

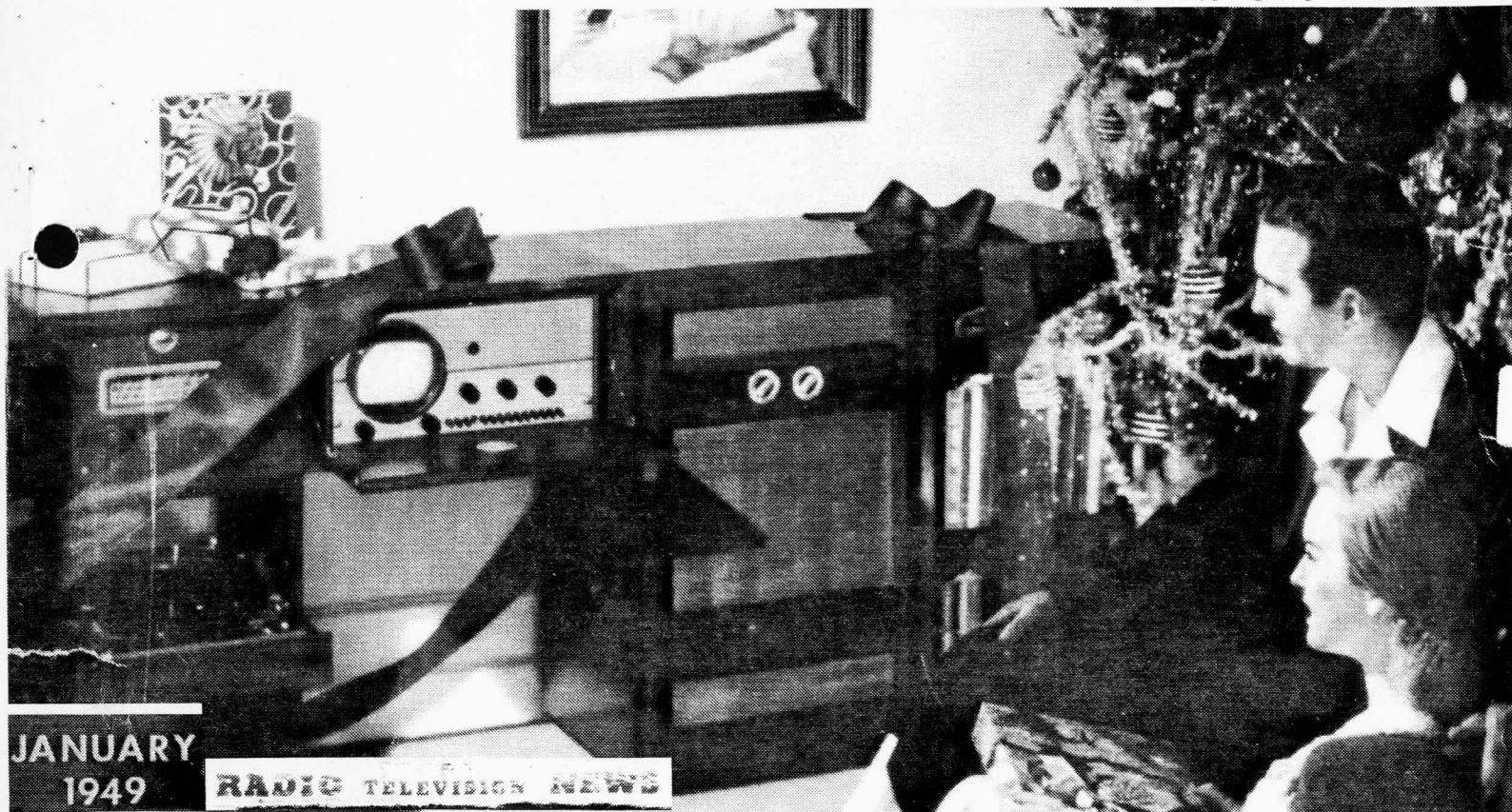
AUTUMN 1990

VOLUME 14, No. 4

THE JOURNAL

of the

CALIFORNIA HISTORICAL RADIO SOCIETY



IN THIS ISSUE:

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

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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. **NOTICE:** 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:

Well, the weather will soon be getting cooler and it will be time to start working on all of those projects that we have acquired during the warmer months. Our last meet at the year, at Foothill College, will be on Saturday, 10 November at lot T starting at 7:00 AM. Please note that it is on the tenth NOT the eleventh as stated elsewhere. This will be your last chance to find a good winter project or get rid of a few too many projects. There will be the usual auction and the Perham Foundation Electronics Museum will have a roomfull of goodies to get rid of.

It's dues time again! Due to the extra income we have received, we will be able to keep the dues the same for 1991. Please, Please pay your dues before 1 January. This gives you two full months to get it done. We need to have your dues in by then to compile the Membership Directory. If we have to send out too many reminders, we will be forced to implement a dual dues system starting in 1992. Dues will become higher for renewals made after 1 Jan to cover the costs of reminders, updates to the Directory etc. So please fill out your renewal form today. In return we pledge to cash your cheques more efficiently and expediently. Any extra funds that you are able to donate will be gratefully accepted. It is these extra funds that allow us to put out larger Journals and have more activities and meets. Due to the extensive publicity for regional meets, they rarely pay for themselves. It is the extra income that allows us to publicise these meets to the general public.

Don't forget our Annual General Meeting at John Eckland's house (969 Addison St., Palo Alto, CA) on Wednesday, 9 January 1991 starting at 7:30 PM. Be sure to mark your calendars. This should be a most pleasant event. Bring your latest project for Show and Tell. This meeting will give us a chance to plan the activities for 1991 as well as have some social recreation. Refreshments will be served and Door Prizes drawn. All members and friends are invited to attend.

The election results will be found elsewhere in this Journal. Looks like we will have a good team for 1991.

As of this writing (25 October) the Perham Foundation has wound up its side of the Electronics Museum case and the judge ruled that a trust had been shown subject to defences. Hopefully this conflict will be resolved by the time you read this. We will keep you informed. There is still time to donate time and money to help support the Electronics Museum.

By the way do not forget the services CHRS offers its members. Will Jensby is our official appraiser and is willing to appraise anything connected with radio for our members. Larry Clark is our Technical Advisor and is willing to help members with any problems that might occur with their sets. You can reach him at 438 York Dr., Benecia, CA 94510 phone: (707) 253-3242. I guess that is all for now. Hope all of you have a most happy holiday season and a year filled with good health, happiness and Peace. 73, Paul.

ELECTION RESULTS . . .

The following people have been elected to serve CHRS for the coming year:

PRESIDENT: Paul Bourbin VICE PRESIDENT: Mike Adams
SECRETARY: Russ Turner TREASURER: Will Jensby
MEMBERSHIP SECRETARY: Adam Schoolsky PUBLICITY & PR: Chris Buttery
BOARD CHAIRMAN: Paul Bourbin
BOARD MEMBERS: John Eckland, George Durfey, and John Wentzel
HONORARY LIFE MEMBER: Paul Bourbin HERROLD AWARD: Mike Adams

Congratulations to all those who have been elected/awarded. The coming year should be a most productive one.

MUSINGS . . .

What to listen to while driving on those long (for me anyway) trips to the Foothill College Swap Meets? May I suggest an old radio show or two to put you in the proper frame of mind?

"The Shadow" is a personal favorite of mine. He even introduces the outgoing message on my phone answering machine at home.

Taped radio shows are fun and interesting alternatives when you're tired on music or talk shows on those dull trips down the Interstate. Mystery shows sound great at night and for a real treat, try Orson Welles' 1938 "War of the Worlds" on an especially desolate stretch of road at night with a full moon! -- Gary Hascall



Barry Goldwater and Ed Sharpe
At Barry's Station

Since we were researching the early history of radio broadcasting in Arizona, we dug out a brochure from KOY that LeeAnn and I used for subject material for another publication we had edited years ago. In this brochure, we read that former U.S. Senator Barry Goldwater had worked for a place called Neilson Radio which owned KOY back in the days when it was called KFCB.

We wrote to Mr. Goldwater to inquire as to his remembrances of the early days. We expected only a return phone call, but instead we were treated to an invitation to his house.

The following is a part of our conversation during the time the three of us spent together one afternoon in June.

Ed - Barry, can you tell us a bit about the early days of radio in Arizona, especially dealing with your relationship with the Neilson Radio Company?

Goldwater - Earl Neilson was the first wireless and radio professional. He started out as a mechanic for the Chevrolet dealership company, and he started out building wireless sets at night...

When I was in high school I was interested in radio, so I would stop in and sweep the floor and pick up things... So he finally said I was working for him, and I worked a whole year and he gave me a headset...

In a little store area he finally had a shop. Was on what we called the town beach- It was a canal that ran parallel to Van Buren, and it made a nice place to have a shop due to the fact that if you didn't want something, you just threw it in the canal.

Earl Neilson had an amateur call 6BBH. I was an amateur also, and my call was 6BPI. (Earl) had a little transmitter we put together, and I would go down at

night and play phonograph records. I think one night they heard me in Mesa!

Ed - Was it actually legal to play music over an amateur transmitting station in those days?

LeeAnn - I don't think there was much regulation in those days.

Goldwater - Well, we never worried about that.

Ed - What year was this that you started working in Neilson's shop?

Goldwater - In 1922 or 23. I was 15. We built the first broadcast transmitter there. It later became KFAD and now it is KTAR. It was a 250 watt transmitter. There used to be a very prominent family here called MacArthur. They were in the Dodge automobile business on Jackson and Central. We put the antenna on their building and started transmitting... that's about the way broadcasting got started here.

Ed - That station was before KOY then?

Goldwater - Yes! KFAD was first.

LeeAnn - When was the first time you became interested in radio?

Goldwater - I do not remember the exact date, but I remember telling my father I was interested in wireless. I built this little crystal set, and that kind of astounded him. So for Christmas he gave me a little Westinghouse called an Aeriola, Sr. and it helped a lot.

For a transmitter, I used a small Ford spark coil to transmit with. That we later replaced with a larger spark transmitter, and then with a 20 watt rig once tubes became more available.

Ed - I have one of those Aeriola, Sr. radios.

Goldwater - Wow! Those are worth a bundle now.

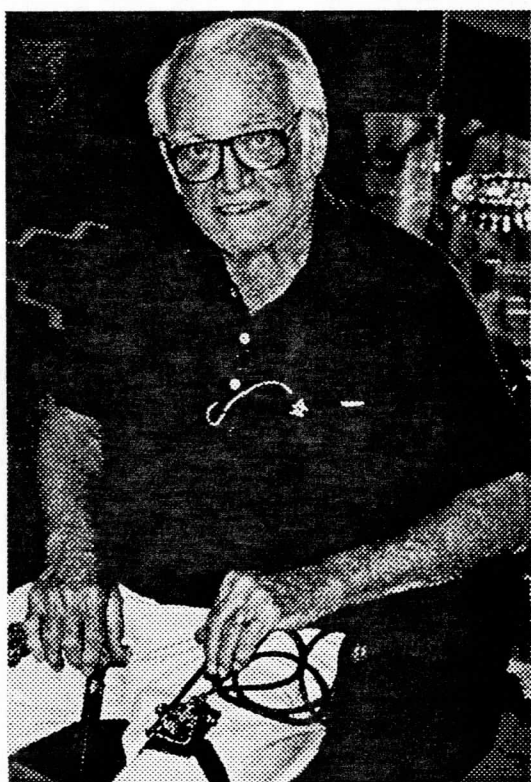
Ed - Our company has taken it upon ourselves to sponsor a radio museum of electricity and communications.

Goldwater - Well, that is good. We should have done it a long time ago. To think of all the old equipment I have had over the years. I wish to God I still had it!

Ed - You never hung on to any of your old equipment you used in those days?

Goldwater - No, I had a few pieces in my mother's garage, and people borrowed them...

Goldwater, Cont.



Senator Goldwater Shows Use of the J-47 Key.

I can tell you something earlier than radio. The first telegraph was brought to Phoenix by my uncle. It was an Army line, but he learned the code and the first call that came through, he answered it. The response from the other end was, ``get the hell off the line!''

I also remember the heliograph. The Army used them to transmit signals all over the state. There was a very important one up on top of Navajo Mountain - at about 12000 ft.

There was a lot of early activity in wireless and radio even in the early days. I would hear someone's call sign and write it down, and go visit them.

I still stay active with radio. Lately, I have been playing with weather and fax reception.

Ed - Did you manage to save any of the old books on radio that you had in earlier days?

Goldwater - No, I do not have any of them anymore. I had one old call book, but I gave it away to someone who was looking for them.

Ed - The earliest one I have managed to get was 1925.

Goldwater - Well, keep looking, they are around. I think you are on a worthwhile project and I hope you don't get tired of doing it - it is needed. No one had ever taken the time to do it.

Mr. Goldwater, LeeAnn and I left the house and walked out towards the Senator's Ham shack, which is a converted pool house alongside his swimming pool.

Goldwater - Here is something you might like for your museum. It is a military aviator's key. They would clip it on their leg and...

After a demonstration of the way a J47 aviator's key was positioned and used, the Senator showed us the radio equipment in his radio room. One item that was great fun was a ``talking'' voice synthesizer antenna rotator that he used to position his beam antenna. It would actually tell you the direction the antenna was pointing. Except for one old R-388 Collins receiver, all other equipment was of modern vintage. Barry Goldwater's radio room also sported a computer used for teletype, FAX, and Morse code.

There were many other things that the three of us discussed about radio - and things which had nothing to do with radio, which can not be reported in these brief pages. LeeAnn and I were both happy to have had a chance to visit Arizona's grand man of early radio. We look forward to his visiting our museum, as it is always best to learn about old communications equipment from someone who actually used it. --EAS



TELEVISION

by Bart Lee
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San Francisco, CA 94133
(415) 788 -4072

TV HISTORY IN BRIEF:

The idea of television is one hundred years old. By 1873, selenium's ability to convert light to electricity had been discovered. In the late 1880s Professor Nipkow in Germany invented a scanning disk system for use over wires. The earliest plan for all electrical television was put forth in 1908 by the Englishman A.A. Campbell Swinton. With wireless telegraphy and radio came the idea of transmitting and broadcasting television images as well as sounds. Hugo Gernsback in 1912 in "Ralph 124C" posited television as a means of communication.

C. Francis Jenkins in the U.S. and Thomas Biard in England put mechanical television on the air in the late 1920s. In the early 1930s, Philo Farnsworth in San Francisco invented all electronic television. RCA put together a similar system invented by Vladimir Zworykin.

Early station lists show mechanical TV broadcasting in the early 1930s at 2.4 megaHertz and 4.5 to 5 mHz, Jenkins at 6.42 and 9.71 mHz and a couple at 13 and 15 mHz. Most early broadcasting took place on the east coast, but Bakersfield and Los Angeles broadcast on 2 mHz. By the late 1930s, electronic TV could be found between 43 and 60 mHz.

The Los Angeles station was that of pioneer Don Lee, Inc., founded in 1932. By 1939, this station, W6XA0, broadcast full 525 line electronic TV on 45 mHz, with a regular schedule and a 25 mile viewing radius. Interest in the broadcasts was stimulated by the Hollywood Television Society, which provided public viewings. An off-the-air photo of W6XA0's 1939 logo accompanies this note.

By the late 1930s, everyone wondered when television would appear as a consumer product. In 1939, RCA's system got its celebrated premier at the New York Worlds Fair. By 1940, some 2,000 sets were in use. Then, the Second World War intervened.

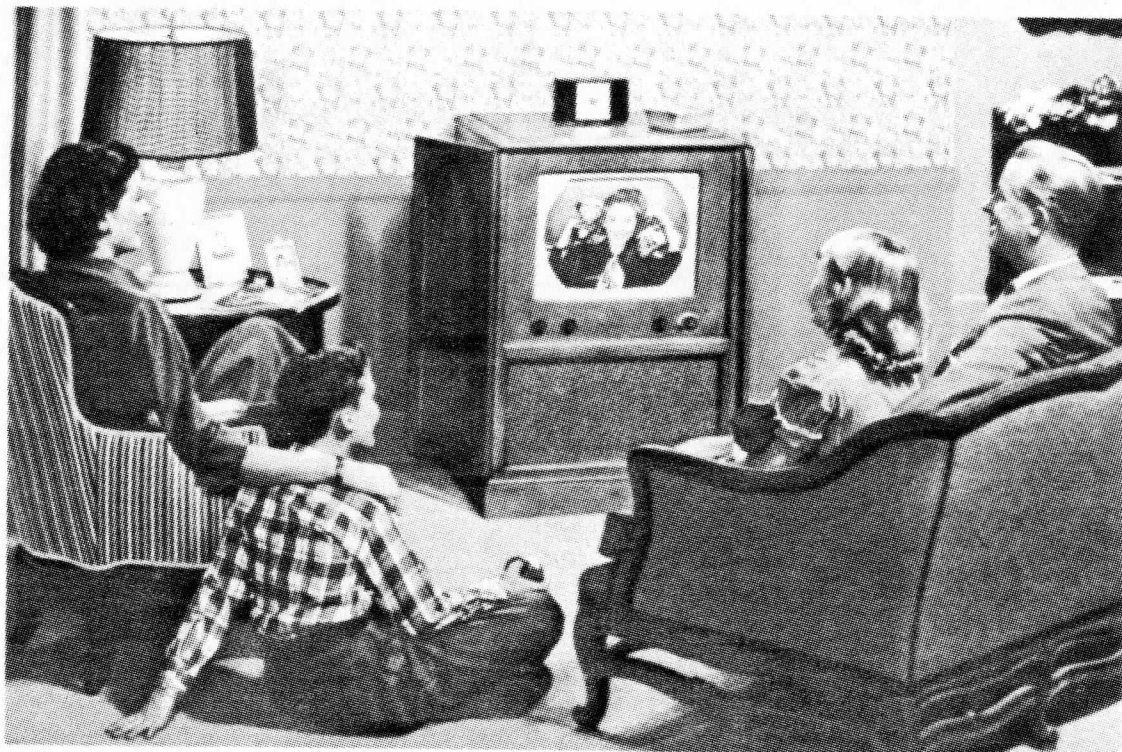
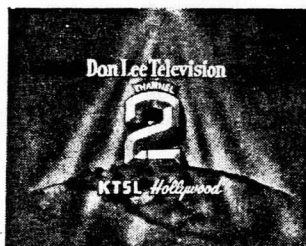
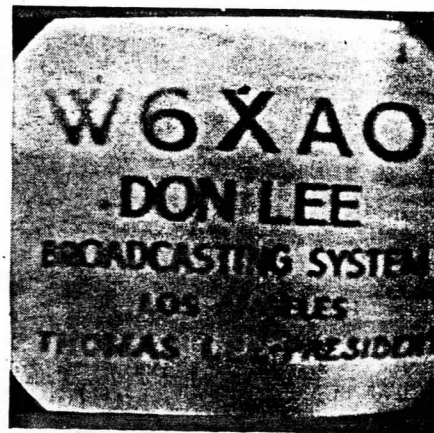
After the War, television came into its own. By 1947, 136,000 sets were sold. Soon every home had to have a set. In 1955, more than 7,000,000 sets were made. TV programming became America's only common culture, from Ed Sullivan to the assassination of John F. Kennedy.

In 1951, San Francisco had three stations, KRON-TV (Channel 4), KPIX (Ch. 5 from atop the Hotel Mark Hopkins) and KGO-TV (Ch. 7). Los Angeles had seven (see list). Don Lee Television in L.A. became KTSL on Channel Two. The 1951 KTSL logo, as well as those of the three San Francisco stations, accompanies this note.



CALIFORNIA		
Los Angeles	KECA-TV	7
Los Angeles	KFI-TV	9
Los Angeles	KLAC-TV	13
Los Angeles	KNBH	4
Los Angeles	KTLA	5
Los Angeles	KTSL	2
Los Angeles	KTTV	11
San Diego	KFMB-TV	8
San Francisco	KGO-TV	7
San Francisco	KPIX	5
San Francisco	KRON-TV	4

At 22 miles, this is a fair sample of what the more distant television fans in the Los Angeles area are able to pick up from W6XAO.



TV COLLECTING:

Many TV sets had intrinsically interesting aspects, making them collectable today. The pre-War sets (e.g. the 1939 F.A.D. Andrea set) are rare and very expensive from dealers. Many of the post-War sets are easily available and reasonably priced.

The three classic post-War sets are the Philco Predicta, with its futuristic styling, the Pilot three inch tabletop set (the first cheap widely available TV) and the Hallicrafters T-54. Many others have found themselves preserved in collections, from giant consoles to miniature transistor sets. The Foothill Electronics Museum displays a 3" Pilot with a huge magnifying lens.

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Please send me:

☐ Radio Map
☐ New Catalog

☐ Free Hallicrafter Catalog

☐ List of Used Equipment.

Name

Address

City..... State.....

THE HALLICRAFTERS T-54:

The T-54 is Television (7 inch screen) as communications gear, an ultimately unsuccessful marketing approach. It is reminiscent, however, of Atwater Kent's marketing of home radio, in the 1920s, as electrical laboratory gear, laid out on the breadboards. TV however, like radio, became furniture, not an electrical appliance. A T-54 appeared on the cover of Radio & Television News for January, 1949, which is reproduced as the cover of this Journal. An advertisement from the period is also reproduced.

The communication receiver metal cabinet of the T-54 may not simply have been a marketing ploy. The box is the same as the top-of-the-line Hallicrafters SWL short wave receiver, the SX-62 (as shown in the 1949 ad). Perhaps the company simply put their first TV in the only available cabinet. Wood versions were, however, also made, as were larger (10" screen) models.

A restored, working T-54 will go today for about what it cost 40 years ago, \$200. (Of course, 40 years ago \$200 had the purchasing power of \$1,000 today). T-54s, unrestored, go for \$25 to \$75. At the 1990 AWA flea market, at least two T-54s in wood appeared.

The advent of the VCR has made it possible to watch period programming on period TVs. It's Howdy Doody time! Not to mention Lucy, The Honeymooners and Milton Berle.



Vernon Furr & "The Mighty Atom" Crystal Radio - Mesa Radio Pioneer

By Edward A. Sharpe, Archivist Southwest Museum Of Electricity And Communications Copyright SEMC 1990



Vernon Furr and Ed Sharpe Examining "The Mighty Atom Crystal Set"

One evening I purchased a small crystal set that, according to the label had been manufactured in Phoenix Arizona. Up to this point I was not aware of any early organized radio production in the state.

Knowing that I wanted to learn more of the history of this radio, I asked as many questions as I could of the person that I purchased it from. He told me that he thought that the fellow that owned the company that built it was still alive.

At this point I went for the telephone book and looked up the name Vernon Furr, and there it was printed in the book with a telephone number that would finally answer some of the questions that I had boiling in my mind!

Well, what started out to be a quick investigative phone call, turned into an interesting two hour informative chat on radio happenings in early Arizona! Vernon agreed to meet with me the following day so that I might interview him on tape in his home.

Between the time I had purchased the crystal set and called Vernon, I had also talked to another friend who had a few crystal sets. Among these

he had an example of ``The Mighty Atom'' also! I mentioned to him that I knew the name of the fellow that had manufactured them, and after talking to Vernon, I called him back to tell him I had indeed made contact with the manufacturer!

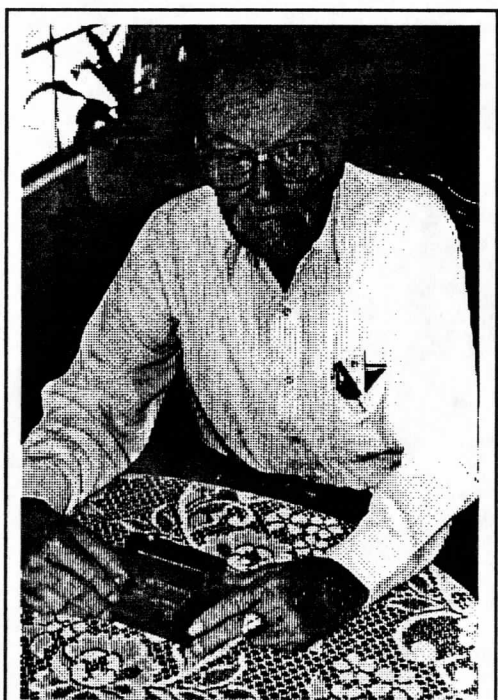
That next morning I headed out from the office along with an engineering student who worked for us part time during the summer. He had an interest in how communications functioned in the early days, and wanted to meet the fellow who had built this little crystal set. Armed with a 35 mm camera and a tape recorder, we set out on our adventure!

I had a very enjoyable chat with Vernon Furr about how the set came about, when it was built, and about general radio topics from the early days. Here is a partial transcription of what we talked about.

Ed - Vernon, what got you interested in radio to begin with?

Vernon - I had a crystal set similar to this (he points at the Mighty Atom) a friend of mine got it some place and I made a copy of it. I also

Vernon Furr, Cont.



Vernon Furr and his "Mighty Atom"

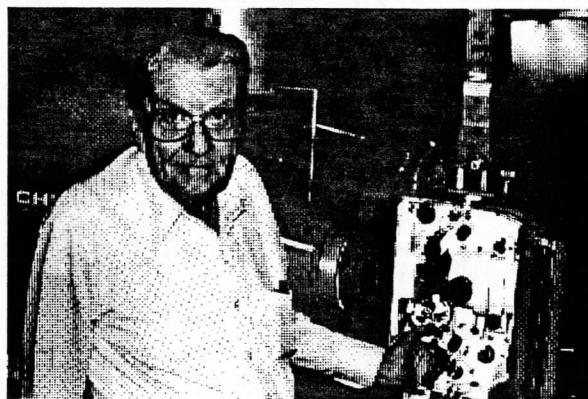
built other types of radios also, here is a negative of an early tuner and one tube detector. (See photo of a young Vernon Furr with this apparatus.)

Ed - What time period would this have been?

Vernon - It was before I got married, and before the depression hit out west here, so I would say in the 20's.

Ed - When did you start your radio shop?

Vernon - Well I started more or less after I got that crystal set! After that I got interested in public address systems. The politicians wanted them for meetings at different places.... I bought some horns, an amplifier and a condenser microphone from KOY. I paid two hundred and some dollars for them.



Vernon and his Century Projector at Metrocenter.

Ed - Where did you buy the parts for the radios you manufactured, Vernon?

Vernon - I got some of the parts from Wholesale Electric, and I got the wire from Electric Rewind in Phoenix.

Ed - When was this radio made, Vernon?

Vernon - This was before the war you know. Hitler was starting his business but there was not a war for us yet.

Ed - Did you continue to make them during the war?



A young Vernon with his home-made tuner and one tube detector.

Vernon Furr, Cont.

Vernon - No, I quit before the war.

Ed - How many of these radios did you make and sell?

Vernon - Around 200 or 250, that's about the size of it.

Ed - I notice that the label says Phoenix, Arizona? But your radio shop was in Mesa. Why Phoenix?

Vernon - We used Phoenix because it was a bigger town, and I got some of my help from Phoenix also.

Ed - What did this crystal set sell for?

Vernon - What did I get for those things... A dollar and a half I think..

Ed - What was the cost of the parts to build it?

Vernon - I made a 50% profit.

Ed - On a radio such as this, Vernon, how many stations could you receive?

Vernon - KOY and KFAD were the only two that would really work; they were both pretty powerful stations. They had antennas on the buildings. It was before they had antennas on South Mountain. KFAD later became

KTAR. I had a friend named Andy Anderson, he was the chief engineer at KFAD. I used to go up and see him and fool around with radios and things with him.

Ed - So, what was it like having a business during the depression?

Vernon - Things were so hard, you could barely get anything to eat! When the war came along things got a lot better. In addition to working with radios, I also worked in theatres as a projectionist.

Ed - What were the radios sold during the depression?

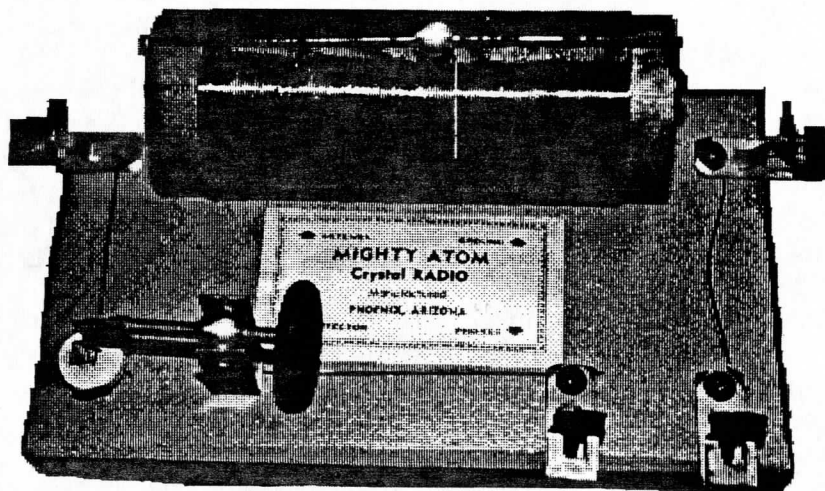
Vernon - Well, Atwater Kent was a real popular one, but there were RCA's etc..

Ed - When did Furr Radio close?

Vernon - I had a shop on North McDonald in Mesa, and after my wife died, it was 1950, I got into the projectionists union and went to work at the theatre full time. In 1950, I had to close the shop, as I was not making enough money to navigate with.... I am still working as a projectionist at

Metro-center two days a week!

Ed - You are still working at almost 84 years old?!!



Close up shot of "The Mighty Atom" Crystal Set, 1936

Vernon Furr, Cont.

Vernon - As long as I can thread a machine I still will be working! I don't really want too many hours, but I enjoy it.

After some more conversation, Vernon took us to a shed behind his house in Mesa, where he said ``I have some of those radios over in the corner there.'' Climbing over the piles of old 50's radio chassis, gutted record changers and remains of televisions, I got to the corner of the room.



Vernon's wife and child alongside his early service truck.

What I saw when I uncovered the box of radios, was as I had imagined what I would find when I let my imagination wander that evening before I fell asleep. There before me was a treasure!

Feeling like Carter when he discovered the treasure of Tutankamen's tomb, I knew that we were becoming archaeologists unearthing fragments of a past era of radio history. A whole box of MIGHTY ATOM crystal sets! Judging from the amount of dust and spiders around there, it seemed as though they had been there since the date of manufacture!

After some digging and shuffling Vernon and I passed the box over the piles of radio chassis and out the door into the sunlight. The final count we came up with was 17 radios. Some were missing the Philmore style detector but were in nice condition. There were even a few that were wrapped in paper so tightly that they looked just like the day they were made! There was also an assortment of wood bases that had been drilled, but never had had any parts put on them.

I really did not need 17 of the same model crystal set, but figured that if I did not retrieve them they may at some point find their way into the trash bin.

After more discussion and more looking around, we decided to call it a day as it was rather hot in the shed!

It seems from the remaining stock of radios, they came in yellow, red and forest green. We ended up with one yellow radio, nine red and seven green models. Examples of each color are on display at the Southwest Museum of Electricity and Communications in Phoenix.

Unfortunately only three weeks after I had the pleasure of meeting Vernon Furr he passed away as the result of a massive stroke. He loved talking about the the old days of radios, sound systems, and theatres and it seemed every few days out of that three weeks he was either over visiting us or we were visiting him.

He gave us a lot of interesting insight on repair of radios, amplifiers and a most novel way to make a crinkled ribbon for ribbon microphones! It was sad that on June 19, 1988, all of this came to an end..... He will be missed by those of use lucky enough to have known him.... --EAS.

FOR SURPLUS HOUNDS:

by Bart Lee
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San Francisco, CA 94133
(415) 788 4072

World War II surplus radio and electronics came on the market about 1947. Amateur radio operators and others quickly learned to convert it to use. Along the way, they wrote many articles on tips and techniques, providing schematic diagrams, conversion ideas and the like. Many of these articles were collected in several books, published in the 1950s and 1960s. If you have a piece of WWII gear, something about it almost surely has been written and collected in a handbook.

Some of the books are:

SURPLUS RADIO CONVERSION MANUAL (Vol. I & II edited by R.C. Evenson & O.R. Beach; Vol. III edited by William I. Orr)

THE SURPLUS HANDBOOK, Receivers & Transceivers (by C. Caringella & R.C. Clark)

SURPLUS SCHEMATICS HANDBOOK (by the editors of CQ magazine).

In addition, CQ magazine put out at least two special issues on war surplus: October, 1965 and May, 1969. 73 magazine put out at least one such issue, June, 1966. Kenneth B. Grayson wrote a good review article "Surplus" in the January, 1960 issue of CQ magazine (p. 86-87).

A chart from 1943 explains all of the nomenclature used in WWII military electronics (e.g. "ARC-5" and "SCR-274N"). Similarly, a cross index chart of vacuum tube numbers between military and civilian versions is available.

The best (and one of the few) commercial sources for military electronics is Fair Radio Sales Company, 1016 E. Eureka Street, P.O. Box 1105, Lima, Ohio. (419) 227 -6573. This is a second generation company in the surplus business for 40 some years now. They even have some ARC-5 gear left. One of the best current sources for manuals is Rainy Day Books, P.O. Box 775, Fitzwilliam, N.H. 03447 -0775; (603) 585 -3448.

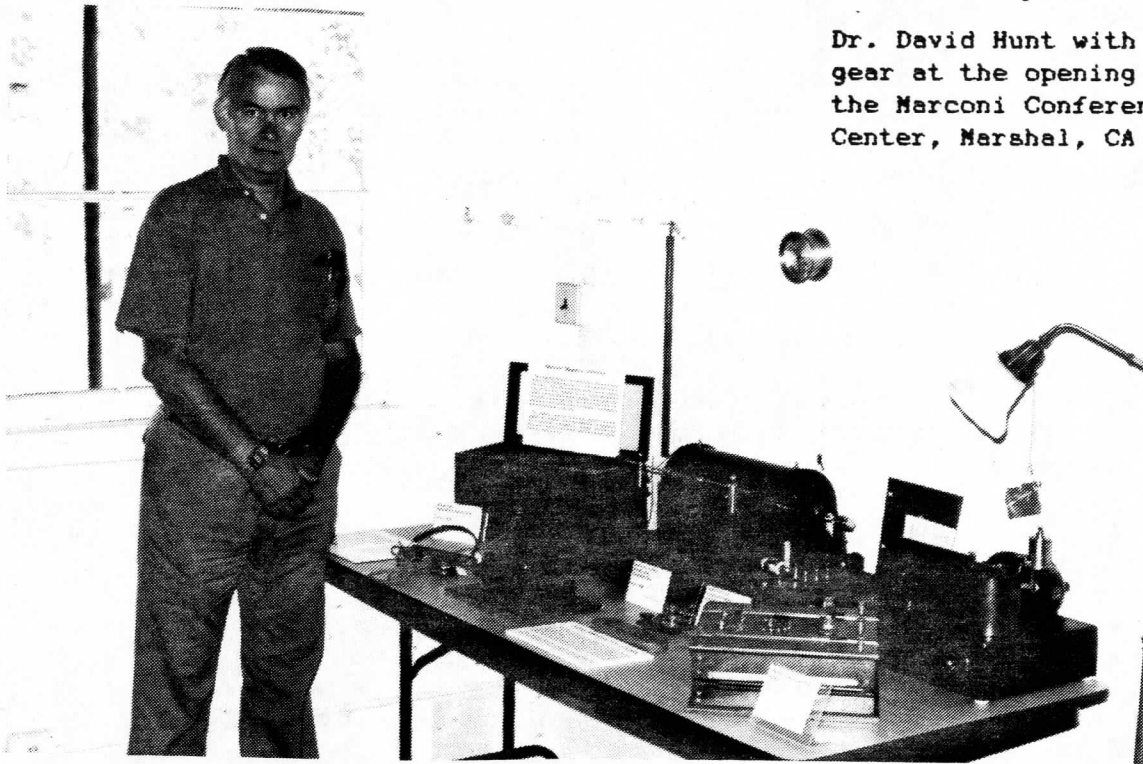
If you need a schematic or conversion (or de-conversion) information on WWII surplus, I have all of the sources listed above -- give me a call or send me a note and I'll do what I can.

A relatively current view of military surplus may be had from Tom Kneitel's article "Uncle Sam's High Tech

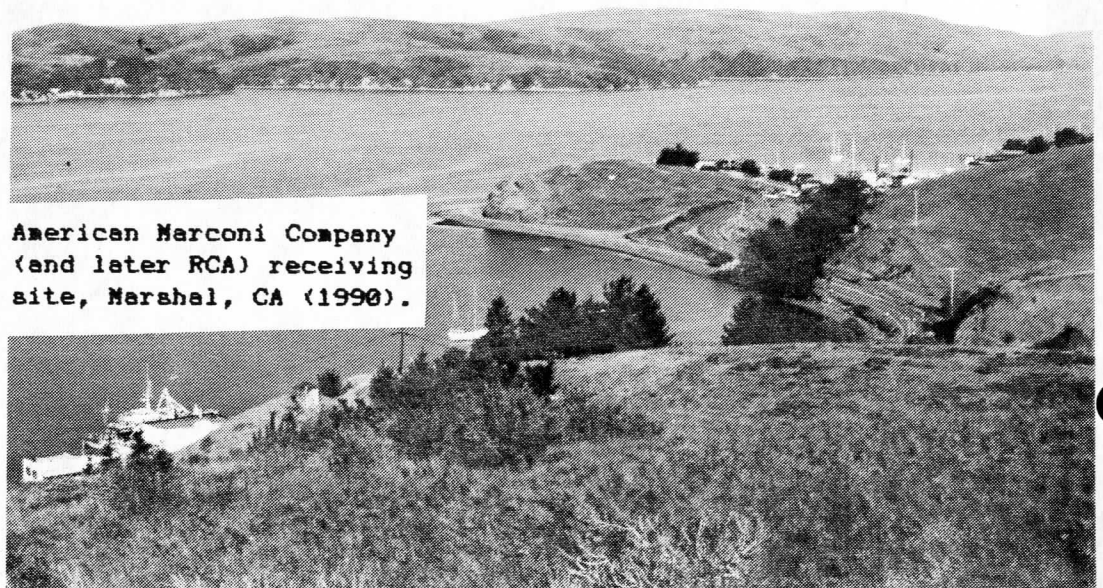
Electronics," in Popular Communications magazine for February, 1983 (page 8ff). A cover story and related materials on collecting surplus gear appeared in the A.W.A. Old Timer's Bulletin, Vol. 30, No. 3 in November, 1989.

MARCONI EXHIBIT

On the weekend of September 8-9, the Perham Foundation and CHRS put on an exhibit at the old Marconi site located near Marshall, CA. This was during the dedication of the site as the Marconi Conference Center. The Center will be a smaller version of the Asilomar Conference Center near Monterey. Amongst those present during the dedication were: Goia Marconi Braga, Marconi's daughter, Dr. John Pierce, traveling wave tube inventor, William Breniman, founder of the Society of Wireless Pioneers and Sy Stein of the Perham Foundation. CHRS members who were present were: George Durfey, Will Jensby, Bart Lee, Paul Bourbin, Marc Gottlieb, Don Koijane and Gary Halverson. These pictures show part of the exhibit. There was probably the largest accumulation of Marconi material in one place in recent times. It was a most pleasant weekend. There are many nice eating places in the area and the view was great. There are even remnants left of the antenna complex.



Dr. David Hunt with his Marconi gear at the opening of the Marconi Conference Center, Marshal, CA Sept. 8, 1990

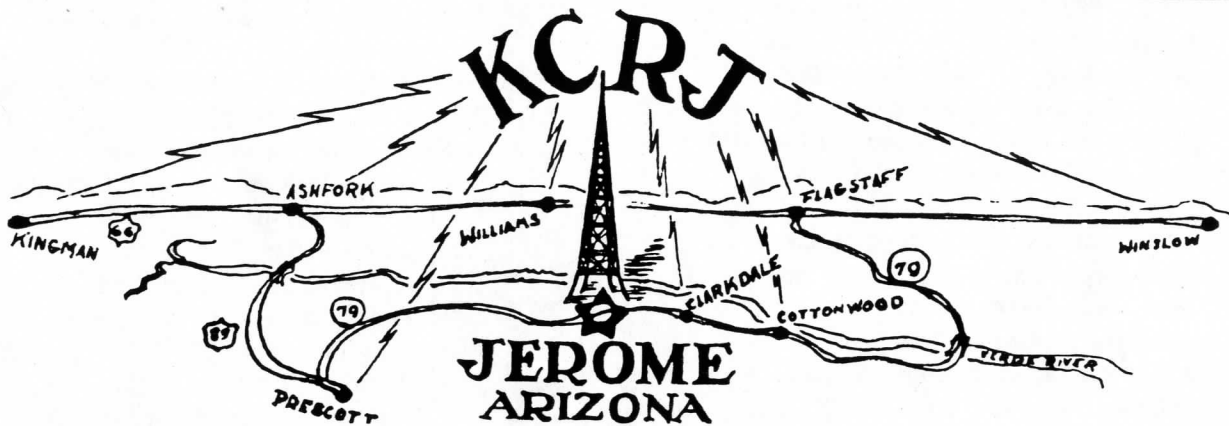


American Marconi Company (and later RCA) receiving site, Marshal, CA (1990).

KCRJ - AM Northern Arizona's Pioneer Radio Station

By Edward A. Sharpe, Archivist Southwest Museum Of Electricity And Communications

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Station logo that appeared on KRCJ's Business letterhead

KCRJ falls into the classification of the early pre-World War II Arizona stations that we wanted to learn more about. There were much fewer stations in the early days of Arizona due to the lack of population that was present here. The large influx of population that we have now, did not occur until after the war.

Our interest in KCRJ began when we met Wayne Fernyhogh, who from May 15, 1941 until July 1, 1944, was the Chief Engineer for KCRJ in Jerome, Arizona. Wayne had come by the museum to look at some of the old radio equipment that we had on display there. We spent several hours chatting about his experiences in radio and electronics and he told us about some of the radio stations that he had worked at throughout the years. We did not go into much detail at that time, but we knew that at a future date we needed to do a more in-depth interview of him.

Time passed and one day Lou Burke came into COMPUTER EXCHANGE (who provides building space for the museum) and after talking with him for awhile about computers, he then mentioned that he was a broadcast consultant and had at one time owned a radio station in Cottonwood known by the call sign of KCRJ - FM. I mentioned to him that I knew a fellow who was the chief engineer at the old KCRJ - AM station in Jerome. Lou then told us that he had invited Wayne to switch on the new KCRJ - FM station, since Wayne was one of the few people that were left around that had worked at the old Jerome station that the FM station was named after.

Lou Burke toured the museum and mentioned that he had an old microphone at home that he thought we would have interest in.

Hi Jinx

START THE DAY OUT
RIGHT WITH

Music! Laughter!

Enjoy this morning funfest
with Oscar The Burro,
Donald The Drake and the
Nation's Hit Tunes in a
Rollicking Half Hour of
Morning Pep!

Coffee Cup Club

8 A. M. Monday Thru
Saturday

—On—

KCRJ -- JEROME

Northern Arizona's Pioneer
Station

1340 KILOCYCLES

KCRJ, Cont..

After several days had gone by, Lou returned for another visit with an old Amperite ribbon microphone in his hand. This old microphone it turns out, was given to Lou at the time that Wayne visited him at the new FM station during the opening ceremonies. Lou Burke no longer owned the Cottonwood FM station, in fact it no longer even goes by the call sign of KCRJ anymore. Lou decided that the place for the microphone was in the museum so that many can visit it, a much more fitting place for it than in a desk drawer! In a future issue we will cover how Lou started KCRJ - FM, and although it is a history much more recent than that of KCRJ - AM, this FM station does not have it's original call sign any longer and the history behind it must be recorded.

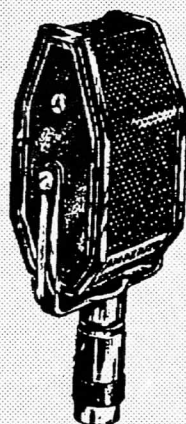
We invited Wayne Fernyhough over for an interview. Besides bringing himself along, Wayne has a wonderful scrap book he has kept through the years, with material relating to many of the stations that he worked at. In addition to this, Wayne brought along a cassette tape for me to copy that Lou Burke had commissioned on the early days of KCRJ - AM. Lou had used this hour long tape as the opening sign-on for the later day FM station.

There is very little remaining paperwork or actual equipment left from the old station, since the station was purchased in 1944, and the equipment and all other assets moved back east. We are deeply indebted to Wayne Fernyhough for the use of pictures and some of the data that was used to construct this article from. Lou is to be congratulated for his funding of the KCRJ sign-on tape, that contains an archive of interviews with some of the people that remember the old station and gave their impressions of it. The museum is also happy to have acquired the KCRJ microphone from Lou also.

The museum has in it's archives many old catalogs of radio supplies. In an 1936 Allied Radio catalog

I found an ad for the AMPERITE RBM Velocity Microphone. It is reprinted in this article.

Wayne showed us letters that people used to send to KCRJ for reception verification reports. A radio station would get a letter from a listener and then after verifying the information the listener had claimed he heard, send a return letter confirming the reception of that station. The most distant letter that Wayne had received was from Les G. Hopkins of the New Zealand DX Club. Wayne still has the original copy of it in his scrap book and we have a copy of it here on file in the archives at the museum. It must have been really amazing to get a reception report letter from such a great distance away, and especially when you consider that KCRJ was a low powered station! Les Hopkins wrote on the New Zealand DX Club form that there was ``noise and static that were bad at times, the tone was good, and there was very little fading."



AMPERITE
Model RBM

Let us now go back into time. The year is 1928, the place Jerome, Arizona.

Charles Robinson, a man of some means, who was an artist and a jeweler, formed ``The Central Arizona Broadcasting System. He applied and received a license to build a radio station in the copper mine boom town of Jerome, Arizona. The stations call letters being KCRJ, meant the following: K- The station was west of the Mississippi river. CR- Obviously stood for Charles Robinson. J - Now this could either stand for jewelers or Jerome, perhaps we will never know which! KCRJ was licensed to broadcast on a frequency of 1340 Kilocycles.

Brandon Delany, KCRJ-FM's news and public affairs director interviewed Louis J. McDonald from Northern Arizona University, who was the executive director of University relations at back in 1981. The following is from that interview.

KCRJ, Cont..

``I knew Charles Robinson that had the station. The studio was in the jewelry store right there on Main Street. In fact it is only two doors down from the fire station. The building is still standing where Robinson Jewelry was."

``It was what we called a pioneer station in Northern Arizona because during the daytime many of the places in Northern Arizona were able to pick up the station. In fact the students here in Flagstaff when I was a student here back in 1930 they used to pick up KCRJ because the local station was not very popular."

``I went back to Jerome to teach in 1931, and of course listened to the station quite a bit. The thing I remember about it were some of the announcers ... Really so many of the people listened to it at that time.. in the daytime it was the only thing you could pick up... Even at that time, the Phoenix stations, what few Phoenix stations we had didn't come into Jerome in the day time... only at night."

``Now going back to being popular, they geared some their programming to the people of Jerome. The population of Jerome during that time was 60 percent Mexican American. They had more than one fine Mexican-American program and a Mexican-American announcer, although I can not remember his name....Later on he left KCRJ and went to Phoenix and was an announcer on one of the bigger stations down there."

Louis McDonald told Brandon Delany in his interview that KCRJ really took an active part in the community, was humorous and even provided coverage of the games at the high school there. From his tone I would have to say that Louis misses the old KCRJ and the times that went along with it in that then boom town of Jerome Arizona.

Brandon interviewed Flossie McClellan, who in 1981 had just celebrated her 79th birthday.

She told Brandon how one young man carried on a lengthy courtship where a young man would every day call up and have Flossie play requests for the young lady he was in love with. She also told Brandon that most of the men were employed by the mines so it was easy for her to get a job as an announcer.

About the final days at KCRJ she seemed also saddened about it's demise.

``We left for work early that morning because we knew it was going to be the last day.....They came by the house and got me..... and Evelyn was there when we got there...I think that none of us wanted to talk very much is what it was... It was about noon that we closed it down.....

Mary Evelyn Starkovich another part time announcer in the final days of KCRJ, who came over from the high school to work. Her father was a miner at the copper mines and then later a foreman.

Mary Evelyn told Brandon how she landed the newscaster's job!

The job was kinda exciting! I was the youngest radio announcer that they ever had in Jerome because, and I hate to admit it now, but I lied about my age to get the job! I was about 14 or 15 when I started working in the afternoon at KCRJ in Jerome Arizona! I predominantly did disc jockey type things for people who would call in and ask for certain records to be played. One night the man that owned the station had a coughing attack right around news time and he could not read the news so he asked me to fill in for him, and the switchboard was flooded with phone calls and people saying `let that girl read! She can pronounce names!' So I was a young newscaster at the age of 15! The names of people and places unfamiliar some announcers were often brutalized beyond recognition especially foreign names, you would come across tongue twisters!"

Brandon asked Mary what she found to be the most gratifying aspect of working at KCRJ Jerome:

``Oh I think having the rapport with the people. We had the feeling that we were all for one and one for all."

Mary told how new births would be announced on daily news and she was proud of being able to help spread the good news!

KCRJ, Cont..

One of the war time policies Mary related, was that they would not play a specific request dedicated to a particular person at exactly the time it was requested. This was to prevent the station from being a carrier of 'clandestine messages' that could interfere with the U.S. war effort.

Another use of KCRJ, was to spread the word of a lost cat or dog! After the news was broadcast, the town folk, especially the younger ones, would form up search parties and spread out throughout the town in quest of the missing animal!

Mary relates the final day of broadcast:

"I don't remember what I had on... but I know there was this lump in the throat feeling that you just didn't want this day to happen.... You knew it was coming, you had known for a while, but you didn't want to admit that today was the deadline... today was D-Day so to speak.... and there was sadness.. and when people are sad they don't quite know what to say to each other.... so we say nothing... you do what you have to do and perform in a robot like atmosphere.... and then you cry...."

"It was sad because it was like a little part of Jerome was dying along with the rest of Jerome, which was a very thriving community for many years prior to the time that the town did start closing the doors... the mines had closed.. the people were moving away... the war was over... and the people that had come back from the service, had gone on to colleges elsewhere or moved on to make their lives elsewhere."

"The radio station was one of the last toe-holds so to speak in the past, and when I gave the final broadcast it was with tears in my eyes as I bade farewell to all of my friends.... because we knew that the station would not be coming back, be-

cause the town as we knew it was not coming back. But it was a tearful closing because there was as I say a lot of history and memories being closed behind those doors"

In Brandon's interview Mary told him that Wayne Fernyhough was a "genius" and kept all the equipment in "Fantastic running condition"

AMPERITE VELOCITY MICROPHONES

The finest type of ribbon-velocity microphones. Ideal for use in the highest quality sound installations. Eliminate distortion, hum-pickup, and back-ground noises. Finished in statuary bronze. Furnished with swivel brackets; equipped with rubber shock-absorbers. Have $\frac{1}{8}$ "-27 thread.

MODEL RB-S

Particularly designed for speech reproduction. Has flat frequency response, 60-9,000 C.P.S. Output 200 ohms; -68 db.

H2270.

List, Each, \$32.00.

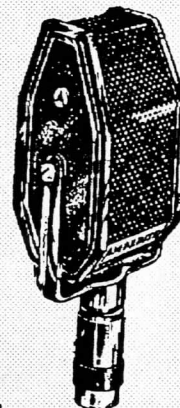
NET EACH.....

MODEL RS-H

Similar characteristics to RB-S, but with high impedance output of 2,000 ohms. Output level, -58 db.

H2271.

\$18⁸¹



MODEL RB-M

Highly recommended for music and speech. Has flat frequency response within ± 2 db. from 40 to 10,000 C.P.S. Output 200 ohms (-64 db.). Ideal for use where quality is essential.

H2272.

List, \$42.00.

YOUR PRICE...

\$24⁷⁰

MODEL RB-B

A highly directional velocity microphone. Excellent for overcoming severe feed-back conditions. Typical Amperite high quality construction throughout. Flat frequency response from 40 to 10,000 C.P.S. Output 200 ohms; -64 db.

H2274.

List, \$42.00. Net.

\$24⁷⁰

MODEL RB-H

Similar characteristics to type RB-M, but has high impedance output, 2,000 ohms (-52 db.). May be operated directly into tube grid without transformer.

H2273.

List, \$42.00.

YOUR PRICE...

\$24⁷⁰

MODEL RB-HB

Very similar to Model RB-B, but has high impedance 2,000 ohm output. Directional characteristics are useful for overcoming feed-back. Output level -52 db. May be connected directly to the grid of tube without using transformer.

H2275.

List, \$42.00. Net.

\$24⁷⁰

When asked by Brandon about the final day at KCRJ Wayne replied:

"Well it was a rather sad day because so many people stopped and talked to me and asked if there wasn't some way we couldn't keep the station going, because it was a big thing in the valley and a lot of people depended on it for entertainment. It left a big void there.... it was really too bad I think..."

KCRJ, Cont..

Wayne also told Brandon that he had enjoyed his career in electronics and that he found all of the changes exciting....

Zella Wignall, who was found by Brandon Delany under the name of Mrs. Bill Davis was the one who had trained Mary Evelyn as an announcer at KCRJ. Zella also started working for KCRJ while going to High School, and it was her first job. She was at the time a freshman in high school when her english teacher Clint Wager encouraged her to apply for an announcers job at KCRJ. She recalls her days of employment there as happy ones! Zella told Brandon that Mary Evelyn arrived on the scene shortly before Zella left to take another job.

Zella also stated that Wayne'e dedication was total, and at times it seemed that he had to hold equipment together with chewing gum and hairpins, but always had it on the air!

Being an announcer made Zella feel pretty important. Since there were only 3500 to 5000 people, everyone heard her on the radio and knew of her.

"THE SHADOW KNOWS!"

Your best friend and
crime's worst enemy . . .
The Shadow . . . In His
Thrilling Experiences.

Presented By

BILL KOONTZ'

SERVICE STATION

7 p. m. Every Wednesday

—from—

KCRJ -- JEROME

Northern Arizona's Pioneer
Station

1340 KILOCYCLES

She would alternate time in the day between school and KCRJ often having to really make tracks to get back and forth in time!

One name that kept coming up in each of the interview that Brandon did, was that of an announcer George Young. All of the KCRJ employees that were interviewed said he was really a fantastic announcer. I suspect that since Brandon did not interview him, he is either deceased or not able to be found. Perhaps he is still out there somewhere, I do not know, but I would sure like to interview him if he is!

The following is a transcription of the interview that we had with Wayne that afternoon in the museum.

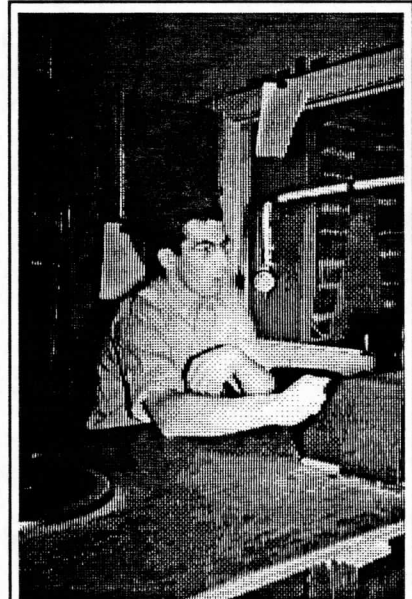
Ed - Wayne,
what brought
you to Arizona?

Wayne - Well I was working at a radio shop in Los Angeles, I was doing radio servicing, it did not amount to very much, but while I was going to school I had a friend at school and he got a broadcast job in Gallup New Mexico.

Ed - What was
the name of the
station there?

Wayne - KAWM and after he had been there for a while they needed an engineer and he asked for me, and I came over there. It was very much different there. It was my first trip to the southwest you know, and Gallup is all Indian country around it.

Ed - Kind of a wilderness around the station?



A young Wayne at the controls...

KCRJ, Cont..

Wayne - It is a wilderness, and in about a month I was in charge of the station. It was kind of frightening because I didn't know anything about it. There was not anyone else knowledgeable within miles and miles! There were not any radio parts stores around either. It was a lot of fun... and I liked it very much, but after a year and a half I got tired and figured that I could make a little bit more money ...so I made a trip to San Diego.

Ed - What year was this?

Wayne - It was in 1939, there was no work in San Diego at all, you couldn't get a job, so I went up to Los Angeles, and I got work there, I didn't like it too much though..... I then got a call from Globe, Arizona. They needed someone up there.

Ed - What radio station was that?

Wayne - KWJB I believe... And I was there a short time, and the station changed hands.. and I was gone again! So I came to Phoenix, and I got a job right away at a radio store.. most of my work was installing mobile transmitters and receivers in police cars, as well as auto radios for people. Motorola radio, had the cream of the crop in radio transmitters and receivers. They had everyone beat for a while there.

Ed - From there you went to Jerome?

Wayne - Yea I had an application in, and they needed an engineer

Ed - Did radio station engineering pay better or did you prefer the work over the installation job?

Wayne - I preferred the engineering work; I thought I would like it better.....

Ed - What was the date that you went to Jerome to work at KCRJ?

Wayne - I was at KCRJ from May 15, 1941, to July 1, 1944.

Ed - Then 1944 was when KCRJ ceased operation?

Wayne -Yes that's right.

ED - When you arrived at the station, what exactly did you find? What was it like? Was it what you expected?

Wayne - No.... They had a dirt road running across from the old Black Canyon Road, in the mountains, but it was a shortcut instead of going through Prescott. It was a pretty rough road.....and I came around the curve you could see the whole town it was amazing.... beautiful... you could see Flagstaff Peaks.. the town it's self was quite exciting.. there were people on the streets day and night.... but the station did not amount to much!

Ed - Who owned KCRJ at that time?

Wayne - W.P. Stewart of Prescott owned it. He also published the Prescott Courier as well..

Ed - What the station and equipment like when you arrived?

Wayne - It was the only station the folks could get in the daytime up there, so we had a lot of listeners!

Ed - What was the power output of the station?

Wayne - 250 watts daytime and 100 watts nighttime.



Wayne Fernyhough and the Amperite RBM ribbon microphone. (Sept. 1989)

NEWS

When It Is News

9:45 a. m. Morning
News Hilites.

11:30 News to the
Moment.

4:00 Afternoon
Headlines.

6:45 p. m. Days'
News in Re-
view.

KCRJ -- JEROME

1340 KILOCYCLES

Ed - What hours was the station on the air?

Wayne - 8 o'clock in the morning until 9 in the evening.

Ed- You mentioned that you functioned there as an announcer there also in the evening?

Wayne - Yes, and I had special programs as well and also monitored the studio work.

Ed - Did you sell advertising?

Wayne - Oh sure!

Ed - Then you sort of had to do everything!!

Wayne - Oh! You had to do everything.. even write your own script!

Ed - How many were working at that station then?!

Wayne - When I started there was another engineer, there was a manager and his wife, and sometimes someone, a girl would come in and do some talking.... Talk shows... Just the four of us....

The manager would go out and sell the advertising, an his wife would do the book work and help write up scripts. There were two of us engineers that took care of the transmitters and took care of the board.....

Ed - When did the mines start to die out?

Wayne - They were digging out some real low grade ore at that time, they really needed anything that they could get due to the war. When they knew the war was ending.. they said the mine had to close. A great many of the miners.. all the active miners went with Phelps Dodge. Some went to Miami and some to Morenci....

Ed - So basically the towns real existence was just to house the miners then?

Wayne - That's all! The miners were paid real good wages and they were pretty good spenders also. The miners were loyal to the town so it was really a good little town... The school had football and baseball teams that played all over the state. They took a lot of the games too... they were good!

List of equipment used at KCRJ - Jerome

Transmitter - Composite crystal controlled, using one 802 Oscillator, one 802 Buffer, one 838 second Buffer, four 805's in parallel push pull as the final plate modulated stage. Two 805's are used as modulators. Two 866 rectifiers are used for the modulator power supply and two 866 for the final and buffer stage.

Frequency Monitor - General Radio Type 475-C

Modulation Monitor - RCA Type 66-A

Tower - Windcharger, 150 feet.

Speech Equipment - Composite, two microphone pre-amplifiers, two phono amplifiers and high level amplifier built in one rack.

Microphones - One Amperite velocity, one Turner Crystal 22X, one Shure 700-D.

Antenna Coupling Unit - Gates 21-A.

Turntables - Three Green Flyer Model D One RCA.

Console - Composite, Phono and five other Channels. 250 ohm

Monitor - Packard Bell Receiver.

Receiver - Hallicrafters, Sky Champion.

Remote Amplifier - Composite.

KCRJ, Cont..

Ed - When did you finally get the word that the station was to be sold? How did they present that to you?

Wayne - They had been telling me that they were going to sell the station.... They had suggested to me that I get a job at the mine.... I worked for about six months at the mine as well as at the station... I worked all sorts of shifts.. I never knew if it was day or night! It was rough!

Ed - They knew that the mines would close and time to sell the station while it was still worthwhile?

Wayne - Yes, All the equipment was obsolete.....

Ed - Tell me a bit about the equipment.. What type of tubes did it use?

Wayne - I believe it had 4 805's in it and two large tubes in the modulator....It was all composite.....The amplifiers were all composite.....

Ed - What do you mean by ``COMPOSITE''?

Wayne - Well.... just put together by someone...

Ed - Oh! you mean Home Brew! Garage Grown!

Wayne - Yes! It was pretty good equipment though, it never really gave us much trouble.

Ed - So you didn't have to have it type-accepted to put it on the air as you do today?

Wayne - Oh yes... Certainly you did,.....

Ed - They would built it then have it type accepted then?!

Wayne - It was pretty common in the early days but now the big companies have it sowed up now..... In those days all stations had to have a first class engineer on duty at all times..... About 1950, they changed that... smaller stations only had to have the engineer on call and the announcers could take care of the equipment, and that cut down on an awful lot of help!

Ed - But most announcers I have seen have never been very technically inclined...

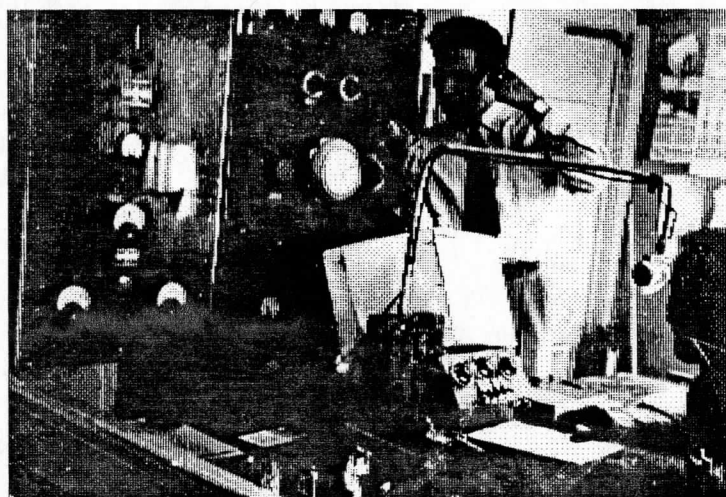
Wayne - Oh Geez! It was a big headache! They would never even attempt to learn anything at all!

Ed - When KCRJ closed was there both yourself and the other engineer there?

Wayne - He left six weeks after I got there! He claimed that due to health reasons he had to go to a lower climate, he said his lungs were giving him all sorts of trouble. Later I found out he went to Grand Junction, Colorado.

Ed - That's not much lower is it?!

Wayne - No! Higher! I think it is higher! He got a better job at twice the pay! About that time the manager was looking for another man to help me.. and weeks and weeks went by.... and he asked me if I would take the



Transmitter and Monitoring Equipment used at KCRJ - Jerome

whole shift!

Ed - That's 13 hours Wayne!

Wayne - That's seven days a week also, except on Sunday we would quit about 2 or 3 o'clock.

KCRJ, Cont..

Ed - Was the pay any better or did you just have to take the extra shift?

Wayne - Oh Yes, I got more money! Oh Yes! But if I had quit, I am sure the station would have quit.....

Ed - Did the manager understand how the transmitters worked?? Was he technically inclined at all?

Wayne - No! Not at all!

Ed -So it was all a mystery to him then!! You have mentioned that there were no schematics for the transmitter?

Wayne - No there was none of those.. there was no spare equipment either there was no supply house closer than Phoenix! Heh Heh!

Ed - Did you keep a stock of spare parts on hand at all?

Wayne - No we didn't!

Ed - What happens if you have a final go out?

Wayne - Well, there was usually a used one around you could throw in until you ordered a new one.... They didn't have any money to operate on... it was sort of a sketchy thing....

Ed - Sounds like quite an experience...Now finally they sold the station, who did they sell it to?

Wayne - They sold it to a man in North Carolina. He had a permit and a transmitter and all the equipment, but because of the war he did not have a frequency monitor and he had to have one before he went on the air... he paid a lot of money for a couple pieces of equipment.....

Ed - I would suppose some of the microphones would have been used also then?

Wayne - They were just little cheap crystal microphones... The turntables were not much either.. a couple green flyer motors to play transcriptions on....

Ed - What was the fellows name that purchased the equipment?

Wayne - Alston, W. J. Alston June 27, 1944.... I think that was before it actually went off.... Here is a list of the equipment that was used at the station...(Wayne then read it off the list reproduced in previous pages of this interview.)

Ed - How did you end up with the Amperite Ribbon microphone?

Wayne - I though it would be nice to have a piece of the equipment and it was no good to anyone, and it was all that I got... it was all I had room for!

Ed - Were you married at the time?

Wayne - Yes, When I left there I had a 1929 Plymouth Coupe, and I had everything I owned in there when I left to come back to Phoenix.

Ed - We are really glad that Lou Burke let us have this microphone for the museum here. It is nice to have for display!

Wayne - Yes it is!

PROGRAM SCHEDULE KCRJ - Jerome Arizon Tuesday - July 28, 1942

8:00 Spanish Program
9:00 Musical Horoscope (KBS)
9:30 Morning Devotional
9:45 Tune Tabloid (KBS)
10:00 Mary Lee Taylor (Pet Milk ABC)
10:15 Timely Events
10:30 Woman's Club of the Air
11:00 Treasury Star Parade (ET)
11:15 Musical Varieties
11:30 Morning News
11:45 Time for the Classics
12:00 Make Believe Ballroom
1:00 Ave Marie Hour (ET)
1:30 Western Serenade (KBS)
2:00 Anson Weeks Orch.
2:15 Talking it Over
2:30 Let's Dance (KBS)
3:00 Moments Musicale
3:15 Earl Hatch at the Vibriharp
3:00 The Esquires
3:45 Monitor News
4:00 Horace Hedot Orch.
4:15 Sexette from Hunger
4:30 Theatre Party (Valley Theatres)
4:45 Cal Shrum and His Rhythm Rangers
5:00 Milady's Melody (KBS Wilson's)
5:15 Toast To America's Allies (Acme)
5:30 Lum'n Abner (KBS Alka Seltzer)
5:45 Isle of Paradise (KBS Jone's Furniture)
6:00 Waltz Time (Krause-Herzberg's)
6:15 Dinner Music
6:30 Sun Down Shadows (Ragles)
6:45 News in Review (T.F.Miller)
7:00 Dan McKinney (ET)
7:15 Spanish Program
9:00 Sign Off.

KCRJ, Cont..

Ed - Where was the station located? Was it in the jewelry building?

Wayne - No, (reaching into his scrapbook) Here are some pictures of the station, and here is one of me announcing! Here is a picture of the back of it, there was room in the back there and that is where I would live.....

Ed - Is that your wife there by the door with you?

Wayne - Yes it is... This is the only picture of the outside of the station that I have been able to get. I have asked the people up at Jerome, but they do not have any.

Ed - Well Wayne, what happened when the big day came to move the station?

Wayne - Well, we had everything packed, and I do mean everything! They built a big wooden crate for the transmitter.

Wayne then showed me several documents that were the orders from the new owner that he was exercising the option to purchase the station and that he wanted every thing packed up, including the ground rods that were not buried too deeply! This is of course understandable due to the critical materials shortage that was common place during World War II. Everything was at a premium in those days!

Wayne told us that it was easier to set up a radio station in the early days, as small towns really welcomed radio broadcasting in their area. The station became the nerve center of the town, and in Jerome when a cat would get lost, there would be announcement about it on the radio!

We also discussed the fact that many AM stations are in poor financial shape, and perhaps in the future that some of the neat old radios from the 20's and 30's may not have any stations to receive. Wayne also stated, that perhaps in the far future

that all programming will come out of one central source. Although this sounds perhaps a bit Orwellian, We will have to wait to see what the future brings ...when it happens.... --EAS

McCarty Wireless Telephone Company



We are looking for any info relating to the
McCarty Wireless Telephone Company.

Please call us or drop a letter if you have any
material relating to McCarty.

Southwest Museum of Electricity
and Communications
2224 W. Desert Cove #205
Phx. Az. 85029 (602) 861-1388



Wayne Fernyhogh and his wife at the back door entrance at KCRJ

OFFICIAL EXAMINATION FOR APPOINTMENT OF AUTHORIZED MASTERPIECE
INSTALLATION EXPERT

[Member Norm Braithwaite was kind enough to pass along a copy of the test servicemen had to take to become McMurdo-Silver Masterpiece instalers. We are making this into a contest. Answer the questions (based upon the technology of the time-1930's) and send your answers to: CHRS Contest, 25 Greenvew Ct., San Francisco, CA 94131 before 1 December 1990. Only the first twenty six questions will be graded. The one who answers the most questions correctly will win a year's free membership in CHRS. If you have already paid your dues for 1991, then 1992 will be free.--Ed.]

(Answer each question completely)

1. State Ohm's Law. A. Given either voltage, current or resistance can you find the other parts of the formula?
2. How do you find the total resistance of three resistances in series? in parallel?
3. Give the general laws covering currents and voltages in series and parallel circuits.
4. What is the difference between Ohm's law for alternating current and direct current?
5. What is the difference between peak and effective A. C. voltage?
6. Give the three equations for power consumed in a circuit.
7. How do you connect an ammeter and volt meter in a circuit and why?
8. Why do you use a high resistance volt meter to measure the voltages in a radio set?
9. What kind of meter can be used for an output device and where is it placed in the circuit?
10. A. How can you tell whether a paper condenser is any good without the use of a meter?
B. When using a meter?
C. Can an electrolytic condenser be tested that way?
D. Is an electrolytic condenser a polarized condenser?
11. What three main sources of hum do we have to contend with in an A. C. receiver and where do they originate?
12. What instruments do you need to properly align and test a superheterodyne?
13. In what way does the super excel the old tuned radio frequency receiver?
14. Why is 10 kc. selectivity considered sufficient for present day conditions?
A. Is greater selectivity desirable, and why?

15. Given the plate current of a tube and the proper bias voltage required, how do you find the resistance necessary to insure this bias voltage being placed on the cathode?
16. What does the amplification factor of a tube mean?
17. Upon what portion of the plate grid voltage - plate current curve does a tube act as an amplifier? detector? oscillator? [grid bias? ed.]
18. At what load impedance does a tube develop its maximum gain?
19. Where is most of the selectivity of a receiver?
20. A. What distance range constitutes good daylight broadcast reception?
B. Why is reception so much better at night than during the day?
C. Is the above true for all frequencies used at the present time?
21. If a set is absolutely dead what is the quickest method to determine what circuit is defective?
22. When a set starts to hum badly what is usually the cause?
23. What is the best method to kill oscillation in a receiver?
24. Why don't we have to neutralize each stage in present day receivers?
25. Why do we use insulation on an aerial?
26. What is the best type of an aerial for DX reception - for both high and low frequencies?
27. How old are you?
28. How long have you been interested in radio?
29. How long have you been connected with radio commercially?
30. In what capacities?
31. What radio magazines do you read regularly?
32. Are you a dealer?....serviceman?....experimenter?....
33. What is your place of business: Store?....Shop?....Home?....
34. If engaged in the radio business, where does your business come from?
35. What radio sets have you sold in the last year - quantity and makes?
36. How do you intend to get business?
37. In what way can I best assist you in selling the Masterpiece?

CLASSIFIED ADS:

WANTED: World's Record (1925-1927), Scott Transformer Co, (1928-1930) and E. H. Scott (1931-1941) radios and literature. Jim Clark, 1292 Starboard, Okemos, MI 48864. (517) 349-2249.

FOR SALE: 1950's console Stromberg-Carlson television in excellent physical and working condition. Betty Nichols, 1525 Carlton Ave., Modesto, CA 95350. (209) 529-0848.

FOR SALE: Jackson-Bell "Peter Pan" set in excellent cosmetic condition; plays fine. \$800 plus shipping. Paul Wood, 274 College Ave. Apt. A, Palo Alto, CA 94306. (415) 324-2343.

WANTED: Will pay TOP DOLLAR for the following CONSOLE radios! Zenith 6S593, Zenith 8S594, Philco 42-1013 and Philco 42-1016. Also need Hammarlund schematic book. Still looking for a coil winding machine. FOR SALE: Custom Radio Restoration Kits. Dan Healy, P. O. Box 764 Woodacre, CA 94973. (415) 488-4596.

WANTED: General Radio 3" diameter black dial with numbers from 0-100 counterclockwise. Also General Radio open frame audio transformer with good windings. Paul Bourbin, 25 Greenview Ct., San Francisco, CA 94131 (415) 648-8489.

FOR SALE: Large accumulation of radios, parts, tubes, books and related materials. Individual pieces. Cliff Berthelsen, P. O. Box 1096, Merced, CA 95341 Call (work) (209) 722-4113 or (home) (209) 723-7026.

WANTED: Become rich and famous. Write articles, notes, tech tips, restoration hints, radio reminiscences, 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 to: Bart Lee, 327 Filbert Steps, San Francisco, CA 94133.

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 St., Plymouth, MI 48170

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 & ABC and Echophone EC-1 "Skyrider, Jr." (not EC-1 "Commercial") receivers. Bart Lee, 327 Filbert Steps, San Francisco, CA 94133 (415) 788-4072.

WANTED: Still looking for some WWII military radios, controls, power supplies, parts, manuals accessories etc. Particularly looking for a WWII Navy transmitter ATB and the manual for it, and the companion receiver ARB. Also looking for mint Viking Ranger II and HRO 60. I have some excess WWII stuff to sell also. Henry Engstrom, P. O. Box 5846, Santa Rosa, CA 95402, (707) 579-2070

FOR SALE: "Legacies" Trash and Treasures - A new shop featuring antique radios and related collectables. Located at: 101-C East "H" Street, Benicia, CA 94510. Hours are Thursday through Saturday, 1-5 PM and by appointment. For more information contact owner David Ryan at (707) 746-7832. While you are there, stop by member Jim McDowell's Home Video Service right next door. This is one of the few places where you can bring in your old radios, TV's, Jukeboxes etc. as well as

your modern TV's, VCR's etc. to be repaired. Call Jim at: (707) 746-5557 for more information. To get there, take the East 2nd Street exit after crossing the Benicia Bridge to "H" Street.

WANTED: Information on early transistor development. Want books, artifacts, notebooks, and to converse with those involved with early development of transistors. Also want Bell Labs "Record" magazine. Memos, journals etc from any company directly involved in transistor development. Also interested in early satellite development. Ed Sharpe, Southwest Museum of Electricity and Communication, 2224 W. Desert Cove Rd. Suite 205, Phoenix, AZ 85029 Home: (602) 247-9420 or 979-2339; work (602) 861-1388.

URGENT
DATED MATERIAL

163068,
Архангельск 68,
аб./яш. 47
МАТВЕЕВ С.Н.

June 26th 1990
Box 47, Arkhangelsk 163068 USSR

From the desk of Serge Matveyev, UA10SM.

Dear Henry,

Have read about you in the journal of CA historical radio society.

I am electronical engineer and short wave amateur, age 40. My wife is an amateur too, former mil. CW operator profi.

I love some ancient rigs too, collecting them and saving from devastation. Our first ham radio equipment was American lendlease AR88F, BC610, V100B.

I am holding at home some units now like AR88LF, BC312, V100B, Russian BC348.

I wonder if you are interested in them, so you can take them if yes. I have also medium wave range receiver of RBMV, CAY-46076A.

If you do not especially care of them, so you may specify what interest for you is particularly important in Russia.

I can supply you or any guy interested with some pieces of Russian gear of period 1950-nowadays, the short wave receivers mostly, becuz xmtrs are enormously heavy.

If you would wish to look on our country and gear of radios by your own eyes, it is the time now. I and my wife can invite you to get into USSR, it is easy with airplanes to Moscow and Leningrad and then one hour and USD 4.00 ticket to us to fly.

Our interest is swap or trade for contemporary amateur short wave transceivers of ICOM INC. or TEN-TEC.

If you need some pictures for info, specify, please.

Best wishes and health,

Very fondly 73

Serge

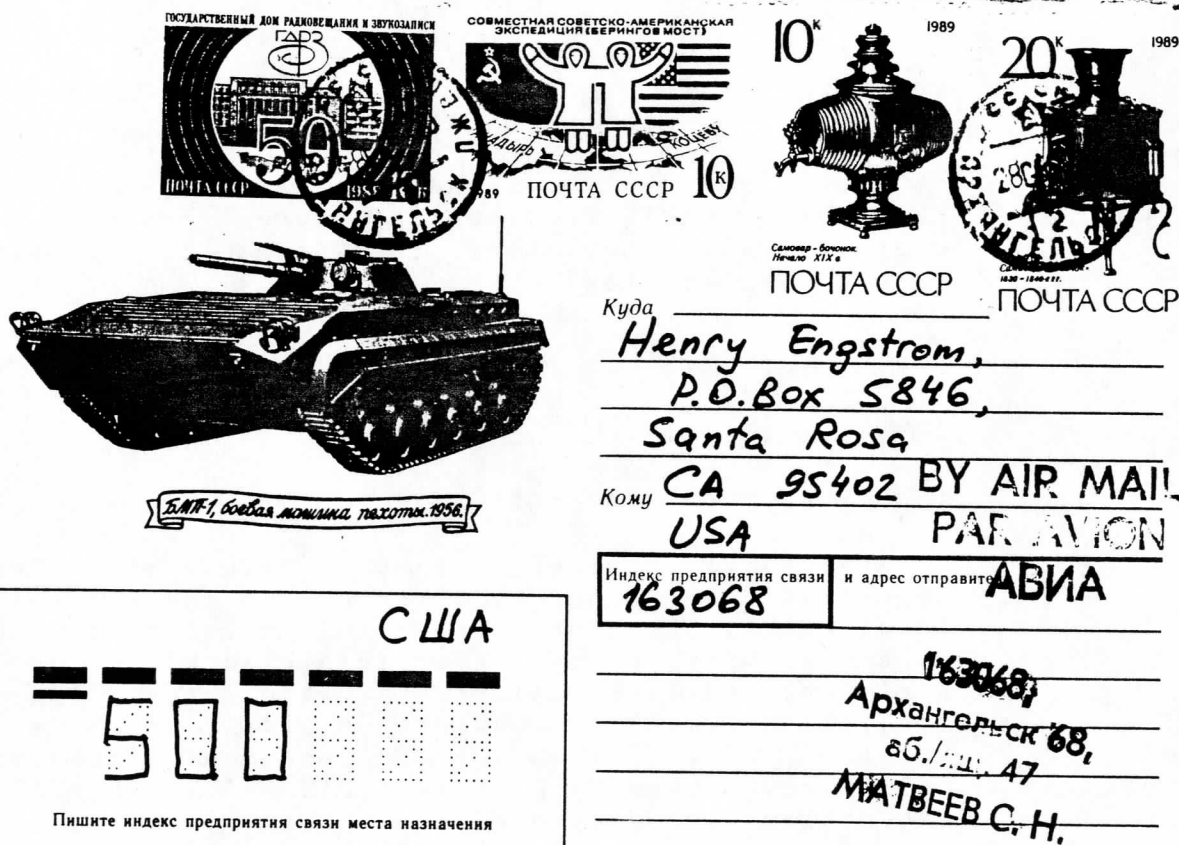
Serge Matveyev (Matthews)
UA10SM, SM0/UA10SM.

GLASNOST:

The letter on the adjoining page and its envelope (below) were received by member Henry Engstrom who wonders how our CHRS Journal found its way to the Soviet Union. It is printed here since the Russian correspondent seems to be extending the offer to whomever may be interested.

Isn't it nice that our hobby is so universal, and somewhat oblivious to any particular country, religion or color?

The envelope is shown also because of all the interesting items decorating it, other than postage stamps.



ANTIQUE WIRELESS ASSOCIATION 1990

This year's meeting of the A.W.A. featured the life and work of Major Edwin Howard Armstrong. The banquet presentation of a slide show, and narrated story of his life, was moving and thought provoking. Armstrong developed regeneration before the first World War, the superheterodyne during that War, super-regeneration in the 1920s, and frequency modulation in the 1930s and 1940s. He died despondent, but his wife carried on litigation that vindicated him.

At the AWA auction, again cheers broke out when a Catalin failed to sell. An Atwater Kent 4445 breadboard went for \$700. A Leutz 7 tube super brought \$1,100. A Radio Craft MR6 (looking like a deForest Unit Panel) sold for \$1,500. A deForest Audion brought \$375. Most deForest gear and parts seemed to sell at a premium. Early crystal sets commanded premiums as well, bringing between \$350 and \$650. The general auction raised \$30,000.

The communications receiver auction saw some SX-28s go for little. Some beautifully restored Hallicrafters sets did not bring minimum bids.

Next year's A.W.A. theme is David Sarnoff, the great promoter of radio and radio's greatest promoter (-- no, he did not really copy either the Titanic or the Carpathia!). (Report by Bart Lee). ##

FOR YOUR LIBRARY

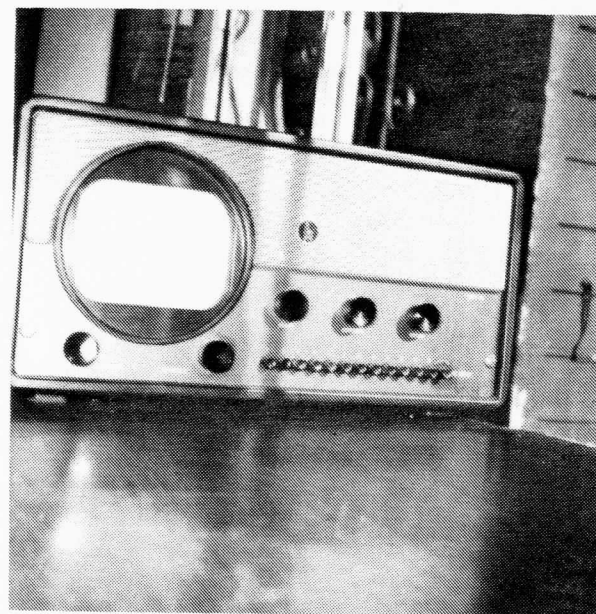
CHRS RECOMMENDS THESE BOOKS:

FROM RECEIVER TO REMOTE CONTROL: THE TV SET. This new book about the television, as an object in the American home and imagination, has just come out in connection with an art museum show of the same name in New York. The book's articles and illustrations are quite interesting, especially for anyone tempted to collect an old TV or three. Available for \$20 (+\$2 S&H) from The New Museum of Contemporary Art, 583 Broadway, New York, N.Y. 10012 (212) 219-1222. The exhibition will continue to November 25.

VISION BY RADIO Radio Photographs, Radio Photograms (1925). Lindsay Publications, Bradley, IL 60915. This reprint shows Jenkin's work towards what we know today as the FAX machine. Jenkins was also an early television pioneer. \$12.95 (+1.50 S&H).

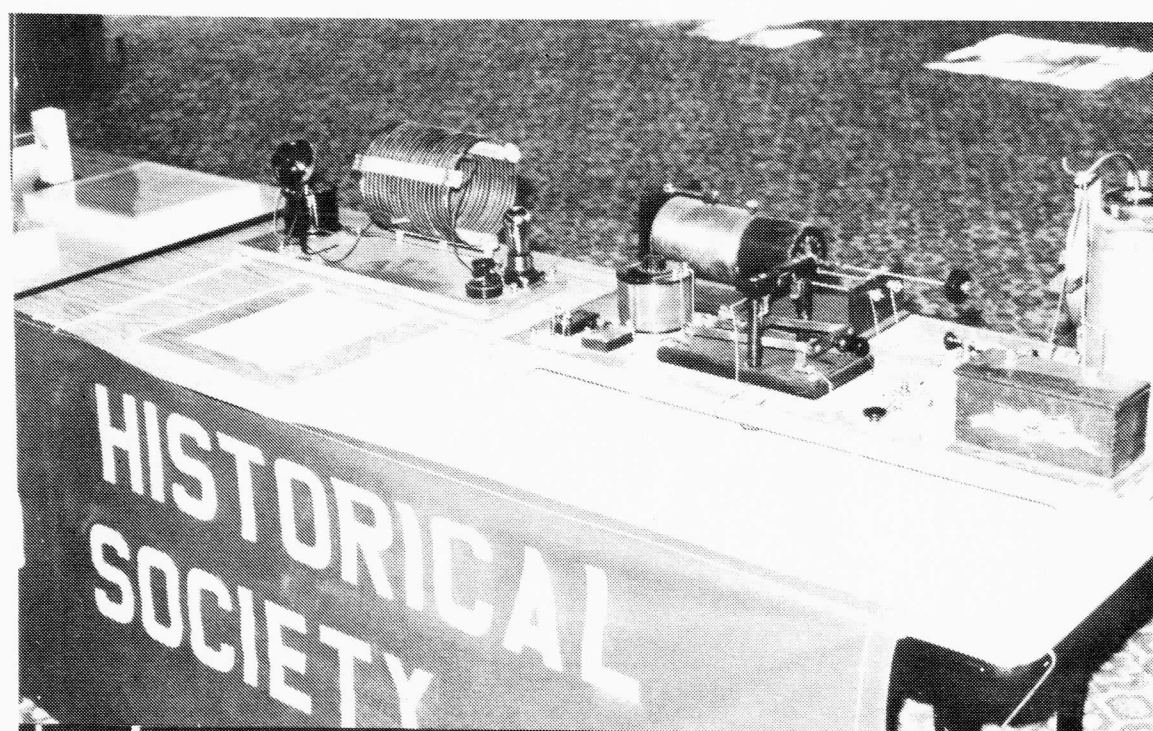
UPCOMING 1990 C.H.R.S. EVENT

REMAINING FOOTHILL MEET FOR THE YEAR: November 10. Mark your calendar and invite your friends.



HALLICRAFTERS T-54 (1949)

Why is this man smiling??



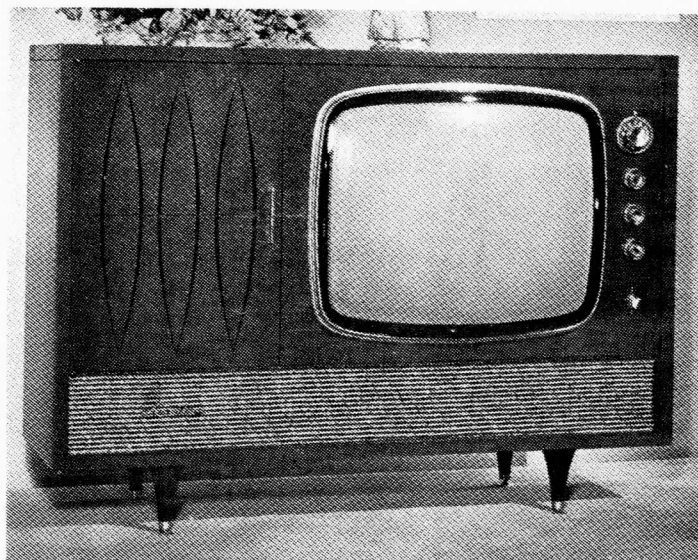
CHRS display at opening of Marconi Center.

NOTICE

from

**CALIFORNIA
HISTORICAL
RADIO
SOCIETY**

Your Subscription
EXPIRES
with this issue
!



The SPARTON 3-way "Imperial"
(#23K4C)

23" TV chassis plus separate AM radio/Hi-Fi
Stereo chassis with automatic record changer
— TV, Records and Radio in one deluxe
"Designer Series" genuine wood cabinet.