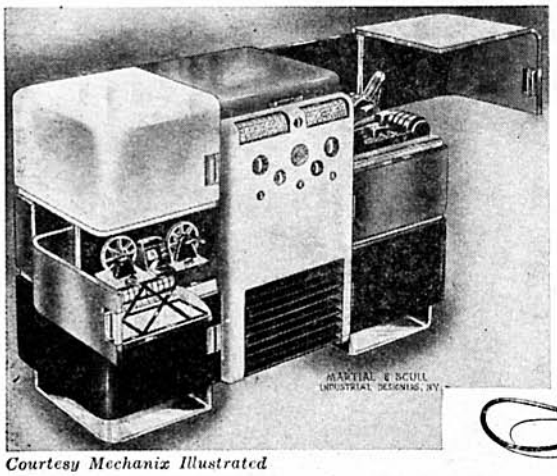


Courtesy Mechanix Illustrated

At the left, an ideal post-war receiver; at the right, a personal walkie-talkie of the same period.

Courtesy Kurz-Kasch Ltd.

FORECASTS OF FUTURE RADIO

WHAT some engineers want and expect in a post-war receiver was illustrated in the Great Christopher Crystal Gazers Model (printed in *Radio-Craft's* July issue). Priced at $14.92 in honor of the discoverer of America, it had everything including the kitchen sink (with hot and cold running programs). All-way reception was provided for, ham sandwiches being the only thing that couldn't be tuned in.

The picture was circulated by Zenith, as a warning against too-extreme ideas and predictions about the "Radio of the Future." The warning was given immediate point by the action of one dealer, who sent in his check for two of the "new radios" and asked for delivery at the earliest post-war date. Whether he had a super-abundant sense of humor, or was simply so confused by post-war radio-electronic planners that he was ready to believe anything, has not—up to this date—been made entirely clear.

Not all technicians are taking the conservative stand, as is evident on this page. More than one noted industrial designer has tried his hand on The Radio of the Future. Some have shown great caution, others almost equal audacity.

Possibly the most beautiful of these is the design made by Raymond Loewy for Admiral. Much is left to the gazer's imagination, but we suspect the flat knobs to right and left are tuning and volume controls, that the speaker is concealed behind the convex grill, center, and that the stops are band-shift switches, or possibly tone controls. The familiar push-buttons are seen, in two rows on this model. Another feature which adds to the beauty of the design is the pair of streamlined supports which lift the cabinet into the clear.

A more venturesome design is one created by Martial and Scull. Completely enclosed in a handsome plastic cabinet, it is entirely made up of swinging sections, which move on pivots to conceal or reveal any part of the apparatus. Even the television screen folds down into the set when not in use.

With the screen up, we have television, with its accompanying sound from the speakers at the base.

The "main speaker for sound track recording" is not entirely clear, but apparently it is intended for "recordings." All the phonograph "records" on this receiver are of the sound-on-film type. Thus the same apparatus is used for a moving-picture machine which is also built into the cabinet. When television programs are dull, you can turn on your own home movies. A microphone for home recording is included.

Two things will interest the radioman and student of this receiver. One is that the machine seemingly contains nothing *new*. It consists of several devices "of the present" rolled together. The second point is that no radio apparatus appears. Presumably it is all contained in the flat section below the tuning apparatus. If so, such compactness is the most outstanding feature of the set.

Something more revolutionary is seen in the Kurz-Kasch "walkie-talkie" in its neat plastic case, about the size of a portable radio. As the designer is a plastic manufacturer, there is no detail on the radio end of this transceptor. Probably he did not even bother with this unimportant angle. The appearance of the cabinet is such that present-day designers of portable receivers may well profit by the example.

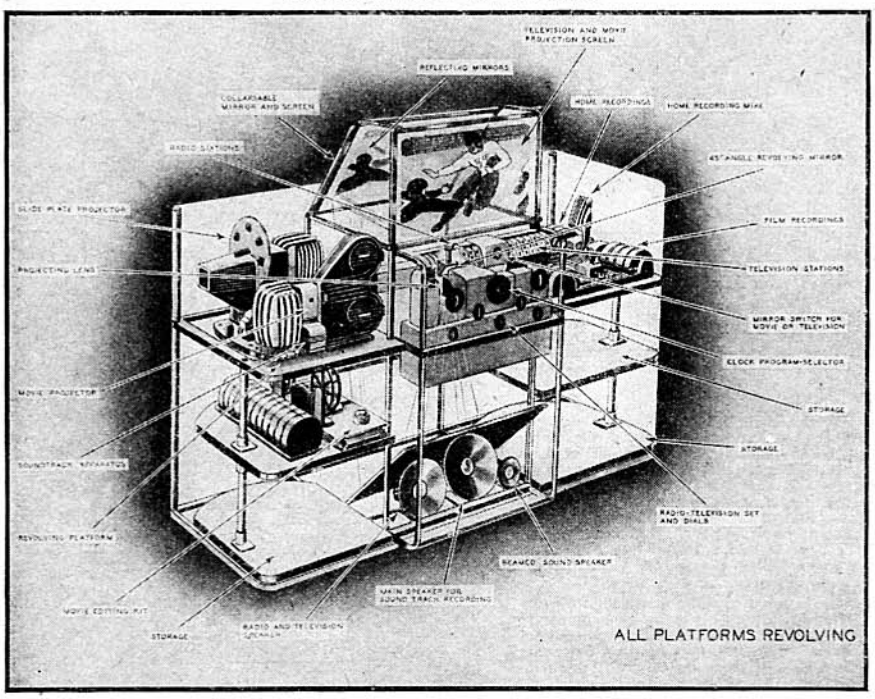
It is suggested that such a set would be found useful by plant executives, foremen on construction gangs, forest rangers, firemen and police.

Such use of small walkie-talkies was advocated in this magazine at the time the *Normandie* burned. The Editor said, in the issue of March, 1942:

"The idea I propose seems absurdly simple, but when it comes to protecting ships during war time—*when seconds count*—there must be instantaneous means of getting in touch with either the Police or the Fire Department. Waiting for someone to run across a deck and onto the dock means loss of valuable seconds. How much simpler then is the idea of equipping guards

(Continued on page 48)

Detailed drawing of the receiver shown at the top of the page. Television, radio, movies and recordings are all combined in one instrument.



FORECASTS OF FUTURE RADIO

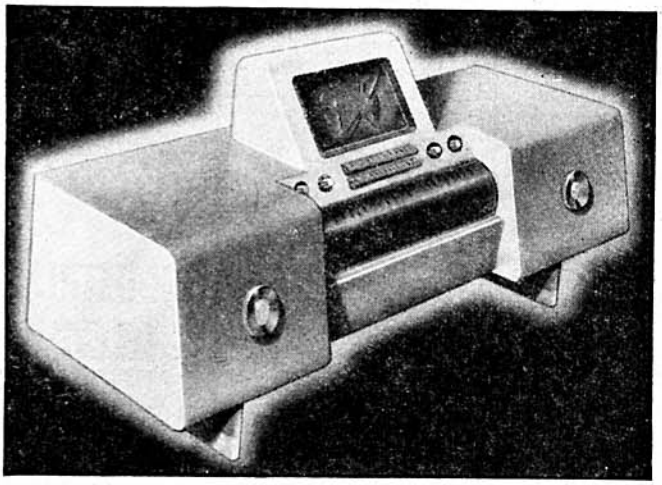
(Continued from page 16)

with portable transceivers, many models of which are now available. Some of these models, which do not weigh more than five pounds, can contact Police Headquarters or the Fire Department *instantly*, while the guard walks about the ship. This would mean two things—one, that the guards could communicate with each other; two, that the one stationed on the top deck could have radioed the alarm instantly to the Police or Fire Department. *Such Radio Guards should be stationed on all ships during war time."*

The antenna of the small transceptor concealed in the shoulder-strap. The outstanding feature of this device is the handset, like that of a telephone, which is so blended into the cabinet as to almost escape notice.

More of these fanciful designs will be seen before the end of the war. If we can depend on our experience of predictions in the past, the new radios are likely to differ widely from these visions (crystal-ball or otherwise) of the prophets. The difference will be due chiefly to inventions and improvements on existing methods worked out during the war. These will not be made public until peace comes, and may be revolutionary enough to make some of our crystal-inspired designs look drab and uninteresting.

A conservative design by Raymond Loewy. Provisions for television is apparently regarded as a "must." One of the most attractive designs yet put forth.



Courtesy Continental Radio and Television

INVASION

Continued from page 17)

circuits. Messages are handled by carrier-current, and the lines are therefore untappable by an enemy, unless he were equipped with the electronic devices necessary to demodulate and unscramble the signals. Quarter-mile lengths may be connected by a simple "twist of the wrist" through the special coupling units provided.

The radio team has as its objective the local enemy radio station or stations. Its job is to take over the radio station, repair it if it is damaged, and put it back on the air for the use of American forces. The radio station is used for long-distance military communications and announcements to the local populace.

The establishment of powerful radio broadcasting and receiving stations for military purposes is an important part of the Signal Corps' responsibility. Ultimately our forces will have a broadcasting and receiving station for military communications powerful enough to reach the United States, London, or any of the headquarters of the United Nations.

Direction-finding equipment, operated by Signal Corps personnel goes ashore as soon as possible after the beachhead is established. Direction finding is done by two radios set as far apart as possible. By tuning in on enemy stations the Signal Corps operators are enabled to compute, through triangulation, the position of enemy communications centers. After establishing the position of an enemy station, direction-finding signal men relay their information to artillery, which lays down a barrage at that point. The information also might be used to send out an air mission to bomb and strafe the enemy location.

DeFOREST ON PHYSICAL EFFECTS of U. H. F.

(Continued from page 14)

ficient energy for the purpose. Certain definite precautions should be observed. It were clearly foolish for anyone to unnecessarily expose himself to such intense beams of radiation, possessing, as these do, excessive power of penetration.

Based on the now classic researches of Debeye, working with much longer wave lengths—of the order of 1 to 5 meters—who 15 years ago investigated carefully the specific effects of such frequencies upon solutions of colloid and bacteria cultures of various degree of concentration, it is to be expected that similar specific effects will be observed when these much shorter waves are turned upon the biologists' test tubes. A very interesting field of research here awaits us, not unfraught with possibilities in the medicinal field, possibly in the realm of malignancies.

It is even more probable that when that as yet unknown spectral region of the millimeter waves is explored, where rays or beams of pencil dimensions are obtainable, with power in the fractions of a kilowatt, very remarkable therapeutic, biologic and chemical effects may well be anticipated. The possibilities of employing such modalities in cancer research are surely not carelessly to be denied."

Very truly yours,
(Signed) LEE DEFOREST