

THE KNIGHT KIT OCEAN HOPPER, AN IMPROBABLE CLASSIC

Anyone who became interested in radio in the 1940s and 1950s probably remembers the kits that were sold by Allied Radio Corporation through their catalogs. Only a few kits were offered in the early 1940s, but by the mid-1950s many Allied Knight Kits were offered, including audio amplifiers and a wide range of amateur radio and test equipment.

During this entire period, Allied Radio offered the Ocean Hopper regenerative receiver with plug-in coils in at least three different forms. These radios are so popular today that an Ocean Hopper in “near mint” condition, with all accessories, sold on eBay in August 2009 for an incredible \$375 after 24 bids were placed. Previous listings of this popular radio kit have routinely commanded prices of more than \$100.

As I tracked the bidding on this radio, watching the price rise into a range that is usually occupied by classic communications receivers such as the National HRO series, I began to wonder why this radio kit continues to be so appealing. The circuit itself is simple and unremark-



Front panel of a completely restored set as pictured on David Ishmael's website (see text.)

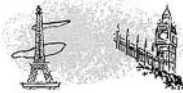
able, and its performance is adequate but not spectacular. I concluded that the Ocean Hopper owes its popularity to several factors:

The name was incredibly appealing in an age before Sputnik when receiving stations from another continent inspired a sense of awe and wonder.

The Ocean Hopper used plug-in coils that the owner could wind himself, and these could be made for all frequencies from 500 kHz to 30 MHz, covering all of the shortwave frequencies.

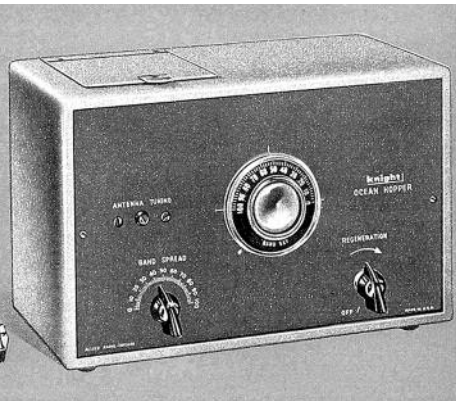
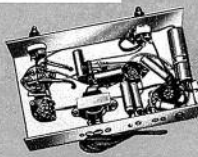
RADIO RECEIVER KITS

THRILLING SHORT-WAVE!



Listening to short wave stations from all parts of the world is fun! You'll hear foreign broadcasts, amateurs all over the world, ships at sea, police, etc.

Inside view of "Ocean Hopper"—illustrates fully-assembled components on pre-punched chassis. Highest-quality parts assure you of top performance.



knighf-kit "Ocean Hopper" Receiver Kit BROADCAST, LONG WAVE, AND SHORT WAVE COVERAGE

NET
\$15⁹⁵

- Wide Frequency Coverage
- Simple Highly-Sensitive Circuit
- Extremely Easy to Assemble
- Convenient, Bandspreed Tuning

Front panel controls include Main Tuning, Bandspreed, Antenna Trimmer and Off-On/Regeneration. Tubes are a 12AT6 detector and 50C5 audio output stage; 35W4 rectifier. Kit is supplied with plug-in coil to cover stand-

Detail from an Ocaean Hopper ad in the 1959 Allied Radio catalogue.

16404 W. 126TH TERRACE, OLATHE, KS 66062

Competitive kits, such as a popular two-tube kit offered by Philmore, were only equipped with fixed coils for the AM broadcast band.

This radio, in all of its versions, always included an audio amplifier that enabled it to be used with a speaker. The Philmore and other kits on the market at that time could only be used with headphones.

Reviewing Allied Radio catalogs from this period, it appears that the original Ocean Hopper kit was introduced in the early 1940s. It does not appear in the 1937 catalog but is included in the 1941 edition. In that early form, the Ocean Hopper used a 12SJ7 regenerative detector, a 70L7 audio amplifier, and a rectifier tube, probably a 35Z5.

By 1947, the Ocean Hopper was redesigned. It kept the 12SJ7 detector, but used a 117P7 combination audio amplifier and rectifier tube. By 1954, it was redesigned again into its final and most popular form, using 7-pin miniature tubes, including a 12AT6 regenerative detector, a 50C5 audio amplifier, and a 35W4 rectifier.

As a youngster, I would have like to have had an Ocean Hopper kit, but couldn't afford to buy one. However I did purchase the schematic diagram. My father, a radio technician, helped me build a modified version of this historic radio in 1956.

The first step was to clear the chassis of a defunct five-tube superhet that had reached the end of its useful life. I kept the tuning capacitor, output transformer, speaker, three of the octal tube sockets, and several minor parts. My version of the Ocean Hopper used a 12SQ7 regenerative detector, a 50L6 audio amplifier, and a 35Z5 rectifier.

After I finished putting my Ocean Hopper knockoff together, I plugged in my radio, keeping a watchful eye on it, to see if it would pass the "smoke test." The tube heaters lit up and no smoke was evident, but the radio was dead and unresponsive.

I asked my father to look at it. After checking my wiring and taking a few voltage readings, I saw a slight smile on his face. "Try reversing the connections to the tickler coil on the coil socket," he said. I plugged in my soldering iron and made this change. When I tried it again, the radio came to life! At that moment I prob-



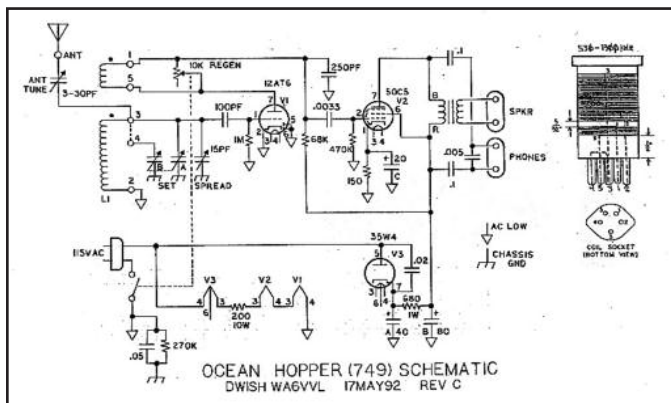
This Ocean Hopper outfit sold for \$375.00 on eBay last August.

ably felt as excited as Edwin Howard Armstrong had more than forty years earlier when he invented the regenerative detector.

My "bootleg" Ocean Hopper was eventually used as the source of parts for other projects. I often wished I had a real Ocean Hopper radio and would like to have one now, but cannot justify purchasing one at current market prices. It will be interesting to see if this classic radio continues to bring such incredibly high bids in the future.

References:

Most of the information came from personal recollection and a review of my collection of old Allied Radio catalogs. The photo of the restored Ocean Hopper came from an excellent website compiled by David Ishmael, WA6VVL. It has an impressive amount of information on the Ocean Hopper radio, including instructions on how to restore one to "like new" condition. Visit David's site at <http://members.cox.net/daveishmael/OH.htm>



Ocean Hopper schematic reveals simplicity of design.