PHILCO NEWS



MARCH 1961

PHILCO. TECHREP WORLD WIDE Service

The spreading influence of American technology plays a vital role in the free world's fight for a just peace and the economic development and welfare of underprivileged countries everywhere.

In this great struggle, technical know-how is a priceless ingredient, for as manufacturing industries develop and produce the equipments and systems that help deter aggression and contribute to economic growth by increasing man's productivity, the need for skilled personnel to engineer, install, man and maintain these complex systems increases proportionately.

Philco foresaw this need for technical assistance some two decades ago, and Philco TechRep Division was established to pioneer a new industry—world-wide Contract Technical Services for any make or type of electronic equipment or system.

Through two decades of war and peace, the challenges have been infinite, the achievements remarkable. Philco TechRep Division has trained hundreds of thousands of military and civilian personnel of many countries in the seemingly endless skills our modern technology requires. It has engineered and installed, modified and overhauled systems that span continents and circle the globe. And it has maintained and operated products of world industry that are opening new frontiers from the uninhabited ice cap of the Arctic to the technological void of the jungle.

It is literally impossible to document and present the many areas of achievement of this unique Philco division that now numbers over 3,500 field engineers and embraces many different fields of technology. The following pages do, however, provide a capsule picture of Philco TechRep Division at work around the world in a few of the many and diverse services that the Division now provides.

> Published by the Public Relations Department of Philco Corporation-MARK LUTZ, Editor.

VOL. 19

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ROBERT F. HERR Vice President, Philco Corporation

"The silent partner in America's great Military-Industry defense team is the field engineer. After the scientist and the engineer have done their work, after the factory has produced the equipment, after the military planners have ordered the installation, the field engineer's work begins.

"His orders are clear—to keep the equipment operating at top efficiency and to share his knowledge and experience with the other members of the military team.

"His forte may be the field of guided missiles, communications, radar, precision-measuring instruments, or a score of other technical areas, but he specializes in just one thing-getting the job done.

"I am proud to be associated with such an outstanding organization as the Philco TechRep Division."

OUR COVER THIS MONTH—Philea TechRep Robert Pryce and students in his class, Guided Missile Dept., U. S. Army Artillery and Missile School, Fort Sill, Oklahoma. (Official Army Photo)

AUSTRALIA AZORES ISLANDS BELGIUM BRAZIL BURMA CAMBODIA CANADA CANAL ZONE **CUBA** DENMARK DOMINICAN REPUBLIC ENGLAND **ETHIOPIA** FORMOSA FRANCE GERMANY GREECE GREENLAND GUAM

ALASKA

HAWAII ICELAND ITALY IRAN JAPAN JUGOSLAVIA KOREA LIBERIA LIBYA MOROCCO NETHERLANDS NORWAY OKINAWA PHILIPPINE ISLANDS PAKISTAN PORTUGAL SAUDI ARABIA

> THAILAND TURKEY UNION OF SOUTH AFRICA VIET NAM

ACROSS-THE-BOARD

FIELD ENGINEERING



Major H. J. Tennant and Philco Team Leader Jim Cook review training plans at the 392d Communications Squadron, Vandenberg Air Force Base, California.

Philco field engineers are systems men, qualified by training and experience to handle technical problems on any item of electronic equipment or system, regardless of who makes it. Following the Division's acrossthe-board concept, one Philco TechRep takes the place of many manufacturers' factory representatives who would be required to maintain the different equipments in a complete weapons system.

More than two thousand Philco field engineers are currently assigned to virtually every major Air Force command including Air Defense Command, Strategic Air Command, Tactical Air Command, Air Training Command, Air Materiel Command, Airways and Air Communications Service, Ground Electronics Engineering and Installation Agency, and the overseas air forces.

Working with the Air Defense Command since its formation, Philco men have provided expert assistance in the siting, programming, and engineering of the farflung radar and communications network which guards America against aggression from the air.

In 1955 the TechRep Division was awarded a contract to supply field engineers to augment the military capability for maintenance and training at aircraft control and warning sites throughout the Eastern Air Defense Force. A year later the contract was extended to include Western Air Defense Force stations. At the present time Philco field engineers provide maintenance assistance and instruct military and civil-service personnel at more than 80 AC&W sites in the United States alone.

The Strategic Air Command is another major user of Philco field engineering services. At SAC bases throughout the free world, Philco men are closely associated with all aspects of the Command's Communications and Electronics and Armament and Electronics systems. Following the Philco across-the-board concept, the TechReps are performing engineering and technical advisory services on problems of maintenance, training, and operations of bomb director, fire control, airborne and ground communication systems, navigational aids, and electronic counter-measures.

Many of the Philco men have been on their SAC assignments for five years or more, thus gaining a wide background of experience on SAC weapons systems, and lending stability to the engineering, maintenance, and training activities throughout the Command.

with the U.S. AIR FORCE



Philco TechRep Roy Wright uses a weatherradar mock-up to instruct airmen of the 4614th Communications Squadron at Ent Air Force Base, Colorado.



TechRep and airman work together in trouble shooting a component of the FPS-6B radar at the 777th AC&W Squadron, Klamath, California.



PHILCO — DEVELOPED TRAINING MATERIALS HELP NATION'S SCHOOLS TEACH

THE WAY AND A PARTY

ELECTRONICS



INSTRUCTOR'S MANUALS

Complete course outline and schedule ... lesson plans and experiments ... oral quiz outlines ... sample exams and answers ... day-by-day schedule for well-balanced division of time between lecture and lab work. In daily use in hundreds of high schools, technical institutes, and colleges (including the Service Academies at West Point, Annapolis, and New London) are training materials and programs designed and developed by the TechRep Division to aid in the teaching of all phases of electronics. Their value proved by years of use in the technical schools of the Armed Forces, civilian educators and industrial training directors have been quick to realize their practical worth in any electronic teaching program.

Using the Philco Classroom Demonstrator, the instructor presents the theory and practice of electronic circuits and equipments a step at a time by combining circuit panels to build complete, functioning systems. With his individual lab chassis, the student assembles the circuit being taught, and by using test techniques, gains practical experience.

Completing the Philco "training package" are instructor's manuals, student's workbooks, and a just-published series of six textbooks incorporating modern concepts of electronics coordinated with modern teaching methods. The program qualifies for Federal funds under the Government's aid-to-science law, Title VIII of the National Defense Education Act of 1958.



TEXTBOOKS

Recently developed textbooks incorporating modern concepts of electronics coordinated with modern teaching methods. Demonstrations and experiments correlated with text. Fills the need for up-to-date texts in the electronic field.



STUDENT'S WORKBOOKS

A complete series of experiments which enable students to perform the procedures that prove and apply the theory they have learned in lectures. Questions and problems on each experiment, block diagrams, schematics, photos, etc.



TechRep instructor, TechRep training materials, are teamed at Army, Navy, and Air Force installations world-wide. Here John Gill lectures to class at the Ballistic Missiles Branch, Ordnance Guided Missile School, Redstone Arsenal, Alabama.

TRANSISTOR TRAINING

Philco training materials used by the Navy's Bureau of Ships for transistor training are exhibited in the Pentagon Concourse.



Naval Reserve students use Philco training materials in electronics course at Floyd Bennett Field, New York.

TRAINING— 过于这些人的问题。 在这些时间的 化化学和分析 计算机的 网络小麦子 化合同化合物



On-the-job training in Cambodia. TechRep Team Leader Bernard Gallagher with machine-shop trainees at the ordnance depot, Phnom Penh.

If one area of TechRep activities were to be termed most important of all, that activity would be training. From the days of World War II, when the TechRep Division under contract with the Army Signal Corps established a school which trained 20,000 military and civilian personnel. up to today's activities in five continents, training has been an ever-expanding field.

BACKBONE

As conducted by TechRep Division personnel, training takes many forms, covers many fields. Philco men are conducting classes in service schools whose facilities rival those of a great university; in the jungles of Viet Nam other TechReps are training natives in the operation and maintenance of road-building machinery.

TechRep terminology splits the training field into two broad areas: formal (classroom and lab) and onthe-job (OJT). Philco men excel in both types and each year they add another chapter to the history which began almost twenty years ago.

At Fort Bliss' Army Air Defense School 200 TechRep instructors teach officers and enlisted men basic and advanced electronics, branch out into specialties of missile guidance, fire-control systems, ground support, and radio-controlled targets. Leaving their class rooms, they often accompany their students on field trips to nearby White Sands Missile Range for practice firing of the NIKE missile.

Another large-scale training activity in the missile field is at Redstone Arsenal, Alabama, where Philco men serve as classroom instructors at the Ordnance Guided Missile School. A third Army technical school utilizing Philco instructors is the Artillery and Guided Missile School at Fort Sill, Oklahoma. In addition to classroom and lab work at all three schools, TechReps also prepare and revise courses of instruction and design training aids.



TechRep Headquarters at Philadelphia offers tailormade courses and provides classroom and lab facilities which have been utilized by thousands of non-Philco students. Soldiers, sailors, and airmen have attended classes here as have civilian employees of the Armed Forces and industrial firms.

Beginning in 1959, the TechRep Division at its Philadelphia headquarters has conducted a continuing series of intensive four-week courses in computers and transistors for civil-service technicians of the Federal Aviation Agency. A similar program began last fall at Palo Alto. More than 300 FAA men have completed these courses and returned to their field assignments.

Contracts like these, where thousands of students are taught and millions of dollars are expended, are important to the TechRep Division. Equally important, and far more numerous, are contracts for training on a smaller scale. American industry realizes the value of in-plant training for upgrading employees, and many firms have used the services of the TechRep Division's experienced instructors and practical courses of instruction.

In the aircraft industry, Convair, Grumman, Lockheed, and Martin have welcomed Philco instructors. At Newport News Shipbuilding & Drydock Company TechReps established a school to increase the yard's electronic capabilities. Bethlehem Steel, Maryland Drydock, New York Shipbuilding, and Todd have also contracted for the services of TechRep instructors at their yards.

The educators call it learning by doing: the TechRep Division calls it on-the-job training. Both terms refer to the system where the trainee learns by actually working at his job. In widespread use throughout the Armed Forces of our own and allied countries, OJT depends for its success on the calibre of the instructor and his ability to transfer theory into down-to-earth application. With their unique combinations of knowledge and experience, Philco TechReps are conducting successful OJT programs around the world.



Philca Site Engineer Fred Edgar explains the theory of a magnetic-core memory to a class of airmen at Klamath, California.



Explaining a trouble-shooting technique at Thule Air Base, Greenland, is TechRep Ross Miller, assigned to the 931st AC&W Squadron.



TWO HUNDRED PHILCO TECHREPS WORK ON MODERNIZATION OF USAF

A TYPICAL example of Philco planning and teamwork to accomplish a major project in the most efficient manner is a current contract with the Air Force for the modernization of its world-wide integrated communications network. As prime contractor for the AirCom Modernization Program, the G & I Group's Communications Systems Division is responsible for the engineering and procurement, the Tech-Rep Division for installation of the equipments.

More than 200 Philco field engineers are now at work at the 24 major stations making up the global network including sites in Japan, Okinawa, Guam, and Hawaii in the Pacific area, and in the Azores, England, Spain, Tripoli, and Saudi Arabia on the other side of the world.



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WORLD-WIDE COMMUNICATIONS NETWORK

D.

AIRCOM PROJECT AT KADENA AIR FORCE BASE, OKINAWA

- A. John Norfleet at work on the new microwave equipment being installed in the Communications Relay Center.
- B. John Rich painstakingly checks the thousands of connections in the main distribution frame.
- **C.** Ed Rice (standing) and Sam Malcolm preparing cables to multiplex equipment for the new inter-site facility.
- D. Clarence Bivins (right) and Sam Malcolm busy on another phase of the installation project.



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F ROM Norway and Iceland, through the countries making up the heartland of Europe, and south to Morocco, Libya, and Saudi Arabia, 200 Philco field engineers are on duty with the Army, the Air Force, and the U. S. military assistance missions.

Some of their work is under security wraps so that the duties of the Philco men assigned to the Air Force Security Service, the Army Security Agency, and the National Security Agency are known only to their military supervisors.

Assigned to USAREUR (U. S. Army, Europe), Tech-Reps are performing a variety of services for the Signal Corps. At Pirmasens, Germany, a Philco field engineering group assisted in the organization of the largest Signal Corps depot in Europe and has been serving there since 1953. Their work first included the establishment of stock levels, preparation of work schedules, and the layout of the shops. They are currently providing instruction in maintenance, overhaul, and retrofit techniques.

With the Air Force's GEEIA (Ground Electronic Engineering and Installation Agency) Philco men in Germany and Spain serve as systems engineers in the planning and installation of fixed and mobile radar, navigational aids, and communication systems. Assisting in other Air Force programs are TechReps with USAFE (U. S. Air Force, Europe) and SAC (Strategic Air Command).

Typical of many large-scale programs which utilize the joint capabilities of the TechRep and the Government & Industrial Division, Philco field engineers are planning and installing units of a classified communication network in eight countries of Europe and North Africa.

William A. Fredericks is TechRep Manager of Atlantic Operations with headquarters at Wiesbaden; the Division also has regional offices in Madrid and Sidi Slimane.

EUROPE, NORTH AFRICA, and the MIDDLE EAST



At a D. S. Army General Depot in Europe Philoo's Joe Ellmore, maintenance advisor to the disputy for supply operations, reviews a scheduling problem with his civilian chief.



Philco field engineers are qualified to solve maintenance probems on a wide variety of equipment. Russel Gimellaro trouble-shoots a television camera at Torrejon Air Base, Spain.

TechRep Glenn McCabe, assigned to Signal Section, V Corps, USAREUR, calls his headquarters during a field exercise in Germany.





SOUTH EAST ASIA

N the newly-independent nations of Burma, Cambodia, Thailand, and Viet Nam, Philco TechReps are helping the people of these countries develop the technical skills which will unlock the vast natural resources in which their lands abound. TechReps are also assigned to military-assistance programs so that these countries may defend themselves against aggression.

For the past four years two teams of Philco men have been working with the Viet Nam Corps of Engineers. At the capital city of Saigon the TechReps are assigned to the engineer depot where road-building machinery is rebuilt, stored, and issued. Parts-supply specialists are training their native counterparts in modern inventory-control and warehousing systems; other Philco men are conducting on-the-job training in the rebuild shops.



Captain Hu Kim Heng of the Cambodian army and TechRep Jack Primmer discuss the servicing of an M-24 tank.

TechRep Dave Lawson and his crew of Vistnamese Insinees check over a duranged 20-ton crane prior ja mbailding

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THÔNG

Instantions from TechRep Ted Sorenson are translated by a Viet Nam foreman to native personnel installing a transmission in the rebuild shop.

The state of the

Several hundred miles north of the capital, another Philco team is giving practical assistance in an important road-building project. Living in temporary camps far from civilization, the TechReps are schooling the Vietnamese in the operation and maintenance of bulldozers, graders, rollers, and other road-building machinery as the new highway is slowly pushed through jungles, across rivers, and over mountains.

At Phnom Penh, capital of newly-independent Cambodia, a Philco team is working with Cambodian Army personnel in an ordnance depot. The on-the-job system of training is being used in teaching the maintenance, supply, and issue of small arms, machine guns, armored cars, and light tanks.

> Outboard engines are vital in a land of many rivers and few roads. Here Philce Team Leader Tom Kilby supervises native mechanics at the Seigen Engineer shops.

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TECHREPS IN KOREA

T HE achievements of the hundreds of Philco Tech-Reps who have served in Korea would fill a book and the Directorate of Historical Services of the U. S. Fifth Air Force has recently published one (see cut) telling the story of the civilian field engineers who so notably worked there. Philco men distinguished themselves in all phases of the hostilities, and after the armistice, pitched in to help the war-torn country rebuild itself and train its armed forces against any future aggression.

It is difficult to single out individual feats, for the entire operation was a story of TechRep teamwork, but the following extracts from official commendations will illustrate what field engineering in Korea was like during the war.

"With utter disregard for your personal safety you voluntarily participated in a 'Mosquito' combat mission to observe the requirements of Tactical Air Control communications. With the knowledge thus gained you have been in a better position to determine our needs in the field-engineer program." Brig. Gen. Crabb, deputy for operations, Far East Air Force.

"In spite of your position as a civilian, you volunteered to lead a party to establish a radio-relay station on Mt. Shimbutsu, a remote and guerilla-infested region. You remained at the site and imparted technical knowledge to the team to enable them to accomplish their mission in an outstanding manner." *Maj. Gen. Partridge, commander, Fifth Air Force.* Mt. Shimbutsu was later named Patterson Hill by the commander of the 502d Tactical Control Group.

"... was present at the site when it was under intense fire. The radar antenna was put out of operation by several shells striking close, severing power



The Korean War brought hardship and suffering to millions; the Philco men, in their off-duty hours, tried to make life a little brighter for the thousands of orphaned children. This 1952 photograph shows Group Leader Walt Sampson presenting new shoes to two little girls at the Chun Tchin Orphanage following a "Shoes for Korea" campaign at TechRep Headquarters.

cables of the drive motor. . . . left his shelter and assisted in splicing the cables so that the tactical airdefense center could resume its mission. The cables were unprotected from repeated explosions, causing . . . to work under heavy fire." Major Thompson, commander, 608th AC&W Squadron.

After the fighting ended, the equally difficult task of reconstruction began; with the help of Philco Tech-Reps the new Republic of Korea began to rebuild its civilian economy and its military defense forces. The majority of the Philco men now in Korea are assigned to units of the American forces assisting in the training of the Korean Army, Navy, and Air Force; others are working with civilian agencies of the ROK government.

Since 1957, a group of specially trained Philco field engineers has been working with the Ministry of Communications in the rehabilitation of the governmentowned telephone, telegraph, and radio systems. Under contract with the U. S. State Department's International Cooperation Agency, the men provide professional counsel in the fields of management engineering, installation, operation, and maintenance of the nationwide communication system.

Among the many projects planned by the Philco group has been the installation of automatic and manval telephone-exchange equipment for 28,000 lines, construction of 2250 miles of carrier-loaded open wire, and the establishment of 183 police fixed-radio stations and three marine-navigation systems. Six dial central offices are currently under construction in the larger cities.

One of the telephone engineers, Jack Lee, served as technical advisor to the Korean delegation at the recent Internation Telecommunications Conference at Geneva which promulgated regulations governing international frequency allocations for radio and television. Lee has techrepped in the Pacific Theater since 1951; during the Korean War he was officially cited for his one hundred volunteer missions over enemy lines at the controls of a PA system installed in a lowflying psychological-warfare aircraft.

Another interesting chapter in the TechRep Division's Korean saga is the story of four Philco Tech-Reps and their accomplishments in re-establishing the Republic's system of vocational schools under a contract with the United Nations Korean Reconstruction Agency. The men helped plan the layout of the new schools, supervise the installation of the equipment, and review the curriculums taught.

Each of the Philco men had years of vocationaltraining experience, but none had ever helped to build a school from the ground up. Accepting their difficult assignments as a challenge, they found a personal satisfaction in helping the hard-working Koreans. As one TechRep said, "I've never worked with men so eager to learn, so appreciative of help, so determined to make their country strong in its independence. I've worked harder than ever before, but it's an experience I wouldn't trade for anything."



Philco's Dominick Dinatale and Kwon Hi Chul, viceprincipal of Taejon Vocational Training Center, review plans for new buildings to house their expanding work.



TECHREP VOLUNTEER SERVES ON ARCTIC ICE ISLAND



A N ice floe in the Arctic Ocean, 450 miles from the Pole, was Mike Swiercz's home for eight months during the recent International Geophysic Year. A member of the volunteer crew of scientists assigned to Project Ice Skate to study conditions of geomagnetism, gravity, and oceanography, Mike was in charge of communications and navigational aids measuring the movement of the drifting ice island.

When weather conditions permitted, aircraft landed on the 12-foot thick ice to keep the little party supplied with food and fuel. After battling temperatures as low as 40 below, Mike had one request at the end of the project: a warm assignment. He is now techrepping in Tripoli.

ENGINEERING AND INSTALLATION SERVICES

FOR ANY TYPE OF EQUIPMENT, SYSTEM, OR FACILITY

Twenty years of experience in providing contract engineering services on all makes and types of equipment has given the TechRep Division an unmatched capability in the important field of engineering and installation. Turnkey technical projects (so called because the customer has only to unlock the front door and the system is ready to operate) demand a wide variety of professional skills; the Division's Engineering and Installation Department can select the manpower required for any type of job from the corps of 3500 skilled Philco field engineers.

TechRep E&I services include engineering studies to determine equipment and systems requirements, specification and modification of required equipments, procurement, construction of buildings and facilities, installation, and acceptance testing as specified by the customer.

As more and more military and commercial customers are learning that both time and money can be saved by utilizing the complete services of this professionally-qualified organization, TechRep engineering and installation contracts are growing in number and scope.

TechRep installation team at work on an antenna project at the Naval Air Station, Miramar, California.

Photo

Navy



TECHREPS IN ALASKA

Of paramount importance in the defense of the North American continent, Alaska and the Aleutian Island chain fling an icy challenge at those who dare to live and work in this vast North Country. Since World War II days the men of the TechRep Division have been working with the Armed Forces in what is now the forty-ninth state.

On barren Kodiak Island a tracking station for the Discoverer satellite is completely manned by Philco TechReps. From Kodiak is flashed the electronic signal which "commands" the satellite to eject its capsule containing test data on outer-space conditions.

At Pt. Barrow on the shores of the Arctic Ocean; on St. Lawrence Island, 120 miles out in the Bering Sea; at Tin City, just 25 miles from the line which divides the U. S. from the U.S.S.R.; and at other remote sites, TechReps work with Air Force personnel at radar-warning stations.

Other Philco men staff and operate the USAF Alaskan Communication and Electronics Depot which provides complete maintenance and supply support for all Air Control and Warning sites within the Alaskan Air Command.

TechReps assigned to the Signal Corps at Fort Richardson program and budget for new equipments, prepare maintenance schedules, and monitor the Arctic supply-system operations. Under the contract with the Air Force's Ground Electronics Engineering and Installation Agency (GEEIA), Philco men provide technical assistance in the planning and installation of fixed and mobile radar, navaids, and communications equipment throughout the Alaskan Theater.

The Division maintains a completely-staffed office at Anchorage.







TESTING AND EVALUATION

Fully-equipped test laboratories are available for performing full field simulations on all types of electronic equipments. At Philadelphia Headquarters and at the TechRep Division's West Coast Facility-Palo Alto a staff of more than 200 technical publications specialists provide the capability for preparing all types of manuals and reports in virtually any technical field. These men -writers, editors, artists, draftsmen, photographerswork together in preparing everything from parts catalogs to installation, operation, maintenance, and training publications.

In addition to work for other Philco divisions, the Technical Publications Department also serves all branches of the Armed Forces, government agencies, and industries in fields ranging from abrasives to materials-handling vehicles and from electronics to heavy engineering equipment.



WRITING AND EDITING

A staff of 90 technical writers and editors provide experience in depth for virtually any technology. Specialized groups selected for each assignment are capable of handling the entire project, including responsibility for technical accuracy and literary correctness.



Colonel Walter Eckman, chief liaison officer of the Civil Air Patrol's Great Lakes Region, and Philco TechRep Jim Petty review one of the training manuals prepared by the TechRep Division's Technical Publications Department.



Recently inaugurated by the Department is a new concept to assist companies faced with problems in the technical-publications field. Under the five-step program, termed Data Management Service, Philco men review the contract to determine the nature and scope of the technical literature required. They submit accurate cost estimates, and furnish a detailed explanation of the military specifications. After approval, the Department assumes full management responsibility to organize all technical information required and develops the publications needed. Before publications are printed, all material is carefully reviewed and checked to insure accuracy and authenticity, first by Philco people and then by the customer.



CREATIVE ART

A full staff of art directors and artists assures clarity of presentation with an imaginative and practical use of all phases of illustrative techniques.



DRAFTING

Mechanical and schematic drawings are rendered accurately by specialists in various diagrammatic techniques.



MODERN PHOTOGRAPHIC FACILITIES

Experienced photographers and processors have the finest studio and field cameras and equipment to fulfill all photographic requirements.

AMONG THE THOUSANDS OF OFFICIAL

U. S. S. SARGO (SS(N) 583) FLEET POST OFFICE SAN FRANCISCO, CALIFORNIA

SSN583/1610 Ser: 74 9 FEB 1960

IN REPLY REFER TO

Commanding Officer, USS SARGO (SSN-583) Commander Service Force, U. S. Pacific Fleet Commander Submarine Group Pearl Harbor Subj: Mr. Jim H. RILEY, Philco field engineer; outstanding performance 1. This letter is being written and mailed at the North Pole to express appreciation for the services of Mr. RILEY, whose able assistance prior to sailing helped make this cruise possible. From: TOI 2. Mr. RILEY spent over five weeks working late hours and often weekends, overhauling and repairing a particularly intractable piece of sonar equip. Via: 2. Mr. RUEY spent over five weeks working late hours and often weekends, overhauling and repairing a particularly intractable piece of sonar equiparts. An attitude of willingness, determination and the highest sense of personal responsibility toward the job at hand complemented his technical skill. appreciation for the services of Mr. RHEY, v to sailing helped make this cruise possible. 3. For his performance in this job and for his invaluable advice on the care and maintenance of other installed sonar endipments, Mr. RIEY has 3. For his performance in this job and for his invaluable advice on the and maintenance of other installed sonar eqfipments, Mr. RILEY hands on SAROO. skill.

SARGO.

CONSUBRON SEVEN Copy to:

> Mr. George Heskett, Philco Field Engineer, was assigned to the 26th Air Division in February 1958. . . . in addition to his outstanding technical performance, Mr. Heskett is always determined to do his best on each job. A noteworthy example of this is his contribution to the QK-338 Magnetron Reliability and Improvement Program which began in this division during January 1959. The average magnetron life at that time was 338 hours. I am convinced that the average of 905 hours, achieved one year later, is due in great part to Mr. Heskett's efforts . . . This improvement represents a significant saving to the Air Force.

A. H. NICHOLSON

SAM W. AGEE Major General, USAF Commander, 26th Air Division (SAGE)

COMMENDATIONS RECEIVED BY TECHREPS

AIR DIVISION UPD. 28TH AIR DIVISION UPD. UNITED STATES AIR FORCE HAMILTON AIR FORCE BASE, CALIFORNIA

2 7 APR 1959

ATTN OF

DURJECT. Letter of Appreciation, Mr. Richard L. Cross Philco Technical Representative Division Wr. Samuel B. Webb General Manager 22d Street and Lehigh Avenue 1. It is my pleasure to bring to your attention the outstanding per-formance of Mr. Richard L. Cross, Philco Engineer assigned to this Invision Headquarters for the past year. Philadelphia 32, Pennsylvania Dear Mr. Webb

2. During this year Mr. Gross has made many valuable contributions to Division progress. I shall not attempt to enumerate them in de-tail. Suffice to say that Mr. Gross, through his strong leadership, molded the Division Philco Augmentation personnel into a closely knit team which fully supported the Division mission and objectives. molded the Division Philco Augmentation personnel into a closely knit team which fully supported the Division mission and objectives. 3. One illustration of Mr. Cross's efforts, worthy of specific men-lion, is the QK-338 Magnetron Improvement Program. Last July Air Defense Command Headquarters established a program for extending the life expectancy of the QK-338 magnetron tube. Mr. Cross worked con-Defense Command Headquarters established a program for extending the life expectancy of the QK-338 magnetron tube. Mr. Cross worked con-stantly and accressively in support of that program. This Division life expectancy of the QK-338 magnetron tube. Mr. Cross worked con-stantly and aggressively in support of that program. This Division now recognizes a monthly savings of approximately \$20,000 and our squadrons have wan one of the three Air Defense Command quarterly

Now recognizes a monthly savings of approximately \$20,000 and our squadrons have won one of the three Air Defense Command quarterly made this possible. 4. I consider Mr. Gross one of the best recommendations for the use of Philco Corporation Field Services personnel I have met. His exmade this possible.

of Philco Corporation Field Services personnel I have met. His ex-ceptional ability to balance Air Force requirements against those or his company makes him an invaluable asset to both organizations. His recent elevation to a position of greater responsibility at Head nis company makes him an invaluable asset to both organizations. His recent elevation to a position of greater responsibility at Head-quarters. Air Defense Command is indicative of his ability and his uls recent elevation to a position of greater responsibility at Hea quarters, Air Defense Command is indicative of his ability and his transfer to T am sume for the ultimate benefit of all concerned Quarters, Air Defense Command is indicative of his ability and his transfer is, I am sure, for the ultimate benefit of all concerned. His loss to this Division, however, is something which will not be easily reconciled. easily reconciled.

Sincerely.

HOWARD A CHE Colonel, USAF Vice Commander

Copies to: Mr. Robert W. Roberts, Philco Supervisor, Hq WADF Mr. Charles P. Adams, Philco Supervisor, Hq ADC

The Commanding

mmend the long and faithful service rendered to this sh erald R. Carnahan. Mr. Carnahan has been aboard this vessel for five years during which time he has been an assistant to the Electronics Materiel Officer in matters of technical advice and personnel training. . . . his wide experience in Navy equipment and his outstanding technical skills have been an invaluable contribution to this ship in carrying out her mission . . . each new Electronics Officer reporting aboard has found him an inexhaustible source of information and advice. . .

> BEN W. SARVER Captain, USN Commanding Officer, U.S.S. Norton Sound



Philco TechRep Paul Bingeman instructs his Vietnamese crew in the operation of a rock drill preparatory to setting charges and blasting. Bingeman is part of a TechRep team giving practical instruction to native personnel building a highway across the rugged Viet Nam terrain.

PHILCO TECHREP DIVISION WORLD-WIDE SERVICE

BOX 4730, PHILADELPHIA 34, PA.

PHILCO CORPORATION

TECHREP DIVISION "C" AND ONTARIO STREETS, POST OFFICE BOX 4730PHONE: NEBRASKA 4-5100PHILADELPHIA 34, PA.

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WHAT'S NEW IN OUR 1961 LINES...

. PHILCO HERE INTRODUCES SOME OF ITS PACE SETTERS FOR THE INDUSTRY AND CONSUMER:



LUCKY SEVEN

Model T-77 transistor pocket radio, a step up from Philco's T-66, has seven transistors, polished die-cast chrome front, chrome finish easel-type stand, and features vernier tuning. Available in aqua, ivory, or black. Suggested retail is \$34.95.

SMALLER AIR WRAP

Philco Corporation introduces a new version of its Air Wrap principle for 1961 in this model 12RS15. This compartment is intended primarily to chill meats without freezing them. Model shown has interior of Wedgwood Blue, features visacrisper and two sliding shelves, and automatic defrost. Suggested retail is \$399.95.







"Sonata," Model 1632 stereo hi-fi is being introduced by Philco Corporation for Spring. The 42" horizontal console is available in Walnut at \$209.95, in Mahogany traditional at \$199.95, and Maple provincial at \$219.95. Unit features deluxe multi-mix changer with sapphire styli, two 4-inch and two 6-inch speakers. Music power autput is 6 Watts.

MAKE YOUR DREAMS COME TRUE;

See Europe in '61



Europe, synonymous with splendor and enjoyment, is only a few hours away as the jet flies. It is only a brief span before you are in London where you will relive the past in sight seeing and enjoy the present of fun and entertainment.

"See Europe for yourself" is the advice of those who have been abroad. And indeed you will see Europe for yourself, and at the minimum of cost, time and effort, if you make this conducted tour designed for your pleasure, comfort and pocketbook.

Enjoy first class service by air and land ... see the legendary sights with English speaking guides . . . revel in the hospitality of first class hotels and enjoy the gournet food in fine restaurants . . . and all without responsibility for luggage, tips, reservations and other bothersome details. The budget prices include everything except what personal purchases you wish to make.

In addition to London, Lucerne, Paris, Venice, Florence and Rome, this year's trip will give you, at a slight added cost . . . \$35 to be exact . . . an extended tour to enable you to see picturesque Naples, fabulous Pompeii, and the incomparable Isle of Capri.

How this holiday of a lifetime can be yours will be explained to you if you write or call Mark Lutz, Ext. 418, or consult with your personnel department. Learn how you may finance the trip—find out how simple the arrangements are . . . by investigating while reservations are open for Philco employees and their families.



Big Ben from the gardens in Parliament Square, London.







NAPLES

A panoramic view of Naples and the famous Bay of Naples.



PHILCO HONORED BY PALO ALTO CC FOR SPACE AGE ACHIEVEMENTS



On January 12, a special achievement plaque (see photo) was presented to Philco WDL by the Palo Alto Chamber of Commerce "for aggressive leadership and spectacular accomplishment in the field of space age communications." The occasion was a Membership Luncheon Meeting sponsored jointly by the Chamber and the Palo Alto Kiwanis Club. This was the first in a series of meetings honoring Palo Alto electronic firms.

Joseph M. Hertzberg, Vice President, Marketing, G & I Group was the main speaker. His topic was "New Horizons in Space Communications." Guests included officials of Philco WDL, Sierra, and Philadelphia; U. S. Air Force Satellite Test Wing, Sunnyvale; Ballistic Missile Division, Air Research and Development Command, Inglewood; and members of the press.

On the same day, Philco made public for the first time, the work it has done on the Communications and Control system for the U. S. Air Force Discoverer Program. WDL's role in this significant program was brought to the attention of the public through a press conference. The conference included an explanation and demonstration of the Communications and Control Subsystem which WDL provided for the famed Discoverer program. After the conference visitors from the press were escorted through the Environmental Laboratory and the Computer facilities.



Cake for beauty: Miss America 1961, Nancy Anne Fleming, was welcomed to Philadelphia in November by (center) Harris I. Stern, president of Stern and Company, Philco dealer, and Benjamin De-Angelio, chef of the Benjamin Franklin Hatel, who presented her with an 18-pound cake—a replica of the city's famous Liberty Bell. Miss America's Philco-Stern visit was arranged through the John M. Otter Company, Philco distributor. Some 2000 persons visited the store to see and to be greeted by Miss America.



The largest distributor of Philco freezers in the world is in Sweden. Here, another shipment is in the process of going overseas to Elektrohalm, the Swedish distributing organization, which, under the direction of Tare Linden, President, distributes Philco products throughout the country. In addition to freezers, the company also imports refrigerators, television receivers and transistors for industrial application.



Leslie J. Woods, who retired the first of the year as vice president for Philco research and engineering and as a director of the Company.

MR. WOODS RETIRES FROM PHILCO AFTER THIRTY-FIVE YEARS

Friends and associates of Leslie J. Woods, who retired December 31 as Vice President for Philco research and engineering and a director of the Company, gave an "au revoir" party in his honor at the Germantown Cricket Club on December 20. Warm and fond wishes that Mr. Woods' years of retirement be healthful and rewarding were expressed at this time.

President James M. Skinner, Jr., delivered the principal address at the dinner which was attended by key executives of the Corporation in addition to many of Mr. Woods' early fellow workers.

Mr. Woods began his long and distinguished career with Philco on August 1, 1925-when modern communications was in its infancy. He played important roles in guiding the development of battery systems used in early models of portable radios which, in turn, led to today's transistor radios. When he was transferred to Philadelphia in 1928 he became Philco's first television engineer.

For six years he was chief engineer of the Vacuum Tube, Export and Auto Radio Divisions. Then in 1941 he was named general manager of the Auto Radio Division located in Detroit, Mich.

During World War II Mr. Woods served Philco as assistant manager of the Commercial Division and as vice president and general manager of National Union Radio Corp., a Philco subsidiary. During this period Mr. Woods undertook important assignments in Washington in connection with highly secret electronics contracts for airborne radar.

He was appointed vice president in charge of the Industrial Division in 1945 and four years later became vice president of research and engineering, the post from which he is retiring. He was elected to Philco's board of directors in 1949 and became a member of the executive committee in 1952. Born in London, England, on June 14, 1897, Mr. Woods was educated at private schools and Shebbear College, North Devon, England. He left college in 1915 to serve in the British Army during World War I as a captain in the Royal Engineers and later attached to the Indian Army. For two years prior to coming to the United States in 1923 he directed Engineer's Radio, of the Iraq Telegraph Department.

Mr. Woods is a member of the Institute of Radio Engineers, the Science Advisory Committee of the Pennsylvania State Selective Service, the Union League and Philadelphia Cricket Club. He is chairman of the meetings committee of the Franklin Institute and has served the American Cancer Society as chairman for special gifts in District I, Philadelphia. He is a trustee of the Pennsylvania School for the Deaf and of Drexel Institute, from which he received an honorary doctor of engineering degree in 1954.

He and his wife, Jasmine, live on Lynnebrook Lane, Chestnut Hill.



Philco transistors and semiconductor products manufactured at the Lansdale Division have been pictured on the covers of these leading trade publications during 1960. These high-exposure appearances plus many articles appearing inside of the trade and technical publications—help keep our customers Philco-conscious.

Alvah L. Clarance has recently been elected president of the Central Bucks County Joint School Board. Mr. Clarance, ongineering sectian manager in the Electronics Consumer Product Division chiefly engaged in export work, has previously been a member of the Warrington School Board. His civic activities also include membership in a number of service organizations and clubs.



TWO "Jackpot" AWARDS PAID BY SUGGESTION PLAN IN 1960

During its first full year of operations the Philco Suggestion Plan paid employees \$8,912 in awards. Over 2,300 suggestions were submitted, of which 692 are still in the process of evaluation.

Two suggesters won "Jackpot" \$1000 awards during the year. . . Charles R. Coyle, of Spring City, and Robert Ellsworth, Plant 50. George Latch, Jr., Spring City, earned a \$500 award.

You too can win cash for your ideas. Suggestions are a key factor in cost-control, and a means by which you can help your Company remain competitive. Your job knowledge and ingenuity will help you to devise ways of effecting savings.

The cash awards and personal recognition you gain from constructive suggestions will add to the satisfaction you draw from your daily work. As an employee on the job you have special knowledge about problems, and you are in a position to recommend a way to save time, materials and money.

When you see a possibility for improving operations, talk it over with your supervisor. He is interested in your ideas and will help you shape them into award winners. What you must supply is an interest in your job, an observing eye and initiative to present your ideas.

Happy award winners at Sierra Electronic Division share \$435 in Suggestion Plan payments. Left to right: Mr. Feldscher, Mrs. Josephine Damonte, George Cnudde, Lloyd Eschman, Gilbert Jauregui and Harley Watson. In 1960 the Division made 18 awards totalling \$955.

High praise for the role the Philco Ionitron played in the recovery of his son is contained in a letter to the Company from Joe Pelensky, an engineer in our Home Laundry Department. When 22-months old Joey Pelensky was accidentally burned by boiling coffee he was rushed to a hospital where physicians estimated that between three to six months would be required for recovery. It was also feared that the infant's scalded chest would be permanently scarred. Several days later the Pelensky family physician recommended that the Philco Ionitron, a negative ion generator, be used in the patient's room to speed his recovery. The Company lent a field test unit to the Pelenskys for installation in the baby's room. Not only was the healing period much shorter than was first forecast, but no scars were left. "I must admit that I didn't know all the good uses of the Ionitron.' Mr. Pelensky said, "and I work for the Company that makes it. The doctors I know think it is terrific."



TOP SUGGESTION AWARD WINNER FOR 1960-\$1,040

ROBERT ELLSWORTH, Department 10-510, receives congratulations and a maximum suggestion award check from Henry F. Argento, vicepresident and general manager of the G & I Group. Joseph H. Gillies,



vice-president of operations, looks on. Left to right: George Masurat, manager of manufacturing, Mr. Gillies, C. Paul Young, director, Government-Industry relations, and Chairman of the Suggestion Committee, Mr. Argento, and the happy winner. Mr. Ellsworth had previously won two smaller awards. He is assistant foreman of printed wiring board fabrication. His winning suggestion is an improved technique for drilling printed boards.



William Feldscher, Vice-President and General Manager of the Sierra Electronic Division of Philco presents suggestion award check of \$250 to Lloyd Eschman for his constructive ideas for a Hydraulic Test Set that performs static pressure and fluid flow tests with great accuracy.



Best wishes for the future are extended Ellen Leavy upon her retirement from Dept. 43-509 in Plant 10. Ellen has worked 30 years with the same department which originally was the old 78 Coil Department. She has no definite plans other than "just to retire and take it easy for a while." John Eden, her supervisor, is shown in the photograph giving Ellen a gift on behalf of friends in the department.



When the Red Cross issued an emergency call to insure a constant supply of bload to all local hospitals, 56 TechReps responded and gave bload. Shown are the TechRep men lining up to board a specially chartered bus and the second picture shows the men in the bus on the way to give bload. Due to blizzard conditions in December six Bloadmobile visits had been cancelled. With collections low the Red Cross issued the emergency call and S. B. Webb, TechRep Division's general manager, and Recruiters Potter Hallinger and Herbert Johnson, went into action and secured the needed bload donors. The bus which took the TechRep men to the Red Cross Bload Center at 1710 Spruce Street was the only chartered bus to get through the snowy streets that particular day.







A farewell gift from friends in Incoming Inspection at Plant 50 is presented to Walter Browne by his supervisor, Tony Pellegrino, upon Walter's retirement after 18 years of service with the Company. Walter plans to spend a great deal of his leisure time engaged in his favorite sport of fishing. Dr. Robert F. Dressler of Philco Research Division attended NATO's Tenth General Assembly of AGARD, the advisory group for research and development, in Istanbul, Turkey. Invitation to attend the meeting was extended by Hugh L. Dryden of National Aeronautics and Space Administration, the National delegate to AGARD. Dr. Dressler has had a long record of scientific advisory activities in Europe, as well as a guest professorship in Germany and service as official delegate to numerous mathematical, mechanical, and hypersonics conferences.





One of the major attractions for the children attending the Plant 50 party is Sally Starr, local television personality.



Local 101's committee members and hostesses are prepared for the arrival of the youngsters. Herbert Bernstein (seated, second from left) served for the twelfth consecutive year as chairman for the event staged in the Plant 2 Cafeteria. Included on his committee were Ann Kephart, Ed Davis, Ray Wilson and Ethel Spencer.



Members of Locals 101 and 102, I.U.E., C.I.O., shared the pleasures of the Christmas holidays with children from orphanages in the Philadelphia area by giving Yule parties in the cafeterias of Plants 2 and 50. In addition to holiday meals and gifts for the youngsters, stage presentations were made.

The membership of the two Locals contributed generously of money and time to see that their small guests experience the joys of the season. Around 1,000 orphans were entertained at the two parties.

It was the twelfth consecutive year that Local 101 has provided such a party. Herbert Bernstein again served as chairman for the event and presided. Jackie Thatcher was master of ceremonies for the entertainment. The Plant 50 party was attended by Sally Starr, local television personality.

Jake Ewing, as Santa Caus, presented gifts from Local 101, while James Clayton was the Santa Claus for Local 102. William Rambo was chairman of the Plant 50 party and presided.

An orchestra, composed of Philco employees, played for the entertainment and during the dinner given in Plant 2. The orchestra was composed of Frank Humphries, Jr., Nick Rosen, Leon Mowinski, Stanley Gladski, Joe Barrell.

Winners in drawings for the benefit of the Local 101 Orphans' Christmas party line up (left to right) with their prizes. They are Ann Dietrick, who won \$100; Mrs. William J. Bray, who won the Philco console, and Ray Wilson, who won the Philco portable. All three winners are members of Dept. 43-503 in Plant 10.



Plant 8's poster urging employees to contribute to welfare funds instead of "exchanging" Christmas cards is signed by Leone Sock while Howard Tomlin (right) and Thomas Davis look on. Mr. Davis was chairman of the fund raising. A total of \$144 was contributed by the 45 participants in the plan. This money was sent to the Salvation Army and to the Children's Reception Center.



Members of the committee, of which William Rambo was chairman, for the Local 102 party. Included in the committee were Sally Cohen, secretary; Leona Green, Barnie Haney, Frances Johnson, Marie Buchanan, Laura Buziak, Mary Confair, Elsie O'Maro, Kitty Apice, Florence Lucas, Irene Follmer, Eddie Street, Evelyn Rowley, Louise' Schneider, Pat Fogarty, Betty Fiorelli, Dolores DiPonpio, Helene DeMarco, Mary Magargee, William and Helen Hutchinson.



An "incubator baby" grows up—Joseph Lee Biggs, who weighed only 1 pound, 14 ounces when he was barn, is shown at the age of eight manths. The infant is the son of Lee Ray Biggs, of Plant 10, Dept. 544. Barn in Frankford Hospital, Joseph spent his first three manths in an incubator. He weighed 12 pounds, normal for his age, when this picture was taken.



Carole Quebbeman was recently elected 1961 Snow Queen by her classmates at the Evergreen Park (III.) High School. The pretty young miss,

daughter of Harry S. Quebbeman, Philco's mid-

west division manager for Commercial Laundry sales, will attend the various functions of the Evergreen Park Chamber of Commerce which



Vic Gittens, Jr., a senior at LaSalle College High School and the son of Vic Gittens of the Engineering Department, received honorable mention in the 1960 all Catholic selection of faotball player in the Philadelphia area made by the city's coaches. Last year he was selected for the second team. Young Gittens expects to enter LaSalle College in the fall.

PHILCO SAVINGS PLAN INFORMATION

Anyone having any questions relating to the Philco Savings Plan will secure the answers by telephoning R. M. Thompson on Ext. 415.



The Les Woods Soft Ball Trophy is displayed by this year's winners, the Plant 50 Research team, in the inter-plant league of the Engineering and Research groups. Winners are (left to right, rear row) Barry Metzger, Dick Schaphorst, Ron Thompson, Ron Lewars, Bob Vernot, George Ritsi, Anthony Angeloni, Wayne Thornton; (same order, front row) Lou Alvia, Neil Randall, Tom Tweedie, Mel Miller. Postmaster: notify sender on Form 3547. Postage for notice guaranteed



