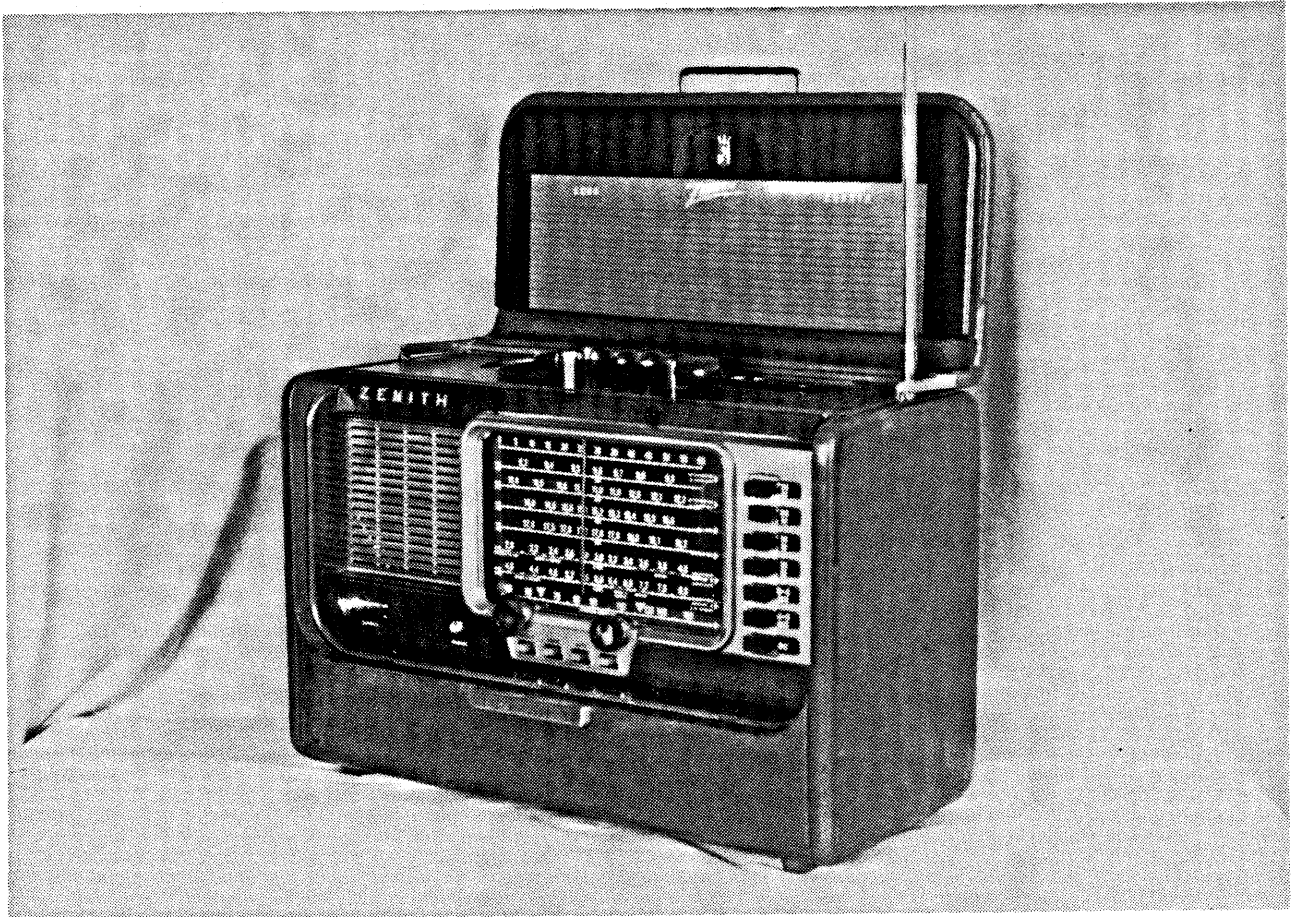


TWO TRANS-OCEANICS

Harold Cones

John Bryant



Model A600 Zenith Trans-Oceanic

The Zenith Trans-Oceanic is a name still recognized by most of the American public over 40 years of age. That is as it should be. The Trans-Oceanic was a fabled series of portable radios; through much of their existence, they were also the most expensive radios for sale to the general public. They were the single most popular radio marque during the first 50 years of radio. Zenith sold about 1,500,000 Trans-Oceanics during their 40-year long run. Many people now involved in the radio hobbies first heard a shortwave broadcast as teenagers on someone's Trans-Oceanic.

Today, few people know that the Trans-Oceanic was a direct outgrowth of the life style and shortwave broadcast listening interests of the founding president of Zenith, Commander Eugene F. McDonald, Jr.. By the late 1930's, Zenith Radio Corporation was a giant of the new radio industry and Commander McDonald was one of America's wealthiest and best known men. He was a member of the 'jet set' before there were jets and lived aboard his 185' yacht, *Mizpah*, moored most of the year near Zenith headquarters in Chicago. Well known for his Arctic explorations and for his leadership of Zenith, he entertained many world-renowned people aboard the *Mizpah* and took many of them to his summer fishing camp on the Canadian shore of Lake Superior. As war clouds gathered in the late 1930's, the Commander became more and more interested in hearing news directly from Europe while he was fishing in Canada. Long a shortwave enthusiast, McDonald charged his Zenith design team with creating a portable shortwave radio that he could use anywhere.

At the time of McDonald's directive, portable (medium wave-only) radios based on new low-drain 1.5 volt tubes were themselves a very recent development. The Zenith design team produced a series of prototypes for 'The Commander' based on those new Zenith medium wave portables. After the first few general coverage prototypes, The Commander, complained of needing 'micrometer fingers' to tune in a SWBC station and suggested a multi-band 'band-spread' model that eventually became the first Trans-Oceanic, the 1942 Trans-Oceanic Clipper.

The 'Clipper' was only produced for a few brief months before Zenith shifted to war production. The few thousand produced were wildly popular with the troops and on the Home Front. After the war, Zenith produced tube-type Trans-Oceanics by the hundreds of thousands, eventually offering four main post-War civilian models and one special military version. In late 1957, Zenith offered the first transistorized model Trans-Oceanic, the Royal 1000. Zenith went on to produce three other solid-state models before closing out the marque as they bowed to overseas competition and ceased radio production in the early 1980s.

As the vintage radio hobby developed over the past decade, both tube and solid state Trans-Oceanics became eminently collectable. Many SWBC DXers who have 'collected' a Trans-Oceanic have been surprised with the qualities of the "T-O" as a working shortwave radio. The following two brief reviews highlight what we consider to be the two best-of-breed Trans-Oceanics.

THE '600 SERIES' TUBE MODEL TRANS-OCEANIC

Harold Cones

Sitting down to a listening session with a tube-type (hollow state) Trans-Oceanic is a formidable experience. There before you sits a "Black Stag" covered wooden-cased object 17" wide, 19" high (with the front open) and 8" deep. A 60" telescoping antenna with the base diameter of a hot dog shoots up from the top of the cabinet. In normal usage, with the radio sitting on a standard 29" high table, the whip antenna stops just short of touching the ceiling in a typical eight foot room. Getting the receiver to the table requires hefting 19 pounds (unless you have managed to find a set of Z985 batteries, in which case you brought 25 pounds to the listening site). An impressive radio, for sure, and one that conjures up thoughts of steaming jungles, military battlefields and snowy mountain tops. The Trans-Oceanic was always marketed to adventurers, both real and imagined, and that feeling rubs off on you as you enjoy this radio.

From the introduction of the Trans-Oceanic in 1942 to the end of the hollow state series, there were five main models: the Clipper, the 8G005, the G-500, the H-500 and the 600 Series. Each was an evolutionary step above its predecessor, incorporating improved circuitry and components and some variation in case design.

The last incarnation of the tube-type Trans-Oceanics was the Model 600. Although there were six radios in the 600 Series, each with a different letter and number designation, they all were basically the same receiver. Unlike its airplane dial predecessors, the 600 Series introduced an elongated, horizontally stretched slide rule dial which greatly simplified tuning. When coupled with the electrical bandspread, the 600 Series was one of the easiest consumer radios to tune until the advent of digital readouts in the 1980s. As with other tube-type Trans-Oceanic models, band selections on the Model 600 are made with seven push buttons located to the right of the dial. In addition to the four specific portions of the shortwave broadcast band (16m, 19m, 25m and 31m), there are two continuous coverage bands for "ship-to-shore" and "weather" (2-4 MHz and 4-8 MHz). The 600 Series also introduced a power cord take-up reel and the first dial light in portable radio history. Zenith also reintroduced the attached log book that was last seen on the Model 8G005Y Trans-Oceanic in 1949. The 600 was available in the standard Black Stag covering or, for the first time, a genuine cowhide covering; the cowhide model had brown plastic parts and a brown dial face instead of the black found on the Black Stag models. Many (myself included) feel that the leather covered 600 was the most beautiful of the entire Trans-Oceanic line.

IN USE

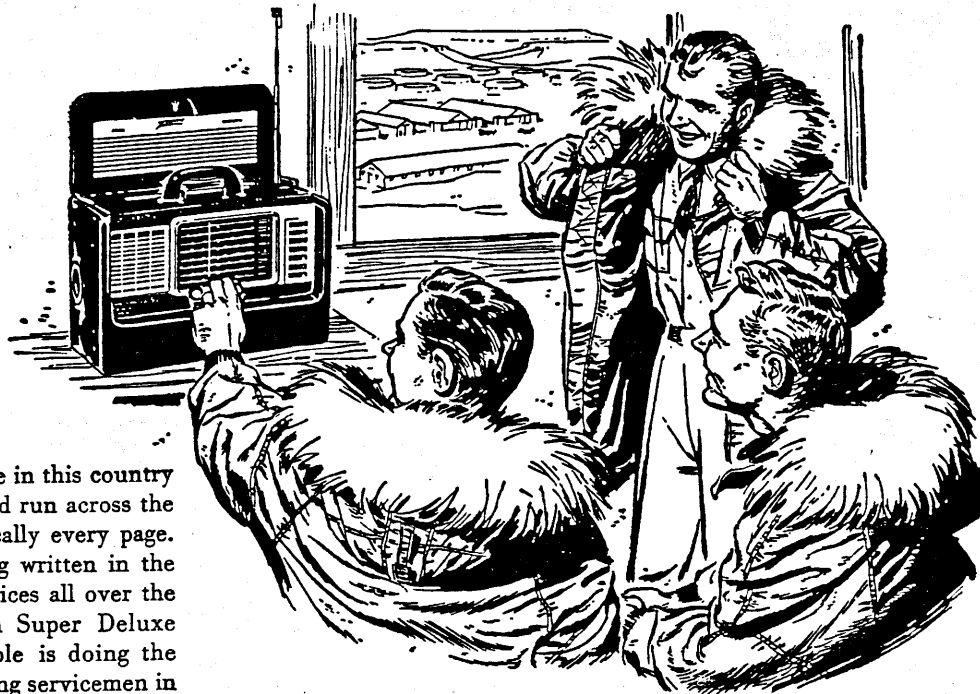
A representative of the 600 Series was chosen for this informal review. A recently cleaned and aligned model A600L ("L" for "leather") was put through its paces with its selectivity and sensitivity loosely compared with an NRD-525.

STABILITY: Hollow state equipment requires a short warmup time before full stability is reached. For this test, I tuned to WWV at 5 MHz., then turned the radio off and let it sit for an hour. I then turned it back on and used sophisticated test instruments (my ears) to listen for tonal changes over time. I could detect none, which affirmed my past listening experience with the Trans-Oceanic—it is a pretty rock-solid receiver.

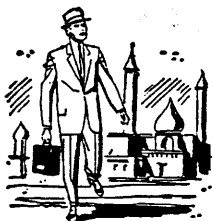
AUDIO QUALITY: In my mucking around with radios, I have never found a portable radio with the audio quality of a Trans-Oceanic. The four switch RADIORGAN allows you to manipulate "Treble," "Bass," "Voice" and "Alto" into as many as sixteen different listening combinations. The result is rich, full audio with enough volume to annoy the whole family if you so wish. An automatic volume control circuit prevents strong station "blasting" in general use. Those who have listened only to recently produced portables are in for a major surprise when they hear a Trans-Oceanic for the first time!

A Brief History of Shortwave

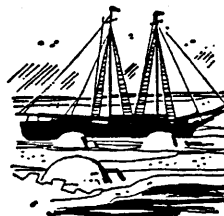
(It's amazing how much of it has been written by Zenith)



If the history of shortwave in this country were put into a book, you'd run across the name of Zenith on practically every page. The latest chapter is being written in the outposts of the U. S. Services all over the world. There, the Zenith Super Deluxe TRANS-OCEANIC portable is doing the valiant morale job of keeping servicemen in constant touch with home. This is the same...



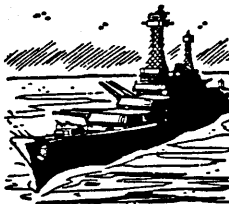
(2) famous Zenith shortwave that has been carried by diplomats, explorers, world celebrities on missions all over the globe. Its list of owners reads like Who's Who. For 13 years it has worked faithfully under very extreme conditions of cold and tropic humidity... on ships, trains and planes. The original...



(4) the production of the now famous Zenith TRANS-OCEANIC portable was begun in 1941. This was only after Commander Donald B. MacMillan, noted Arctic explorer, reported from off the coast of Greenland that never had a radio worked so well under Arctic conditions as the battery operated shortwave set Zenith had supplied him. Even more dramatic...



(3) Zenith TRANS-OCEANIC portable introduced just before World War II, was the realization of Zenith Commander McDonald's insistence on a practical portable that would handle shortwave as easily as standard broadcast. It took Zenith's engineers over two years to develop such a set and...



(5) was the year in the early 20's when Commander McDonald persuaded the Navy, bound for exercises off the coast of Australia, to take along a shortwave transmitter and receiver aboard the battleship "Seattle." When all standard radio failed, this equipment maintained direct contact with the U. S. That was the turning point in the Government's recognition of shortwave.

Zenith leadership in the development of shortwave has resulted from 36 years of devotion to engineering and manufacturing radionics products exclusively. The know how born of this experience has been at the constant service of the Government... as, for instance, in the manufacture of the proximity fuses which played a major role in World War II.

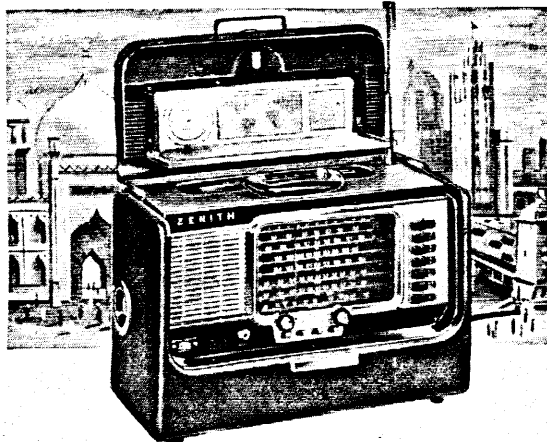
ZENITH 
The royalty of **RADIO** and **TELEVISION**®

Backed by 36 years of Experience in Radionics Exclusively
ALSO MAKERS OF FINE HEARING AIDS
Zenith Radio Corporation, Chicago 39, Illinois

When it's 8 p. m. today
in Chicago ...



it's 7:30 a. m. tomorrow
in Bombay



New "Dial-O-Map" feature on Zenith Trans-Oceanic calculates time anywhere!

Tune in the world with this latest version of the world's only 14 year proved shortwave portable radio. Its list of owners reads like an international "Who's Who." Its list of features includes patented detachable Wavemagnet® antenna, exclusive Radiorgan® tone control, tropic treated against high humidity, Patented pop-up Waverod® antenna, voltmatic regulator, battery saver switch, spread band tuning, push-button band selectors.

Now Zenith has added a rotating directional feature to the Wavemagnet® antenna and two other new "extra service" features to help your new Trans-Oceanic serve you better:

"DIAL-O-MAP". (Shown above.) In log chart compartment. Set disc for time where you are listening—see at a glance correct time in principal spots around the world.



PHONO-JACK. Plug in your record player, and use the TRANS-OCEANIC's powerful and sensitive Zenith-built speaker to enjoy your favorite records.

The TRANS-OCEANIC shown is in durable Black Stag, model R600, \$139.95*. It is also available in luxurious top-grain cowhide, model R600L, at \$159.95*. Operates on AC/DC or battery.

ZENITH



the royalty of RADIO and television

Backed by 36 years of Leadership in Radionics Exclusively

ALSO MAKERS OF FINE HEARING AIDS

ZENITH RADIO CORPORATION • CHICAGO 39, ILLINOIS

*Manufacturer's suggested retail prices not including batteries.
Slightly higher in far West and South.

SELECTIVITY: For this test I tuned in a number of shortwave stations with close adjacent stations and compared selectivity to the standard radios. The Trans-Oceanic was quite capable of rejecting a low powered station 5 kHz away but could not reject a big broadcaster at the same interval. It did surprisingly well at rejection at 10 kHz increments for stations of all powers except the very biggest. All in all, I was quit pleased with selectivity—the Trans-Oceanic is selective enough to make an acceptable DXer's radio.

SENSITIVITY: Although hard to believe, I found that if there is a signal there, the Trans-Oceanic can hear it with either its whip antenna or a long wire attached to its external antenna terminal. Generally, I found that the lower the frequency, the greater the need for an external antenna. Sensitivity was acceptable for general listening in the Tropical Bands, however, the attachment of my tuned dipole to the antenna terminal made the receiver "hot." I certainly never imagined that a 40 year old portable radio could produce such very respectable results!

I tuned a number of Papua New Guinea stations with the NRD-525 and then "found" them with the Trans-Oceanic attached to the external antenna—they were there with equal strength! Most, but not all, could be found with just the whip antenna but were much weaker. The Trans-Oceanic can get them, but in normal shortwave listening situations, the low powered stations would most likely be missed because of the analog tuning (although a calibrated second scale at the top of the dial allows accurate return to a station).

I checked the performance of an "as is" model A600 recently bought at a flea market (I had not yet peaked it up) and found that the same sensitivity was absent. The hollow state circuitry of the tube-type Trans-Oceanic is based on components that can change value over time and can therefore change the performance of the radio from its intended design specifications. Any Trans-Oceanic which will be used for every day listening should be realigned and should have all its capacitors changed to receive maximum benefit from its quality design.

THE BOTTOM LINE: 600 SERIES

The bottom line on the 600 Series Models is that they are very sensitive and selective all band receivers with some of the richest audio you will encounter. They are not only excellent general listening radios (I keep one in my office) but it is also a decent shortwave DXing radio.

Throughout the eight year run of the 600 Series, the retail price of the Black Stag covered versions was \$139.95. The versions covered in genuine cowhide cost \$159.95. These figures, from 1954 convert to about \$800(Black Stag) and \$900 (cowhide) in 1994 dollars.

The major problem with the tube-type Trans-Oceanics is that they are no longer made. They are available, however, at ham fests and vintage radio meets and through publications such as Antique Radio Classified.



THE ROYAL 7000 SERIES TRANSISTORIZED TRANS-OCEANIC John Bryant

There were three models series of transistorized Trans-Oceanics: the Royal 1000 Series, the Royal 3000 Series, and the Royal 7000 Series. The Royal 7000 Series was followed in 1979 by an integrated circuit-based R-7000 Series which closed out the line as the R-7000-2 in 1981. These designations are noted as "Series" because each contained several sub-models produced during their lengthy production runs.

The Royal 7000 Series was introduced in the 1969 Zenith Line as an "11 band portable powered to span the globe and receive more information locally." The "local" comments referred to a new band which tuned VHF weather transmissions. The Royal 7000 model was followed by the Royal 7000Y-1 and then by the Royal D7000Y. The primary difference between the three sub-models was in details of the VHF coverage. The Royal D7000Y was last offered in the 1979 Zenith line. The retail price at the introduction of the Royal 7000 was \$275. At the close of the inflation-ridden '70's, the price had only risen to \$300. The introductory \$275 converts to nearly \$1000 in 1994 dollars.

In modern terms the Royal 7000 is a very large and heavy transistorized portable. Opened for use as in the photo, it measures about 13"W x 12"H x 7"D and weighs in at a whopping 17 pounds with batteries aboard. (In contrast, the Sony ICF-2010 measures approx. 11"W x 6"H x 2"D and weighs a petite 4.5 lbs. including batteries.) The Royal 7000 measures almost 6 feet from the base of the receiver to the tip of its oversized whip antenna. It is fair to say that the Royal 7000 continued the design theme set a generation earlier when Commander McDonald put performance and audio quality ahead of all other design concerns.

It is important to note that the Royal 7000 also continued the traditional Trans-Oceanic focus on bandspread dials for International Band listening rather than being a general coverage receiver. The 11 bands were the VHF Band, FM, Long Wave, Medium Wave, continuous coverage of 1.7 MHz to 8.0 MHz in two bands, 9.4 to 10.1 (31 meters), 11.4 to 12.3 (25 meters), 14.6 to 15.8 (19 meters), 17.1 to 18.5 (16 meters) and 20.6 to 22.4 (13 meters). Although this approach left large areas of the shortwave spectrum uncovered, it made the Trans-Oceanic one of the few analogue receivers which could be used easily and reliably by the general public wishing to tune international broadcasts.

For the first time in the Trans-Oceanic Line, the Royal 7000 provides switchable selectivity, a variable BFO, and RF GAIN control and a combination Battery Level and Signal Strength Meter. The Royal 7000 also contains an on-board AC power supply and a well designed battery box for nine 1.5 volt 'D' cell batteries.

IN USE

My measures of a "listener's radio" are ease of tuning, frequency stability, audio quality, selectivity and sensitivity, in that order. A listener's radio should be as easy to use as any other piece of consumer electronics and should deliver the major international programs beamed to North America with ease and high reliability. The radios of the Royal 7000 Series do that and more.

EASE OF TUNING: Thanks to Commander McDonald's commitment to bandspread coverage of the major International Bands, Trans-Oceanics (except the final R-7000 general coverage model) are among the easiest analog receivers to tune for international broadcasts. For instance, the 31 meter band is marked off 9.4, 9.5, 9.6, etc. through 10.1. The markings are about 1/2" apart, so it is rather easy to interpolate the dial marker to the nearest 10 to 20 kHz or so. Before running the tests for this article, I aligned my Royal 7000-1 and was able to tune all of the normal power-house broadcasters with no problems at all.

STABILITY: The temperature compensation of the Royal 7000 is outstanding. I found no noticeable drift whatsoever during warm-up. The same thing is true for basic oscillator stability. Unlike their replacement, the R-7000, the Royal 7000 series are truly "set and forget" receivers.

AUDIO QUALITY: Almost from the beginning of the company, Zenith enjoyed a reputation for excellent audio quality. The Royal 7000 is no exception. The audio section is rather formidable five transistor circuit with a first audio amplifier, a pre-driver, a driver and an individually matched pair of audio output transistors in push-pull. This circuit drives a high quality 4" x 6" oval speaker which uses the large case as an unported enclosure. The audio is powerful enough to more than fill my living room with undistorted and quite mellow sound. I informally compared the audio of the Royal 7000 to my Sony ICF-2010. Both in quality and quantity, the Royal 7000 makes the 2010 seem like a plastic toy.

SELECTIVITY: The Royal 7000 was the first Trans-Oceanic to provide switchable (Wide-Narrow) selectivity. The Wide setting is only useful on Medium Wave and the very strongest International Broadcasters. The Narrow setting provides narrower selectivity than previous Trans-Oceanics, but the filter skirts are still wide enough to admit annoying heterodynes in a few cases. A KIWA 4 kHz. filter would solve those problems; however the problem heterodynes are so rare that I will probably not bother.

SENSITIVITY: I compared my Royal 7000-1 to the Sony 2010 and the JRC NRD-525 using wire antennas, a McKay-Dymek DA-100 active antenna and the whips of the two portables. On very weak signals, the AGC action of the Royal 7000 was not as effective in holding the audio level even when compared to the other two radios. Fading was more apparent. Medium and strong signal reception was about the same on the three receivers when using the active antenna or the outside wire antenna. The Royal 7000 really "struts its stuff" when operated on its large whip antenna. Well it should; it is the culmination of almost 25 years of design pointed toward creating shortwave radios for consumers who had no desire to string wires up in their back yards. There was no comparison between the Sony 2010 and the Royal 7000-1 when they were operating on whips. The Zenith won hands down.

All in all, the Royal 7000 Series Trans-Oceanics are the receivers to own if you want a transistorized Trans-Oceanic. Unlike the Royal 1000, it tunes the FM band. Unlike the Royal 3000 Series, it offers selectable IF bandwidths and a considerably more sophisticated design. Receivers of the Royal 7000 Series are beautifully designed radios in chrome and black leatherette and is a welcome addition to any room.

FINDING AND BUYING A TRANS-OCEANIC

Within the vintage radio collecting hobby, there is brisk trade in Trans-Oceanics. Probably the easiest way to access this market is by subscribing to Antique Radio Classified (current US rates are \$30/yr. 2nd Class and \$45/yr. First Class Mail. P.O. Box 2, Carlisle, MA 01741. ph (508) 371-0512.) This monthly publication carries hundreds of classified ads for all sorts of vintage radio gear, a number of informative articles as well as notices of local and regional vintage radio club meets, flea markets, regional auctions, etc. ARC espouses a "no questions asked" return policy for its advertisers. Each issue carries around a dozen ads for various models of Trans-Oceanics. Prices vary quite a bit between various parts of the country; they vary even more based on the quality and condition of the radio in question. Junker "parts sets" go for around \$10 to \$20. A very well preserved 600 Series Trans-Oceanic varies from about \$90 to \$150, with the most elegant leather version of the 600 Series usually costing an additional \$30 or \$40. The Royal 7000 Series receivers are somewhat rarer than the tube models and generally bring from \$125 to \$175 or so.

"Direct from La Scala...the opening performance of Pagliacci." 25 meter band
 "Wave heights expected: 15 to 18 feet off Montauk Point." 162.55 MHz weather band
 "The British are 100 for 5 at cricket in Karachi." 19 meter band
 "This is North American Service of Radio Moscow with the news." 16 meter band
 "Boise: altimeter, two niner seven niner. Ceiling, twenty-five hundred." 150-400 KHz band
 "This is ZD8ZAD Ascension Island calling W9DCN Peoria." 13 meter band
 "We've taken two marlin here at Pompano...looks good." 1.6-3.5 MHz band
 "Next tone begins at 14 hours, 6 minutes, Greenwich Mean Time." 31 meter band
 "Hurricane winds of Force 12 expected from 20 hundred hours." 3.5-9 MHz band
 "Bulletin: the Coast Guard has sighted survivors." Standard Broadcast band
 "And now WEFM presents West Side Story." FM Broadcast band

Presenting the Zenith 11 band Trans-Oceanic.
The last word in radio. About \$270.*



Built to tune in the world with simplified precision tuning. Electronic band spread tuning widens dial space for easier station selection on five shortwave bands. BFO control for Single Side Band and CW code reception. Tuning meter shows signal peaks for fine tuning. Manual RF gain control to pinpoint RDF locations and facilitate SSB and CW reception. *Model Royal 7000Y-1, price optional with dealer.

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 The quality goes in
 before the name goes on

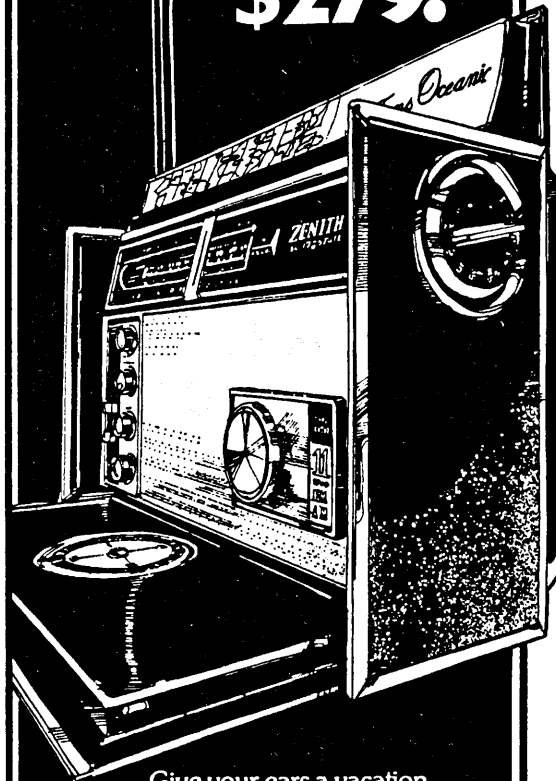
A FINAL NOTE

Neither of us uses our Trans-Oceanic as a portable radio. We don't want to risk the accidental ding or dent that would forever mar such a thing of beauty. Although batteries are no longer available for the tube model Trans-Oceanics, portability is still possible through a special adaptor battery pack from Antique Electronics in Tempe, Arizona. This pack costs about \$90 and runs on owner-supplied D cell batteries. The Royal 7000 and the other transistorized models were designed to run on D cell batteries. Drainage is low and one set of batteries lasts several hundred hours.

FROM THE EDITORS:

Harold Cones and John Bryant currently have a manuscript in the final editing process at Schiffer Publications of Pennsylvania. The 160-plus page book will be very extensively illustrated. Titled *The Zenith Trans-Oceanic: The Royalty of Radios*, it will be the definitive reference on Zenith Trans-Oceanics. Thanks to a lot of cooperation by Zenith Electronics Corporation and by many retired Zenith employees, Harold and John have unearthed much never before available information on these fascinating radios. Look for publication notices in late 1994. The book will be available directly from the authors at *The Radio Professors*, P.O. Box 592, Stillwater, OK 74076 USA.

'Round the
world
tour.
\$279.*



Give your ears a vacation, with the radio that's powered to tune in the world. Eleven-band reception, including FM, AM, long and short wave, marine, and weather bands. Runs on 9 "D"-cell flashlight batteries or plugs into any 115- or 230-volt AC outlet. Includes built-in antennas, earphone and jack, flip-up time-zone map, and log chart compartment listing world station frequencies from Poughkeepsie to Peking. Hear The Trans-Oceanic portable, model D7000Y, at your Zenith dealer's.

*\$279.95 Mfr's suggested retail price.

ZENITH
®

The quality goes in
before the name goes on.