and prevent costly press overruns or premature press shutdowns.

A detection device senses the fold of each newspaper on the conveyer and relays the count to a master totalizer, automatically compensating for day-to-day changes in the number of pages.

An Electro-Typesetter perfected by Dow Jones & Company, Inc., publisher of the Wall Street Journal, will also be produced and marketed by RCA. This system provides high-speed automatic typesetting from perforated tapes.

RCA Newspaper Counting Systems provide instantaneous counts of deliveries from high speed presses. It counts up to 120,000 units per minute.

Performance-proved through five years' operation at Wall Street Journal Plants, it permits setting type at speeds up to 540 characters per minute.

Service and maintenance is held to a minimum on the ETS. Signal lights indicate distributor jams and when loose or tight lines are set, the machine stops automatically. Replacement of the complete operating assembly can be accomplished in a matter of minutes. Plug-in modules are readily changed. Safety interlocks protect electrical parts.

A fourth device is a strip labeler which can print up to 24,000 names per hour from stencil plates, useful for newspapers, magazines, direct mail firms, mail order companies and other extensive mailing list users.

Service and Maintenance is held to minimum on RCA Electro-Typesetters. Linecasters can be operated manually during service periods.

An RCA Electro-Typesetter system installation can, in many plants, pay for its cost in a single year by savings in the typesetting operation.

Harold Metz returns as Tech Education V.P.

Vice President Harold Metz

"Hal" Metz, who was Service Company's Personnel Manager ten years ago, has returned to assume duties as Vice President, Technical Educational Programs.

In the newly-created position, he will provide management direction to RCA Institutes, and coordinate Service Company's technical publication activities. Mr. G. F. Maedel continues as President of RCA Institutes, reporting to Mr. Metz.

Mr. Metz jnined RCA as an iodustrial engineer in 1944, after a three-year service with the War Manpower Commission. He was oamed Personnel Manager of the RCA Service Company in 1949, and Director of RCA Personnel in 1953.

Transferred to RCA International in October, 1956, he was the division's Director of Special Management Projects until July 1, when his new Service Company assignment became effective.

He is a native Philadelphian; received his AB degree from LaSalle College, and his Master's from University of Pennsylvania.

Ad-Man Wins Biggest Stake

Not all men in gray flannel suits are on Cloud Nine, nor does Madison Avenue typify all people who walk the dead-line trail.

Case in point is A. D. Ricketti, cost-conscious young "Copy Chief" in Service Company's Advertising and Sales Promotion activity.

Between copy-cuts and stets, he unerringly pointed out the way and means to a substantial saving in the handling of Consumer Products Service contracts—on a suggestion blank.

The idea was simplicity itself, and one that will save Service Company an approximated $16,000 in the first year of use. His suggestion: Drop the return postage on contract renewal solicitations.

Ricketti's share of this—ten per cent of the first year's savings—is the largest suggestion award ever made to a Service Company employe. It tops—in cash only—the $1,300 award paid to F. E. Bassett of Tech Products in 1957.

H. A. Poole, Mgr., Advertising and Sales Promotion, delivers initial check on $1,600 suggestion award won by A. D. Ricketti. Personnel Manager J. F. Murray at left.

No Job too big for Hollywood

A recent Closed-Circuit TV job for Tidewater Oil sent F. D. Miller, of Consumer Products Hollywood Branch, to his drawing huard for a unique solution.

To seat 1,000 people in the Palladium so that they could simultaneously view a TV show and eat dinner, Miller conceived a table arrangement cunstructed in the shape of a pyramid, with the TV set at the point.

With this geometry, no one person was farther than 24 feet from the set, nor more than 30 degrees away from the center line.

By building these fundamental pyramid units into a hexagon module, it became possible to seat 360 persons within a radius of only six receivers.

This process, continued nver the whole dance floor, provided seating for 1,078 people. The excess 78 seats were removed to comply with fire and catering requirements.

Closed Circuit TV setup for Tidewater Oil at the Hollywood Palladium.

★ ★ ★ ★ ★

What's the Score?

The game has just begun for countless youngsters with million-dollar grins—the children of RCA employes.

Safe as they may be in their parents' split-level homes, their security is further assured because Mommy and Dad "have RCA Service Group Insurance."

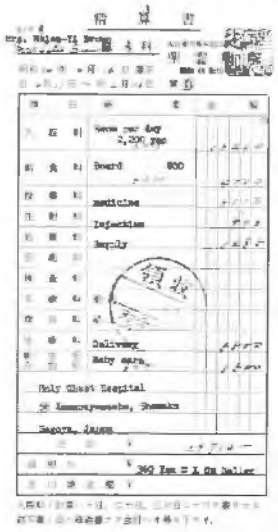
The benefits may have started on the day of birth, as it did for more than eight hundred babies born to RCA Service people in 1958.

It may have protected the child from possible deprivation in any one of many family emergencies, for which RCA Service Company issued more than $1,000,000 in claims during 1958.

Or it may have paid for expensive lessons in how to grow up: not to feed aspirin tablets to little brother; perfume does not taste as good as it smells; and all the other mishaps of childhood which no amount of parental vigilance can entirely prevent.

These and other urgent forms of personal emergency fill all available file space in RCA Service Company's offices of insurance at Cherry Hill.

The man behind the claim, submitted for payment in good times and bad, is J. E. Piatt, Manager, Insurance, Personnel Records, and Retirement. He is assisted by the Misses Edith Strahan and Patricia Barrett, and Mrs. Jean Lewis in the task of handling thousands of Service Company employe claims, all of which clear through this office.


Board 800
Holy Ghost Hospital

A baby is born to Mr. and Mrs. Brown. Holy Ghost Hospital. Nagoya, Japan.

Together they processed an unparalleled 7,500 claims and arranged for the forwarding of 9,300 checks to employes in the year 1958.

Claims range in size from the comparatively minor emergency of approximately $1.00 to the major crisis of $750 or more.

Gary is the son of B. I. French, RCA Department of Information.

They are received from as far away as Japan and Germany (necessitating translation from yens and marks to dollars and cents) and as near as Route 38 suburbia, adjacent to RCA-Cherry Hill.

By far the most common claim among adults, barring maternity, is hospitalization for "over-haul" operations and heart rest, compared with the accident which happens in a split second, on an approximate 3 to 1 ratio.

Next to the expense of being born and the exigencies of accident, childhood years seem to lead inevitably to the tonsillectomy, hundreds of which were performed—and paid for by RCA Service Group Insurance—in 1958.

Labelled a "fringe benefit" in the jargon of the trade, insurance coverage often means the difference between real financial hardship over sustained periods, or a source of much-needed income "when times are tough." Protection then becomes a part of the whole cloth, rather than the fringe.

(Official U. S. Air Force Photo)

SAC—A Strategic Air Command Boeing B-52 bomber carries a Hound Dog missile under each wing, near the fuselage.

(Official U. S. Air Force Photo)

Space ship developed by Air Force, Navy and NASA (Nat'l Aeronautics & Space Adm.)

(Official U. S. Air Force Photo)

TAC—Tactical Air Command airlifted 6600 tons of heavy equipment to Alaskan DEW-line.

Around-the-World Service for the Armed Forces

Hundreds of RCA Service Company engineers are currently providing technical assistance at Army, Navy, and Air Force Bases here in the United States and in more than forty foreign countries, in perhaps the best known of all of the Government Service Department's programs.

They provide services involving the planning, installation, operation and maintenance of complex military equipment and systems, usually at the equipment installation site, and assist in the development and conduct of training programs, both formal classroom and on-the-job.

AIR FORCE

A typical example is the operation and maintenance of communications and radar equipment at about forty Aircraft Control and Warning sites within the Air Defense Command's Central Air Defense Force (CADF) area. At each of these sites, RCA Service engineers and technicians provide round-the-clock maintenance of all the electronics equipment and conduct on-the-job training for Military personnel assigned to these sites.

"Sage"

In another important Air Defense Command project, the Government Service Department's engineers and technicians provide maintenance and training services at several Semi-Automatic Ground Environment (SAGE) sites which form part of the radar defense system across North America. RCA Service personnel are responsible for the maintenance of the entire "powerhouse," or utility system, which includes the generator and refrigeration equipment. RCA Service field engineers, specialists in diesel and refrigeration applications, also provide on-the-job training for the Air Force and Civil Service personnel attached to these SAGE "powerhouse" sites.

"Sac-Tac-Mats"

Other RCA Service field engineers provide technical assistance for the Air Force's Strategic Air Command, Tactical Air Command, Military Air Transport Service, Airways and Air Communication Service, Air Research and Development Command, Alaskan Air Command, Pacific Air Forces, and the U. S. Air Force in Europe. Hundreds of senior engineers, systems engineers, technicians, and draftsmen are currently assigned to these Commands. They are providing valuable assistance in the Air Force program to install, operate and maintain complex airborne and ground electronics and associated equipment in a constant state of readiness—no matter how remote or isolated the Base may be.

U. S. ARMY

RCA Service field engineers provide similar services for the U. S. Army. Under contracts held with the Army's Signal Corps, they perform services on radar, fire control, communications, avionics, meteorology, motion picture, and nucleonics equipment—just to name a few. In some instances, RCA Service personnel actually perform the installation, operation, maintenance and related services themselves at Army Bases and Depots. In other cases, RCA Service field engineers are assigned as Project

Engineers or serve in an advisory capacity. This is particularly true where technical assistance is a part of the Army's Foreign Aid Program and these services are actually performed for the Military Forces of an Allied Nation.

"Spot"

In June of 1956, a group of Government Service Department engineers and technicians assisted the Signal Corps in the establishment of a program designed to study the reliability of long range communications using frequencies considered to be above Maximum Usable Frequencies.

Supported by consultant services obtained from the RCA Laboratories and RCA Communications, the Government Service Department conducted tests during the program which resulted in the determination that these frequency ranges could be used if certain conditions of antenna and receiver-transmitter design were met. RCA's recommendations for these design changes were then submitted to the Signal Corps.

During October 1957, when this study program was phasing out, the Russians launched their first earth satellite. The equipment used during the frequency studies was quickly modified and used to monitor the satellite transmissions. RCA Service field engineers now operate this fully instrumented SPOT (Satellite Propagation Observation and Tracking) program at Fort Monmouth, New Jersey, and they are compiling valuable data on the performance of satellites as well as missiles.

"White Sands"

Since September 1956, RCA Service field engineers have been assigned to duties involving the installation, modification, and maintenance of range instrumentation equipment at the Army's White Sands Missile Range. The equipment includes communications of several types, radar, telemetry, optical, and other special devices used in missile instrumentation.

U. S. NAVY

The Government Service Department has furnished field engineering services to U. S. Navy organizations for many years. RCA Service field engineers serve with the Navy's Bureau of Ships and provide installation, maintenance, and training services aboard Naval ships, at Shore Stations and Shipyards in the United States and overseas. These services involve complex communications, radar, fire control and associated equipment and systems of all types. Similar programs are being conducted for the Bureau of Aeronautics' Naval Aviation Electronics Service Units, covering airborne electronics and navigational aids equipment, and for the Bureau of Ordnance.

"Polaris"

At the several Naval Ordnance Test Facilities on the West Coast, Government Service Department engineers and technicians are providing assistance in such fields as electronics, physics, photography, ballistics and missilery. The Department's staff assigned to these Facilities perform a number of highly diversified field engineering services on Naval Ordnance underwater, surface, and short-range air equipment and systems. One such system involves the Navy's "Polaris" Missile.

(Official U. S. Navy Photo)

White Sands, New Mexico—RCA-built base houses one of the most comprehensive electronic weapons systems ever devised.

In another program now underway on the West Coast, the Government Service Department's engineers and technical specialists are providing installation and related services at the Navy's Point Arguello Facility. This Facility is an integral part of the Naval Air Missile Test Center and the Pacific Missile Range. The Government Service Department's responsibilities include engineering review of all electronics and communications equipment, test and checkout after installation, plus the writing of technical manuals covering the installation and operation of the range instrumentation.

Philippine Complex

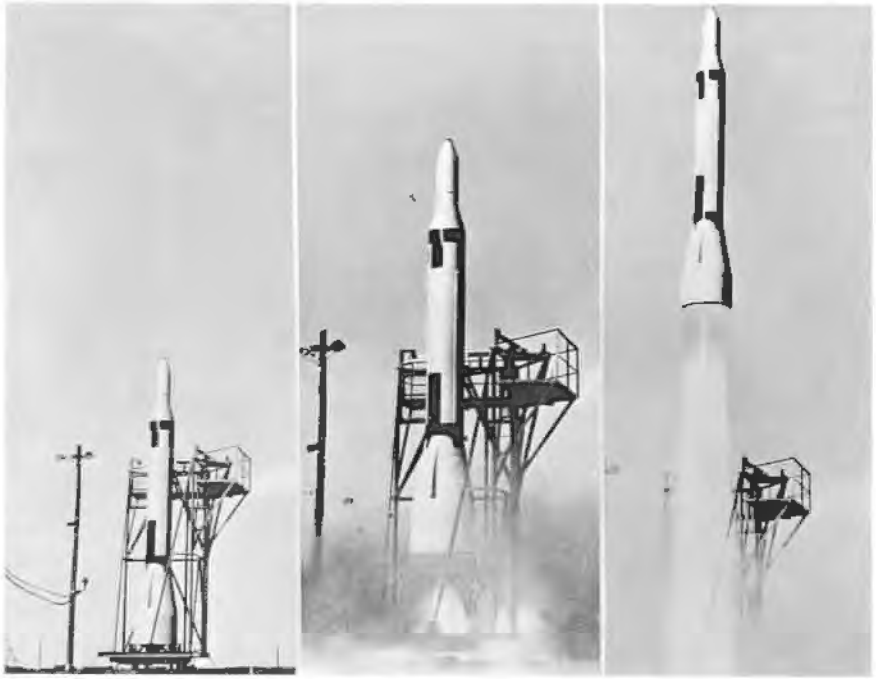
For the past three years, Government Service Department engineers and technicians have been working with the Navy's Bureau of Yards and Ducks on the recently

(continued on next page)

Philippine Complex — Microwave Relay Center atop Santa Rita Mountain.

(Official U. S. Air Force Photo)

First Sage-Controlled Bomarc was launched in Florida by a push button in New York state.



(Official U. S. Navy Photo)

U. S. Navy Polaris Test Vehicle, before launching . . . beginning its flight . . . and well on its way.

(continued from previous page)

completed installation of communications equipment in a vast system known as the Philippine Complex. This system includes six main installations within 3000 square miles of rugged mountainous terrain throughout the Philippine Islands. Although under U. S. Navy cognizance, the system is used by the Army and Air Force and is integrated for two-way communications with the Armed Forces' world-wide communications network. RCA Service personnel were responsible for the installation of equipment at the receiver building and the large antenna farm; the terminal building with approximately 260 channels for teletype, facsimile, and telephone; the transmitter building, near Manila, with sixteen transmitters of various types; the microwave relay center at Mount Santa Rita; and drop-out points for two-way communications facilities at Cubi Point Naval Air Station, Sangley Naval Air Station, Clark Air Force Base, and the American Embassy in Manila.

The successful completion of this project, and its satisfactory operation by the Navy, resulted in new RCA Service assignments for the Navy's Bureau of Yards and Docks, currently being carried out in Hawaii and the Pacific Missile Range.

CIVIL AERONAUTICS

During the past several years, the Government Service Department has been assisting the Civil Aeronautics Administration (now Federal Aviation Agency) in its Air Traffic Control programs. RCA electronics engineers formulate installation plans for radar, navigational aids, and communications systems, form installation layout plans, design buildings and write specifications for construction contracts. RCA's mechanical engineers determine air-conditioning requirements, write specifications, and also design special hardware appurtenances. These people are supported by RCA engineering draftsmen who produce final detailed plans and drawings. In addition to these planning services, RCA Service field engineers and technicians supervise the construction of facilities, perform the installation of electronic components and conduct equipment checkout tests.

RCA Service field engineers also provide technical assistance for other non-Military Agencies of the U. S. Government and industrial firms engaged in Defense Contract work. Groups of Government Service Department engineers and technicians are presently assigned to perform a wide variety of field engineering services for the Government's International Cooperation Administration, and such Contractors as Bell Laboratories, Union Carbide, Reaction Motors, Trans-Arabian Pipe Line Company, Convair, McDonnell Aircraft—just to name a few.

BMEWS, MTP and ATLAS

Government Service activity in the Ballistic Missile Early Warning System of long range radar defense bases in the far North—in the Missile Test Project at Cape Canaveral, Florida—and in the electronic checkout and launching system for the Atlas missile, at Van Nuys, California—have been covered separately in previous issues.

—Wide World Photo

Ingemar Johansson Uncorked his right hand . . . Champion Floyd Patterson sprawls.

Watching "Ten thousand Swedes come through the Weeds"

The nation's fight fans were incredulous the night of June 26, when Sweden's "Ingo" Johansson dropped Patterson seven times in the third to win the world's heavyweight boxing championship.

It was the first time the title had left us in twenty-five years. Ten thousand Swedes, or so it seemed, surged into the ring to cheer the new champion.

Close to 22,000 spectators saw the slaughter at Yankee Stadium, and an estimated 3,000,000 Stockholm fans heard it via Radio Luxembourg. Countless thousands more in the U. S. and Canada saw it blow-by-blow in 150 Teleprompter locations.

It was reported that Teleprompter bought the closed-circuit television rights to the fight for $300,000. This corporation in turn sold the show, distributed over Telephone Company lines, to local theatres or promoters. Some had permanent Theatre TV equipment; others leased it from Teleprompter.

Installation and servicing at the various locations was supervised by 160 Tech Products field engineers, and coordinated from L. R. Watson's desk at Cherry Hill.

An old hand at the technical end of show business, Mr. Watson has been with RCA Service "off and on" since the grass-roots days of early RCA Photophone.

One of the "offs" was nineteen months in the China-Burma-India theatre with the Signal Corps in World War II, assigned to duty as Code Clerk and Message Center Chief. Back home, he had a year's fling in do-it-yourself, i.e., a Visual Education business in Denver, Colorado. He returned to RCA Service Company in 1947, is now Theatre and Industrial Coordinator of Field Operations under G. A. Toepperwein.

The fast-growing Theatre TV Service is a valuable adjunct to the more established (and more seasonal) four-wall and drive-in business.

Further, there's much additional business to be done for firms who use Closed-Circuit TV to introduce a new product simultaneously in widely separated markets, or to present a new idea to employes situated in several outlying plants.

These services, varying from 25 to 100 locations in size, have been performed by Tech Products people for International Business Machines, Chrysler, General Motors, Pontiac, Texaco, Phillips Petroleum, Upjohn, and others.

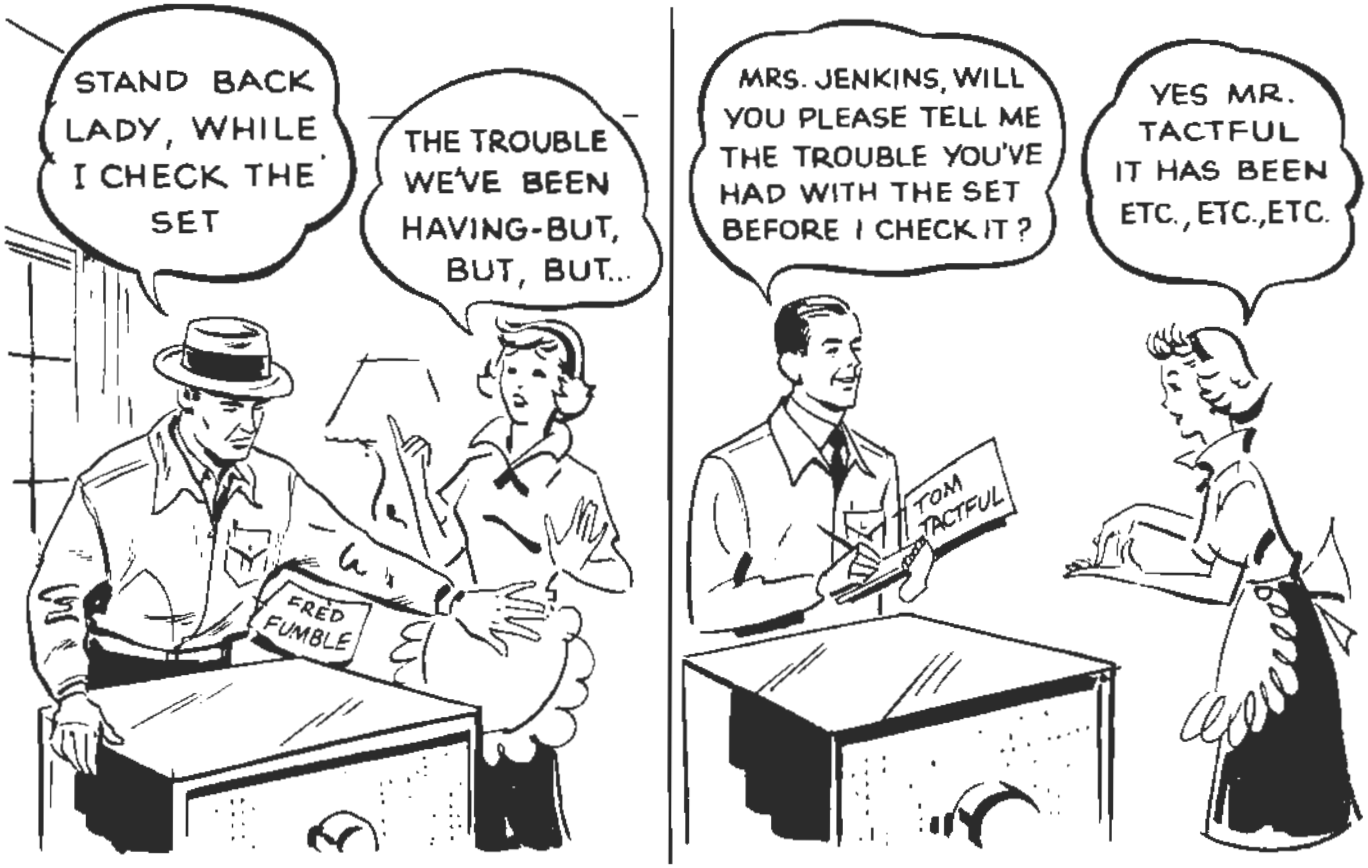
In all, fifty-two Closed-Circuit telecasts were handled by T & I field engineers in 1958, covering 659 locations.

U. S. and Canadian fans saw it happen via Teleprompter broadcast. L. R. Watson, at Cherry Hill, coordinated TV installation at 150 locations.

Fred Fumble, Tom Tactful, and the DSA-way

(courtesy of East Central Region)

INTRODUCE YOURSELF – USE THE CUSTOMERS NAME OFTEN ! ! !



LET THE CUSTOMER TALK – YOU MAY LEARN SOMETHING ! ! !

Service Company Personalities

P. E. CARTER started his RCA Service Company career in 1950 as a Budget Analyst, assigned to the development and installation of a Standard Cost System for Consumer Products TV Branches.

Progressing rapidly to Manager of Budgets and Standard Cost, he was, in 1954, promoted to Manager of Auditing and, in 1956, to Manager, Budgets and Procedures.

He is now Manager of Budgets and Pricing, responsible for the coordination of all Operating, Administrative, Advertising and Capital Budgets for the Service Company. He also supervises the preparation of long range forecasts and the Cost Analysis and Pricing Activities of Consumer Products, Technical Products and Government Service Departments.

Mr. Carter served in Naval Intelligence during World War II; stationed in Puerto Rico for two years.

He is a CPA, and a member of the Pennsylvania Institute of Certified Public Accountants. He is also President of the Huntington Valley Investment Club. Favorite sport: Ski tracks in Canada.

E. D. VAN DUYNE, Manager of Defense Electronic Products Services, heads a division of 700 Government Service people who install, service, and otherwise support the RCA equipment which the U. S. Military has purchased.

Prime examples are the "ATLAS" missile launch and checkout equipment; the "DAMP" system of downrange picket ships which electronically measure missile performance; FPS-16 Instrumentation Radar, and many other classified projects.

Originally an RCA Photophone Field Engineer (1935-41), then a Government Service Group Leader (BU Ships, 1941-45), Mr. Van Duyne's more recent experience was with Technical Products Service in the Kansas City District.

He was Field Supervisor there for five years (1945-50) and District Manager for seven (1950-57), then was named West Central Region Service Manager. He transferred to his present assignment in GSD in September, 1958. He's a member of the SMPTE; was Past Master of the Kansas City Masonic Lodge. His ham radio call is WØQI.

Paul E. Carter

Eugene D. Van Duyne

Charles L. Carroll, Jr.

Robert L. Valentine

C. L. CARROLL, JR., is Manager of Quality Analysis at Service Company's Missile Test Project in Florida. As such, he leads an organization which provides staff guidance in establishing missile test policy.

In this capacity, the group reviews, analyzes, and reports on the adequacy and performance of data gathering and data processing systems, and proceeds to recommend action for improving MTP performance.

Mr. Carroll was, for seven years, Associate Professor in the Department of Mathematics, North Carolina State College. He then, for one year, served as Research Administrator, Mathematics Division, Air Force Office of Scientific Research.

He came to RCA Service Company in 1956 as an engineer on data reduction analysis.

He holds memberships in the American Mathematical Society, the Mathematics Association of America, Sigma Xi, American Rocket Society, and the American Ordnance Association.

R. L. VALENTINE, Auditing Manager, has first-hand knowledge of the job he requires from his staff.

His early experience as an auditor with Public Accountant firms was interrupted by a hitch in the 70th Infantry Division of the U. S. Army.

Thereafter, he joined Service Company (1948) as a Field Auditor which, with subsequent promotions, kept him on a continuous cross-country circuit for the next eight years—auditing the records and accounts of assigned Service Company locations.

He became Leader, Field Audits, in 1951 and Manager, Field Audits in 1955.

Mr. Valentine's promotion to Manager, Auditing, became effective in February, 1956. He directs and supervises the auditing activity which, in all types of audits, determines the accuracy of accounting methods and systems throughout the Company.

He's a member of the Institute of Internal Auditors. He does a little model railroading, ostensibly for his son.

Stephen D. Heller, RCA Service Company Vice President, heads the BMEWS project for Government Service.

There Can Be No Winner in a Nuclear War

For centuries, man has been striving to attain an effective means of positive destruction, produced at an exact location.

Bows and arrows, mortars, rifles, artillery and, later, radar-guided aerial bombing are familiar milestones in the never-ending search for the ultimate weapon.

Now, experiments with rockets and rocket fuels have produced vehicles of tremendous thrust, capable of transporting heavy nuclear warheads. Radio or Inertial Guidance Control has been added, so that these vehicles can be controlled in their mission of destruction. They may be delivered accurately from great distances and at extremely high speeds, to a specific target.

The world may well question its future survival in the day and age of the deadly Intercontinental Ballistic Missile.

Our Best Defense

Stephen D. Heller, Vice-President of the BMEWS Service project, says retaliation is the best defense.

"Defense is inherent," he explained, "in the horrible outcome of the use of such weapons against mankind. No one wants to use such a weapon if they know that the same weapon could be used against them. There can be no winner of a war fought with missiles carrying nuclear warheads.

"Our best defense against ICBM," he said, "lies in a ready capability to render devastating retaliation in the event of an enemy missile attack.

"The success of such defense depends greatly upon our accurate detection and warning, at the earliest possible moment, of missiles launched against us—so that the wheels of retaliation may begin to roll even before the first enemy missile has reached its target."

The first steps toward an adequate warning against an ICBM attack are well along in RCA's development for the Air Force of a Ballistic Missile Early Warning System—a momentous project to establish a giant electronic Radar system capable of probing thousands of cubic miles of space over the Polar wastes of North America.

A multi-million dollar contract for the development of the system, known as BMEWS, was awarded by the Air Force to the RCA Missile and Surface Radar Division as Prime Contractor.

RCA Service Company, as sub-contractor, assumed tremendous field engineering responsibilities, calling for the construction of the huge Radar Systems at bases in the far North, to detect fast-rising Ballistic Missiles and to predict their probable destination.

The Shortest Route

Mr. Heller poined out, "Contrary to what you may have believed in the past, if Russia were to launch Intercontininetal Ballistic Missiles at prime targets in the United States, the shortest route would be over the North Pole.

"Technically, with Alaska now recognized as a state, Russia and the United States are actually less than one

hundred miles from each other. BMEWS gives us vital protection, along our most vulnerable frontier, over the North American Polar Wastes."

In its operational form, the BMEWS system will consist of radar sites at strategic points in Greenland, Alaska, and in the British Isles.

Through a unique system of computers and electronic communication, information obtained from the high-powered radars will be interpreted, integrated, and communicated to the Zone of Interior, for evaluation by the North American Air Defense Command (at Colorado Springs). If warning to the predicted target areas is ever necessary, retaliatory forces of the Strategic Air Command will roll into action almost immediately from all of its world-wide bases.

In the Lead

BMEWS Service Vice President Heller is a man of quiet authority with an extensive background in missiles and missile defense.

Associated with RCA since 1940, he started his career in the Camden, New Jersey, Engineering Standard Laboratories, working his way through the ranks from technician via a succession of increasingly responsible managerial posts.

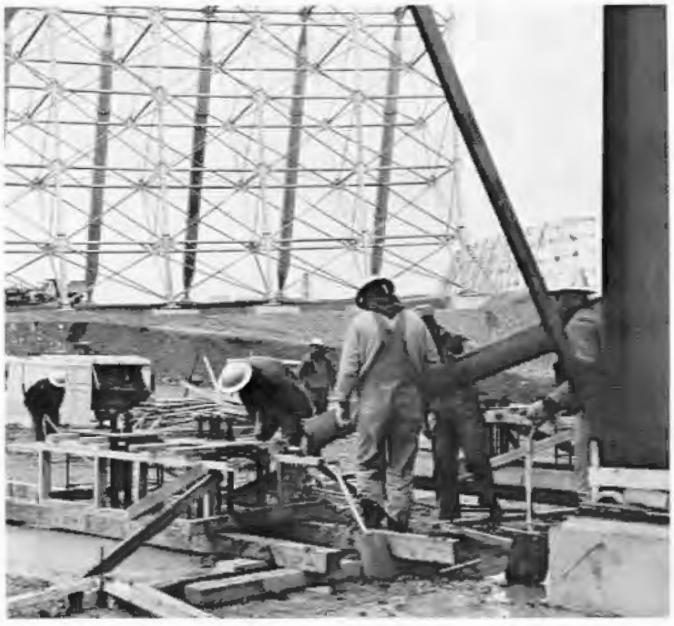
He served first as Operations Manager and later as Vice President in charge of RCA Service Company's Missile Test Project at Cape Canaveral, Florida, where his outstanding performance earned him the RCA Award of Merit, the corporation's highest citation for salaried employes.

He was named Vice President in charge of the BMEWS Service project in January, 1958.

RCA-Moorestown, N. J., plant where BMEWS was born: the RCA Missile and Surface Radar Division.

RCA Service Company, Riverton, New Jersey, headquarters for the construction of BMEWS in the far North

Greenland Site #1—Buildings 5 and 1 (in background) are constructed of structural steel to withstand the area's 135-mile gales.



Concrete footings are poured at Building 6 site which will house computers and other equipment for Antenna #10, visible in the background.

Our Kinda People . . .

DWIGHT A. COLLIER
(spare-time author)

To keep the pot boilng Dwight Collier has, for the past five years, worked as a technician in MTP Telemetry, Grand Bahama Island where, he says, he has "made friends and enemies and watched both come and go."

But when the day's work is done, he writes books for children. Two have been published, one is soon to be released, and one is currently being written there on the range.

He wrote the 10,000 words of his first book in a little less than two weeks of spare time. It's titled "Kathy's Visit to Mars," composed for an eight-year-old girl with a smile that could "melt a heart of boron carbide."

His second, "The Little Girl Who Could Perform Miracles," was published last March, inspired by Kathy's sister Joan. "Ride the Wild Rose" is scheduled for publication next year, and "Demons in the Wind" and "Lullaby at Sunset" are yet to be written.

Collier learned his electronics trade in the Navy. Assigned to the Second Amphibious Seabees, he went on operations several times to several countries. "We never saw any action," he writes. "This fact I did not regret."

JAMES E. SIMPSON
(long-time collector)

After a five years' residence in England, GSD Field Engineer James E. Simpson and family are still "enjoying every minute of it."

Popular Mrs. Simpson, though a civilian's wife, was President of the Officer's Wives Club at Shepherds Grove RAF Station and more recently, at Bentwaters RAF Station, has held OWC office as Parliamentarian, Tour Chairman, Anglo-American Chairman, and OWC Newsletter reporter.

Mr. Simpson has gained fame through his extensive collection of ninety rare guns, ranging from 16th century to present day weapons.

His most highly prized rifle is a hand-made elepbant gun which bolds a 500/450 nitro-express cartridge. One of the oldest is a Japanese match-lock rifle, estimated to be over 300 years old. Another is his 1625 muzzle-loader, made in Italy. He also has a pair of French flint-lock dueling pistols, and an 18th century Russian miquelet pistol with a solid ivory ball used as a grip.

The Simpsons have extended a welcome to anyone in Cherry Hill Office who has the opportunity to visit them. They enjoy showing visitors the "real" England they have grown to know.

ALBERT S. GASTOUKIAN
(Full-time linguist)

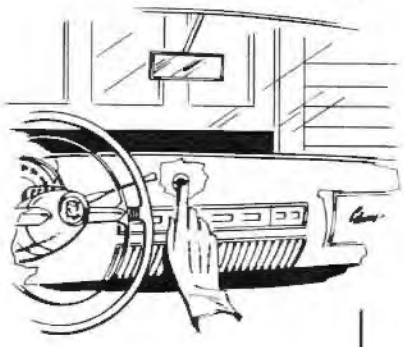
As a part of NATO activities, a group of French Naval Officers recently visited the United States for familiarization with American Fire Control Systems.

The Government Service facility at Alexandria, Virginia, was on their itinerary. There, to their evident surprise and pleasure, they were addressed in fluent French on the subject of Fire Control Switchboard design, including data applicable to the latest U. S. vessels with missile firing capabilities (namely, the Tartar and Terrier Missile Systems).

The multi-lingual instructor, Albert S. Gastoukian of Systems Engineering, is fluent in Spanish, French, Turkish, Italian, and Armenian.

Born in France and educated there, he came to the United States in 1949 and was naturalized in 1957. He was in the U. S. Air Force for four years as a Fire Control Instructor, and spent two years in Turkey with the U. S. Mission on an MDAP assignment as a radar advisor.

He has had experience as a GSD Field Technician (his first RCA Service job); is now an Associate Systems Engineer. He and his family reside in Silver Spring, Maryland.



A SMOOTH OPERATOR . . .

Dashboard control is solving the problem for more and more drivers who have wrestled once too often with heavy overhead garage doors.

Now, by the finger-tip touch of a button, RCA's Garage Door Operator will automatically open, close, lock all overhead doors, and turn the garage light on and off.

Completely safe, too. Should the descending door brush against anything, it will stop instantly, move again in the opposite direction on your signal.

Installed by RCA Service technicians, the radio-controlled operator is a permanent accessory which can be easily transferred from car to car.

A Page from the Family Album

NEW YORK—Third win in five seasons gave the Flushing Grids permanent possession of N. Y. Regional Manager's bowling trophy. The team (*l. to r.*): M. Kours, A. Bertolotti, J. Kobbe. (*Kneeling*) N. Smith, W. Thorne.

"Wait 'til next year," Bernie Grossman yells as team captains reach for the new Regional Managers' trophy. He's Consumer Products Field Sales Manager, New York District.

PATRICK AIR FORCE BASE, FLA.—D. K. Thorne (*center*), RCA Service Company Administrator of Organization Development, swaps notes with MTP's OD Manager W. L. Strayer (*right*) and J. M. Kaeser, Manager, MTP Range Support.

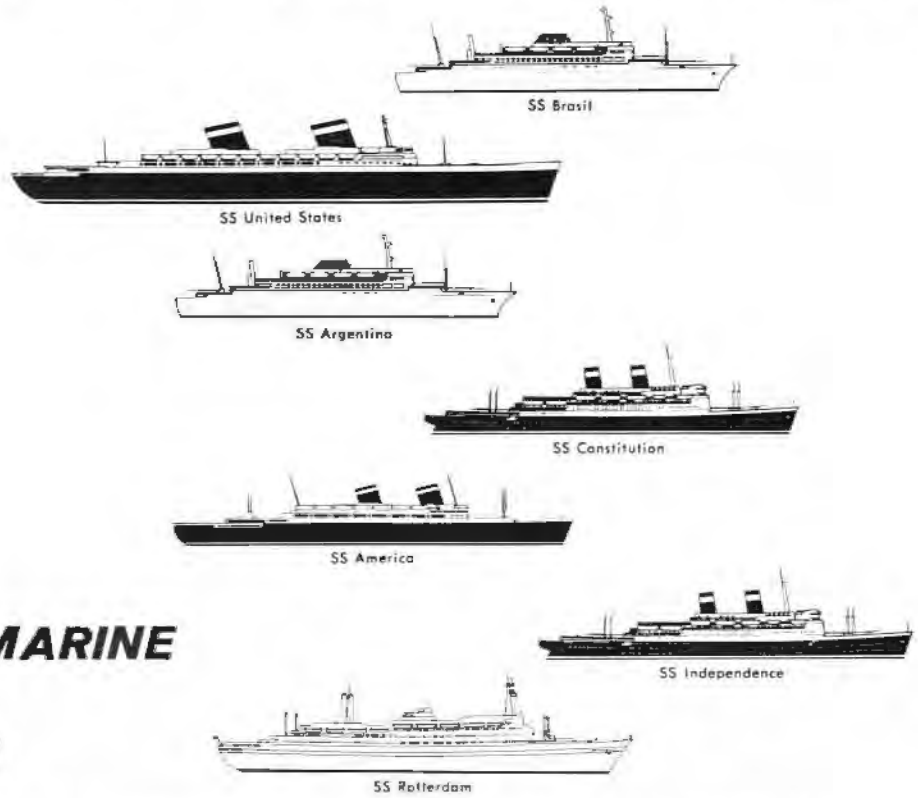
To Moscow—RCA President J. L. Burns extended best wishes to the RCA team who demonstrated color TV at American Exhibit in Moscow. (*L. to r.*): R. M. Gillaspy, G. Malko, R. Saunders, M. R. Gargiulo, W. L. Murray, Exhibits Manager R. H. Hooper, F. L. Brown, J. A. O'Dowd, Mr. Burns, W. Poch, L. Baum, R. Flory, R. E. Brooker.

CAMDEN, N. J.—Service & Installation Division, District Managers, 1934—(*L. to r.*) *Front row:* W. W. Jones, W. L. Jones, S. D. McIntosh, H. J. Leighley, E. C. Cahill, C. H. Herbst, J. E. Heney. *Middle row:* W. H. Bohlke, G. A. Toepperwein, J. Mauran, G. P. Allen, O. V. Swisher, A. E. Jackson. *Top row:* E. M. Hartley, E. O. Johnson, A. A. Aiken, F. B. Ostman.

TUCSON, ARIZ.—GSD Facility Manager J. L. Langevin (*left*) transmits letter from the C.O. at Fort Huachuca to R. J. Rowe, commending work on a CSTATC contract. Participating, D. Pascoe and Y. Kajiwara.

WORLD LEADER IN MARINE RADIO EQUIPMENT

WORLD'S MOST MODERN FLOTILLA USES RCA RADIOMARINE EQUIPMENT!



Typically represented aboard the SS Brasil

NAVIGATION CENTER—Navigator Benjamin E. Joyce of the Moore-McCormack Line stands by one of the Brasil's two radar units and radio direction finder. These units were supplied by Radio Corporation of America as part of a complete package of the latest electronic marine equipment for safety in navigation.

COMMUNICATIONS CENTER—L. B. Victor, Manager of Moore-McCormack's radio and electronics department, makes final check of liner's "communications center." The center, developed by RCA, consists of radiotelegraph and radiotelephone consoles providing radio and phone service from every stateroom to both sides of the Atlantic.

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CAMDEN, N. J.