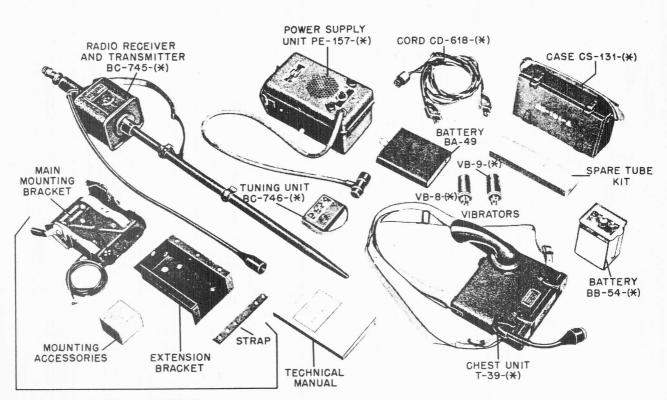
VOLUME 14, No. 2

SPRING 1990

THE JOURNAL

of the

CALIFORNIA HISTORICAL RADIO SOCIETY



MOUNTING FT-338-(*)

Figure 1. Radio Set SCR-511-(*), Components

IN THIS ISSUE:
TECH TIPS
WWII "POGO STICK" RADIO
CLASSIC RADIO RESTORATION KIT
FEATURED SET: Stromberg 1121
CLASSIFIED ADS and MORE!

TM 11-245



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Technical Advisor: Larry Clark
Foothill Swap Meet Coordinator: Chris Buttery

The California Historical Radio Society is a non-profit corporation chartered in the State of California, and was formed 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 the areas such as: collecting, literature, programs, and restoration of early equipment. The *Journal* of the CHRS is published quarterly, alternately in printed and audio tape format, and is furnished free of charge to members. Yearly membership dues are \$15.00.

Fine Print: The enclosed membership directory addendum covers members who have joined or renewed since the directory was printed in late January 1990. <u>NOTICE:</u> The Directory is published with the intent for personal use only, enabling members to contact others with similar interests. Commercial use of any kind, whatsoever, is unethical and therefore is prohibited.

PRESIDENT'S MESSAGE

The first 1990 meet at Foothill College in February was successful for both buyers and sellers as quite a bit of material changed hands. Looks like this will be a good year for swap-meets. At the next meet, at Foothill College on 12 May, we will auction off an Edison Fireside cylinder phonograph donated by Charlie Ruling. The proceeds will go to CHRS. The San Luis Obispo meet will be held again this year due to the enthusiastic response. Dan Steele will be your host for what has become a North and South state meet. All members and friends, especially from the the Central and Southern parts of the state are invited. Thère also will be a swap meet in San Francisco in July.

CHRS will be participating again this year in the Living History Days sponsord by the San Jose Historical Society at Kelly Park, San Jose on 19 and 20 May. Their goal, like ours, is to bring a bit of history alive so that others may enjoy and understand it better. Many people attend this event so plan to come early. exhibit will be in the old Hotel. This is a good way to introduce people to the lore of vintage radio (and sometimes get leads to great old sets, see Norm Braithwaite's article) and bring more people into the fraternity. People become more aware of the roots of electronics, something they take for granted now.

Some of you may not be aware of all of the benifits of membership in CHRS. One of them is the help from our Technicial Advisor. Larry Clark has taken over this position and is willing to help you with your technicial questions on electronics. If you need help with a radio that you are

working on or have a question about things electronic, Larry is the one to contact. He will do his best to help you. We also have an apraiser who will gladly apraise radio related items in your collection. He is Will Jensby who happens also to be our treasurer. Seems he knows the value of a dollar! Their addresses and phone numbers are in the Membership Directory. Speaking of the Directory; you should use it to contact fellow collectors who are near you or who have the same interests. They might have just what you have been looking for.

You should be getting this Journal about the time of time of the First CHRS Picnic. This event was first suggested by Jim McDowell who thought it would be nice for members and their families to get together and enjoy a social event without the presure of buying and selling that goes on at the meets. It also gives us a chance to use those radios we have been collecting in the way for which they were designed. A lot of us get so involved with collecting radios that we forget that they were designed to be USED. One of the major reasons for radio was that it provided entertainment, often in picnics or other social events. Radio is one of a series of home entertainment devices that was created to give pleasure not by owning it but by using it. picnic will give us a chance to experience some of the pleasures (and pains!?!) that radio has given its owners for a long time. In addition, the DX contest will give us a chance to see just how well the various types of sets really worked under field conditions.

HELP! We need people to assist the membership secretary and to help with the production of the Journal. A person with a computer would be very nice, but a person

without one can do a lot too. A few of us have carried most of the burden and we could use some help. If you want to maintain the quality of the Journal and have speedier membership processing you will have to help. If you can be of assistance, please call Adam Schoolsky. We also are in need of a person to market the Society so that more potential members are made aware of the benifits of being a member of CHRS. If you can plan and organize more and differient activities for the membership to participate or want to help market the Society, please contact Paul Bourbin.

Here's an update on the status of the Electronic Museum at Foothill College. The Perham Foundation, which operates the Museum, has obtained a temporary injunction and has posted a \$150,000 bond. This halts the eviction until a trial in August. The hoped for result will be a permanent injunction allowing the Museum to remain. The Perham Foundation needs your help more than ever now. Please call Bart Lee (788 4072) and offer whatever help you can; even a letter of support will help. Thanks to Bart, as he is the attorney that went to bat for the Perham Foundation, putting in over \$29,000 in uncompensated time so far. Many of us like to attend the Ham Meets sponsored by the Perham Foundation. The continued existence of these meets is probably based upon the Perham Foundation winning this suit, as is the preservation of so much electronics history.

I guess that's it for now. Hope all of you have a most pleasant Spring and Summer with lots of good finds! If you have any questions or ideas, call me anytime. --73, PJB.

UPCOMING C.H.R.S. EVENTS

REMAINING FOOTHILL MEETS FOR THE YEAR: May 12, August 11, and November 11. Mark your calendar and invite your friends.

CHRS PICNIC: Our re-scheduled picnic will be on Sunday, 6 May at Owl Campsite, Tilden Park from 11:00 AM to 3:00 PM followed by an open house at Chris Buttery's home. We sent a postcard with details. If you are in need of more information, contact Chris Buttery.

SAN LUIS OBISPO REGIONAL MEET: This year's San Luis Obispo Regional meet will be at the Sunset Drive-in Theatre, 255 Elk Lane, SLO, on Saturday, June 23rd, from 7-11 AM. From south of SLO, take Madonna Rd. offramp off of 101 and turn right. Go to light and turn right again. Drive approximately two blocks and the first street on right is Elks. From north of SLO on 101, take the Madonna Rd. offramp, turn right and go across freeway. Go through the first light to the second light and turn right. to the next light and turn right again, drive approximately 2 blocks the first street on right is Elks. For more information, contact your host Dan Steele, (805) 544-2904.

CHRS EXHIBIT FOR LIVING HISTORY
DAYS IN SAN JOSE: C.H.R.S. will
be participating in the San Jose
Historical Society's Living History
Days on 19 and 20 May, with an
exhibit in the old Hotel building.
If you want to participate, call
Paul Bourbin at (415) 648-8489. In
previous years we had a most
enjoyable time. You never know
what might turn up. All members and
friends are invited to stop by and
say hello. There is much for a
family to see.

FLASH!' 14 July is the date for the San Francisco, Regional Swap- Meet.

CALIFORNIA LISTORICAL ADIO SOCIETY



For the restoration and preservation of early radio and radio broadcasting.

WHEREAS the Foothill Electronics Museum of the Perham Foundation is one of the most important collections of electronics and radio history in the world, comparable to that of the Smithsonian Institution in its areas of emphasis, and

WHEREAS this Society, and its hundreds of members, and similar antique radio clubs nationwide are dedicated to the preservation of early radio and broadcasting history, now therefore

BE IT RESOLVED this Society deplores the breach of trust by Foothill College in attempting to close the Perham Foundation Museum on campus, and

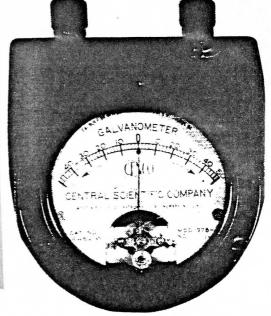
BE IT FURTHER RESOLVED that this Society respectfully urges the Palo Alto Branch Superior Court to Order Foothill College not to close the Museum.

By the Board of Directors of the California Historical Radio Society, March 1, 1990 at San Francisco, California, by its President, Paul Bourbin, 25 Greenview Court, San Francisco, CA 94131:

Send Lawyers, Guns and Money to the Fund for Justice of the PerhamFoundation.

101 N. First St., Los Altos, CA 94022.





Director of the North Valley Chapter, Norm Braithwaite, tidying up the display prior to Sunday's rush of visitors.

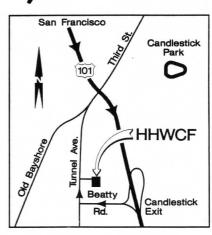
If you generate small volumes of hazardous waste in your business or industry, call the TOXIC INFO HOTLINE at 1-800-233-3360, or the SAN FRANCISCO HEALTH DEPARTMENT at 554-2780 for disposal information and assistance.

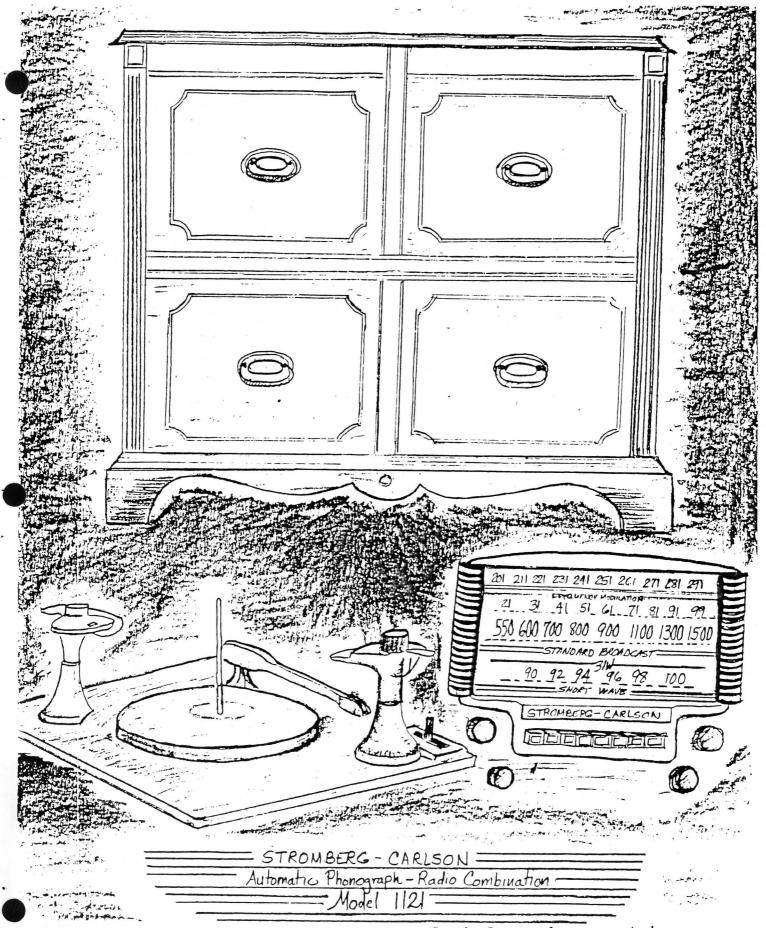
A PUBLIC SERVICE MESSAGE BROUGHT TO YOU BY CHRS:

To reach the Household Hazardous Waste Collection Facility:

From San Francisco, drive south on Highway 101 and take the Candlestick Park Exit. Go straight on Beatty Road and follow the signs to the facility.

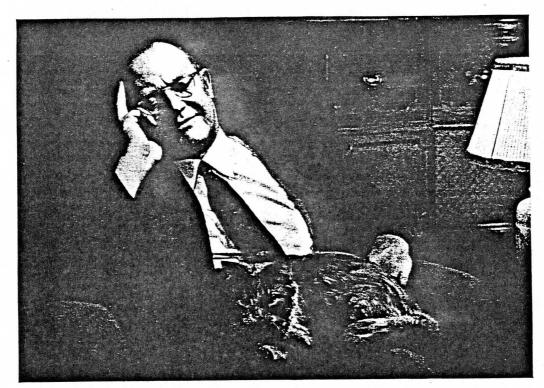
Household Hazardous Waste Collection Facility 501 Tunnel Avenue San Francisco, CA. 94134





THE STROMBERG CARLSON MODEL 1121. Illustration by Chris Buttery.

Chies J. Buttery 1/13/90

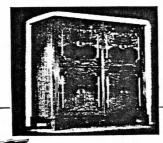


Mr. Potter's private war

Mr. Potter closed his eyes and listened to the music....
He was on the bridge of a destroyer in the North Atlantic.... Captain Potter gets the convoys through.

Then he was Pilot Potter... riding the skies over Europe. The music softened... and Lieutenant Potter of the U.S. Marines was lying wounded in the jungle... pale and drawn. Then his wife called, "Henry!" she said, "Put the cat out and come to bed."

To Mr. Potter, music is relaxation from war work.... To the girl whose husband has gone to war, music is a companion. Music is many things to many people... but it is at its best when heard with all the subtleties that give it meaning. Tomorrow, all the richness, all the greatness of fine music, will come to you through the postwar Stromberg-Carlson. This is a promise worth remembering... for it is backed by fifty years of experience... by the skill that made Stromberg-Carlson the leader in FM... and by many new wartime developments! Keep the postwar Stromberg-Carlson in mind.... Your War Bonds will buy nothing finer!



now to bring you fine Stromberg-Carlson radios when peace comes...important because these plans will mean good jobs for our men in the armed forces... and good jobs for the men and women whose work has won for Stromberg-Carlson the Army-Navy "E."

IN RADIOS, TELEPHONES, SOUND EQUIPMENT...
THERE IS NOTHING FINER THAN A

STROMBERG-CARLSON

A HALF-CENTURY OF FINE CRAFTSMANSHIP

£ 1944, STROMBERG-CARLSON COMPANY, ROCHESTER, H. Y.

National Geographic May 1944

Ad for Stromberg Carson Model 1121 from National Geographic, August, 1944.

FEATURED SET

STROMBERG-CARLSON MODEL 1121

A versatile Radio-Phonograph Combination.

By: Chris J. Buttery
71 Tenth Street, Apt # 207
0akland, CA 94607
(415) 272- 9204

I acquired my Stromberg model 1121 in May of 1989, well aware that it was unlike any of the other consoles that I owned (mainly consisting of late 1920's highboys) in both the cabinetry and radio chassis. For its day, this set was a very deluxe automatic phonograph and radio combination. As late as 1990, almost 50 years after its manufacture, I find it an extremely usable and versatile set.

The radio chassis is extremely selective and sensitive in its performance, mainly due to the fact that it uses no fewer than 12 tubes. All of these tubes are octals and nine of them, with the exception of the 5U4 rectifier and two 6V6 output tubes, are all metal. The radio's circuit also employs a tuned radio frequency amplifier on all four bands.

The frequencies covered in the four bands are: standard broadcast, 31 meter shortwave, and two FM bands; the old 44 to 50 MC band and the present 88 to 108 MC band. For an added convenience this Stromberg also featured eight pushbuttons so that selected AM stations could be preset. A favorite station could be turned to immediately with a touch of one of these buttons since the button activated a mechanical device which brought the tuning capacitors into the correct precise position for that selected station.

In addition to a very fine radio chassis, the audio amplifier is powerful and clean sounding, providing easily an undistorted 20 watts to a 12" electro-dynamic speaker.

The record changer is the best in its class, using the two-post, rotating- blades type system which was very popular before WWII. Stromberg's changer was so carefully designed, that in the time I've had it, it has never scratched, chipped or damaged records. This is and was a common problem on other makes of record changers of this vintage. They also tended to jam on records that were slightly too thick, which is a problem I've never encountered with this model. The changer can accomodate a large stack of twelve records of the then standard 12 inch width, making it practical to play a complete opera in the 78 RPM format. I am very fond of collecting and listening to such operas.

The final added convenience, which made this model Stromberg so unique, is that it also featured automatic shutoff after the last record in the stack has completed playing. There is nothing more annoying in changers of this vintage than hearing the same last record over and over again, even if one was either too busy washing dishes or cleaning house to shut the darn thing off!

This model Stromberg has been a very difficult radio for me to date precisely. It is not listed in "Flick of the Switch," or any of the other references. Paul Bourbin was kind enough to look up the schematics in Rider's, which appear in Volume 15. The date which he was able to come up with was 1946, the date the schematics were copyrighted. This may not be the

whole story, however; Stromberg did appear to be making a small number of sets before the end of the war, although their distribution must have been extremely limited.

There is a story behind the particular set that I own. Its origional owner was a military officer, who like so many people put all of his household furniture in storage for the duration, during the latter part of the war. He was, unfortunately, killed. His wife kept everything in storage until 1970, when she ceased making payments on the storage facilities. The storage company claimed the furniture, including the Stromberg, and it was all sold to a woman in 1976. This woman then sold it to my friend, Jim McDowell, who has owned it since. I was able to find the origional ad which appeared in "National Geographic" in May of 1944. The exact Stromberg is pictured, but as the advertisement indicates "Tomorrow, all the richness, all the greatness of fine music, will come to you through the postwar Stromberg-Carlson."

Is this model 1121 post-war or isn't it? Could it be that
Stromberg may have provided limited editions to top military personnel, or military officer's clubs, during the war? This is a question which will have to remain unanswered for the nonce, but that would explain the story behind my particular set. It would also explain why it appeared in Rider's after the war, when this model was mass produced for the general public. It's alluring to own a radio with its own history and mystery behind it.

[Editors' Note: We congratulate Chris Buttery for preserving the history of this interesting radio. More of us should try to document the history

of a specific set because this adds not only to set's value but also to our understanding of our social history. The presence of the high FM band on this set points to a post war manufacturing date. Pre war FM sets, such as the Philco 42-355 made in 1941 for the 1942 model year, have only the low FM band. One can now find the California Highway Patrol and many local police stations on the low band, broadcasting in Narrow Band FM which these old sets will pick up quite clearly.—Ed.]

FEATURED SET Author: Chris Buttery



STAMP CORNER; EPHEMERA

The editors like stuff about old radios as well as old radios themselves. So, whenever we have some space, we will try to put in a postage or trade stamp relating to radios, or some other ephemeral paper, such as a parts box, or stock certificate. If you have any interesting material of this sort, send a clean xerox and some description to Bart Lee for publication (327 Filbert Steps, San Francisco, CA 94133).

RADIO REMINICENCES:

LOCAL COMMERCIAL STATIONS

By: Dick Dillman, N6VS c/o Greenpeace Radio Fort Mason, Building E San Francisco, CA 94123 (415) 474 - 6767

I have often thought it interesting to tour some of the commercial radio stations in the Bay Area. The most historical area is that of Point Reyes. Dr. Beverage (inventor of the Beverage antenna) selected the receiving location at Point Reyes which The RCA station KPH uses to this day. The old long wave receiving site at Marshall still exists. I have flown over the site many times and always find it thrilling to pick out the concrete bases and guy points of the long wave antenna array. These are oriented in a direct line to Hawaii.

I have made it a point to periodically visit the remaining high frequency commercial radio transmitting and receiving (HF) sites in the San Francisco Bay Area. This is becoming more emotionally difficult as each visit shows the continued decline of the use of HF. For example, on my first visit to KPH in the sixties, the top floor of the receiving station at Point Reyes had its walls lined with trans- Pacific HF diversity receivers, each of which occupied three 6 ft. racks. Above each was a placard announcing the circuit it served. These included Hong Kong, Honolulu, and many other locations. Operators lounged casually at a central control point which contained several Collins 51J-4 receivers and other pieces of control gear. A large RCA "meatball" logo was inlaid into the floor. The entire room was shielded with copper mesh and the

doors were made of copper sheeting with "fingers" to make contact with the frame when the doors were closed. All this is gone now, with the exception of the doors, and the second floor is used as a satellite downlink for video and data.

The newcomer on the block at Point Reyes is the Coast Guard station NMC, which moved there from its site on Mt. San Bruno, in, I believe, the sixties. The original sign announcing the presence of NMC still existed on Mt. San Bruno behind the county jail as recently as my last visit a year or so ago. In any case, I once visited NMC after spending time with the veteran operators at KPH. one of the young NMC operators where I has just been, and he replied "You know, those guys copy stuff we can't even hear." looked over his assortment of modern Collins digital receivers and remembered the vacuum tube analog receivers the KPH men were using at the time, and I thought: "Kid, that's what comes of spending 40 years on the circuit."

The KPH transmitting and receiving sites are, of course, a maze of telephone poles used to support the rhombic, Vee and "fishbone" antennas favored by RCA. Some of these supports consist of two 110 ft. poles, one on top of the other. The rigging is more complex than a sailing ship and it took a special type of man to keep the antennas in the air, especially in the face of the Pacific winter storms that frequent the area. had the honor to meet that man. He was Jim Bournes (I believe I have the spelling correct), a robust, barrel-chested man apparently in his sixties. He wore thick glasses close to his eyes, but his build and his big, work-roughened hands showed that he was a man prepared to deal with any disaster in the

worst weather without thinking much about it.

Some years later, I visited a ham in Bolinas (N6CG, now deceased). He was a former ship's radio officer and we swapped lies for a while. On leaving, I noticed a rigger's leather climbing belt cast in the corner of his garage and radio shack. The belt had an engraved brass plate which read "To Jim Bournes - A Rigger's Rigger, A Man's Man". This had to be the belt presented to Jim upon his retirement. One could hardly hope for a better summation to one's life and work than that statement.

Building One (1) at the R.C.A. transmitting site in Bolinas originally contained a Alexanderson alternator. These were completely mechanical long wave transmitters. The output of the alternator was connected directly to the antenna. The fact that such an impressive device dwelled within the building was proclaimed by a proud brass plaque near the entrance. The plaque was still in place on one of my early visits. It has since been removed and is in the care of a radio historian. Building One now contains several disused HF transmitters, but the 500 kiloHertz transmitter (designated BL1 for Bolinas 1) is still in service there. On a visit several years ago with a friend, she inadvertently opened a door that looked much like any other. Unfortunately, this was the door that allowed one to enter the transmitter and all sorts of alarms went off. But the idea of entering a transmitter through a room-sized door and strolling around in its innards appealed to me.

The transmitting operators at KPH were also men of consequence. Some of the best installation and wiring work I have ever seen was

done there. When the trans-Pacific transmitters that were the companions to the receivers on the second floor of the receiving were in service, the transmitting operator performs a choreographed ballet to shift from day to night frequencies as the sun set, all without interrupting service. The frequency change control was a large lever protruding through a vertical slot in the front panel of the transmitter. The slot was at lease 3 feet long. As the time approached, the plate voltage would be turned off, the lever moved with a large bang, the antenna changed and voltage returned, all in a second or two.

This frequency change, and in fact all communications between the transmitting and receiving sites, was coordinated over a long telegraph order wire, complete with sounders, of the type typically used on old fashioned railroad lines. This land line circuit, along with the keying information from the receiving station operators, was transmitted along an RCA owned land line between Point Reyes and Bolinas. The circuits in this line progressively became bad due to moisture contamination and the line was removed from service several years ago. However some of the supporting poles for this line were still in place during my last visit to west Marin.

Natually, the transmitter operators had to be able to respond quickly to requests over the order wire from the receiving site. Sounders and telegraph keys were therefore sprinkled liberally about the transmitting site. This included one in the toilet stall of the men's john. I can easily picture a grizzled transmitter engineer conducting an errand of personal necessity with his pants around his ankles, only to receive

a request from the receiving station. I imagine he would reach up, open the circuit, and send a terse acknowledgement while muttering under his breath. The sounder from that location is in my possession.

The best operator I ever met was at KFS, the ITT coast station south of San Francisco. KFS was the station I worked most as radio officer aboard the Greenpeace ship Rainbow Warrior, callsign GSZY. The senior operator there was the picture of a real radioman. He was in his sixties with thinning gray hair. He wore a pair of lightweight headphones and, yes, a green eyeshade. Before him were three ITT receivers in a vertical stack. The interesting thing was that the tuning knobs of all three were connected by a toothed rubber belt running to a single central master tuning knob. The two receivers for the frequency bands currently being monitored both fed his headset, one to the right ear and one to the left, as he carefully tuned for calls. He was a master of his trade and no ship's operator could send too fast or too sloppily for his trained ear. He never asked for repeats and copied directly to the teletype machine, all the while carrying on a conversation with a visitor. later used an antique wooden Keeinshmidt perforator to make up the paper tape for the next weather broadcast and traffic list. I like to think that he was the KFS radio operator I worked on the high seas from the Rainbow Warrior.



FOR YOUR LIBRARY

CHRS RECOMMENDS THESE BOOKS:

MAYES, WIRELESS COMMUNICATION IN THE UNITED STATES published (1989) by the New England Wireless and Steam Museum, East Greenwich, R.I. 02818, about \$20, ISBN:9625170-0-3. This is the outstanding collection of articles and notes on early wireless, with proper emphasis on west coast developments.

WALLEN, GENIUS AT RIVERHEAD, A profile of Harold H. Beverage, published (1988) by North Haven Historical Society, North Haven, Maine, about \$16, Lib. of Cong. Catalog Card # 87-62783. A personal biography of Dr. Beverage, inventor of the wave antenna that first made reliable long distance communications possible. Dr. Beverage is well into his ninties, and at last report still alive. This book is an interesting glimpse at another age, socially and technically.

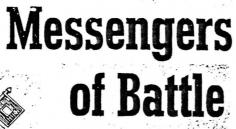
MOORE, ZENITH TRANS- OCEANIC, The Radio Powered To Tune The World, published (1990) by Bob's Books, P.O. Box 27232, Denver, CO 80227 for \$7. A labor of love, this typescript book is very nicely done, with copies of ads and pictures of the evolving models of the classiest of the old portables.

CHRS RECOMMENDS THESE MAGAZINES:

POPULAR ELECTRONICS. This general interest contemporary hobby electronics magazine is full of chips and printed circuits, but Marc Ellis's Antique Radio column is worth the price of the subscription.

POPULAR COMMUNICATIONS. This general interest monitoring magazine runs regular articles by

"Alice Brannigan" (alias Will Jensby?) on radio history with emphasis on broadcasting, with an occasional piece in great depth. Especially for anyone who actually likes to listen to radios, a good value of much interest. (We think "Alice Brannigan" is actually Kathi Martin, [CB] xKGK3916).





SURPLUS HOUNDS:

THE POGO-STICK RADIO

By Henry Engstrom
Post Office Box 5846
Santa Rosa, CA 95402
(707) 579- 2070

Among the military surplus radio equipment of the World War Two era, a little known set occasionally appears in ads, or at ham fests, with the nickname of "Pogo Stick" or "Horsey Talkie". The official nomenclature is BC 745 (SCR-511), and is described as a low power, portable, AM radio-telephone, receiver, transmitter. It is soldiercarried, and powered by a self-contained 2 Volt wet battery, or it may be vehicle mounted, and utilizes the vehicle battery for charging.

Frequency coverage of the set is 2-6 mHZ, through the use of 27 plug-in tuning units, with a range of 5 miles (under ideal conditions) on 3/4 watt output. More technical information appears at the end of this note.

This radio is a classic example of the wrong set at the wrong time. This was Galvin Manufacturing Company's first attempt at designing a portable transceiver for the U. S. Army, with the original intention of providing a hand-held radio to be used by the cavalry. The armies of the world, however, learned a sad lesson by the experience of the Polish Cavalry in 1939 against the armored and airborne might of the German Army, which forever changed the nature of war. Consequently, when the production run of 1941 began to appear in the U. S. inventory, the Cavalry had essentially been disbanded, so the

IT TAKES SIGNALING AS MUCH AS GUNS TO MAKE COMBAT TEAMS INVINCIBLE

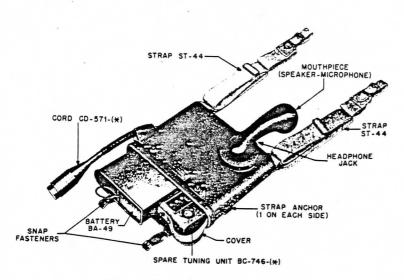
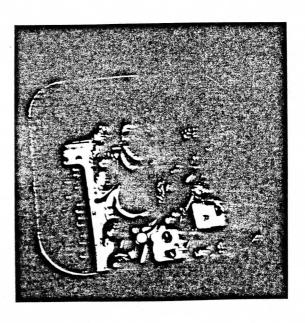


Figure 3. Chest Unit T-39-(*), Open View



Interior of BC-745 Courtesy of Lee Technology

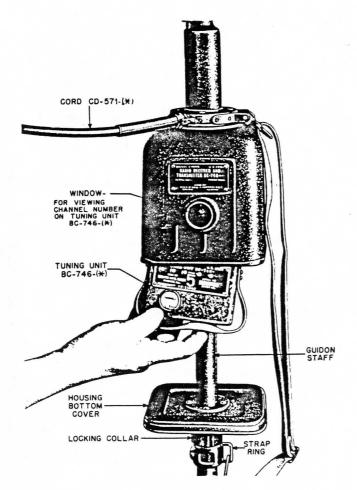


Figure 5. Radio Receiver and Transmitter BC-745-(*), Channel Changing





"Pogo Stick" was issued instead to airborne units of the Army.

Some 18,000 were manufactured with production continuing until 1944. The "Pogo Stick," surprisingly, was used in most WWII combat areas, including Normandy and the South Pacific. It is hard to concieve of any combat soldier making effective use of this awkward, hard to handle radio with all of its required accessory paraphenalia. Obviously, the light—weight, one—hand—held "Walkie Talkie" (SCR-536) which replaced it was patently superior, and must have been heartily welcomed by the front-line troops.

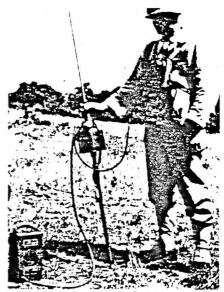
Of the 18,000 Pogos made, many, of course, were casualties of battle, with probably an equal number being dumped at the first opportunity a soldier had to replace it with something less cumbersome to handle, and operate. After the war, a large number of the surplus inventory were given to the Civil Air Patrol, and MARS, mainly because of the frequency coverage. Many went to Nigeria as well. Since they weren't released in great numbers like some other radios, they are relatively scarce today, particularly as a complete set. They do turn up, occasionally, however, in the price range of \$75 - \$150. Individual pieces are, of course, somewhat less. Most, by the way, have chipped paint since Galvin seemed to think primer was unnecessary. You'll see this on other Galvin sets such as the BC 728, BC 659, and BC-620.

There seems to be a renewed interest in the "Pogo Stick" lately by WWII radio collectors, inasmuch as it is a piece of radio equipment unlike any other.

Technically, the receiver portion is a seven tube superhetrodyne circuit having a seperate crystal-controlled oscillator, a stage of RF amplification and a push-pull audio power amplification stage. The transmitter uses six of the same nine tubes and much of the same circuitry to deliver 3/4 watt through a "pi" matching section into the antenna radiation resistance from a pair of plate-modulated 3S4's operated in parallel. Of the nine tubes in the set, there are five 3S4's, three 1T4's, and a 1S5. Some illustrations from the documentation accompany this note.

From: "Flick of The Switch", pg. 270

WALKIE-TALKIE HISTORY



SCR-511, designed for cavalry in 1940, was the only light Walkie-Taikie when WW II broke out, and saw wide use by infantry.

U. S. ARMY PHOTO



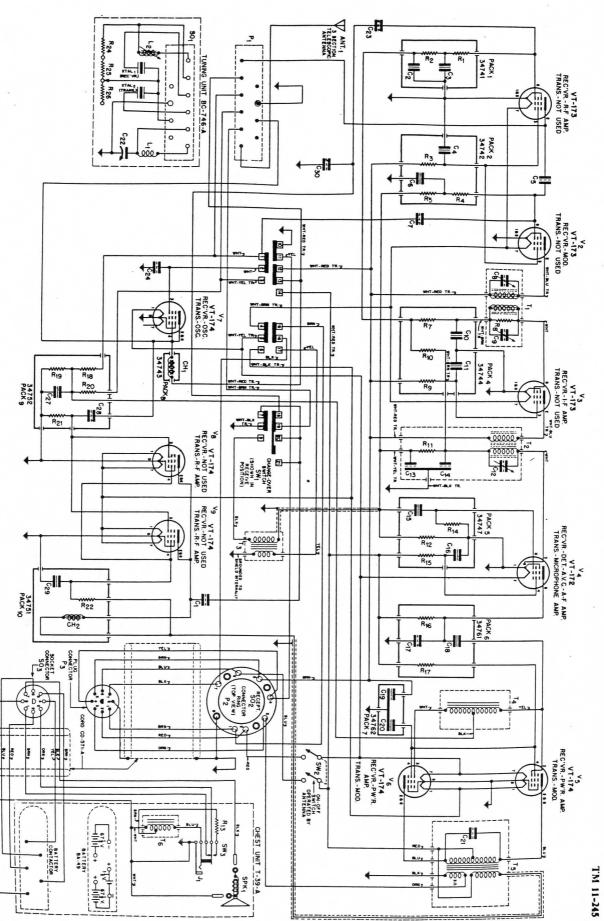


Figure 40A. Radio Receiver and Transmitter BC-745-A, Tuning Unit BC-746-A and Chest Unit T-39-A, Schematic Diagram (Late), Order No. 2658-CHI-42

RESTORATION

THE CLASSIC RADIO CUSTOM RESTORATION KIT

By: Dan Healy, Classic Radio Service P.O. Box 764, Woodacre, CA 94973 (415) 488- 4596

[Editors' Note: We asked Dan Healy of Classic Radio Service to write something for this Journal, and we are pleased to present his response, a description of a product many of us will find intriguing and useful.]

There is a resurgence of interest in antique radios and more and more of you want to restore one yourself. If you've never done it before, the obvious question is: where to start? Many good books have been published on the subject, covering both the electrical and cosmetic aspects. We find that most people don't want to go through the time consuming process of learning about how radios work, inside and out, just to restore one set, and the fact is, it isn't necessary. Through years of answering questions here at Classic Radio Service, we discovered that what is really needed to help you with your radio restoration project, is a one- step- at- atime approach to complete rebuilding with instructions that pertain directly to your particular radio. A customeized "do- ityourself" kit, if you will. We have also concluded that anyone with an ability to read and with a minimum of soldering practice can restore a radio.

Our own personal goal as collectors and restorers is to own and restore one of every make and model radio ever manufactured (good luck) and during the past thirty-five years of restoring our

own private collection, as well as those we have restored for our customers, we have developed a system of high quality restoration. You might say we discovered what is and what is not important to make your radio play perfectly. We subsequently came upon the idea of developing a customized kit for you restorers. This kit provides restoration help at every level with the materials and information necessary to be able to restore your particular set. Having gained a reputation as authorities in the radio restoration business, we receive several telephone calls a week from people with a set they are anxious to restore themselves. Oten they feel that they are unable to pull it off due to lack of, not just a schematic, but also to procurement of quality parts as well as credible help in the way of operating procedures. For these reasons, collectors are often discouraged from attempting resorations themselves.

The Clasic Radio Custom Restoration Kit provides, along with the schematic, detailed instructions that direct you from one carefully explained step to the next towards a perfect restoration; from basic cleaning all the way through alignment and tuning. The kit includes all the required replacement parts and all these parts are of the same highest military- specfications ("Mil Spec") quality that we use for our own and our customers' restorations. With a soldering iron, and a few tools, a restoration can be effected, keeping in mind that it's always better to start small and work up.

Say, for example, you inherited an antique radio from your grandfather. It's a ten tube, five bander with a phonograph and you've decided to attempt your very

first restoration. In the face of the complexity of a set such as this, it's understandable that a first time radio restorer could be quite overwhelmed. A good way to overcome this is to head out to your favorite flea market or second-hand store and pick yourself up a small 5 tube, AM radio for your first restoration. If you have doubts about a successful outcome, keep in mind that if you blow it, you really haven't lost anything. All you'd be out is the cost of the radio and the kit and some of your time, time well spent learning the technique of soldering. Actually you can't really blow it if you follow the instructions closely and besides having learned "how-to," you will now have the first of your very own, self restored radio collection. If on the other hand, you discover this is not you, you haven't ruined Grandpa's radio, and you can always have someone else restore it.

The Classic Radio Custom
Restoration Kit removes the mystery
from restoration and can provide
the radio enthusiast with the
opportunity to experience the great
satisfaction of knowing not only
that you have restored your set
yourself but have perfect results.

When you decide to purchase a Classic Radio Custom Restoration Kit, there are some basic tools that you will need to aquire on your own, all of which are available at any local electronics supply house: a soldering iron, rosin-core solder, small needle nose pliers, small diagonal wire cutters, a screwdriver and a V. O. M. (volt ohm meter). The kit will provide everything else you will need. We are able to customize a kit for each individual radio because Classic Radio Service has complete documentation on all

radios ever made. Upon reciept of the make and model number of your radio, we will pull the documentation from our library, photocopy it and pass it along to the kit department. They consult the parts list and assemble your kit. The parts included in the kit will be all the proper values required for that particular set and will include items such as dial cord, light bulbs, grommets, teflon sleeving, a new power cord etc.

One problem we encountered while developing this concept was how to deal with tubes. Contrary to common misconception, bad tubes are rarely the problem with old sets but it would be a disappointment, to say the least, to go through an entire restoration and wind up with a non-working radio only because of a bad tube. The answer is to avoid this by having your tubes tested first. Most radio and television repair shops still have tube testers, and will, either for free or a very nominal charge, test your tubes. Take the back off your radio, take out all the tubes, have them tested and if any are found bad, simply include the numbers along with the make and model number of your radio when you order and we will include them in your customized kit. Since all radios fall into three general "level of complexity" categories, we are marketing three basic kit sizes, priced from \$75.00.

During the years we spent developing the knowldge of true and proper radio restoration, there was no Classic Radio Service to provide answers for us. Because of this we are happy to make ourselves available to kit purchasers to answer any and all questions via telephone or mail in order to insure your success with our Classic Radio Custom Restoration Kit system.

After considering it all, we feel this kit is a great idea, priced reasonably enough that you can't afford not to try it. For more details and pricing, call or write to us. We know that once someone has restored his first radio, either with the help of this kit, or without it, he's going to have gotten the bug and another antique radio enthusiast will be born.

[Editors' Note: A call to Dan Healy indicated that these kits are primarily for radios produced from the mid-thirties through the mid-fifties and a limited number of radios from the early thirties. Buyers of kits will receive complete user support from Classic Radio; whatever it takes to get the radio to play. While chassis restoration is the primary thrust of the kit, grill cloth and cabinet repair/restoration advice are also available. Copyright 1990 Dan Healy d/b/a Classic Radio Service. All rights reserved. "Classic Radio Service" and "Classic Radio Custom Restoration Kit" are registered trade- marks of Classic Radio Service.

TRANSISTOR TOPICS?

After tubes, something called a "transistor" was invented by the telephone company, maybe 40, 50 years ago. Anyone having any information on this alleged device is invited to write for this Journal about it, its invention, its history and any social impact it may have had.

TELEVISION?

After radio, something called "television" was invented by a General Sarnoff, maybe 1939 or so. Anyone having any information on this alleged device is invited to write for this Journal about it, its invention, its history and any social impact it may have had.

TECHTIPS

RIVETS

Rivets were often used in the production of radios. Often we have to remove them to replace a component. If we lack rivets and the associated tools, or the space is difficult to get to, or the material to be riveted is fragile, then a serious problem exists. One solution is to make faux, ersatz or false rivets. They look like rivets from the outside but are used like machine screws underneath. Number 6-32 stainless steel, round head machine screws will work for most applications in radio work, but any size of roundhead machine screw may be used. Stainless steel can be polished to look like nickel or chrome.

Obtain some round-head screws of the desired size and length. Chuck them in an electric drill which has been clamped in a vise or clamp so the chuck is horizontal, or a lathe. Turn on the drill and, with a fairly coarse file, proceed to file off the head in such a way as to remove the slot. Keep the file moving over the screw head and vary the angle. Results will be more even if you reverse the rotational direction of the drill When the or lathe occasionally. slot is nearly gone, finish removing it with a fine cutting file. When it is completely gone, polish the remaining head with: first, fine emory cloth; then, crocus cloth. You should have a head approximately the thickness, shape and diameter of the original rivet with a nice satin finish. you desire a mirror finish like nickel or chrome, just buff them on a cloth buffing wheel using stainless steel compound. Rotate the head with the fingers while buffing. The result will be quite nice and almost impossible to tell

from a real rivet head. While the above procedure seems time consuming, you can make a rivet in less than a minute once yu get the hang of it.

Place the rivet through the holes of the materials to be "riveted," attach a nut and tighten down in the normal way. You can control the amount of torque to just the amount you want without fear of damaging the material. A little thumb pressure on the "head" will generally give enough friction to permit you to tighten down the nut. The other advantages is that you will be able to take it apart much easier the next time! PJB

NEW DIALS FROM OLD!

Member Chris Buttery has come up with a great way to replace radio dials that have been damaged or cracked or even are missing. If the dial is missing or severly damaged, you will have to borrow one from someone else who has the same make and model of radio. In fact, it will save uou time if you can borrow one. All that you need is access to Xerox machine. If the dial is damaged, make a xerox copy onto regular white paper and touch ip up using white-out made for xerox copies. You can even draw in parts that are missing. Take the good dial, or the copy, and make a xerox copy of it onto clear plastic made for overhead projectors. material is made to be used in xerox machines. You will now have a perfect copy on clear plastic. This dial can be backed onto paper of the correct color. Parchment paper comes close to the color of many radio dials. For glass dials that had white lettering, use a piece of paper that matches the background color of the set behind the glass dial when xeroxing. You will have have a dark background

with clear lettering. This can be backed with a white (or other colored) piece of paper. There are many off white colored papers that should work. The dial can then be sandwiched between two pieces of thin glass and the glass bound with slide binding tape found at Photo Supply stores. With a little creativity, you should be able to duplicate a lot of differient dials. With color xeroxing, now readily available, and of quite good quality, there are even more ways to creat old dials. Chris made a dial reproduction for me that was quite extraordinary. Many thanks to Chris for a wonderful idea! PJB

LIGHTNING IN MY RADIO?!

A lot of us collectors have a few old lightning arrestors or antenna grounding switches in our collections. But how many of us are using them? Lightning is as dangeroud now as it was in the early days of radio, . EVERY outdoor antenna should have an arrestor or switch attached to it. This is especially true if your antenna is out in the open. While the chance of your antenna being struck by lightning is remote, the effects of even a nearby hit are devastating. The damage to your equipment, house, and even you can be beyond imagining. Be safe, and authentic: install a lightning arrestor or antenna grounding switch soon and NEVER handle electrical equipment during an electric storm. Make sure that the ground used for the arrestor/switch is separate from the one you are using for your radios! Also note that any nearby lightning strike can overload and burn out modern FET or CMOS front ends. Use an old lightning arrestor or switch to save your new gear as well.

CLASSIFIED ADS: WANTS

WANTED: Become rich and famous! Write Articles, Notes, Tech Tips, Restoration Hints, Radio Reminicences, Drawings, Photos etc. for this Journal. You write it, we print it. Get another line on your resume! Impress girls with your prowess! Send it in: Bart Lee, 327 Filbert Steps, San Francisco, CA 94133.

WANTED: Scott Symphony radio, has large "shamrock" shaped escutcheon on front, manufactured by the Scott Transformer Co., circa 1929. Will purchase outright or have good trades. Jim Clark, 1292 Starboard, Okemos, MI 48864. (517) 349-2249.

WANTED: WWII military radios, parts, pieces, manuals, accessories, etc. Particularly a WWII Navy transmitter ATB and the manual for it, and the companion receiver ARB. I have some excess WWII stuff to sell also. Henry Engstrom, P. O. Box 5846, Santa Rosa, CA 95402, (707) 579-2070.

WANTED: Early transistor radios, especially battery operated clock radios. July 1959 Issue of Popular Science with Philco Safari on cover. Safari side knob and battery. Michael Arken, (415) 648-6817.

WANTED: Any information about wireless in Northern California 1899 to 1919 -- books, magazine articles, newspaper accounts, early magazines, for research project. Please send me a xerox or offer for sale. Book Wanted: "Electronics in the West" by Jane Morgan, to borrow or buy. Bart Lee, 327 Filbert Steps, San Francisco, CA 94133 (415) 788- 407?.

WANTED: Dial Glass for Packard-Bell Model 46B, will buy junker if necessary. Cabinet for Fisher model X-101 or 100 T. Need schematic for Scott 222C not 222B. Want 7189 tubes. Paul Bourbin, 25 Greenview Ct., San Francisco, CA 94131.

WANTED: ZENITH brochures or anything else relating to Zenith for a research project. I will copy and return if you like. Mark T. Oppat, 167 Caster Street, Plymouth, MI 48170. [Editors' Note: Mark has been kind enough to provide us with a very interesting tape for an upcoming Radio News Audio Journal, so if any of us can help him out in his Zenith research we could repay his kindness to us.]

WANTED: National NC-100 Red Front communications receiver; SX-28 in mint condition. HQ-180 in mint condition. Working original spark transmitter. Manuals for NC-156 and Navy RBA & RBC and Echophone EC-1 "Skyrider, Jr." (not EC-1 "Commercial") receivers. Bart Lee, 327 Filbert Steps, San Francisco, CA 94133 (415) 788- 4072.

WANTED: 3NP4 Tube. Norm Braithwaite, P. O. Box 2443, Redding, CA 96099, (916) 246-4209.

CLASSIFIED ADS: FOR SALE

FOR SALE: Radio parts from the 1920's through the 1960's. Twenty years accumulation must go. Elmer Jorgensen, 3535 East Cook Lot 181, Springfield, Ill, 62703, (217) 544-1535.

FOR SALE: Two Atwater Kent Model 40's, Atwater Kent Model E speaker, Brunswick Console 5-band radio from the 1930's, RCA Victor Model 86X AC/DC superhet in wooden case with "Waterfall Front", Zenith Model 6DC30 wooden table model. Ruth E. Might, McDowell Collection, 821 Fennimore St., Fremont, Ohio 43420.

FOR SALE: Three Atwater Kents in Kiel tables. George Durfey, 912 La Mesa Drive, Portola Valley, CA 94022, (415) 854-4041.

NORTH VALLEY CHAPTER MALL SHOW

By: Norm Braithwaite Post Office Box 2443 Redding, CA 96099 (916) 246- 4209

During the weekend of March 3 and 4th, the North Valley Chapter of CHRS presented a display of radios at the Mount Shasta Mall in Redding, California. Approximately 50 radios, 10 phonographs, two televisions, and two jukeboxes were displayed in an effort to educate and remind the public of the history and values of radio and phonograph entertainment. Sets featured included a 1918 Wireless Specialty Apparatus Co. S. E. 143 with a Western Electric SE-1017 Amplifier, an Atwater Kent A. K.-10 breadboard, a Soctt Imperial on a Mapier Consolette, a 1937 Scott "Sixteen" with remote control, a 1939 Mills Throne of Music jukebox, a Sparton mirrored radio, a Bolova grandfather clock radio, and a couple of early plastic sets. The response from mall visitors was very gratifying.

Many visitors would reminisce about the sets. One comment which got back to me through an antique dealer: "The show was great except for one thing. Some fool chrome plated several of his old radios!" These, of course, were the Scott and Lincoln receivers which I displayed and they had, of course, been chrome plated at the factory! See if I bring them again!

Participants of the show received numerous leads on sets available and on potential restoration jobs. Some of the better "finds" as a result of the show included a 1935 Capehart Orchestrope jukebox for \$50.00, a 1923 Magnavox AC-3 amp for \$5.00, a free 1949 Mortrola 7" T.V., and a 1949 RCA projection set. Some other

sets which were discussed but which are not available included a scanning disk television, a Wireless Specialty Apparatus Co. IP-501A, a Scott World's Record Super 10, and a Scott AW-12.

The mall donated \$55.00 to the North Valley Chapter of CHRS for presenting the show. Additionally, the North Valley Chapter received \$238.00 as a result of a drawing in which the Chapter offered a restored RCA 128 tombstone radio donated by David Harden of Chico. The 7-inch Motorola television will be given away to a CHRS member as a door prize at the next North Valley Chapter meeting.

[Editors' Note: Norm
Braithwaite has the Society's
appreciation for his good work up
north. Putting on such a good show
led to acquisition of great new
collectable sets at reasonable
costs. Many people just want to
find a good home (like yours) for
their old radios. Any volunteers
for the CHRS Living History Days
exhibit in May? Call Paul Bourbin,
(415) 648 8489]

CLASSIFIED ADS: SERVICES

SERVICES AVAILABLE: Radio and Jukebox repair and restoration: John Ekland, (415) 323-0101.

SERVICES AVAILABLE: Radio, Television, and VCR repair (Philco Predictas a specialty): Jim McDowell, (415) 682-8255.

SERVICES AVAILABLE: Cabinet repair, restoration and refinishing: Larry Boyson, Jr., (415) 681-8352.

SERVICES AVAILABLE: Antique phonograph (hand crank types) repair and restoration: Paul Bourbin, (415) 648-8489.

CONTEST WINNER

ORIGIN OF THE WORD "THEREMIN"

By: Russ Turner and Denis Wade

[This is the winning response to our trivia question (What is the origin of the word "Theremin"?) posed in the last issue of the Journal. This is allegedly the complete, true and unabridged story.--Ed.]

It all began in the Old West, back in the last century. Out around the wild and woolly town of Tonopah, Nevada there weren't nearly enough women to go around, and the miners were in the habit of stopping by when they were in town to visit a lady with a reputation for... well, hospitality, you might say.

The year was around 1877, or maybe 1879, and the Lady's name was Minnie Smith. Awful lot of those pioneer gals were named Smith in those days, by some coincidence. Anyhow, Minnie wasn't the best looking woman in Nevada, and she wasn't the youngest either. But she had a talent for entertaining her gentlemen callers that caused her reputation to spread far and wide.

Nevada's always been a pretty dry state, you know, and up around Tonopah it doesn't take much to work up a good charge of static electricity. So Minnie and her guests often set off sparks during the course of an evening's entertainment, literally as well as figuratively.

But you're probably wondering what all this has to do with the Theremin! Well, Minnie didn't have a lot of money, you know; those miners never did strike it very rich. And what with one thing and

another, while she managed to keep her parlor nicely furnished and dusted, the old bedstead she'd brought from St. Louis was beginning to show the wear.

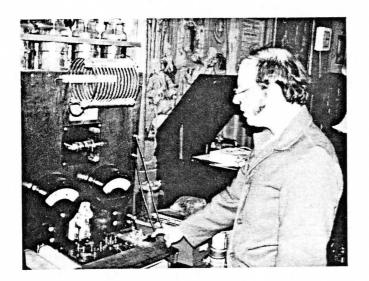
So it happened that one particularly dry day, after an especially invigorating afternoon with an unusually frisky miner, Minnie reached over to replace two errant bedsprings that had become dislodged from their bindings and were protruding from the mattress. At the aproach of her hand the springs emitted a truly lovely sound, and she found that as she moved her fingers near the springs, she could create tunes. The miner, needless to say, was completely enthralled. Tears filled the eyes of the rugged Westerner as he heard the strains of "Flight of the Bumblebee" for the first time since leaving his mother's home in Brockton, Massachusetts, in 1868!

Before long, Minnie was playing Rachmaninoff concertos, and grizzled miners were queueing up for an hour's entertainment, topped off by her soothing musical abilities. "Therapeutic Minnie" became known far and wide, and it wasn't long before every young newcomer in the territory was talking about "Thera Min." The tale became a bit twisted, as tales will, and by the 1880's the name "TheraMin" was being applied to Minnie's unique instrument. Of course, those miners never could spell worth a darn, so TheraMin had become Theramin by the time the dictionary dudes back East got wind of the word.

As you might expect, Minnie was doing so well by now that she could easily afford a new feather bed. The miners wouldn't hear of it, of course. Fortunately, the dilemma was solved a couple of years later when an inventive miner

from New Jersey named Reuben Edison rigged a generator to the waterwheel at the local mine and strung a wire right to Minnie's house, where he hooked it to the old bedsprings. Minnie got her feather bed, the Theremin worked even on damp days, and the rest is history! THE END.

[Editors' Note: We publish this answer even though it is not correct. The Theremin is named after its inventor Leo Theremin, (a Russian-born engineer). Because this story is at least as interesting as the correct answer, we are awarding the prize anyway.]



Give Us Your Lunch Money!

Hey! Here's a new quarterly newsletter which is designed to debunk all the current myths about hi-fi and delve into the recorded past of American musical novelties. (Like, how 'bout the myth that belt-drive turntables are better than direct-drives?) Now, isn't this just what you were looking for to fill those empty hours spent at the office?

Previous issues of AC contained: A description of the Blattnerphone, an early tape recorder used by the BBC as early as 1933! A 'think piece' wondering whatever happened to Dolby FM, CX, FMX, quadraphonic, Qube, VIR, Direct Broadcast Satellite tv, 3-D tv... A Mel Blanc obituary. The next issue(#3), will feature RCA Victor's State Action Lps, twenty albums from 1961 which were probably the ultimate stereo demonstrators.

Incidentally, how much did you spend on lunch today? maybe seven bucks? If you'd skipped that Six, you'd have enough money to pay for a lunch, subscription. Just think, skip only one a year, and you'd get AÇ for free. lunch skipped lunch isn't going to kill (One you! Besides, you're probably too fat Subscribe now before the anyway.) coming in '91 make us postal rate hikes raise our low overhead!

Okay, I give up. "Uncle." Sign me up for—

Δ1 year/\$5.00 Δ2 years/\$9.50 Δ3 years/\$14.00 ΔThe rest of my

natural days/\$150.00 Pleeze make checks payable to "Jerry Nutter." (Or reasonable facsimile thereof.)



111-32 112th Street SOP, NY 11420-1026

WHY IS THIS MAN SMILING?



