

JOURNAL OF THE
CALIFORNIA HISTORICAL
RADIO SOCIETY

CHRS OFFICERS AND STAFF 1996

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ABOUT CHRS

The California Historical Radio Society (CHRS) is a non-profit corporation chartered in the State of California. CHRS was formed in 1974 to promote the restoration and preservation of early radio and broadcasting. Our goal is to provide the opportunity to exchange ideas and information on the history of radio, particularly in the West, with emphasis in collecting, literature, programs, and the restoration and display of early equipment.

The *Journal* of the Society is published and furnished free of charge to members. Yearly membership dues are \$20 (U.S. funds).

Submissions for the *Journal* are always welcome. Typed copy is preferred, submitted on a 3.5 inch IBM or Macintosh diskettes in ASCII or Microsoft Word format. Send all material to Alan Voorhees and include your name, address, and phone number. You write about radio and we'll print it.

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CHRS

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CHRS on the Internet:

<http://www.wp.com/chrs>

ON THE COVER

The new NBC Building in San Francisco as it appeared during the opening in 1942.



FROM THE PRESIDENT

Steve Kushman

NEWS:

Dues—If you know someone who hasn't paid their 1997 dues tell them to remit now, Please!

Election—The results of the Election regarding changing the By Laws are in. You overwhelmingly approved the changes. There were 328 Yes votes and 8 No votes. This is an overview of the changes:

The Board of Directors will fill vacancies on the Board; Board members are limited to a three year term; the Vice President will be elected by the Board; the Vice President will succeed the President upon the President's retirement; the ex-President will become President Emeritus.

If you haven't done so yet, please vote on these By-Law changes on your renewal forms.

Hotline—Remember, the CHRS HOTLINE, 415 821-9800. Check the HOTLINE for rainout information or any changes involving our events.

Journal—We are always looking for articles for the Journal. And since many of our members collect many different things, we can use articles on not only tube radios, but phonographs, microphones, hi-fi audio, transistor radios, television, telegraph keys, etc. You get the idea, start writing! Thanks to all who sent in want ads and keep them coming. Remember they are free to current members.

Name Badges—Our thanks to **Norm Lehfelddt**, our Badge Chairman, for the debut of the new Plastic Badges at the Sacramento meet. These attractive new badges are easy to read and allow for 3 lines of type. If we owe you a badge, it will be in your mail soon.

Technical Reprint Service—Our Technical Advisor, **Larry Clark**, continues to offer reprints of schematics or other materials from the CHRS Library. Just send a note to Larry and let him know what you need. Enclose a self addressed stamped envelope and \$1. Mail to: Larry Clark, 438 York Dr., Benicia, CA 94510 (707-745-9132). Or if you need assistance with a repair project, call Larry and maybe he can help. Thanks Larry! The Library is still looking for Rider's Vols. 17 thru 23. If you have these and aren't using them call the HOTLINE. The library now has all of the early Riders Volumes thanks to members **Dennis Lariviere** and **Chester Carter** for their donations.

Presidio Project—As some of you already know, CHRS is involved with the Perham Foundation, in a project to restore the original radio station buildings in the historic Presidio of San Francisco. The eventual goal is to have these sites restored to original condition, display working historical gear, to possibly have a home for the Perham Foundation's Electronic Museum and to possibly build the California Historical Radio Society Museum. The CHRS Museum would not only contain radios, but other historically related media, such as phonographs, hi-fi equipment, historical audio gear, microphones, keys, etc. Please read the information on Earth Day activities at the Presidio site. This is a good opportunity to show your support for the project and participate in an important event for CHRS. We need a large turnout and your support. Let **Bart Lee** or myself know if you can attend.

Museum Fund—Thanks to all who continue to donate to the Presidio Museum Fund. Including the \$533 we raised in the successful auction at the last Foothill Meet, the Fund stands at almost \$1000!!! Thank you all. Keep the donations coming.

Lifetime Members—Thanks to **Norman Leal** and **Robert Hope** for their ultimate support of CHRS. These members renewed for LIFE! Now that's commitment. Thank You!

SHRS—Welcome again to all the new members of CHRS who came from the Sacramento Historical Radio Society. I know that the union of our two groups will benefit us all. See the names of these people in the new members section..

INFORMATION:

Collector Events—At the right is the list of events for the remainder of 1997. All events are subject to change or rainout. Please call the CHRS HOTLINE 415 821-9800, for the best updated information. Please note that some meets start at 9am instead of the usual 8am time, and that some events are tentative. Sellers fee applies unless noted.

I am always available to receive your thoughts and suggestions please call me at 415 821-7671 or leave a message on the HOTLINE at 415 821-9800.

HAPPY COLLECTING!

Steve

UPCOMING SWAP MEETS

April 5th. Saturday, 8am

Concord, CA. at Concord Flea Market at the Solano Drive-in., 1611 Solano Way at Olivera Rd. Thanks to **Stan Lopes** for setting up this event.

May 3rd. Saturday, 8am

Los Altos Hills
Foothill College, Lot "T."

May 17th. Saturday, 8am

San Luis Obispo, CA. Joint meet with SCARS, location TBA. Thanks to **Dan Steele**.

June 7th. Saturday, 8am

San Rafael, CA at Erik's Downtown Drive-In, corner of 2nd and Lindaro. Thanks to **Lee Alder** and remember...Erik cooks a great breakfast!

July 5th. Saturday, 8am

San Francisco, at St. Annes of the Sunset, 850 Judah St. off Funston (13th Ave.). Thanks to **John Wentzel** for the arrangements.

July 18th. Saturday, 9AM

Merced, at **Cliff Berthelson's** Radio Warehouse, corner of 13th. and X street. Thanks for having us Cliff!

August 2nd. Saturday, 8am

Los Altos Hills
Foothill College, Lot "T."

September 6th. Saturday, 9AM

Salinas, CA, St. Ansgars Lutheran Church, 72 San Joaquin. Thanks to **Howard Griffin**.

October 4th. Saturday

Redding, CA.
The Shasta-Cascade Amateur Radio Society invites CHRS members to participate in their event. Call (916) 246-4209 for details.

October 18th. Saturday, 9AM

Fairfield and Rio Vista
Western Railroad Museum, State Rt. 12. Collectors event and Picnic. No sellers fee, pay reduced museum admission. Thanks to **Paul Bourbin** for setting up this one.

November 1st. Saturday, 8am

Los Altos Hills
Foothill College, Lot "T."

TOKYO ROSE, M.I.A.

Norman Cox



The war is over. Japan is swarming with correspondents competing with one another to come up with that special story to catch their editor's eye and justify their overseas expense accounts. There is one unsolved mystery that is stumping all of them and it could be the one story that would keep their bosses happy. Where is Tokyo Rose? Her name conjures up an exotic, honey-voiced seductress, straight out of the pages of Terry and the Pirates.

There are several facts that keep getting in the way. Fact one: No propaganda radio broadcasts from Japan had ever been heard where the name of Tokyo Rose was ever used. Fact two: The US Office of War Information stated that Tokyo Rose did not exist and that she was solely a GI invention. Fact three: There were over 20 women who broadcast in English over Radio Tokyo to the troops in the Pacific.

Two enterprising reporters, not letting the facts get in the way, offer a large reward to anyone that will lead them to the elusive Tokyo Rose. An NHK radio station employee suggests to them that a part time disc jockey for Radio Tokyo, Iva Toguri, might fill their needs. They locate her with her husband, still in Tokyo. She does not quite fit the hoped for image. She is 29, short, thin from a bad wartime diet and looks rather scholarly with her braids and glasses. They offer her \$2,000.00 for an exclusive interview if she says that she is the Tokyo Rose. She agrees. How did it happen that Iva would be willing to accept the mythical title of the Tokyo Rose?

This decision, to play the part that so many people wanted her to play, was based on her naive assessment that the US held for her and the radio work she was forced to do while in Japan. She had no idea of the strong feelings that were soon to be ignited against her by the press and radio. It would be a decision that she would regret.

Let's go back to the summer of 1941. Iva is living in Los Angeles with her family. She has recently graduated from UCLA and hopes to train for a career in medicine. But before she can get started, it is decided that Iva will be sent to visit her mother's ailing sister in Tokyo as a family duty.

The war starts and Iva's first thought is to get home. A Swiss ship is leaving with repa-

triated journalists and businessmen but she has trouble getting help from her US consulate and is not allowed to sail. Next her ration card is canceled because she repeatedly refuses to give up her US citizenship. Her clothing, speech and manners all identify her as American and she does not fit in. Now she is running out of money.

Working at various jobs, with speaking and writing English as her main resource, she answers an ad for a part time typist and translator. This time the job is with the Overseas Broadcasting Bureau of radio station NHK and she becomes part of its typing pool.

US short wave broadcasts were being monitored at NHK and Iva, while working as a translator, found out that all Japanese on the US west coast had been relocated to internment camps. What she did not know was that her mother died in one.

In 1943 the Japanese started up a new radio show called "The Zero Hour". In its initial format it was designed to take the fight out of the GI listeners by relating disasters that were falling down on the folks at home, by telling stories of how the 4F's were making lots of money and how their girl friends were generally misbehaving with the men left behind. After a trial run, the people in charge of the show were not happy with the product and started searching for ways to improve it.

All of the English speaking female employees at NHK were ordered to audition for a part in the replacement show being set up.

Unbelievably, it was to be under the direction of two prisoners of war: Charles Cousens who was an Australian radio commentator captured at Singapore and Captain Wallace Ince of the US Army, captured at Corregidor, who had a brief career broadcasting propaganda for the US on the Voice of Freedom show from the Philippines...

Iva was selected, over her objections, to be part of a new segment of the "Zero Hour" broadcast. She was to read scripts prepared by Cousens and Ince and to play popular phonograph records.

During their auditions and interviews, the two men were convinced of her allegiance to the US and told her that they would be responsible for the scripts and that she would be doing nothing wrong in reading them. Also the prisoners told her that they were experi-

enced radio professionals who could turn out a show that would do no real harm and what would be heard, in the way of propaganda, would be mostly unbelievable to the GI listeners. They also chose her because of her horrible speaking voice. It was described as sounding as abrasive as fingernails on a blackboard and it would have the added asset of being so bad that it would carry no credibility.

When her new career started at the end of 1943, many other English speaking women had previously been heard on Radio Tokyo for over a year and a half and they had all been given the generic name of Tokyo Rose by their listeners. Iva picked out her own nickname, calling herself Ann. This was the abbreviation entered on her scripts for announcer. Then, reflecting her homesickness, she started using the name Orphan Ann or Annie.

Iva's segment of "Zero Hour" would last about 20 minutes with her playing four 78's of light classics and popular music with her scripted, light bantering deejay talk thrown in the middle. "Hello Boneheads. This is your friend Orphan Annie". The rest of the show, read by others, gave details regarding the various prisoners held by the Japanese. This five minute bit did offer some comfort to the families who wanted to be assured that their loved ones were still alive. Next would be a recap of all of the bad news from home, then five minutes of propagandized news that was scripted and read by the Japanese.

The show was criticized by for its lack of hard hitting propaganda. But the people in charge were reluctant to do much fiddling with the only show that they had that could be compared in quality with like shows being produced elsewhere in the world.

Iva, now married to a Portuguese national named Felipe d'Aquino, would find more and more reasons to not show up for her part time job at NHK. As a result of her extended absences she was replaced during the last six months of the war on her "Zero Hour" segment by another woman.

The war's sudden end caught everyone by surprise. Iva and her husband were ecstatic over the arrival of her countrymen into war torn Tokyo and she began making plans to rejoin her family as soon as she could.

Now, several months later and after her exclusive interview with the two enterprising cor-

respondents, word was to get around the news community that Tokyo Rose had been found and Iva was besieged with requests for more interviews.

She decided to give one consolidated press conference with all of the reporters invited. Now, getting caught up in all of the attention, she was posing for pictures and handing out autographs as Tokyo Rose at the request of her new found US friends.

Her husband was becoming nervous about all the attention being paid to her and asked her to cut down on the Tokyo Rose activity. But his warning was too late and she was arrested.

She was held in the Eighth Army brig in Tokyo for a year. After months of questioning and investigation, along with a general trampling on all of her rights as a US citizen, it was found that there was no evidence of any wrong doing by Iva and her release was ordered. The FBI, back in the states, reaffirmed that no reason existed for keeping her any longer and ordered her freed. They also stated that she had been stranded in Japan at the start of the war and had to work to live. She joined her husband and now had only one thought: to return home to the US and her family.

Her first step would be to apply for a passport. It was not to be. Instead, the State Department asked the Justice Department for a ruling as to whether she could be issued a passport. Her application was leaked to the press and soon forces back in the US were banding together to bring her to trial as a traitor.

Walter Winches, the New York newspaper columnist and Sunday evening radio personality known for his flamboyant style and fiery rhetoric, began his campaign to bring Tokyo Rose to justice. "Good evening Mr. and Mrs. North and South America and all the ships at sea. Let's go to press. Flash!"

Once again the power of radio was proven.

Many different groups, reacting to the Winchell columns and his radio tirades, joined in with their demands that she be tried for treason.

In August 1948 she was arrested a second time at her apartment in the suburbs of Tokyo. Now, after seven years, she was finally on her way home but it was not the happy experience she had anticipated.

US law says that anyone arrested out of the country and returned for trial has to be tried at

the first place they touch land that is under the control of the US. This posed a problem. If she was taken by air, the plane would have to fuel in Hawaii where there were many people who might be sympathetic to her plight. It was decided that she should come home on a loaded troopship that would make port in San Francisco. It was a hostile environment.

The local newspapers would give much heated space to the return of Tokyo Rose and her trial for treason.

The trial began in July 1949. By today's legal standards the trial of Iva Toguri would not have even started. Many pieces of so called evidence would have been excluded because of hearsay and lack of due process. However, amid the witch hunt mentality of the time, the trial began with many government witnesses submitting thoroughly polished and distorted pieces of testimony.

There were eight separate counts brought against her. The main purpose of the eight counts appeared to be to confirm that Iva was an NHK employee and that she willingly took part in Radio Tokyo's "Zero Hour" radio shows that had been beamed out over 20 transmitters to the areas covering Australia up to the Aleutians.

The defense's star witnesses were to be the two prisoners of war that wrote and produced most of Iva's scripts. Both Charles Cousens, the Australian radio commentator and Wallace Ince, the Army Captain had fared much better after the war than Iva. Cousens had been found innocent of any wrongdoing by his country and was looked upon as a respected journalist and war hero. The Army had accepted Ince's word that he was helping produce the shows under duress and he had even been promoted up a couple of notches. Both the defense witnesses outlined their parts in the "Zero Hour" broadcasts and reaffirmed that they had told Iva that she was just a soldier in the US Army, reading what they had written for the "Zero Hour" program. They also testified that she would often smuggle food and medicines to them that she had purchased with her part time salary.

The trial lasted three months. At its end the tired jury decided that Iva was innocent of seven of the counts. She was found guilty of saying a single sentence on a radio show for which there was no recording, no script and for which it had been testified to that it did not originate

WANT ADS

from Tokyo. "Orphans of the Pacific, your ships have been lost. How will you Set home?" For this she was sentenced to ten years in a Federal prison.

After serving seven years she was released early because of her good behavior. As a result of having been convicted of treason she was classed by the government as a stateless person and procedures were initiated to have her deported to Japan.

Her defense attorney was able to block the deportation and she was allowed to return to her family that had settled in Chicago where she now runs a store owned by her family. In 1976 the old case against her was given renewed attention by the press and by then President, Gerald Ford. On one of his last days in office he issued a full and unconditional pardon to Iva Toguri. In spite of this action and many subsequent disclosures, most people will remember her as the one and only mythical Siren of the Pacific, Tokyo Rose.

Refs. *The Hunt for Tokyo Rose* by Russell Warren Howe ISBN 0-8191-7456-4

The San Francisco Chronicle editions of July 6, September 30, and October 7, 1949

For Sale: Entire collection of old radios, tubes, spare parts, test equipment & Riders Abridged I-V; I-XXI. Radios include AK 10C in three tier type Pooley, 38, 44, and many more. Will be making a list and expect to have it by June 1st. Let me know if interested. Edsel Erwin, 1513 E. Houston Ave., Fresno, CA 93720. (209) 299-5012.

Wanted: Televisions, Philco Predictas all models. All types of earlier TVs wanted. Send fax or description to Sheldon Donig, 340 Laurel Ave. San Anselmo, CA 94960 415-454-8851 Fax 415-456-9322.

Wanted: Riders manuals, Volumes 17 thru 23. Call CHRS HOTLINE, 415 821-9800.

For Sale: CHRS Tee shirts, \$17, including postage. CHRS baseball caps \$10, including postage. Call CHRS HOTLINE, 415 821-9800.

Wanted: Blue, etched, side mirror for Sparton 558 (4 knob). Dial glass for Sentinel 248 (wavy grille). Chassis for Stewart Warner R469. Steve Kushman, 4233-25th. St. San Francisco, CA 94114. 415 821-7671.

Wanted: 1945-1953 Plywood radios from the following companies: Emerson model #503, #519, #535 or any with the perforated fronts. Tele-Tone #117, 117A with speaker holes. RCA model #28T. State price based on condition. Also want Zenith "radio nurse," brown plastic speakers. Steven Cabella, 500 Red Hill Ave., San Anselmo, CA 94960. Phone 415 461-6810.

Wanted: Mini-tube and hybrid coat pocket size plastic radios, pocket crystal radios, hearing aids. I'll buy, or trade my transistor radios. Mike Brooks, 7335 Skyline, Oakland, CA 94611. Phone 510-339-1751.

Wanted: Majestic model 194 gothic cathedral cabinet, or a loaner to copy. Also Philco 60 chassis and speaker. Ben Martin, 18334 Pepper St., Castro Valley, CA 94546. Phone 510 582-6804.

For Sale: Send large SASE for tubes, parts, literature, radios or for books, magazines, catalogs, manuals. Two stamps, please, brings you both lists. Stan Lopes, 1201-74 Monument Blvd., Concord, CA 94520. 510 825-6865.

Wanted: Rack mount Navy radio RBC or RBB, or the cabinet alone. John Gibson, 1075 Sterling Ave., Berkeley, CA 94708. 510 849-1051.

Services Offered: Repair/replacement of meters before 1940. Wanted: Old meters/Galvos before 1910. As is okay. Leonard Cartwright, 879 Russet Dr., Sunnyvale, CA 94087. 408 739-6025.

For Sale: Hallicrafters SX-43 restored, \$175 (no speaker). You pay UPS, local pick-up preferred. Ted Stewart, 2157 Braemar Rd., Oakland, CA 94602. 510 531-7042.

For Sale: Bird Wattmeter with case and six slugs: 2-30 Mhz, 100w, 500w, 1000w; 100-250 Mhz 25w, 250w; 200-500 Mhz, 25w. Excellent condition, Model 43, 50 ohm. Dave Schutt, 22 So. Keeble St., San Jose, CA 95126. 408 293-3437.

For Sale: Kenwood TH21-A, 2 meter hand held transceiver, new ni-cads, short and long rubber duck, charger and 115VAC supply. Original packing and manual- \$60. Henry Meyer, 30 Tobin Clark Dr., Hillsborough, CA 94010. 415 349-2071.

Wanted: UV-199 socket to make adapter to test tube at a 80 socket or an adapter. Edsel Erwin, 1513 E. Houston Ave., Fresno, CA 93720-2750. 209 299-5012.

Wanted: Atwater Kent model 20, big box radios, any condition. please state price. Paul Thompson, 315 Larkspur Dr., Santa Maria, CA 93455. 805 934-2778.

Wanted: Any information on the history, use, or development of the HT-4 transmitter by Hallicrafters. Mikhael Brown, 188 Sprucemont Place, San Jose, CA 95139. 408 578-6076.

Wanted: Antenna for Radiola Super VIII console, or details to construct one—pictures, dimensions, etc. Mark S. Rauber, P.O. Box 1077, Minden NV 89403. 702 782-3596.

For Sale: Electrolytic capacitors, NOS, two section- \$4, 3 section- \$5, four section- \$6. Some rated at 450 volts. Evan Powell, 4717 Conquista Ave., Lakewood CA 90713. 310 429-3793.

Wanted: Small knob (one) for W. E. Aeriola Sr., either filament or tickler. Gene Warner, 522 Weiman, Ridgecrest CA 93555. 619 446-2617.

Wanted: Vintage and collectable TVs and related items, other than parts or service literature. Eric Stumpf, P.O. Box 60245, Santa Barbara CA 93160. 805 964-9417.

Wanted: Good photos of tube type transmitters, transceivers, and allied equipment, for the next edition of 'Tube Type Transmitter Guide. Gene Rippen, 105 Donnington, Auburn, CA 95603. 916 885-6147.

Wanted: chassis for Gloritone 27. Joe Selkregg, 408 980-0474.

For Sale: Old radios, \$50 to \$150. 1930's to 1950's. Restored and working! Jim McDowell. 510 798-4333.

Wanted: Ampex MR-70, universal audio compressors, mic pre-amps, EQs, other tube broadcast and studio items. Leave message. Mark Drury. 510 426-2300.

For Sale: Edison Model C-2, radio phono, unrestored, original. \$1000 or best offer. Wanted: assembly and operating instructions for a Globe "Chief" ham transmitter. "Zep" Bennett. 510 534-9576.

FIRST PRESIDIO HISTORY PROJECT EVENT ON SITE

Wanted: Top \$\$\$ paid for art deco style sets with chrome or metal grills/trim 1930-1940 only. Also buying radio & other advertising signs, clocks, banners. Adam Schoolsky. 503 579-1080.

Wanted: RCA CED Videodisk players and movies. Art Adams 415 321-4886.

For Sale: Misc. parts, hi-voltage caps, DCC wire, etc. Send SASE for list. Dan Smith. 8904 Cypress, Cotati, CA. 94931. 707 664-8156.

Wanted: Pocket size reel to reel tape or wire recorders. Guy Doss, 736 Los Padres Blvd. Santa Clara, CA 95050. 408 241-2437.

For Sale: Thousands of tubes, various tube sockets, (e.g., Amphenol, octal, ceramic) and shields. Assorted hardware and components, (wire, resistors, insulators, grid/plate caps, etc.) Don Buchalter 510 569-3619.

Wanted: Any information about radio operations at the Presidio, 1901-1991. Please call Bart Lee, 415 788-4072(eves); 415 956-5959 #103(days).

Wanted: Knobs for 10" Admiral plastic floor model TV and fine tuning knob for 7" Motorola TV. Services: I repair auto radios. Roy Yost. 415 369-0890.

Wanted: Large Midwest table model w/ half round dial (1941) and other Midwest radios and parts, what have you? For Sale: lots of tubes and knobs, (send want list or call). Also Victor wind-up/ Freed-Eisman radio-phono combo, very rare and unique, \$450/offer. Mike Simpson. 408 867-7315.

For Sale: Columbia HG phonograph. Plays concert cylinders. Trade: Dyna Mark II plus cash for Dyna Mark III. Allan Hibsche, 916 589-0138.

Wanted: Western Electric tubes: VT2, VT25, VT52, 104D, 205D, 252, 262, 274, 275, 300, 310, 348; Globe tubes: 10, 45, 50, 280, 281, 585, 586; single-plated or etched-base 2A3; and transmitting: VT4C, 211, 212, 284, 800, 801, 834, 842, 845, 849, 851. Ming Yang. 510 376-4220.

For Sale: Zenith T.O. 700Y, mint exterior. Realistic Pro-2006, excellent, both \$300 or \$100-\$200 each. Would like to sell together. Other radios available: Sony ICF-2010, ICF-5800, ICF 900; Radio Shack DX 440, DX 380, SW 100; Regency D810, G.E. Super Radio 3. Most in box, all with manuals, all work, some never used, some accessories available. Make offer or trade for working communications receiver. Pete Warncke. 707 643-6202.

When: Earthday April 19, 1997 10am.

Where: Coast Artillery Radio Station, Presidio of San Francisco, building 1444 next to Rob Hill campground. *See map below.*

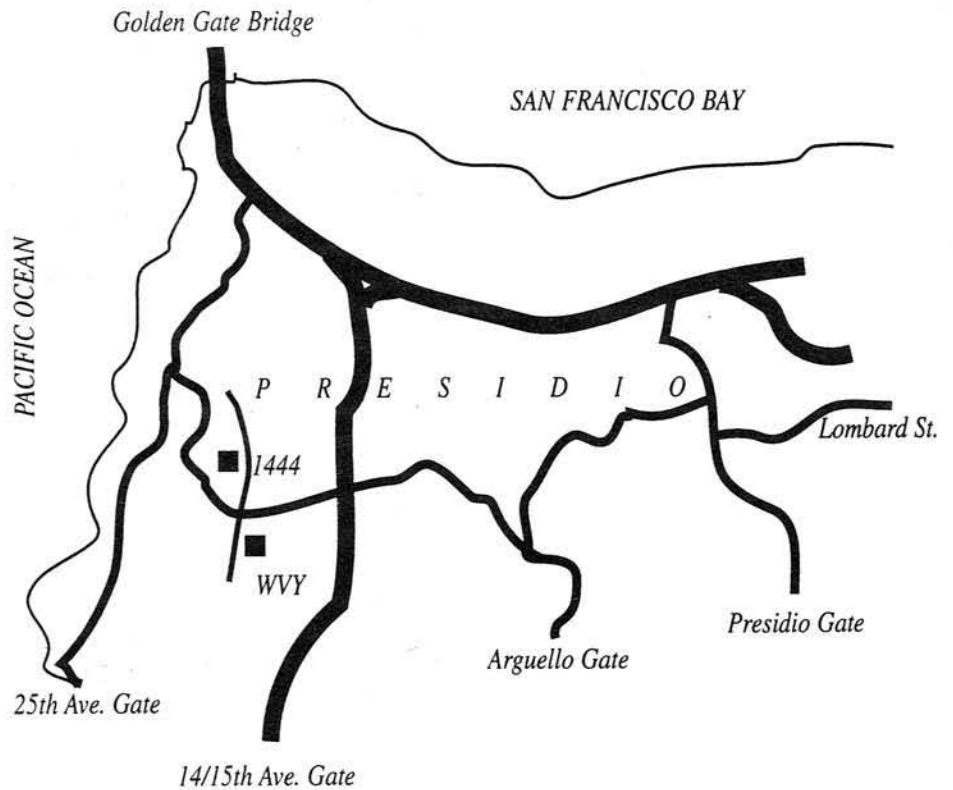
Who: CHRS, Perham Foundation, Boy Scouts and Military Radio Collectors Net.

Task: Introduction from the National Park Service naturalist on native plants, removal of non-native plants, exploration for and mapping of radio and other artifacts on the ground.

Logistics: Lunch and refreshments courtesy of the Perham Foundation; rides arranged through CHRS and Perham Foundation.

Extra Added Attractions: Operation of vintage military radios and tour of radio related sites on the Presidio.

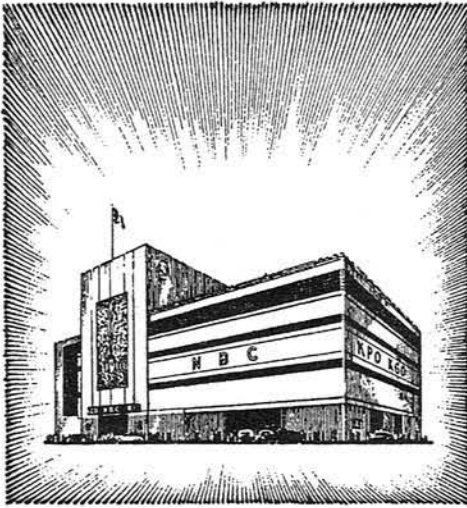
All CHRS and Perham Foundation members are welcome, invited guests and all interested Boys Scouts, Explorers, Cubs with scouters or parents, and all scouters.



"I stopped building ships in bottles after the Navy taught me radio."

SAN FRANCISCO RADIO CITY

Reprinted from the (San Francisco) NBC Building 1942 Souvenir Booklet



RADIO IN 1942

Radio, so intimately a part of practically every life during normal times, is infinitely more vital during a period of national crisis. Always the friendly purveyor of news and entertainment and education, broadcasting today sublimates all these functions to the supreme task of helping fit a whole people to win a great war and a great peace.

San Francisco Radio City was conceived in peace. Its object was to bring the Golden Gate on par with New York, Chicago, and Hollywood as one of the four major network producing centers in America. That it is brought forth in war in no way means that the original objective has not been achieved. Rather it does signify that this multi-million-dollar monument, literally the most perfect broadcasting plant devised by the ever-improving hands of our industry's miracle engineers, takes its place in the surge of our nation's war effort as definitely as does the latest plane factory and the newest shipyard.

Morale, as well as munitions, will win this war. Radio will do more than any other agency to enhance morale...and San Francisco Radio City, making possible more programs and better production and quicker news dissemination from the great war theaters of the Pacific, is going to be a powerful contributory factor.

Sidney K. Stroby

VICE-PRESIDENT
WESTERN DIVISION
NATIONAL BROADCASTING COMPANY

Since veteran executives and engineers of broadcasting have pronounced San Francisco's new NBC Building the most perfect plant of its kind ever designed, and since it is agreed the improvement will definitely establish San Francisco as one of the four great radio centers of the United States, let's look at the qualifications which give the structure such an impressive rating.

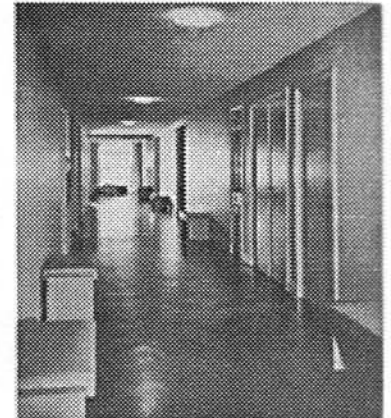
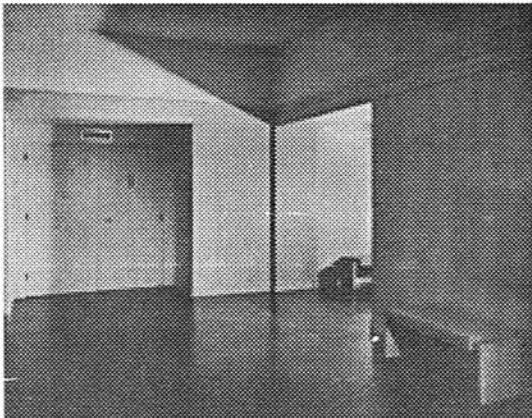
There can be no argument with the statement that the National Broadcasting Company stations, KPO and KGO, were in serious need of new quarters. Over a period of ten years many plans and ideas had been considered without favorable action.

Late in 1939, when Al Nelson became general manager of KPO and KGO, the effort became more determined. A total of 38 different propositions were investigated. The best of these was developed and recommended. Approval and authorization followed in November, 1940.

The structure represents a total value well in excess of one million dollars, including an investment of \$200,000 for special equipment by the National Broadcasting Company.

Scores of business executives and civic leaders have endorsed the judgment of NBC management in establishing such a broadcasting headquarters in the city which is the recognized business center of the Pacific Coast. They also approve the location at the corner of Taylor and O'Farrell streets. It is in the heart of the retail business district, within a few minutes' walk from the largest department stores, theatres, hotels and clubs.

Five stories high, the Building is constructed of reinforced concrete, trimmed with bands of glass brick. These admit daylight but are not transparent.



There are no windows in the Building and it is air conditioned throughout. Architecture is modern, streamlined, but not freakish, fantastic nor faddish. The structure contains 52,800 square feet of floor space, more than double the area of previous quarters. A larger percentage of the footage is devoted to studios and not wasted in unnecessary office and hallway area.

Main entrance is on Taylor Street, near the Clift Hotel, beneath a dignified, inviting marquee. An 80-foot tower rises above the entrance, the most dramatic feature of which is a great mural panel, 16 by 40 feet. It symbolizes the vast extent of radio and the unlimited service it gives to all the lands and all the peoples of the earth.

Ten studios give KPO of the National Broadcasting Company and KGO of the Blue Network Company adequate facilities for all broadcasts, rehearsals and auditions. The largest of these will accommodate audiences of 500 people.

All studios open to the public are on the second floor, easily accessible from elevators and stairway.

Show windows at either side of the entrance and others inside the main lobby tell the story of radio, and publicize programs and radio-advertised products.

Such interesting activities as the master control room, news room, traffic, radio recording, are visible from the foyers on different floors through large windows, making it possible for visitors to see what goes on "back stage" in a broadcasting plant.

There are a million feet—that's 190 miles of wire in the Building, most of it being of a special design to meet the requirements of broadcasting. Much of the technical equipment was constructed in the engineering field office, across O'Farrell Street from the Building site.

Cooperation Brings perfection

Determination of the San Francisco organization to have the finest broadcasting plant in the world was shared by the New York NBC executives and engineers, with the result that plans and specifications included every improvement that has been developed in laboratories or learned in the construction of studios in other cities. San Francisco's new broadcasting headquarters has the benefit of all this

experience and knowledge.

Nerve center of the plant, of course, is the master control desk, so designed that one man will have complete control over every studio, every line in and out of the Building, all the switches and operations. He will be like a train dispatcher directing all moving trains.

There is a special PAX system to make all house monitoring possible and to enable executives to dial any studio, any program or any other local broadcasting station direct from their desks.

Chances of error in switching operations are reduced to a minimum by means of a master pre-set. Previously individual buttons were punched for all stations that were to carry the following program and this had to be done in five seconds. By the use of the pre-set this work is all set-up in advance. When chimes ring, only one button will need to be pushed. The pre-set will do all the rest, instantly and accurately.

Following the best accepted practice, every studio has been set on springs with the walls and ceiling suspended by springs—the box within a box idea. In this way it is impossible for any outside sound or vibration to reach the studios. All wall surfaces have scientifically correct acoustical treatment and are set at angles that make echoes and sound reflection impossible.

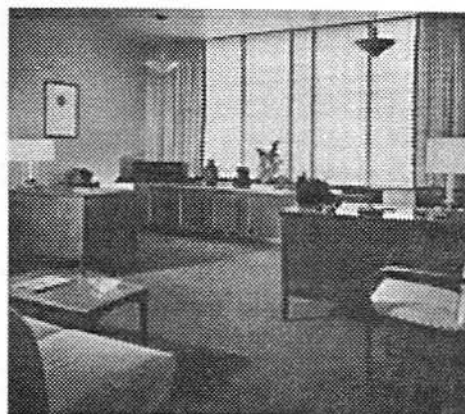
Really Air-Conditioned

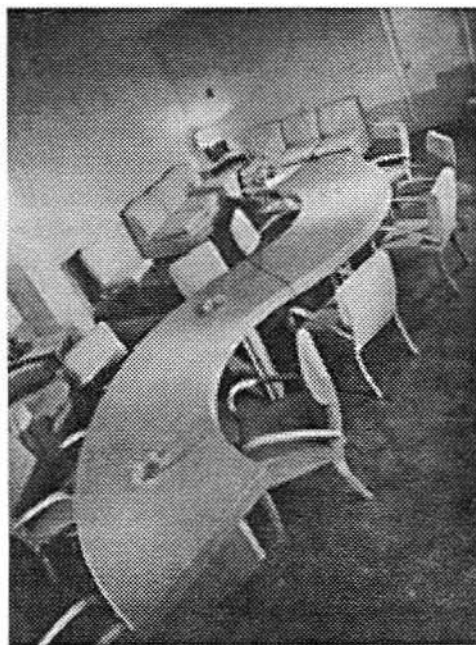
Steam heat is combined with the \$75,000 air-conditioning system to maintain ideal atmospheric conditions, with temperature of 72 degrees and moisture content of 45 per cent. Controls and equipment are located on the fifth or penthouse floor.

Having the entire plant air-conditioned is also a definite benefit to musicians in keeping their instruments tuned. They do not have to make corrections as they move from one temperature or degree of moisture to another.

Office and studio layout and the arrangement of departments received much serious study by many members of the NBC staff as well as the architects and engineers. The result is a series of floor plans conducive to absolute efficiency of operation. Convenience of the public also was kept in mind as plans were drawn for the newest showplace in a city filled with showplaces.

From the moment they pass through the





beautiful entrance doors into the exquisite lobby, every detail of design and decoration will interest visitors. The broad stairway and elevators invite them to the second floor.

Facing this foyer is the newsroom with its teletype machines bringing news from the four corners of the earth over the wires of all three of the great news syndicates. Editors there prepare news broadcast material while in the center is a triangular news desk from which broadcasts originate.

Through another large window visitors see the traffic department where program schedules are worked out, corrected and kept posted on huge boards.

Studio A opens directly off of this foyer through double doors and a vestibule. At the far end of the room is the large platform and to the right the control room. This studio, 41 by 70 feet, seats 500 people.

Studios B and C are just a few steps down a public corridor and are 24 by 44 feet. Control rooms are at the far ends of these studios and

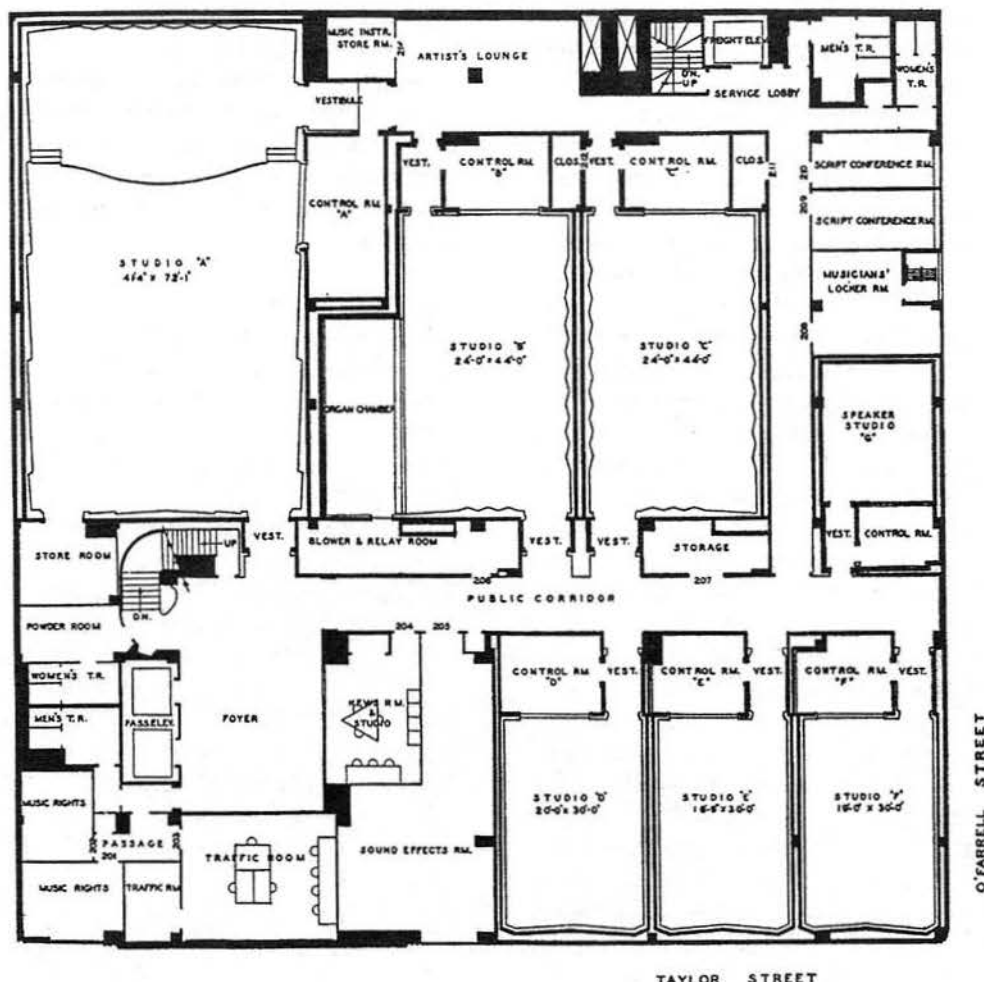
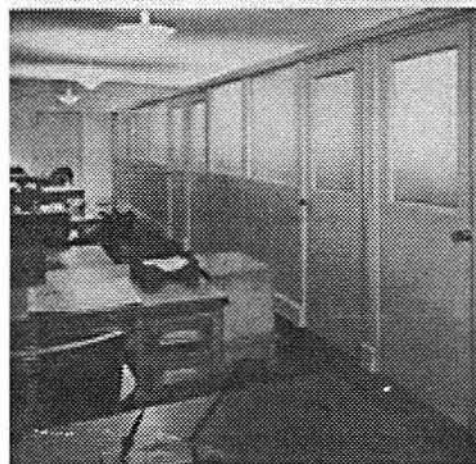
the pipe organ is located in Studio B. Studios A, B and C are two stories high and clients' observation booths are above the control rooms.

Studios D, E and F are across the public corridor from B and C and each is 20 by 30 feet in size. Studio G opens off the end of the corridor and is to be used chiefly for speakers or forums or programs not of particular interest to visible audiences.

Other occupancy of the second floor includes sound effects room, two script conference rooms, musicians' room, artists' lounge and the necessary store rooms, lockers, service lobbies and wash rooms. Freight elevator and second stairway are at the rear of the Building, available from O'Farrell Street.

Each Foyer an Exposition

Visible from the foyer of the third floor is the master control room directly opposite the elevators. To the left is the radio recording room while at the right are studios H and J, for the presentation of transcribed programs.



DID YOU KNOW THAT

Reprinted from the NBC Building 1942 Souvenir Booklet

Quarters of the Blue Network Company and the KGO staff are located on the third floor as well as general rooms for engineers, music and Thesaurus libraries, telephone switchboard, and photographer's dark room.

NBC and KPO executives and departments occupy the fourth floor, outstanding features of which are the clients' audition room and the manager's offices.

Except for a public parking garage in the basement and a portion of the first floor, the entire structure is devoted exclusively to broadcasting—a compact, well arranged, beautifully designed structure—an ideal combination of radio studios, offices and facilities.

Editor's Note:

The NBC Building, at the corner of Taylor and O'Farrell Streets in San Francisco currently stands vacant. Much of the building, including the "streamlined" entrance lobby remains intact from the 1940's. Although most of the studios were used as offices, the physical structure of them remained unchanged.

The building was used most recently by television station KBHK (lower floors) and Gray Line Tour offices (upper floor). There was talk in the mid-1980's of demolishing the structure to make way for an expansion of the Clift Hotel next door, but that has yet to materialize.

By the 1960's the tile mosaic above the front entrance was considered dated and was covered over by painted plywood. It remained that way for a number of years.

Radio Is America's Most Popular Family Servant

While there are only about 27,500,000 passenger cars in America, less than 25,000,000 homes wired for electricity, about 14,500,000 telephones, 14,000,000 refrigerators—in 1942 we find 56,000,000 radios.

Nearly fourteen million new radio sets were bought in 1941 alone. And when Fortune Magazine asked people, "If necessary, which would you give up?"—79% said "Movies." Some 7% "Did not know." And only 14% said "Radios."

NBC Broadcasts the Nation's Most Popular Radio Shows

The most recent surveys prove that more of the 10 most popular radio shows in America are broadcast on NBC than on the other three networks combined. On NBC you hear Fibber McGee, Charlie McCarthy, Jack Benny, The Aldrich Family, Bob Hope, Baby Snooks, Bing Crosby, Mr. District Attorney, Red Skelton—these are some of the NBC stars.

The pioneer in network broadcasting, NBC today is heard through 140 stations from coast to coast.

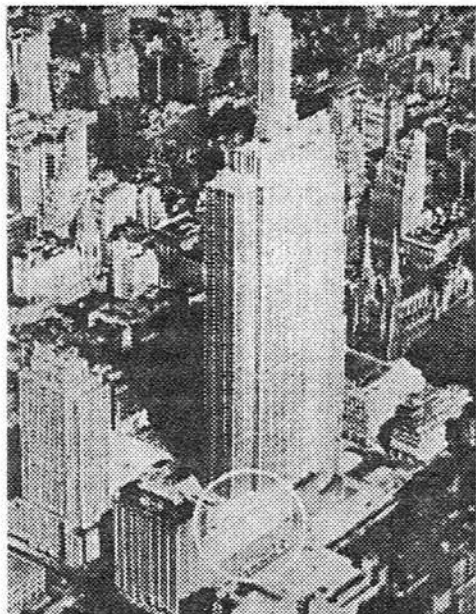
KPO Has a 70% Larger Audience Than the Next Station

As the key NBC station for all of Northern California, KPO brings these leading shows to millions of western listeners. KPO is the only 50,000 watt, maximum power station in this region, and latest research indicates that 70% more listeners are tuned to KPO than to the next ranking station.

With the dedication of San Francisco's own Radio City, KPO again forges farther ahead in service to the Pacific Coast.

INTERESTING PREVIEWS OF THE WORLD'S GREATEST BROADCAST METROPOLIS

By Samuel Kaufman, *Radio News*, Dec. 1933



THE NEW HOME OF THE N.B.C.

Circled in the foreground is the N.B.C. studio section of Radio City. The executive offices are in the tower building.

The world's largest and most modern broadcasting studios will be opened for their inaugural broadcast on the evening of November 15, 1933, when the National Broadcasting Company officially enters the elaborate studio suite in Radio City, New York's huge realty development devoted to entertainment.

Covering some 400,000 square feet of floor space, in an 11-story wing of the RCA skyscraper, the new NBC studios embody most up-to-date broadcasting ideas. The entire world was combed by network engineers and research men for innovations that would help improve the gigantic radio headquarters from technical, decorative and practical angles.

The new studio layout far surpasses the facilities of any radio station or network in the world. Even the model Broadcasting House of the British Broadcasting Corporation in London, long considered the best studio center in the world by radio experts, is outdated in the New York project.

Until Merlin Hall Aylesworth, president of NBC and Radio-Keith-Orpheum recently took New York radio editors and columnists on a tour of the nearly completed studios, a veil of secrecy surrounded the enterprise. O.B. Hanson, NBC Manager of Plant Operation and Engineering, once delivered a paper on the studio planning before the Institute of Radio Engineers, but the finished studios were far ahead of all advance ballyhoo.

Of the thirty-five studios in the Radio City plans, sixteen will be functioning by the opening night. The remaining nineteen will be opened at later dates. The studios range in size from intimate speakers' chambers of small dimensions to a huge auditorium measuring 78 by 132 feet and three stories in height. The large studio will contain a semi-circular stage capable of accommodating a 100-piece orchestra. About 1,000 guests will

be able to watch the proceedings from the main floor while 250 more will be accommodated in the second floor-level balcony, which faces the stage.

The second largest studio will be used for dramatic programs. It is two stories in height and measures 50 by 89 feet. The stage utilizes a glass-curtain similar to the one introduced in the NBC Times Square studios atop the New Amsterdam Theatre Building. When the curtain is lowered, studio visitors will hear the program over amplifiers while viewing the actors through the huge glass window. Eight additional studios are two stories in height. Two have floor measurements of 50 by 80 feet, two 25 by 40 feet, and four 30 by 50 feet.

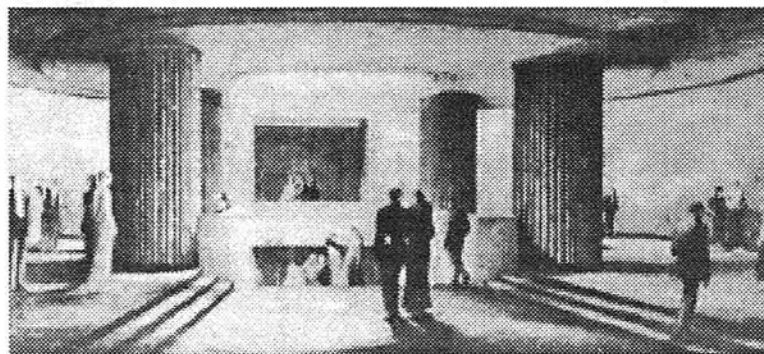
Side galleries are provided for guests who may view the programs through glass windows. Special galleries of smaller sizes are provided for clients who wish to view broadcasts, auditions or rehearsals.

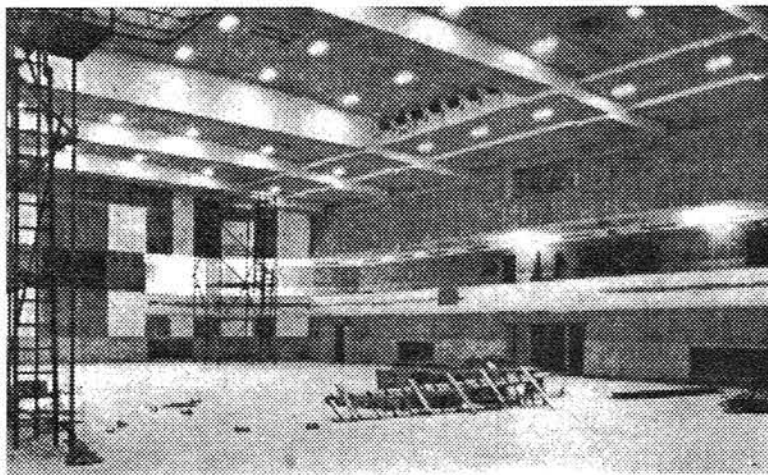
One of the unusual features of the Radio City undertaking is a group of four studios built around one central control room of circular design. The control room floor consists of a giant turntable so that the equipment may be swung about mechanically to face any of the four studios.

"It is possible," Mr. Aylesworth said, in speaking of the unique studio arrangement, "that this may be of great use in the future for television broadcasting since all that would be necessary to shift scenes would be to swing from one studio to another. For the present it will be useful in certain types of programs, where an orchestra may be put in one studio, a speaker in another, and so forth."

A special children's studio will be used for juvenile broadcasts. A separate lounge room for the youngsters adjoins the studio and both rooms are appropriately decorated.

ARTIST'S SKETCH OF THE
GREAT RECEPTION ROTUNDA





PREVIEW OF THE WORLD'S LARGEST STUDIO

The huge auditorium studio as it nears completion. It is three stories in height, 132 feet long and 78 feet across. The huge balcony on the far side will allow visitors to watch and hear the programs as they are broadcast.

Two of the most important engineering problems to cope with in the studios' design were air-conditioning and soundproofing. The absence of windows or direct natural ventilation in the studios necessitated the installation of the largest air-conditioning plant in the world for the NBC's use.

The air-conditioning plant occupies the greater part of the tenth floor in the NBC wing, while the refrigerators for cooling the air are in the basement. The air conditioning control board, a panel of sixty-four giant dials shows a continual graphic report of temperature at every section of the building. The operators can keep the air condition constant by observing and correcting variations due to the number of persons in the studios and other causes. At the operator's will, the air can be circulated, washed, humidified or dehumidified.

Mr. and Mr. Aylesworth explained that all of the studios, through the special soundproofing are virtually "floating" free from the building. All of the studio floors, walls and ceilings are separated and insulated from the building framework. Each studio is surrounded by tons of Rockwool, Transite and

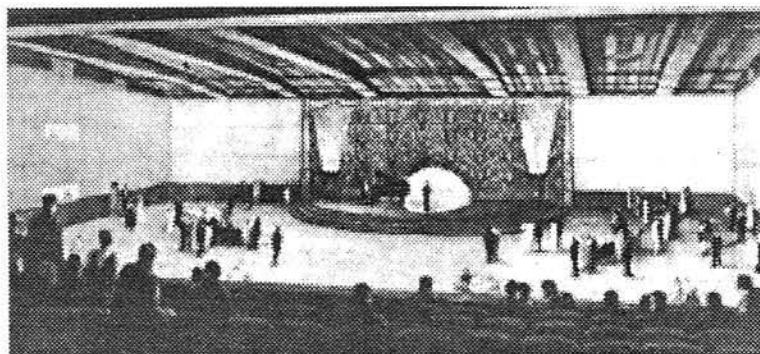
textiles. Pads of heavy Felt are placed at all points of contact between the studio and the building, with enough slack to take up possible vibrations in the steel framework. A perforated composition acoustic material is used either visibly or behind decorative cloth in the studios.

Some studios have sliding-wall panels, which are operated mechanically from the control rooms to vary acoustical effects by altering the extent of hard surface exposed.

Mr. Aylesworth said that in most modern broadcasting studios, it has been the practice to place the main control room in the horizontal center and have it surrounded by the studios. Because this was not practical in a building of this sort, the principle was retained in the vertical plane with the master control located on the fifth floor and the studios laid out on lower and higher floors. In addition to the master control, the floor contains the main equipment room, power and battery rooms, technical laboratory, maintenance and operations shops, telegraph rooms and switching booths. Visitors' observation galleries

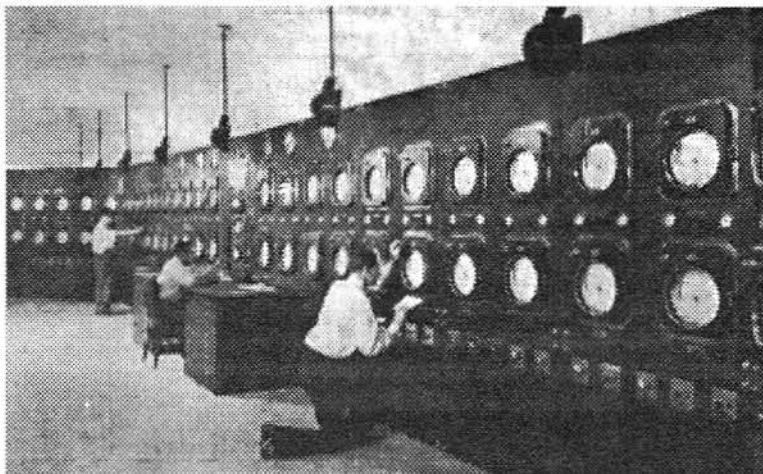
run through the technical departments as well as the studios, the NBC officials believ-

*HUGE AUDITORIUM STUDIO
OF RADIO CITY*



CONTROL ROOM AIR CONDITIONING PLANT

The studios will have the largest airconditioning system in the world. Here is the control panel for regulation of temperatures in all studios and other parts of the building



ing that listeners are interested in the backstage scenes as well as the studio settings.

For special news broadcasts, where parts of programs come from such remote points as airplanes, ships, pack-transmitters on the backs of announcers, or from foreign countries, a specially designed control room has been erected to handle the setting-up of the multi-point productions. Thus, the program director can keep in touch with as many as ten different pick-up points either by wire or short waves, and to switch to any of the desired sources momentarily. The apparatus also enables the director to talk back to any or all points of program origin.

Mr. Aylesworth is of the opinion the studio decoration is especially important because of the effect it has on radio performers and speakers. As a rule, he pointed out, interior decorators are hampered when executing studio assignments on account of acoustical requirements. The chief decorative materials, due to these acoustical needs, are textiles. A

long period was spent in going over specimens of wools, linens and silks for the studio decorations. Cloth has taken the place of even paint and paper in the decorative scheme. Woven linen was found to be best for studio ceilings, backed by acoustical materials.

The studios are of conservative modern design. Color, either harmonizing or contrasting, is the basic decorative scheme of each studio.

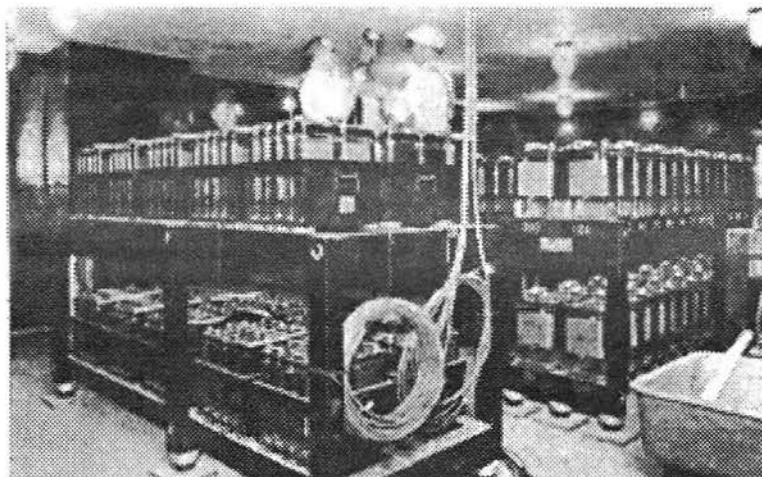
Four "speakers" studios utilize distinctive mood design. The scheme of one speaker studio is English Tudor with oak panels and a fireplace. Another studio is of Georgian style, a third of early American and the fourth modernistic.

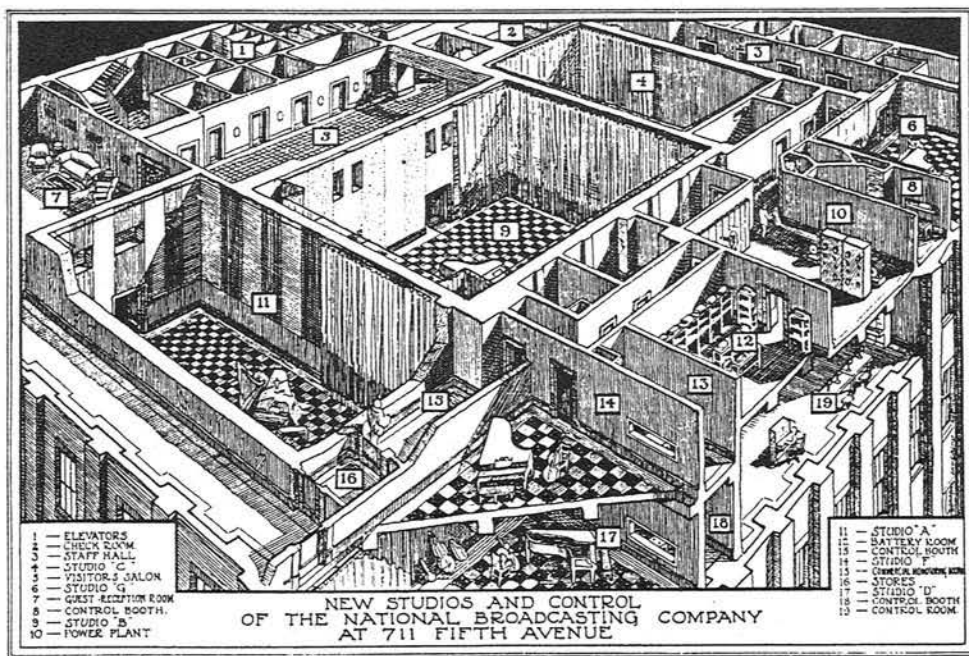
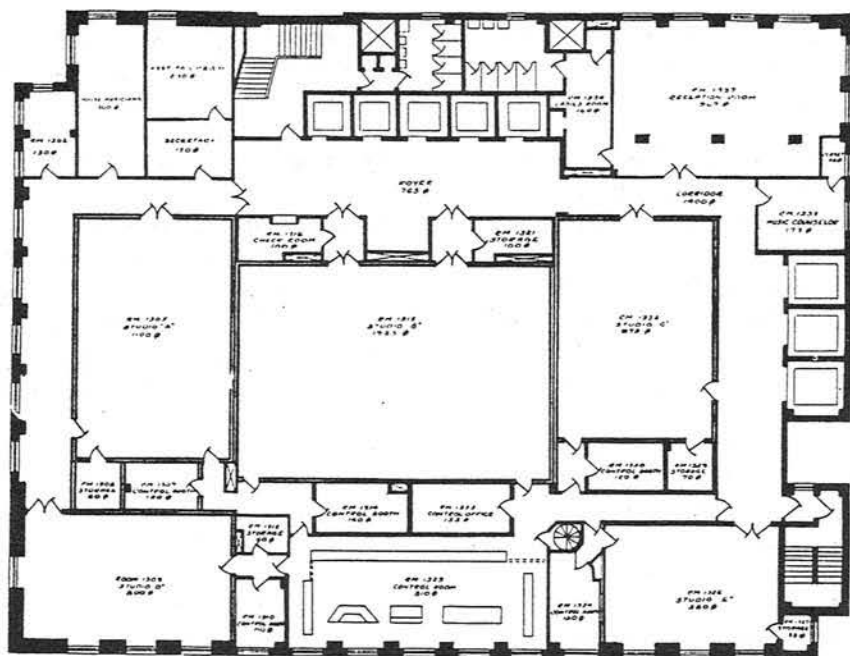
Wood-paneling and fireplaces are also noted in the main reception lobby, sponsors' rooms and guest rooms.

The growing demand from radio listeners for permission to attend broadcasts and observe favorite stars in action at the microphone is the reason for elaborate provi-

A RESERVE POWER PLANT

A battery room where sufficient battery power is reserved to continue operation for seven days should a natural catastrophe or bombing raid disable the regular power plant. The reserve situated in bomb-proof chambers would continue operation.





sions to accommodate guests at the Radio City studios. It has been rumored that a small admission fee may be charged, but it is understood that there are many obstacles in the way of this plan, as such a move might bring the studios under a theatrical rather than a broadcasting classification.

Studios are laid out to accommodate the largest possible number of visitors with minimum confusion. When the guests enter, through a large mezzanine rotunda, they will take special elevators to the second floor lobby where they will be directed by hostesses. There are several lounge and smoking rooms, opening out on terraces. Audition studios and sponsors' and artists' lounge rooms are also on this floor. Special elevators from the reception floor take guests to the visitors' galleries of the various studios.

NBC will move into the new studios gradually so that broadcasting will not have to be interrupted. The transfer from the old headquarters at 711 Fifth Avenue to Radio City has been under way for several past weeks. Although broadcasts may originate from the new site before November 15, it will be on that day—the seventh anniversary of the chain—that the official opening program will go on the air.

In another part of Radio City—the huge Music Hall theatre—there is another completely equipped broadcasting studio which has been used by S.I. Rothafel (Roxy) for his Sunday afternoon Roxy Gang programs over the NBC.

American broadcasting, on the whole, benefits by the gigantic radio development in Radio City. Long the leader in the field of broadcast entertainment, America makes still greater strides forward in world radio pioneering.

ATWATER KENT RESTORATION

Norman Leal

The Atwater Kent Metal radios are to radio as the Model A Fords is to cars. The AK 40 Series Radios are plentiful and there doesn't seem to be much of a demand for them. Most were made between 1927 and 1929. Since they used heavy metal for the case cleaning and careful painting is usually all that's required on the outside. They are not very large and can be stacked if you do not have a lot of room. The inside of the AK is laid out neatly and makes a good conversation piece when the lid is removed.

Many of these radios have the same problems that are easily fixed:

1. The filter caps are usually bad or about to go bad. If you think they are OK, operate the radio for a time. If bad, the voltages will start to go down. Even though these capacitors are located in the tar bucket power supply you can still cut them lose and install new ones without removing the tar. Cut the negative lead on the caps if the positive is not accessible. The negative leads are connected to ground, center screws, in the supply and can be seen after removing the board.

2. Remove the cartridge grid leak resistor if it is still in the radio. The cartridge resistor has most likely increased in value and may cause noise if left in the circuit. You may be able to pull off one end of this resistor and remove part of the element. Replace the end and return the resistor to its socket to keep the original look. A new grid leak should be 2-3 meg and may be mounted on the underside.

There were two cartridge resistors originally in the power supply, under the board. Replace these resistors if they have not been changed. The one closest to the edge of the

board can be 100K, 1Watt and the other 15K, 1Watt. The exact values are not critical but the originals have usually increased to 3 times these values.

3. The Audio Interstage Transformers may be open and can be checked with an ohm meter. If open they can be replaced with A53C transformers, available from AES, which will fit in the original cans. The original, heated on a hot plate, can be removed from the can. Of course you can use an R/C circuit and eliminate the transformer if you don't mind the change.

Some interstage transformers that check good can still cause noise due to leakage between windings. This leakage is sometimes caused by moisture and may be driven out by operating the radio (if not the transformer needs to be replaced).

4. Replace the capacitor in series with the speaker, mounted by the volume control. Use a 1mfd, 400volt unit if available. The original cap can be removed from the can by heating. This cap is usually leaky and will allow DC to flow through the speaker. The cap from RF B+ to ground may be leaky causing the voltage to be low. This cap located under the chassis, if bad, may also be warm.

5. Oil the bushings on the tuning capacitors. Even the ones that move freely seem to freeze up if not lubricated.

6. Lubricate the volume control. This will help prevent noise associated with non use.

Metal radios which have chipped paint and some rust can be made to look almost like new. Following is what has worked for me on many metal radios. First remove all the electronics and hardware. To remove the emblem

on the lid drill the rivets from the underside. Use a small bit just to remove the rivet shoulders as the rivets will be reinstalled later.

Clean and remove loose rust but do not sand the top or outside of the cabinet, not even the rust.

The inside of the cabinet and lid can be sanded and painted if necessary. The nearest match to the original color I found was called nutmeg, while it is slightly lighter. For the outside of the case and top I mix flat dark brown latex paint with lamp black along with a little water until the shade is right. This mixture should be thin more like a dye than paint and will not damage the wrinkle finish. Lightly paint the entire cabinet rust and all. The rust is actually better than shiny metal as it holds the paint and more closely matches the wrinkle finish. Wipe away any excess paint. This paint can be touched up anytime without leaving marks.

Mask the lid and spray gold paint in the center portion. The proper color here is bright gold as can be seen under the emblem. Use just enough paint to give even color so the wrinkle finish is not lost. Once painted do not touch up the gold. After removing the masking touch up the brown paint if necessary. When the paint is dry lightly spray the entire cabinet with Krylon Crystal Clear or other clear coating. This will protect the finish and help prevent future chipping.

Do not paint the emblem as it is solid brass. It may be cleaned with a tooth brush and brass cleaner. When reinstalling the emblem use the old rivets with a small spot of epoxy on the underside of the lid.

Replacement for Ballast Tubes and Line Cord Resistors

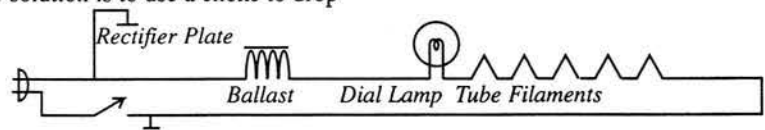
Herb Brams

Many AC-DC radios of the 1930's used a ballast tube or line cord resistor in series with the tube filaments to drop line voltage to the value necessary to operate the tubes. A typical set might have three 6.3 volt tubes and two 25 volt tubes. Modern replacements for these ballasts and line cord resistors are generally unavailable. Using a large dropping resistor as a substitute is unsafe since a large amount of heat is generated. A high voltage solid state rectifier diode can sometimes be substituted,

the rectified AC voltage effectively giving the lower voltage necessary to operate the tubes, but if the set has dial lights the initial surge of current may burn out the bulbs unless a resistor is shunted across the lamps. This decreases the brightness of the lamps, however.

A better solution is to use a choke to drop

the voltage and limit the current. I have found that a small fluorescent tube ballast, 14-22 watts, will work just fine. The choke does not heat up, and, being small, is easily mounted in the set. The ballast should be installed in series with the tube filaments only.



RECREATING A 1930'S FINISH

Alan Voorhees

Safety Precautions

Remember when working with refinishing chemicals, solvents and finishes that these products must be handled carefully. Read and follow label warnings and instructions.

Use refinishing chemicals outside if possible. If used inside, make sure there is adequate ventilation.

When using solvents and spray finishes wear a respirator with replaceable filter cartridges (not just a dust mask). Chemical resistant rubber gloves (not dishwashing gloves) and eye protection should be used when using chemical strippers. Wear a dust mask when sanding.

Most refinishing products are highly inflammable. Don't use them near open flames or appliances with pilot lights. Dispose of solvent laden rags in water to prevent the chance of combustion.

Basic Materials

Available at paint or hardware stores.

Naphtha (can also use mineral spirits)
#0000 steel wool
Gel-type paint remover
"Disposable" bristle brush
Hamster bedding (from pet store)
Lacquer thinner
Denatured alcohol
Paste wood filler
Burlap or other coarse fabric
#220 silicone carbide sandpaper
#400 wet/dry sandpaper
Tack rag
White (clear) shellac
Good quality brush
Oil based stain(s)
Lacquer tone spray(s)*see below
Gloss spray Lacquer*see below
2 blocks of wood wrapped with felt
Pumice
Lemon or butcherblock oil
Rottenstone
Car wax or paste wax

*Available in the Bay Area at Bay City Paint Co., 2279 Market St., San Francisco. Other areas call Liberon/Star Finishing Supplies at 707-877-3570 for information.

The hard part about refinishing a wood radio so that it has an original type of finish is wading through the many choices in the paint store. Radios had lacquer finishes (except for a few, mostly in the 20s, that had shellac finishes), so lacquer is the finish to use. Don't use varnishes, polyurathanes, tung oil or Danish oil finishes. They won't look right on a period piece. Here's how to do it:

Stripping a finish off an old set is usually quite quick. The easiest method for most people is to use a chemical stripper. I would suggest using a gel stripper, such as Citristrip. Apply it liberally over the old finish using a cheap "disposable" brush. Let the stripper alone to do its work. When the finish starts to come up, grab a handful of wood chips (get some hamster bedding at a pet store) and scrub off the finish. The chips will absorb the stripper and the dissolved finish. Don't forget to wear protective gloves. Then make a 50/50 mix of denatured alcohol and lacquer thinner and wash off any finish and stripper residue with the mixture using #0000 steel wool to apply it. Use some fresh chips to dry up any of the mixture from the surface. You now have a clean wood surface.

Some woods have an "open pore" grain structure. Walnut, mahogany, and oak are such woods. To obtain a smooth finish it is best to fill the pores level with the wood surface. A paste wood filler is made for this purpose. The filler can be colored with a little oil based stain, if needed. Apply the filler to the wood and rub it into the pores. Let it start to set up and remove the excess with a coarse cloth across the grain, then let it set overnight.

The next day sand the surface lightly with #220 silicone carbide sandpaper. Make sure any film of filler that might have been left on the surface is removed. Wipe it down with a tack rag to remove stray dust particles.

In a jar, mix one part shellac to five parts of denatured alcohol to make a thin "sealer" coat. Paint a coat of the thinned shellac over the wood surfaces of your radio and let it dry (it will only take a few minutes). This shellac coat seals the surface and allows the stain to cover more evenly. Run your hand over the wood. You'll feel some slight bumps. Sand lightly with #400 sandpaper just to remove those bumps—and be careful not to sand through the wood at the edges.

Apply the appropriate stain to the wood with a brush or paper towel. Let it set a few minutes and wipe the excess off with paper towels. Let the stain dry overnight.

The next day apply another sealer coat, let it dry. Tack rag again. If the color is right, go on to the next step. Otherwise you can apply a second coat of stain, either the same color or another, then add another sealer coat, sand, and tack rag. It's important to add the shellac coat in between the layers of stain, otherwise the solvent in the new layer of stain will start to dissolve the lower coat and you will be wiping that away along with the excess new stain. You can also use spray cans of lacquer toner (with sealer coats in between) to even out colors in different pieces of wood (this is what most manufacturers did).

Once you get the color right, give the surface one last sealer coat, sand, and tack rag, and you're ready for the finish.

Spray lacquer is somewhat difficult to find, but was the finish used on almost every wood radio made. The hardest finish is obtained with gloss lacquer. It is best to use the gloss, even if you don't want a really shiny finish, as you can control the level of shine in the last steps.

Spray even coats of lacquer on the radio, letting each coat dry completely, and then sanding lightly with the #400 paper and tack ragging. Again watch out for the edges. You probably will need to apply three or four coats (more if you didn't fill the grain of any open pore woods).

After the last coat, sand again with the #400 paper just enough to give an over all dull look. Then buff the surface with #0000 steel wool until you get a more even dull appearance.

Wet the surface with some soapy water, sprinkle some pumice (an abrasive) on and rub the finish with a block of wood wrapped with a couple layers of felt for flat surfaces or a pad of cloth for rounded surfaces. This will give the lacquer a semi-gloss finish.

If you want a glossier finish, repeat the process using lemon oil or butcher block oil, rottenstone (a really fine abrasive) and a clean felt wrapped block.

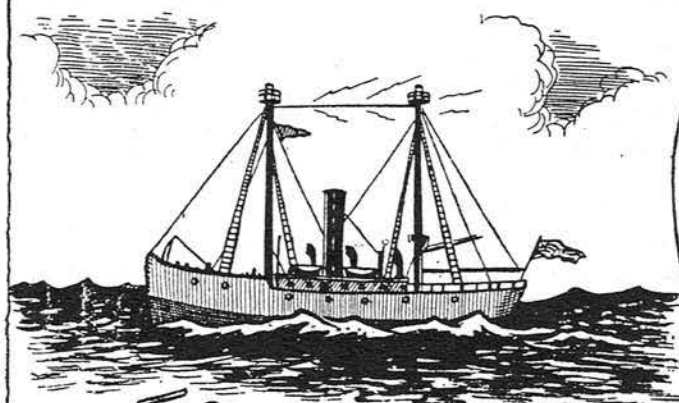
Lastly, apply a thin coat of wax. Pre-softened car wax is easy to use, or use paste wax (add a splash of naphtha to liquefy the wax and make it easier to apply. Buff the wax to a shine.

RADIO FACTS and ODDITIES •••• By X.T.ELMO

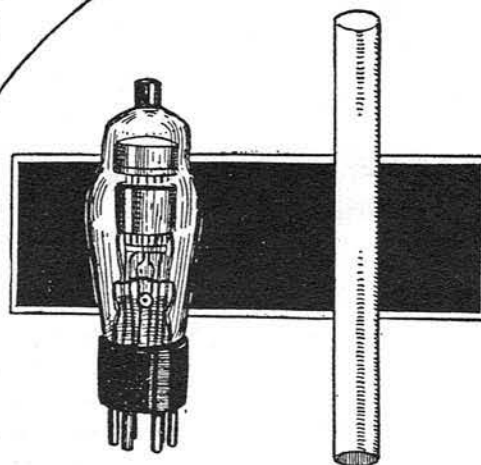


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CHRS WELCOMES NEW MEMBERS

An organization such as CHRS needs and welcomes new members. New members bring new ideas and enthusiasm and keep the club interesting and fresh. The names with asterisks (*) are new members from the former Sacramento Historical Radio Society. WELCOME!

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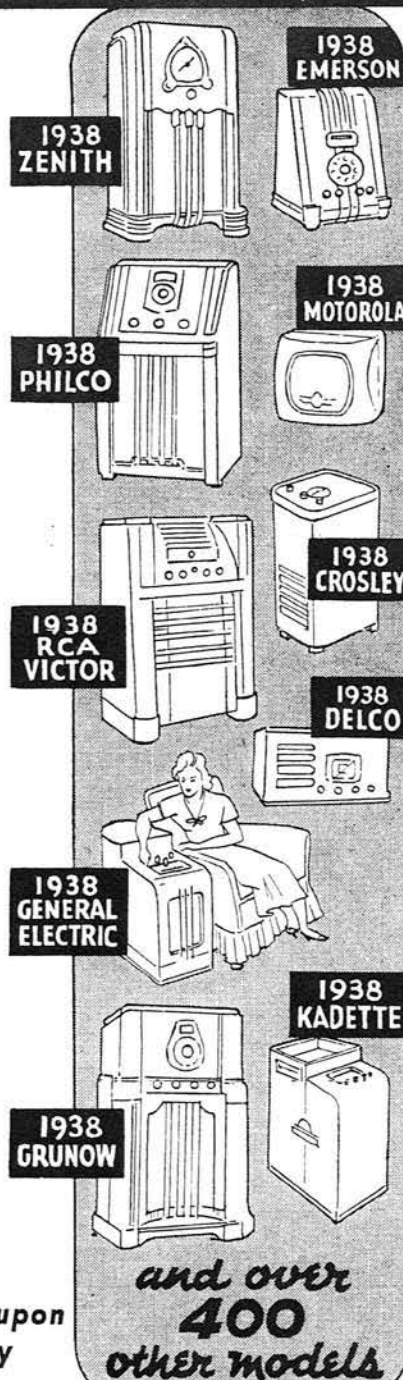
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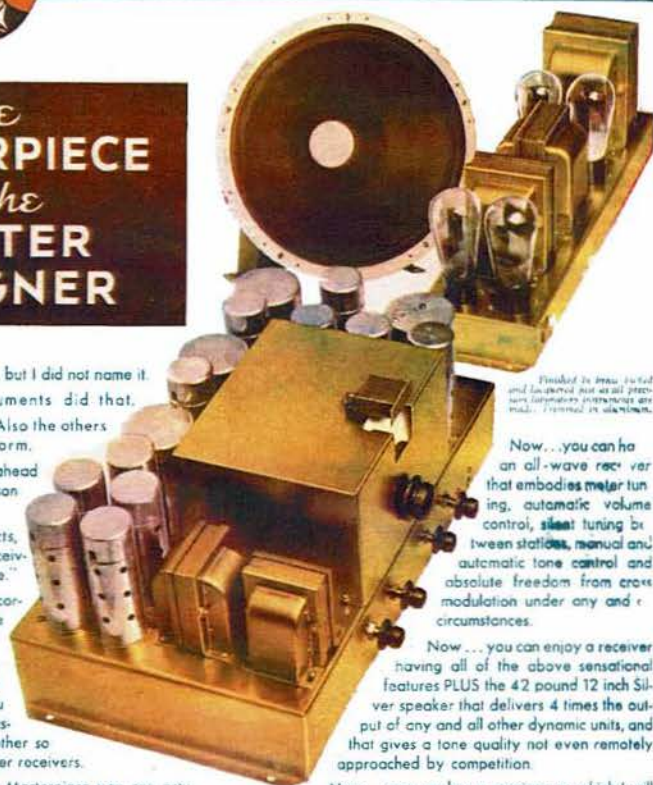
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