



Let's slug it out with
the tube Racketeers!

Together we can give 'em
the knockout blow!

PHILCO

Tube Racket-Smashing Campaign

Last year Philco sponsored the industry's first Tube Racket-Smashing Campaign. The results . . . wonderful cooperation from service dealers and praise from thousands of TV and radio owners who had been "taken over" on replacements.

Now, after one year of slugging, the tube racketeers are staggering . . . and we're ready to "knock 'em out" with another great Tube Racket-Smash-

ing Campaign. During the month of August, Philco Distributors will credit you with 5c for old, worn out tubes you bring in, toward the purchase of new Philco receiving tubes. *Your old tubes will be smashed right before your eyes.* Join the Tube Racket-Smashing Campaign today . . . for the good of the industry . . . for extra profits for you. See your Philco Distributor.



PHILCO CORPORATION
ACCESSORY DIVISION
PHILADELPHIA 34, PENNA.



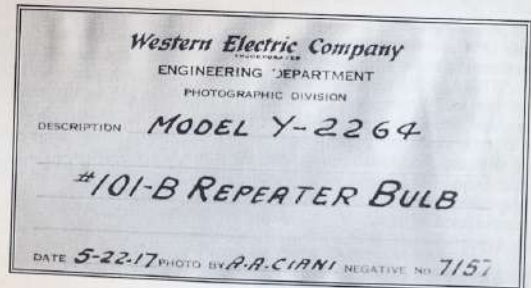
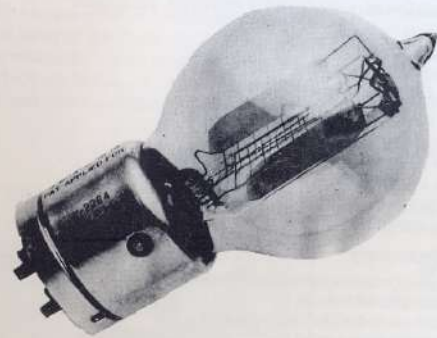
TUBE COLLECTOR

TUBE COLLECTORS ASSOCIATION

"HISTORY • PRESERVATION • APPLICATION"

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TUBE COLLECTOR
TUBE COLLECTORS ASSOCIATION, INC.
 PO Box 636, Ashland, OR 97520, USA



The Tube Collectors Association is a nonprofit, noncommercial group of individuals active in the history, preservation, and use of electron-tube technology. *Tube Collector*, its bulletin, appears six times per year.

Officers and Staff

President: Ludwell Sibley, KB2EVN, (541) 855-5207, tubelore@jeffnet.org

Vice President: Norm Wilson, N6JV, (916) 689-3534, N6JV@N6JV.com

Secretary-Treasurer: Bob Deuel, K2GLO, (541) 482-8752, k2glo@jka-systems.com

Editor: Ludwell Sibley, as above

Webmaster: Norm Wilson, as above

Awards Administrator: David Kraeuter

Directors:

Jim Cross (chairman)

Jerry Vanicek

Joe Knight

Norm Wilson, N6JV

Ron Lawrence, W4RON

Honorary Members: Bob Deuel, K2GLO; Bro. Patrick Dowd, W2GK; Al Jones, W1ITX; Ludwell Sibley, KB2EVN

Web Site: www.tubecollectors.org

email Reflector: tubecollectorsassociation@yahoo.com

To subscribe: send a blank, untitled email to

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To unsubscribe: send a blank, untitled email to

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Group moderator: Ron Lawrence, W4RON, w4ron@carolina.rr.com

To join TCA: annual dues is \$20.00 (in North America; \$25.00 elsewhere), to the address above. Please make checks payable to "Tube Collectors Association." Payment by PayPal is welcomed, to tca@jkasystems.com. The membership year runs January-through-December. Those joining after February receive the year's back issues of TCA publications. Multi-year memberships are offered: in North America, \$37 for two years or \$54 for three; elsewhere, \$49 for two years or \$73 for three.

Articles on tube topics are invited. Editorial correspondence should go to the editor at tubelore@jeffnet.org or 102 McDonough Rd., Gold Hill, OR 97525.

Renewals, changes of address, and other membership business should go to Bob Deuel at tca@jkasystems.com or PO Box 636, Ashland, OR 97520.

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FRONT COVER: A fine old WECO (pre - Bell Labs) shot of a "tennis-ball" repeater bulb.

Source: Jerry Vanicek

REAR COVER: Philco promotes the destruction of used "pulls" lest they fall into the hands of fraudulent reproducers.

Source: Service magazine, August 1956

MICROPHONICS FROM THE EDITOR

2010 TCA MEMBER MEETING

The date is Saturday, September 25, 9 AM. We'll be returning to Oregon, specifically the Old Sams Valley School outside Gold Hill. Full details in the August *TC*.

75 YEARS OF METAL TUBES

This year holds the anniversary of GE and RCA announcing their new metal receiving tube (April 1, 1935) and promoting it at the annual IRE Convention (July 1). The tube and receiver industries quickly split into pro-metal and anti-metal camps.

In honor of this event, this issue reprints the metal-tube history written by Bro. Patrick Dowd, W2GK, in 1976. This is classic interview-the-oldtimers material.



Philip Taylor chats with Kirk Cline and Ron Lawrence at Charlotte

Photo: Bengt Swansson

TCA MEETING AT CHARLOTTE

By invitation of the Ron Lawrence and the Carolinas Chapter of AWA, we held a morning meeting on March 26, ahead of their annual 2-1/2 day conference. The audience was in the high forties, and included three extra-continental members. Ludwell Sibley gave a brief status report on the progress, plans, and health of the association. Bill Wagner described an automated tube tester that he uses for "production" testing, a Card-Matic operated from a PC via an interface box and a thick cable going into the card reader on the tester. Philip Taylor gave a brief report on past attempts in British circles to reproduce the "R" valve. Jim Oram of CC-AWA showed a video on the restored

Colossus, the British code-cracking machine of WW II. Bob Dobush, Bengt Swansson, and Paul Weidenschilling showed and described a variety of intriguing tubes. Sibley made a presentation on the Eimac 4W20,000 tetrode and its development. Tube-trading and door prizes completed the event.

This was a run-up to the main event, which the Chapter had promoted vigorously via a strong Web presence and an unusually complete 12-page color brochure. It featured several heavy-hitter session presenters. Besides the usual antique-radio auction, a special auction handled the estate of the late Ernie Hite. The Chapter had done very careful prep work on the tubes, whose sales are reported on page 2. More information is available on the Chapter Web site (www.cc-awa.org) and Paul Farmer's writeup in the May issue of *Radio Age*, and, one suspects, an upcoming issue of *Antique Radio Classified*.

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50 YEAR OLD EDISON LAMP USED IN RECEIVER

Radio-Craft, February, 1933

John Dilks, K2TQN, uncovered this old-time report and reprinted it in his "Old Radio" column in QST for Sept. 2008. He did some research on the participants, who seem to have been somewhat overqualified for what is basically a publicity stunt. Dr. Sharp was a founder of the Illuminating Engineering Society of North America and a fellow of the American Institute of Electrical Engineers, while Caldwell had been on the staff of Electrical World, later a member of the Federal Radio Commission and further on editor of Electronic Industries and Radio Retailing and Electronics. This story is worth repeating to a TCA audience.

I've always thought it would be fun to build a Fleming-valve radio using a dual-filament car tail-light bulb with one of the filaments burned out and serving as the anode. - Ed.

Has radio really advanced? Is present-day equipment really more sensitive, and does it really give better quality than the older radio equipment? These questions are most conveniently answered by referring to the two photographs shown [below].

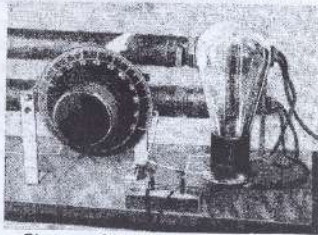


Left, Mr. O. H. Caldwell; and right, Dr. Sharp tuning the simple receiver with the 50-year-old Edison tube.

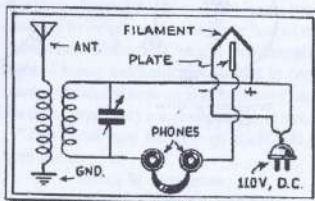
It seems that about 50 years ago, Thomas Alva Edison discovered that if a cold metallic plate of some sort be placed around the filament of his incandescent lamp, there would be a flow of current from the filament to the plate. This effect, as will be readily recognized, is the fundamental principle of our modern vacuum tube. In order to obtain qualitative as well as quantitative data, Edison built several such "radio tubes," and one of them is shown in the photographs to the left.

The original model of Edison's lamp

was recently connected in a double-circuit tuner by the National Broadcasting Co. They picked up a signal from WJZ on the



Close-up of the Edison receiver; the two wires serving as the plate are clearly shown. little receiver and fed the output to the input of WEAF for rebroadcasting purposes. Listeners all over the country state that the reproduction was as good as the ordinary programs. Dr. Clayton H. Sharp, well known scientist, is shown tuning the set (which has a range of about one-half mile), while O. H. Caldwell, President of the New York Electrical Society, looks on.



Schematic of the double-circuit receiver.

"VEC"

AN ENTERPRISE REPAIRING CERAMIC ELECTRON TUBES
Abel Santoro, LU8DXI

Managed by Mr. Eric Heuser and sons, this Argentine enterprise is dedicated, among other businesses, to rebuilding ceramic power tubes.

While working in the Transworld picture-tube factory in 1974 (TC, Feb. 2010), Mr. Heuser began experimenting with glass-tube repair in the garage of his house. In 1977 he established the actual laboratory of the "VEC" company in Munro County, Buenos Aires, which began producing some types of new glass tubes and repairing existing ones.



Mr. Eric Heuser at his desk

Soon after, "VEC" began rebuilding ceramic tubes, with machinery made by Mr. Heuser himself.

One of his first tube-repair jobs was a 4CX5000A, for the broadcast station "Radio El Mundo," which had a transmitter site in San Fernando County with an RCA 100-kW "Ampliphase" transmitter.

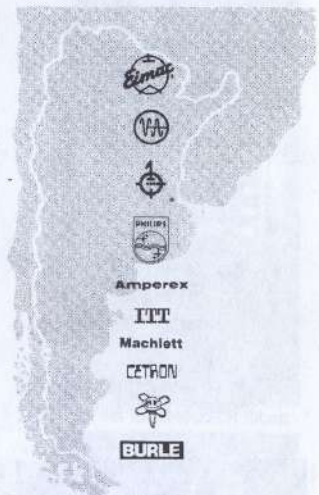
A LABORATORY TOUR

Today "VEC" reworks ceramic electron tubes, as shown in the illustrations that follow.

"VEC" imports, sells and repairs all types of ceramic tubes for the Argentine Army and Navy, radio and TV broadcast

stations, industry, etc.

In the '80s "VEC"'s tube laboratory was the only facility of this type in Latin America. Today "VEC" represents more than fifty brands, importing and selling such products as complete radio and TV broadcast systems, aircraft communication systems, industrial radio-frequency heaters, and all types of electronic components.



VEC S.R.L.
C. de Comercio 5122 (1600) MUNRO B. A. Argentina
Tel: 762-399/0082 758-0908
Fax: 0411-950-1861 Telex: 300711 VEC AR

Advertisement with logos of the company and its product line

ACKNOWLEDGEMENTS

To Eric Heuser, Mariano Heuser, and the "VEC" company.



Mr. Mariano Heuser in the plant's reception area



Mr. Heuser Sr. in the mechanical area. The shelves hold tubes awaiting rebuilding, and recovered parts.



Close-up view of the novel tube display in the photo above



Assembly table, with a stock of recovered grids and other parts



Mr. Heuser Sr. in the plant, with finished tubes behind him.



The "cold bell," with copper-tubing RF-heating coil raised above the tube

Válvulas Cerámicas

PARA
RADIODIFUSION
TELEVISION
ELECTRONICA
INDUSTRIAL

ahora
reprocesadas
en el país



CON GARANTIA
DE ORIGEN

3 CX 2.500	3 CX 3.500	3 CX 5.000
3 CX 15.000	3 CX 15.500	4 CX 5.000
4 CX 10.500	4 CX 15.000	

CONSULTENOS POR OTROS TIPOS

'70s-vintage ad for rebuilt tubes, listing eight Eimac-designed tubes on offer



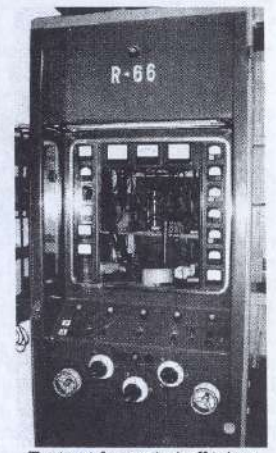
Plaque from Richardson Electronics celebrating sales results



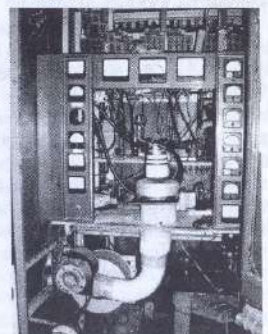
Plaque from Richardson Electronics marking a conference of distributors



Mr. Heuser Sr. in the vacuum area



Test set for sealed-off tubes



A tube ready for testing