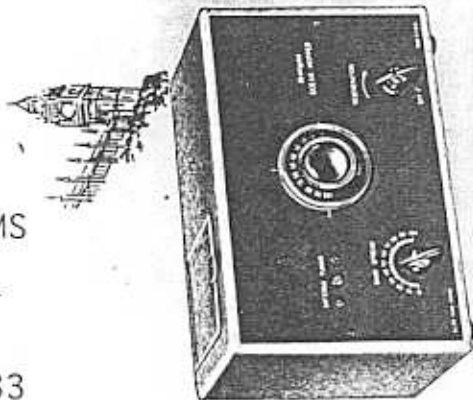


## OCEAN HOPPING DREAMS

by Bart Lee, xWPE2DLT

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33



### knight-kit "Ocean Hopper" All-Wave Radio Kit

**Model Y-740** This top-performing regenerative receiver puts a world of listening pleasure at your finger-tips. Tuning range (using coils listed below) is virtually world-wide; covers 155 kc to 35 mc, including every type of radio transmission: AM broadcast, marine, aircraft, distress channels, direction-finding, Amateur, frequency standard, foreign broadcast, and police. With band-spread tuning. For use with headphones or 3-4 ohm PM speaker. Kit is supplied with standard broadcast band coil and all tubes and parts. (Less extra coils, headphones, speaker and cabinet.) Shpg. wt., 5 lbs.  
**Model Y-740**, Net only ..... **\$11.95**  
**Y-746**, Cabinet for above, 1½ lbs. Net **\$2.90**  
Extra coils available: Long Wave Coil (155-470 kc), Net 79c, Short Wave (1.65-4.1 mc; 2.9-7.3 mc; 7-17.5 mc and 15.5-35 mc). Each 65c.

Correspondence is invited.

Allied Radio provided many of us with our first real radio, in the 1950s. A real radio had a short wave band. There were other sorts of radios around, of course. We had listened to broadcast stations on home radios, hearing distant stations at night as the world opened up for us, into nearby states. Then, too, we or relatives or family friends sometimes had big consoles or table models with short wave bands, and then the world really opened up: London, Moscow, Paris! What Allied Radio offered us was a real short-wave radio we could build ourselves, from a kit, that would tune not only all of the short-wave bands, but also the broadcast band we knew, and even long-wave. It was called the Ocean Hopper; what a deal!

The kit was cheap, \$11.95, although of course that was a considerable sum in kid money in those days. It was a regenerative receiver, which sounded pretty good to those of us not conversant yet with such circuits as the superheterodyne. It promised "every type of radio transmission" and it held out the prizes: "AM broadcast, marine, aircraft, distress channels, direction finding, Amateur, frequency standard, foreign broadcast, and police." Its three tubes could power a speaker. You could buy a cabinet for it for three bucks and coils for 65 cents each (except long-wave, which cost 79 cents). 1957 was a wonderful year.

Allied Radio had a catalog that was the wishbook of the Carl and Jerry set. Every month, Popular Electronics reported on the current electronic/radio adventures of Carl and Jerry. They even rescued an occasional damsel in distress. These were the guys for whom the English language had to invent the word "Nerds" long before Bill Gates, in typical nerd fashion, connected hobby electronics to the capital markets, for a personal net worth of six gigabux. Carl and Jerry knew about radio. We knew about radio. What we wanted was a radio with the magic powers of all band reception.

Allied obliged with the Ocean Hopper, presented in all its glory in every catalog.

Allied Radio itself had a glorious history, and alas, it is no more. Simon Wexler founded it in 1921 as Columbia Radio Corporation, selling crystal sets. He died in 1955 at age 56, and the company continued on for many more years. As a distributor, Allied sold 20,000 items from 500 sources of supply, from 147,000 square feet of floor space in Chicago in 1954, with expansion then planned. (See SIGNAL magazine, March April, 1954, at p. 26: "Allied Radio;" some illustrations nearby come from this article). Of Allied Radio's class, including its competitors, Lafayette Radio and Radio Shack, only the Shack survives (still selling tubes by the way, and short wave radios).

Allied introduced the Ocean Hopper in 1946, powered by a 12J5 and a 117P7, octal tubes. Lloyd D. Apt, no doubt its designer, wrote it up for Allied in the December, 1946 issue of Science And Mechanics, (p. 167). Its circuit featured a grid leak regenerative detector: "...still the best to use when you want highest possible sensitivity from one tube." Radio Experimenter reprinted this Article in 1950. Oddly enough, the name Ocean Hopper was already more than 10 years old. In 1935, radio pioneer Lawrence M. Cockaday, and S. Gordon Taylor, designed a multi-tube, multi-band superhet for Radio News, at the peak of the short-wave craze. (See "Presenting the Taylor-Cockaday Ocean Hopper," by John H. Potts, Radio News, November, 1935 at p. 266; "Testing..." December, 1935 at p. 345 and "Added Features..." January, 1946 at p. 411. Construction blue-prints were available for 50 cents.

The 1957 "Knight Kit" Ocean Hopper employed miniature tubes, a 12AT6, a 50C5 and a 35W4. It was a hot little radio (model number 83Y749). With a good antenna, short wave stations from around the world did indeed roll in at speaker volume. It could bloop and squeal if the regeneration control went too far, and the antenna trimmer was critical and suffered from hand capacitance effects, but it was indeed a real radio. For most listening, earphones plugged into the back. Allied sold a set of such high impedance 'phones under the Lincoln brand, with the appropriate and even then old fashioned phone tips rather than a plug on the end of the cord.

The regenerative sets blooped and beeped, and in the 1920s, the sets using this circuit were actually known as bloopers. Each

Terminus of conveyor belt to shipping department. After merchandise is checked, pans are placed in bins shown at the side of packers' tables which are located on each side of the belt.



A PRODUCT OF

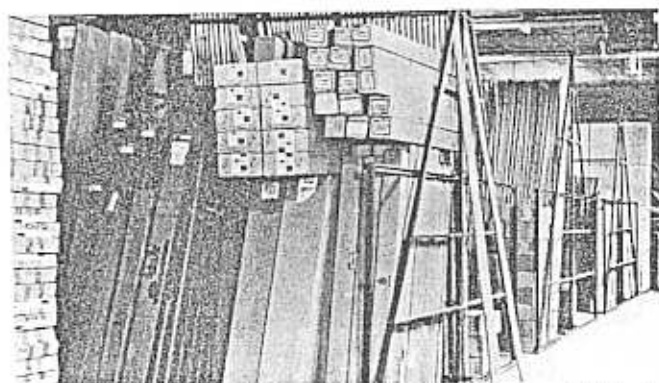


ALLIED RADIO - CHICAGO

ASSEMBLY MANUAL

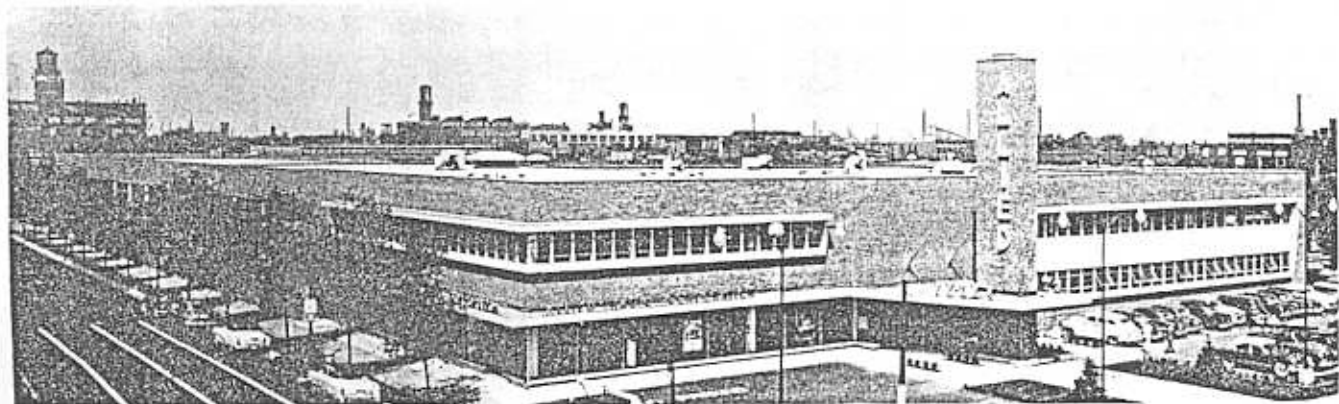
# *knight-kit*<sup>®</sup>





On the left is a view of the floor stock area showing special bins for antennas and masts. On the right is a view of Allied's large salesrooms. Leading off the main sales area are two high fidelity equipment demonstration studios and a "Ham Shack" for amateur gear.

Allied Radio Corporation's recently built home at 100 North Western Avenue in Chicago.



such episode of oscillation sent out audio feedback modulating RF back up the antenna. Direct interference with nearby and sometimes distant receivers resulted. All radio services frowned on this kind of QRM. Stanley Caesar writes: "Back in 1954 I used to have one of these little radios and I would leave it on all the time. I did not know that when it drifted into regenerative mode it was transmitting a signal, The FCC tracked it down with a direction finder and confiscated my little radio." Mr. Stanley was quite pleased to get another one in 1988.

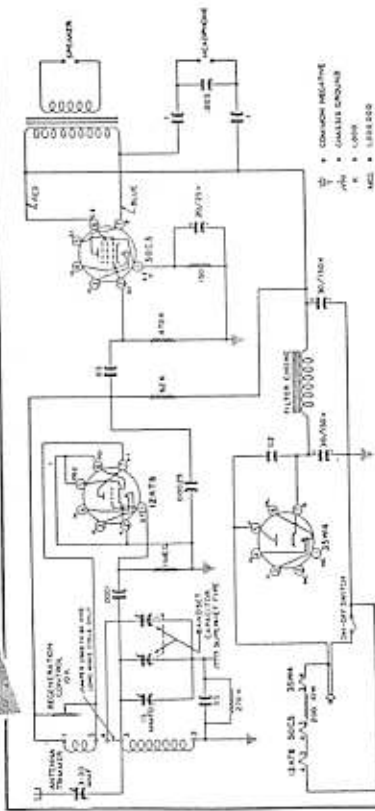
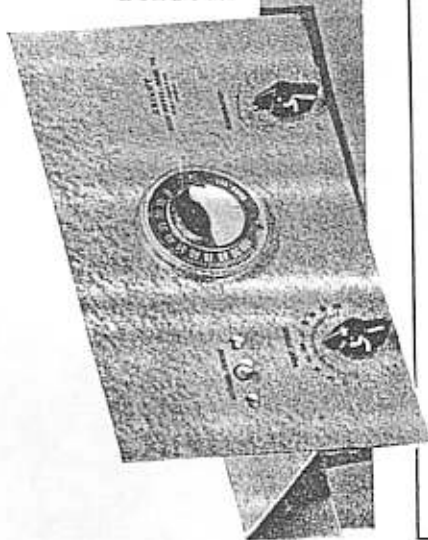
Professor Harold Cones is known as Dr. DX in the listening hobby. He, too, started out with an Ocean Hopper. His 1988 note comparing the Ocean Hopper and the Japan Radio NRD-525 is reproduced in a sidebar. It appeared in FRENDEX December, 1988 (now known as the NASWA Journal of the North American Short Wave Association.).

My Ocean Hopper got me involved in the Cold War. I wrote away for a QSL card in May of 1958 to Radio Moscow. James Jesus Angleton of the CIA was sitting in the main New York post office opening all the mail to eastern Europe in those days. The CIA kept a copy of my envelope for almost 20 years (and for all I know, they may still have it). This bizarre event got the attention of Playboy Magazine in the February, 1989 issue. John Dentinger wrote about "Two Hundred Years of Postal Spying" (p. 44). He reported "Among those whose mail was read and photocopied were Richard M. Nixon, Edward Kennedy ... and a 12 year old short-wave-radio listener who wrote to Radio Moscow." (That's the closest I've ever gotten to the Playmate of the Month).

The Ocean Hopper opened worlds for many kids of the era. It opened the radio frequency spectrum, from 200 kHz to 30MHz, to the careful attention of enthusiastic young listeners. Regeneration amplified the minuscule antenna currents resulting from every service and type of transmission, broadcast, amateur and utility. The sunspot peak of 1957-'59 has yet to be equaled, and the signals rolled in. Stations happily responded to requests for QSL cards from eager young listeners. Those were the days, the days of Ocean Hopper dreams. -- 73 --

# Kits

Left, the three-tube ac-operated "Ocean Hopper." Right, the two-tube "Battery DX, et." The respective schematics are just below the photographs.



HOW many people have sometimes thought that they might be interested in short-wave listening, yet have hesitated to invest in a regular communications receiver because of doubt that the short-wave offer enough to justify the investment? It is possible to get a low-cost amateur and at the same time learn more about electronics. Just built a short-wave kit!

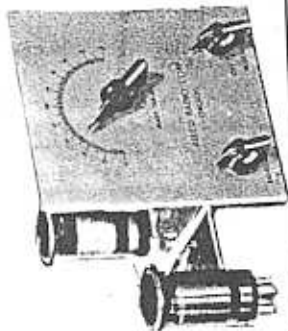
Two simple, inexpensive all-wave receiver kits available for the novice are the Knight Model 740 "Ocean Hopper" kit and the Knight 2 Tube Battery "DX-er." Both are marketed by the Allied Radio Corporation. The "Ocean Hopper" operates from 117 volts a.c. or d.c., uses three tubes, including a rectifier, and will operate a loudspeaker. The "DX-er" is a battery-operated receiver intended for headphone listening only, using two low-drain tubes.

Both of these receivers use plug-in coils to cover six wave bands. Both receivers cover the regular AM broadcast band as well as short-waves, and the "Ocean Hopper" also covers one long-wave (low-frequency) band. The actual frequency range of the "Ocean Hopper" is from 155 kc. to 35 mc. The "DX-er" covers from 550 kc. to 31.5 mc.

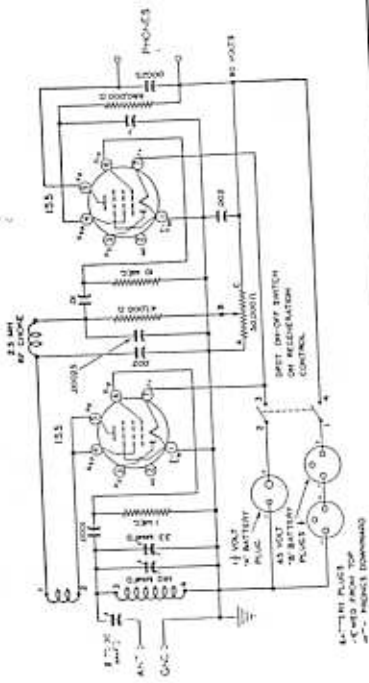
Each receiver has three controls, a bandset or main tuning control, a bandspread or fine tuning control, and a regeneration control. An antenna trimmer also is provided on each set; this adjustment does not have to be changed every time a different station is tuned in, but maximum efficiency will be obtained from the antenna used if the antenna trimmer is reset whenever the operating frequency of the receiver is changed by a large amount.

POPULAR ELECTRONICS

# of the Month



Here are two simple and inexpensive receiver kits which cover most amateur bands and the short-wave and regular broadcast bands.



Each kit includes schematic and plotting diagrams, assembly instructions, and all parts and material, except hookup wire and solder. The coils are factory-wound, which not only saves the builder the time and trouble of winding his own coils, but assures him that they will function as intended without "cutting and trying." The only tool needed are a soldering iron, a pair of long-nosed pliers, a diagonal cutter, and one or two screwdrivers. Even a beginner should have little difficulty in putting either receiver together so that it will work properly.

These receivers are not intended to compete with expensive, multi-tube communication sets. They are relatively inexpensive kits that each complete receiver costs only a few dollars or less. Naturally, they

lack some of the features of more elaborate receivers; they are less sensitive and less selective. Tuning them is somewhat more difficult since they use regenerative detectors and the regeneration controls affect both tuning and volume. Dials are not calibrated directly in frequency, but have a single 0-100 scale for all bands. The dial reading for any station will vary somewhat between receivers, because of variations in coils, tubes and the placement of wiring by the builder.

Those who become seriously interested in short-wave listening will want a receiver with conveniences which these kits lack. However, either of the kits is a good buy for anyone who wants to find out without investing too much money just what the short-waves have to offer that might be of interest to him.

March 1955

-----DR. DX TAKES A SHOT AT SERIOUS WRITING-----  
A SIDE-BY-SIDE RECEIVER COMPARISON: THE JAPAN RADIO NRD-525  
vs THE KNIGHT KIT OCEAN HOPPER  
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Recently at one of the infamous Old Dominion DX Association "all-nighters," I had the opportunity to perform a side-by-side comparison test of a new Japan Radio NRD-525 and an Allied Radio Knight Kit Ocean Hopper 740. It was not quite a fair comparison, I suppose, since the NRD-525 was the standard off-the-shelf model, while my Ocean Hopper was the deluxe model with the optional cloth-covered wooden case with "a hinged door in the top for easy plug-in coil replacement". Nonetheless, it seemed like a good time for a comparison test, so one was conducted. The first thing that struck me was the large size and weight of the 525--the Ocean Hopper was definitely more compact. The 525 had a plastic handle for carrying, whereas the vent hole in the back of the optional wooden case provided an easy grip on the Ocean Hopper. I switched on the 525 and started to leave to make a cup of coffee; but suddenly there was music coming from a speaker *inside* the case somewhere, and I had not even reached the stove yet! On the other hand, there is always plenty of time to get a cup of coffee before the Ocean Hopper warms up and is ready to start DXing; and as an added benefit, there is no speaker to annoy others while you sip your coffee and go about the business of DXing. It is obvious that the manufacturer of the 525 desires to get you DXing quickly, and allows you to do so from across the room somewhere if you want. The Knight folks, I guess, better understand the nature of the hobby and elected not to rush you into it but allow you time to get ready. A quick look at the fronts of the radios tells quite a story. The 525 people get you started quickly, then make you fiddle with a lot of knobs and junk. There are enough pushbuttons, knobs, and dials to make a bushel of Ocean Hoppers with enough left over for two Space Spanners and a Star Roamer. Only four simple knobs greet the Ocean Hopper owner, and a quick turn of each instantly tells you its function--no complicated instruction manual needed here (I never did figure out what about half the doodads were on the 525. One even dimmed the dial light--yes, a *dial light!*). Inside, the story was just as telling. The 525 was a mass of parts (probably most dealing with dial light dimming) while the Ocean Hopper had only a handful of easily reached and replaceable parts--and rugged parts at that, what with 600 volt capacitors vs 20 volt caps in the 525. And worst of all, there was no warm glow inside the cabinet of the 525. The Ocean Hopper not only glowed but radiated a gentle heat, telling you that it was hard at work for you, making your hobby relaxing and enjoyable. I could go on, but I guess I said it earlier: it is not a fair comparison. Guess which one I used for DXing that night.



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FOR THE RESTORATION AND PRESERVATION OF EARLY RADIO



The Ocean Hopper by Allied Radio, c. 1957, and QSLs