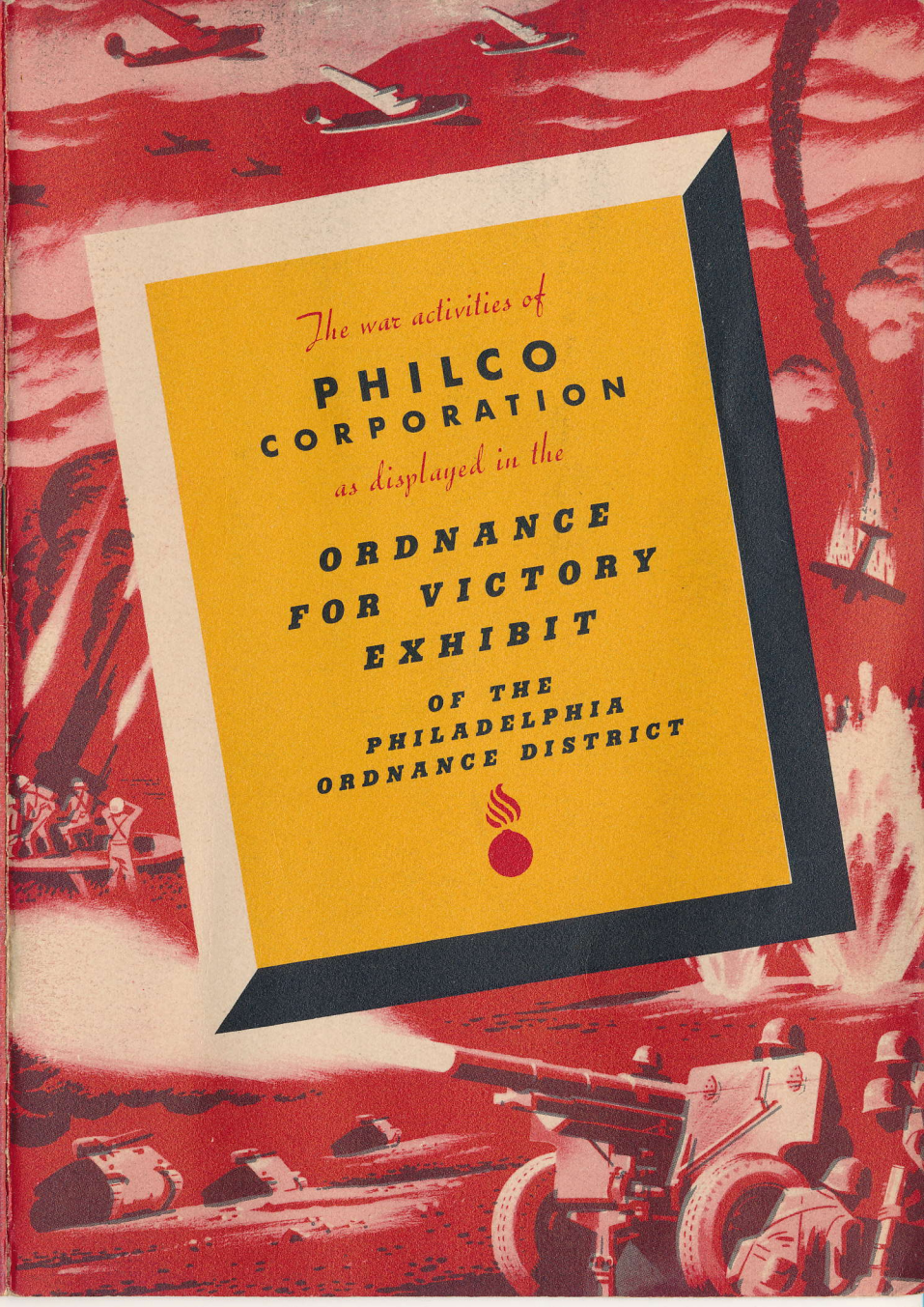


**PHILCO CORPORATION**

OUR WAR PRODUCTION PLEDGE:

**MORE ● BETTER ● SOONER**

*The war activities of*  
**PHILCO  
CORPORATION**  
*as displayed in the*  
**ORDNANCE  
FOR VICTORY  
EXHIBIT**  
**OF THE  
PHILADELPHIA  
ORDNANCE DISTRICT**





HOW THE DIVERSIFIED RESEARCH AND  
MANUFACTURING FACILITIES OF  
**PHILCO CORPORATION**

HAVE BEEN DEVOTED TO THE  
PRODUCTION OF WAR EQUIPMENT



Through its diversified research, engineering and manufacturing facilities, Philco was well fitted for a leading part in the battle of production. For twelve straight years, it had led the radio industry in sales and production, making vital contributions to radio and ultra-high frequency research and engineering. When war came, Philco offered to our armed forces the knowledge and experience of leadership in the radio field.

In addition, Philco offered the mechanical knowledge, experience and facilities gained through spectacular progress in the fields of electric refrigeration and air conditioning. Through this diversified engineering and manufacturing "*know-how*," Philco was in a position to serve almost every branch of our Army and Navy. The production of ordnance for the United States Army, under the supervision of the Philadelphia Ordnance District, is one of its earliest and most active war assignments.



*Battle Flags*

for Philco Soldiers of Production





**The Ordnance Department of the United States Army,  
now in its 132d year, has the great responsibility of  
providing firepower for our American fighting men**

Today, as in all the wars in which our country has engaged since 1812, Army Ordnance is enabling our soldiers to bring upon a formidable enemy firepower of great volume and vast effect. Army Ordnance designs, develops, produces, supplies and maintains in the field all the fighting equipment our Army uses on the ground and in the air. It also supplies the Navy with a great deal of its ordnance.

In peacetime, the Department operates six large arsenals, where the art of arms making is kept alive. One of the oldest and most famous of these is the Frankford Arsenal, founded in 1812 in Philadelphia. At Frankford, the world's finest small arms ammunition, artillery fuzes and optical instruments are developed and produced under the guidance of the Ordnance Department of the United States Army.

The foremost engineers and scientists cooperate with the Department in the development of new weapons and the improvement of old ones. All American industry is now engaged with the Ordnance Department in the production of military equipment. The result of this fine teamwork is a tribute both to Army Ordnance and to industry.



IN THE WORDS OF  
MAJ. GEN. L. H. CAMPBELL, JR.,  
*Chief of Army Ordnance . . .*

"The Ordnance Department has carried its administrative functions out into the industrial centers of this country. In this policy of decentralization, the Ordnance Department is not the master of industry—industry is the partner of Ordnance. Our six arsenals manufacture less than five per cent of the total ordnance requirements of our fighting forces. These arsenals are the finest investment this country has ever made. It was these arsenals, which, in the early days of this war, disseminated the 'know-how' of ordnance manufacture throughout American industry.

"I say that the production of ordnance is an art unto itself. Proficiency in the ordnance art does not come overnight. It must be sustained, especially in time of peace. On countless occasions, you of industry have graciously acknowledged your debt to the Army Ordnance arsenals. I take this occasion to express again to every man and woman in every company engaged in ordnance design and production my sincere appreciation and my enthusiastic praise for the great contributions which they are making toward bringing about the certain success of our armies in the field."



## THE PHILADELPHIA ORDNANCE DISTRICT

★ ★ ★

ITS PART IN THE PROCUREMENT OF  
ORDNANCE MATÉRIEL FOR THE NATION

The Philadelphia Ordnance District is one of the thirteen United States Districts of Army Ordnance, War Department, whose function it is to negotiate and execute contracts, to plan, expedite, inspect, accept, pay for and ship the thousands of ordnance items manufactured by American industry.

*The Philadelphia Ordnance District is responsible for the output of some thirteen hundred manufacturers in the seven states from southern New Jersey to South Carolina.*

Under the leadership of Colonel D. N. Hauseman, District Chief, and Mr. C. Jared Ingersoll, Deputy District Chief, the Philadelphia Ordnance District has played a major role in ordnance procurement. The volume of the matériel produced under its direction totals over two billion dollars, comprising practically every kind of ordnance item including ammunition, guns, parachutes, bombs, fire control and optical equipment, tanks, half-tracks and other armored vehicles.

The Philadelphia Ordnance District is the responsible government agency which, through its officers and personnel, supervises the ordnance production activities of private industry. It



COLONEL D. N. HAUSEMAN,  
*Ordnance Department, District Chief,  
Philadelphia Ordnance District*

An Army authority of over twenty-five years' experience in ordnance, Colonel Hauseman was one of those responsible for the present war production program. Of the *Ordnance for Victory* exhibit, he said, "We want the parents and friends of our

soldiers to see what their boys are fighting with; we want the general public, who are paying for fighting weapons, to see how well the money is being used. Ordnance Industry has done such a good job that we want the public to know what it is doing."

is their function to insure that their contracting companies manufacture enough of the munitions required with the greatest efficiency, the finest quality and at the fairest price. And that delivery is made *on time*.

In the discharge of their duties, Colonel Hauseman and the Philadelphia Ordnance District have enlisted the service of the leading industrial firms of their area. It is a source of satisfaction and pride to the men and women of Philco to have had the opportunity to contribute to the attainment of the goal expressed in their slogan, "*not only enough, but good enough.*"



## ORDNANCE MATÉRIEL

PRODUCED BY THE ENGINEERING AND  
MANUFACTURING FACILITIES OF

## PHILCO CORPORATION

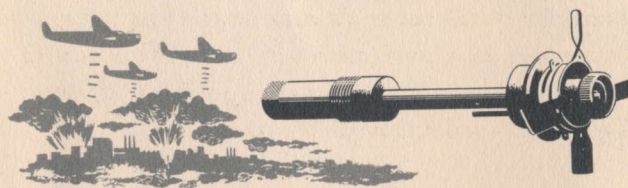
UNDER THE SUPERVISION OF THE  
PHILADELPHIA ORDNANCE DISTRICT

A large portion of the manufacture of Philco radios and refrigerators is concerned with the processing of metal parts. Fully a year before Pearl Harbor, Philco began to convert the skill, experience and equipment of its Metal Division to the manufacture of various United States Army ordnance items. Philco engineering knowledge proved invaluable in the conservation of critical materials and scarce machinery and the development of new production processes. The following pages outline briefly the ordnance matériel produced by the various plants of the Philco Ordnance Division.



### M-48 AND M-51 FUZES

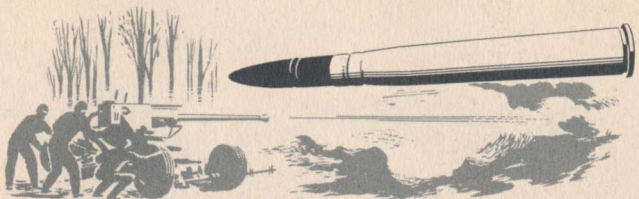
A fuze is a mechanism attached to a shell which initiates and controls the timing of its explosion. The M-48 and M-51 fuzes illustrated above are point detonating fuzes used on 75 millimeter and 105 millimeter field artillery shells which are fired from field guns and howitzers. Their manufacture requires machining and assembly operations of the utmost accuracy, precision and care.



### AN-M100-A2 BOMB TAIL FUZE

The bomb tail fuze is attached to the tail of the 100 lb. and 250 lb. bombs used by our bombing planes. Its construction makes the bombs safe against premature explosion while they are being loaded and carried in the plane. When the bombs are dropped, a miniature propeller revolves and detaches itself, setting the bombs for explosion upon contact with their targets.





### M81-40 MILLIMETER, ARMOR PIERCING SHOT

The business end of this 40 millimeter projectile is its head of solid, specially hardened steel which strikes its target with such force and velocity that it penetrates even thick armor plate. This armor piercing shot is used in anti-tank and other anti-armor warfare. Philco engineers solved a war emergency by making this shot with non-critical machines and untrained workers.



### MARK II-40 MILLIMETER, HIGH EXPLOSIVE SHELL

This high explosive shell is used chiefly in 40 millimeter anti-aircraft guns. Philco manufactures the steel body which, when it makes contact with its target, explodes with tremendous force, fragments itself and completely shatters its objective. Here, again, Philco engineers developed a method of manufacture through which it was possible to use available machinery and workers without previous experience.

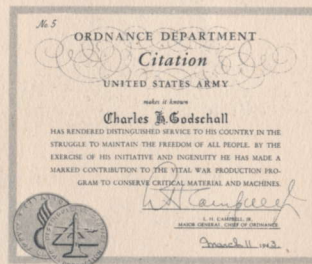


**NOT FOR PUBLICATION!**



An important part of Philco's ordnance activities is an item of utmost military secrecy used in anti-tank warfare. Philco is proud to be among the few manufacturers of the country assigned to the production of this vital weapon. And grateful, too, for the opportunity given to its engineers to contribute basic ideas to its design and construction which have an important bearing upon its usefulness and efficiency.

### A CITATION—FOR SAVING 166,000,000 POUNDS OF BRASS



The Army Ordnance Department officially cited the Manager of the Philco Ordnance Division for making "a marked contribution to the vital war production program to conserve critical material and machines." His idea saves a quantity of brass equivalent to a column 24 feet square, as high as the Washington Monument!



As the world's largest manufacturer of radios, the research laboratories and production lines of PHILCO CORPORATION are also engaged in the manufacture of important RADIO, COMMUNICATIONS and ELECTRONIC equipment for the Army and Navy.

## R A D A R

### TELLS A SENSATIONAL STORY OF PHILCO AT WAR

*Radar means **RA**dio **D**etecting **A**nd **R**anging. Radar seeks out the enemy beyond the range of human eyes and ears. Through ultra-high frequency waves, it locates and measures the distance to enemy targets. It warns against the approach of hostile forces. Fog, clouds, storms and darkness have no effect upon its miraculous powers.*

Radar is one of Philco's most important war production activities. Long before Hitler's ominous threats of secret weapons, the scientific branches of our Army, Navy and government were quietly developing this miracle of electronics.

The time came when the radio industry of America was called upon to produce Radar quickly and in decisive quantities to turn the tide of Axis conquest. That's when Philco, the world's largest manufacturer of radios, with its vast research experience in the field of ultra-high frequency radio waves, was able to render its vital service to our fighting forces.

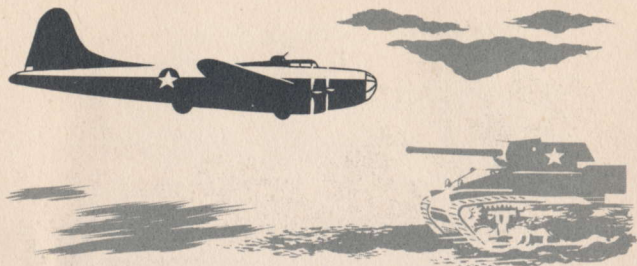
That, in a nutshell, is the Radar story of Philco. While Philco soldiers of production are turning out ordnance, tank radios, communications equipment and storage batteries, one of their most important war assignments is Radar, the once secret weapon that stands guard upon our planes and ships.



Radar

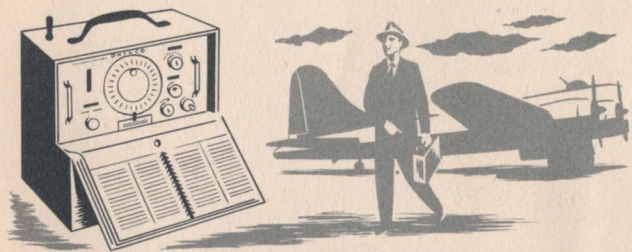
The Fabulous Radio Weapon that seeks out  
the enemy through Fog, Clouds and Darkness





### RADIOS FOR TANKS AND PLANES

Philco is producing for our fighting planes and tanks, powerful, rugged, extremely sensitive receivers which are performing accurately and reliably under the most severe conditions . . . in the torrid desert, and arctic snows, in stratosphere dogfights, bruising tank engagements and over mountainous seas.



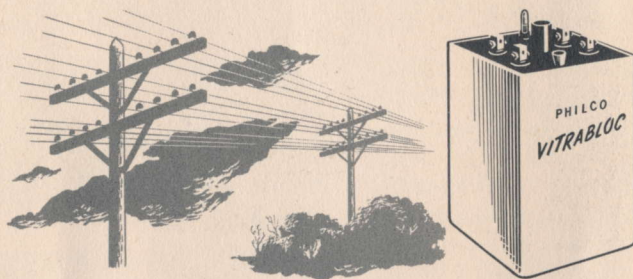
### FREQUENCY METERS

A vital instrument to check the calibration of all military radio equipment where extreme accuracy of wave length is essential. A great Philco engineering contribution, based on extensive study and experience, produced the first frequency meter that is free from drift and can be depended upon for absolute accuracy under all conditions of temperature and climate.



### QUARTZ CRYSTALS

Philco was chosen to organize and equip a complete plant to produce quartz crystals, one of the most critical necessities of the war for radio equipment. Its manufacturing processes require workers of the utmost skill and training in precision whose work is measured in tolerances of millionths of an inch.



### POWER STORAGE BATTERIES

Fifty years of experience and a new plant of tripled capacity have qualified the Storage Battery Division of Philco Corporation for the outstanding job they are doing in making power storage batteries of all kinds . . . for war production plants, for Lend-lease and for the armed forces of the United Nations.



## PHILCO RESEARCH LABORATORIES



With a background of knowledge, experience and achievement in the theory and practical application of radio, television and ultra-shortwave principles, Philco research engineers are at work night and day on urgent projects of radio and electronic research and development. What they contribute to victory must remain a military secret until Victory and the dawn of peace.

## THE PHILCO TRAINING SCHOOL

At the request of the Army Signal Corps, the Philco Training School was established to train the large number of technicians needed to install and service the vital radio and electronic equipment in America's war planes. Philco, with its years of experience in training technical service men, was well qualified for this task. Thousands of graduates, trained by instructors from the Philco field organization, are today on duty with our armed forces.



## An Acknowledgement to the Sub-contractors and Suppliers Who Are Helping Us Do the Job

The story of Philco war production would not be complete without a word of recognition and appreciation to the sub-contractors and suppliers who are helping us produce the weapons of victory.

Over 50% of Philco's production of ordnance matériel, radar and radio communications equipment for the Army and Navy is made up of parts, components and sub-assemblies purchased from other manufacturers. Their skill, their efficiency and their fine spirit of cooperation have contributed greatly to the accomplishments of the Philco laboratories and production lines.

These sub-contractors range in size from one of the largest steel producers in the country to a fishing reel manufacturer and a peacetime producer of compacts and lipstick holders.

By thus relying on the facilities of its sub-contractors, Philco has made it possible for the special production skills of these smaller companies to contribute to the war effort. At the same time, Philco has been able to multiply the output of its own factories by making the fullest use of its engineering resources, managerial ability, and experience in mass production of precision equipment.



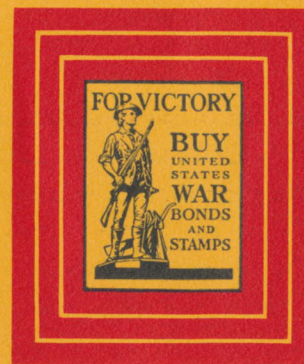
## Philco War Research Today Holds Untold Promise for You in the World of Tomorrow

In Philco research and production for war, years of progress in the science of radio and electronics have been achieved in months. When Victory is won, the achievements of the Philco laboratories will be translated to the uses of peace. And Philco, the quality name in millions of American homes, will fulfill again the obligations of leadership. Its new knowledge, new skills, new experience *and new ideas* will appear to the world as peacetime miracles of radio, television, refrigeration, air conditioning and electronics for the homes and industries of America . . . under the famous Philco name.

### LISTEN TO "OUR SECRET WEAPON"

Hear Rex Stout, celebrated author, in a smashing exposé of Axis lies and propaganda as heard over Columbia's Short Wave Listening Posts.

EVERY FRIDAY EVENING, 7.15 P.M., E.W.T.  
WCAU AND ALL COLUMBIA STATIONS



### FOR VICTORY . . . FOR YOUR FUTURE BUY WAR BONDS AND STAMPS

The war bonds you buy today help to build weapons for our fighting men. Tomorrow, they will help you enjoy the fruits of Victory. Buy regularly!