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A BENEFIT FOR
THE CALIFORNIA
HISTORICAL RADIO
SOCIETY
CELEBRATING
100 YEARS OF
RADIO
BROADCASTING
IN THE
SAN FRANCISCO
BAY AREA



LIVE! AT KRE 2009

A BENEFIT FOR THE CALIFORNIA HISTORICAL RADIO SOCIETY
CELEBRATING 100 YEARS OF RADIO BROADCASTING IN THE SF BAY AREA

SATURDAY JULY 18TH 10AM TO 3PM GATES OPEN AT 9AM AT THE HISTORIC KRE RADIO STATION BUILDING 601 ASHBY AVE BERKELEY ENTER ON SHELLMOUND S5 DONATION CHILDREN FREE

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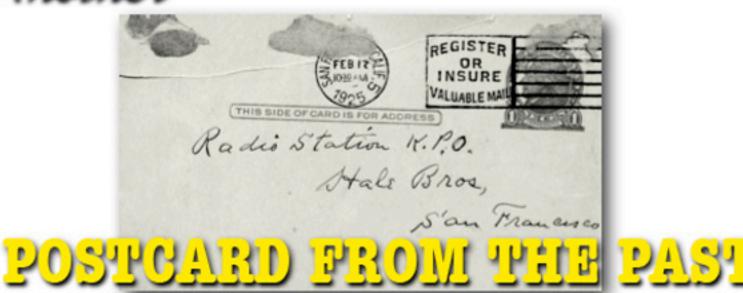
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In the previous Signal, Lew Doty took us on a tour of radio's early days with a family postcard from the 1920s. Sent from a radios station on Catalina Island, this postcard prompted Lew to research the fascinating history of a pioneer broadcaster. After reading Lew's article, CHRS member Tom Harris sent along this postcard. Tom explains.

Rod.

My wife's grandmother, Mrs. P. H. Allen, (Joelle) was a Sorbonne trained artist. She was a painter, soulptor, violinist, pianist, and singer. I met her years ago; quite a lade was "MeMe", from San Francisco polite society.

This postcard is to radio station KPO regarding her singing solos for the Community Chest on February 16, 1925. This was pretty early stuff for radio.

As you all probably know, KPO was in a studio at Hale Brothers Department Store. At the time Joelle sang, it was running 500 watts on Western Electric gear on 700 kilocycles. The station eventually became KNBR. More information can be found at HTTP://www.oldradio.com/archives/stations/sf/kpo.htm

Tom Agris, Petaluma

Will you présent my compliments and thanks to Mrs. Thrank Howard allen for her déligitul solos tomight for The Community Chest-own K. P.O. .

Mrs. alleus beautiful voice mas especially appealing in The California Especially appealing in The California Lullaly " Bélière me Very getely,

1546 Ellis St, San Francisco. Chas. P. Rowley

HIGH GAIN RECTIFIERS?

John Staples, W6BM

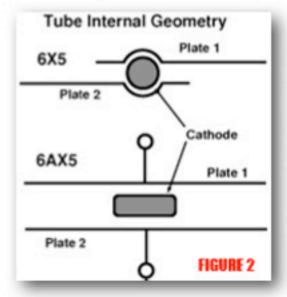
Yes, you read that right. Under certain conditions, some rectifiers can be made into amplifiers. Here, I describe results obtained with some rectifiers obtained from CHRS's tube stock.

First, a little history...

A number of vacuum tube manufacturers devised ways to get around the DeForest patent of the

gridded triode, resulting in a number of unusual designs, such as the Weagant external-grid triode, and the Moorhead "solenoid tube", shown in Figure 1. In 1926 Berkeley ham radio operator Ralph Heintz with colleague Jack Kauffman formed a company that provided radio equipment exclusively to the Dollar Steamship Lines. Wary of fights with RCA, who now held the key patents, they developed the gridless "Gammatron", a high-power transmitting tube that substituted an electrostatic electrode for the control grid. The tubes had low gain, but they worked and proved to be very rugged. A pair of HK255's could provide 2500 watts of audio in a push-pull circuit with 5 kV on the plates. Later sold to amateur radio operators, they survived operation with the plate running white hot.





The Gammatron configuration never caught on, but there has been a buzz of activity lately about using common types of full-wave rectifier tubes in the Gammatron mode. The 6AX5 and certain 6X5 rectifiers are

built with the two plates closely facing each other, as shown in Figure 2. This geometry, similar to that of the original H&K Gammatron, can provide a significant amount of gain. A complete AM transmitter is described, including a schematic, by

K2GLO in the *Tube Collector*, Volume 8, Number 1, comprising an oscillator, modulated final amplifier, and audio ampifier chain, using 6AX5 full-wave rectifiers.

At a recent CHRS tube sorting operation, I selected some 6AX5 and RCA 6X5 tubes and tested them for Gammatron performance. Figure 3 shows the construction of the 6AX5 from the side: two anodes facing the cathode.



For these tubes to operate in the Gammatron mode, they are operated in the emission limited regime. This means that the cathode temperature be low, limiting the electron emission. At full temperature in a conventional gridded tube, the quantity of electrons emitted from the cathode forms a space-charge cloud which shields it from the electrostatic potential of the grid. In the Gammatron mode, the amount of electrons coming off the cathode is small enough to prevent this shielding action, so a nearby (Gamma) electrode can modulate the current to the plate. Running the heater at a lower than normal voltage puts the tube into the emission-limited regime.

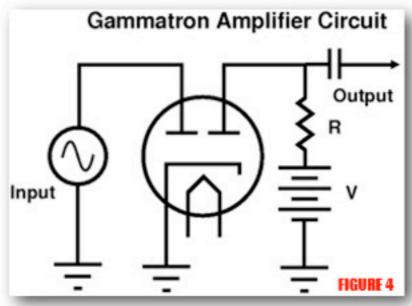
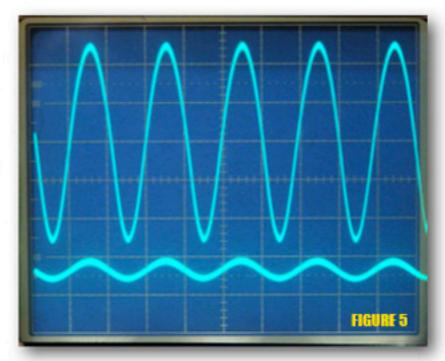


Figure 4 shows a simple test circuit. A Wavetek function generator provides a sine-wave input signal, as well as a variable d-c offset (bias). The heater is excited by a 6.3 volt transformer from a Variac. The signal output is developed across the plate load resistor R and is observed on an oscilloscope through the decoupling capacitor. Both 6AX5's and 6X5's were tested: they have the same pin-out arrangement.

The 6X5 had the highest gain. Figure 5 shows the input and the output signals on a scale of 0.5 volts per division. The highest gain of 10.9 (21 dB!) was obtained with a plate supply of 200 volts, a load resistor of 750K ohms, 1.72 volts a.c. on the heater and a plate current of 0.21 mA. The adjustment of the heater voltage is critical to achieve Gammatron operation.

A gain of 21 dB is almost what one could expect from a conventional amplifier circuit using a 6J5! Danial Stocks, in the *Tube Collec*tor, Vol 10, No. 6, tested several Raytheon and Tung-Sol 6X4 7-pin miniature full-wave rectifiers with the Gammatron plate geometry, finding maximum gain from 2.9 to 11.4 over a selection of 19 tubes.

This exercise recreates a bit of history, showing that the concept was workable, if not practical, due to the critical adjustments and wide variability of tube characteristics. The Gammatron configuration had insufficient

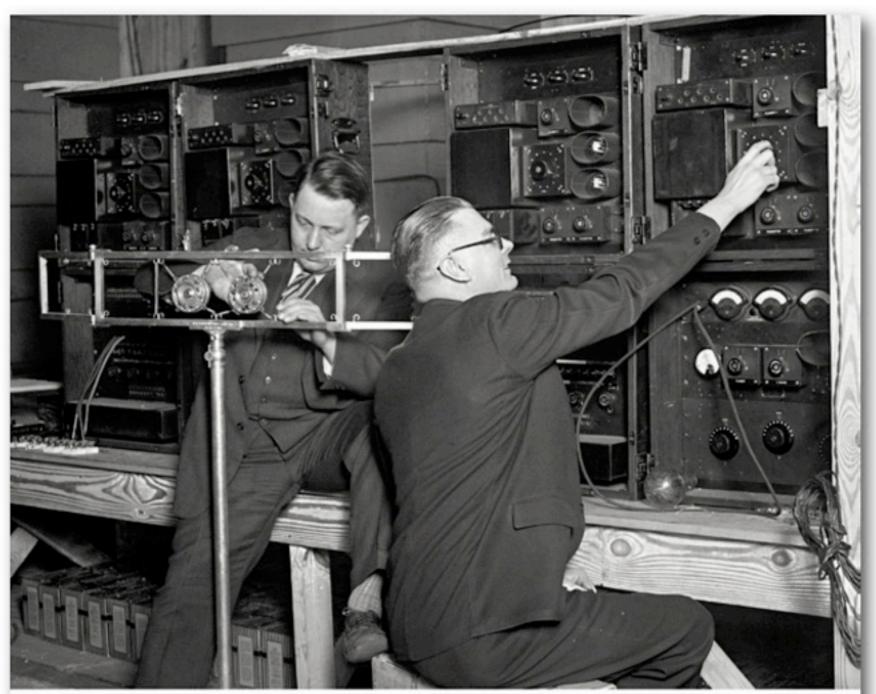


gain for many applications, and the patent disputes with RCA were finally settled. H&K entered into a famous court suit against RCA, where they proved to the court that their tubes could

indeed amplify, and RCA abruptly dropped the lawsuit. This story is related in lurid detail in the Al Jones Tube Museum video, available through CHRS.

One can find additional information on H&K, the Gammatron and other recent demonstrations of Gammatron operation on the web by Googling "gammatron".

John Staples, W6BM, is a CHRS board member, and trustee and licensee of the W6CF ham station. He holds Amateur Extra and First Phone / Radar licenses, both issued in 1958, and a Ph.D. in nuclear physics, developing particle accelerators and laser systems at the Lawrence Berkeley Lab.



Gosh, I love the smell of white-hot Gammatrons in the morning!

SILENT KEYS

We are sad to report the passing of CHRS member James O. Coleman. Jim passed away unexpectedly on May 11. He was only 61. CHRS sends our condolences to the Coleman family. Jim was the consummate restorer and left behind a fabulous radio collection. CHRS is grateful to Jim's brother and sister, Bill Coleman and Louise Coleman-Brown, for their donation of 60 beautiful radios to our CHRS Museum collection. The Coleman family also donated 175 boxes of "project radios" and all of Jim's restoration materials. They also consigned over 650 radios to CHRS for sale. We will be auctioning 125 of them on July 18th. CHRS wishes to express our sympathy to the Coleman family for their loss and we wish to thank them for their generous donations in Jim's memory. Please enjoy this article, written six months before Jim's death by freelance writer Brad Eastland.

MEET THE MERRY MAVEN OF RADIO RESTORATION

Jim Coleman of Rowland Heights and Oakland Keeps a Bygone Era Alive With His Pursuit and Collection of Antique "Tube-Style" Radios.

by Brad Eastland, freelance writer

You would never know it to look at him...

You would never know that James O. Coleman, age 60, a quintessentially normal-looking man and conservative Please enjoy this article, written half a year bofore Jim's lunatic) who has--over the course of the last thirty-five years---managed to collect over 1,000 antique radios.

But he is and he has. And he pursues this passion with a pure heart and a desire to preserve the best of what has come before him.

"The antique radio, for me, is a form of industrial art," says Coleman, who I interviewed recently at his office at the Executive Inn & Suites hotel in Oakland, where he is the General Manager. (He is also Director of Operations for his ownership's sister hotel, the Best Western Executive Inn in Rowland Heights, which is only twenty miles due east of downtown Los Angeles.) As he answered questions regarding the great passion of his life, surrounding us everywhere---on the floor, shelved on walls, and stacked on tables---were exactly 173 of the over-1,000 radios he has assiduously and lovingly hunted down and procured since the early 70s. "Radios are unique in that a radio from the nineteen-thirties can work and sound as good and in many cases better than the newest radio. And my favorite radios, the ones with tube sets powered by a transformer, have a richness and warmth to their sound that is so comfortable and reassuring in our modern world."

It is a "modern world" that in many ways he has no use for. This reporter has known Jim Coleman since the mid-seventies, when I was but a callow youth going to college up in Berkeley. From the first, I perceived Jim to be a true throwback, old fashioned right down to his core and dedicated to all things off-beat, past-tense, and nostalgic. His favorite singer is still Nancy Wilson. She's 71. His favorite TV show is still the Mike Connors detective yarn Mannix,

which went off the air in '75. An accomplished rider, he still reads English "hunter seat" equitation magazines. And among the many old VHS tapes he has collected over the years (yes, I said VHS; no DVDs for this old-timer!) are reruns of dusty old shows like Mr. and Mrs. North and The Avengers; shows so old that I doubt most readers of this magazine have even heard of them.

And in an effort to preserve his roots and attach a tangibility to his passions, Jim has always collected things. Old things. Case in point, he owns 83 antique "Emeralite" desk lamps. Those are the cool old lamps with the green shades. An old car freak, he once owned as many as seven classic Buicks and Pontiacs from the 50s and 60s. (Come to think of it, I still have a couple of his broken Pontiac axles stuffed under the crawlspace of my house in Sierra Madre.) But of all the ancient subjects of his various collection manias, the antique radio has always maintained the strongest grip on his heart.



The late Jim Coleman with some of his lovingly restored radios

So how did Coleman get into radio collecting?

"I started collecting when I was eleven years old. Because that's how old I was when I was given my first radio. It was a Zenith."

Like most good collectors, Coleman is quite particular when it comes to epoch and style. He specializes exclusively in radios built between 1931 and 1962, and only collects "tube" powered radios you plug into a wall, rather than cord-free transistors. "It was the early thirties when tube radios switched from battery power to plugging a cord into an A/C outlet, and it was in the sixties when the tube style died out in favor of the transistor radio," explains Coleman, though he clearly is anything but in favor of this evolution.

Since Coleman's job requires him to shuttle back and forth between Northern and Southern California, he maintains a two-region support network for his radios: "I bought my first radio in 1972 from John Wentzel of the Aladdin Antique Radio Shop in San Francisco. John is still alive, he's eighty-six, and he still makes repairs for me and helps me with my restorations." When he's in L.A., Jim employs Jerry's Vintage Radio in Canyon Country for his repair and restoration needs.

And I can tell you it's absolutely true that Jim has collected and currently owns over 1,000 antique radios.

Because I've seen them all. In addition to the 173 aforementioned plug-in tube style radios that adorn his Oakland office he also has close to 200 radios awaiting restoration in his Rowland Heights apartment, as well as about 680 fully restored pieces crammed into his live-in apartment at the Oakland hotel he manages. Some are wood, some are plastic. All are beautiful. To stand in his apartment amidst nearly 700 beautiful, meticulously restored antique radios occupying every wall, nook, and cranny of his living quarters---including the bathroom---is nothing short of breathtaking...

The financial aspects of radio collection can be equally breathtaking. "You remember my big RCA model 816K floor console? It's worth about thirteen hundred. It's one of only two floor consoles I own, all the rest are table radios about the size of a breadbasket," says Coleman, walking over and then leaning on the gorgeous, waist high, Roosevelt Era radio in question. Of course I remembered it. Jim allowed me to display this remarkable piece of Americana in my own home for over fifteen years, before finally repossessing it so that he could restore it properly.

"This baby was built in nineteen thirty-seven," he adds proudly. "Anyway, I bought it from a guy in Silverlake in the mid-eighties for only a hundred and fifty bucks. Not a bad investment!"

So then I finally asked him what the average value of his radios is. He told me about \$100 dollars. That's \$100 times 1,000. "Yeah, I guess I own over a hundred thousand dollars' worth of radios," he concluded sheepishly, perhaps a little embarrassed by the math.

Coleman obviously considers radio collecting a rewarding and sociable hobby, and believes that Southern California is as good a place as any for the aspiring collector to get started. "You can meet wonderful radio people all over L.A., at the Rose Bowl Swap Meet, the Pasadena City College Swap Meet, and the Long Beach Swap Meet," he says. "Great people, great sellers and collectors. It's a little fraternity in and of itself. And there is also a good website you can use to learn about this stuff, namely www.antiqueradio.com; the website of the Antique Radio Classified magazine. It's a good magazine, a great place to peruse ads for service and repair, get flea

market and swap meet schedules, read articles, check out photos, absorb radio history, everything."

And to top it all off, Jim is an active, participating member of a local radio club; the Southern California Antique Radio Society. Or SCARS for short. This is a man who knows his business. Any wonder I call him the merry maven of radio restoration?

Ironically, considering all the beautiful, expensive table radios Coleman owns and has restored over the years, his most prized possession from the radio world is only six inches tall and is not even of the tube style. "That Zenith I told you about that I got when I was eleven? It was given to me by my mother. But like any dumb kid, I managed to lose it," he reveals with a high, cackling laugh. Coleman's beloved mother, Ginny Coleman, a sweet, sassy spitfire of a woman with a ready laugh to match her son's, passed away in 2007: "It was a Zenith Royal 500 model. Several years ago I picked up another Royal 500, exactly like the one mom gave me, the one I lost when I was a kid. It's a transistor. It's the only transistor radio I own. And it's the only radio I'm sure I'll never part with."

That's Jim Coleman for you. Like all true collectors, sentimental to the end.





Steve Kushman and Jaime Arbona were among the CHRS volunteers who spent many hours cataloging and photographing the Coleman radios



BUSY SPAINETIME AT KAE

On April 4th Jerry Cantou gave an interesting talk on Japanese shirt pocket transistor radios of the late 1950s and the '60s. His focus was mainly the "Marvel" brand radios of which he brought many fine examples.



Jerry Cantou shares his knowledge of Marvel transistor radios





An impressive display of the many models of Marvel transistor radios



Ben Koning tells about "A Tale of Sunnyvale"

June 6th, we were very pleased to have Ben Koning speak to us about the making of his film. "Echos of the Past: A Tale of Sunnyvale". He then showed the film about the Echophone radio, which was very well done with great re-enactments and effects. By the way, we had a great swap meet before the talk. Well attended with many sellers and many radios.



Happy buyers at June 6th swap meet at KRE

HISTORIAN VISITS KRE

On April 4th, radio historian John Schneider was given a tour of the KRE building by CHRS members Steve Kushman, Scott Robinson and John Staples. Many of you know John through his

Radio historian John Schneider tours the KRE facility

fascinating and extensive website devoted to radio history of the bay area.

Shortly after John's visit, he sent us a KRE sales brochure from around 1937. We are grateful for this gift. It will become a central display in our KRE museum.

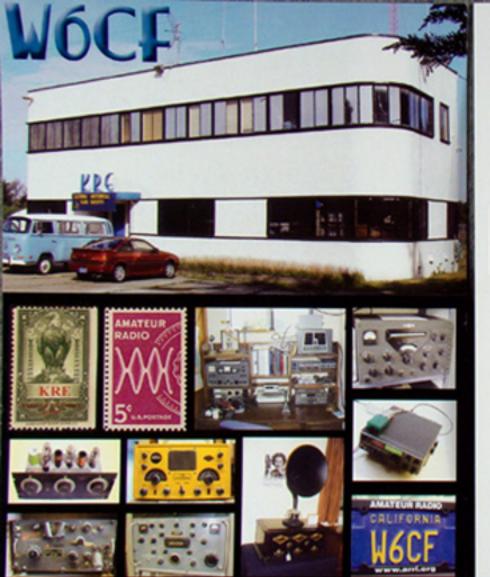
Mr. Schneider's website, Voices Out of the Fog features detailed articles about all aspects of broadcasting history in the bay area. There is an excellent article about KRE.

There are hundreds of photographs to be seen. You can find all of this at:

http://www.sfradiomuseum.com Allow yourself plenty of time,







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> California Historical Radio Society Save Kushman, President Mke Adame, Chairman

USA San Francisco CA 94131 DOSX 31659



Operating from the historic KRE radio station building, Berkeley California, 37° 50′ 58″ N 122° 17′ 48″ W; Grid: CM87

James Maxwell Memorial Amateur Radio Station

W6CF

W6CF/B - 28.2045 MHz (24/7)

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

http://www.californiahistoricalradio.com . PLEASE JOIN CHRS !

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There are QSL cards and then there are QSL cards
QSL cards
Thanks to Bart Lee for donating 1000 of these cards which he and our Amateur Radio Committee designed

KRE WELCOMES GROUP TOUR



Retirees from Diablo Valley College arrive for tour

April 4th was a busy day at KRE. Not only did John Schneider pay us a visit, we also hosted a tour of 32 retirees from Diablo Valley College. Professor Melissa Jacobsen of DVC is developing a ciriculum for an upcoming class on various aspects of life in the East Bay during World War Two.

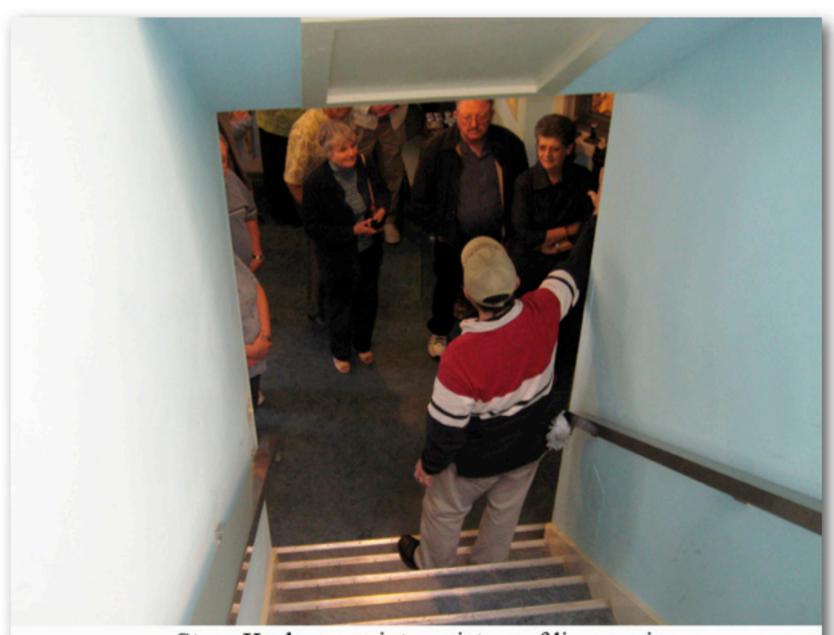
Ms. Jabobson describes the project: "What I am doing right now is documenting historical sites that were prominent during the 1940's. Once my initial research and photography is done, I will create a new online California Travel Study course. Diablo Valley College already has a number of these courses, such as "In Pursuit of

Jack London" or "Historic Sacramento." Students take these courses, often in conjunction with California History -- which I also teach -- for 1 unit of credit. I would like the KRE property to be on my course website, which means that Diablo Valley College students will learn about the historical nature of KRE particularly during the 1940's. And because I teach California History, I would also like to encourage my students to visit the KRE museum when it is open and to help out with the various volunteer days as part of an on-going educational relationship."

We are delighted to see our concept of KRE as a museum and learning center continue to take shape. The tour was a success for all and we hope to have more such events in the near future.



The crowd is regaled by tales of water coming up and antennas coming down



Steve Kushman paints a picture of live music being performed in Studio A











Art Deco style Marconi radio donated by Gilles Vrignaud



Robert Swart trying for "boxes in VW" record. This just a small part of the over 600 boxes comprising the Jim Coleman collection



This place is for the birds! In the last Signal we mentioned George and Gracie, our two resident geese. This wild turkey must have read that and wanted to check the place out!



KRE gets the blues. CHRS volunteers bring building closer to the original deco-nautical color scheme

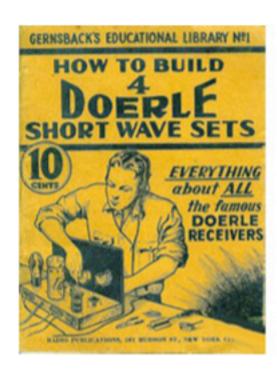


It's always something. This spring we had a lake on top of KRE



Elsa Trexler and Larry Drees pack up one of the hundreds of boxes of Coleman radios to be sold at auction by CHRS







This vintage Sailor marine band tranceiver, made in Denmark, was donated by Greenpeace and presented to CHRS by Richard Dillman





Treasure to be found at the May 2nd Foothill swap meet











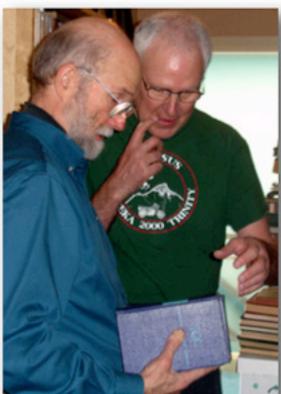
A "digital-ready" TV at the Citrus Heights swap meet



Early birds at the June 6th swap meet at KRE



There's your problem! John Staples helps Rod Wentler with an eBay purchase. This kit was put together wrong over fifty years ago!



Scott Robinson and John Staples ponder a tome in the evolving Maxwell Library at KRE



This month's "Spot the Mower" contest





Things are coming along nicely at your favorite vintage radio Society. **CHRS** continues to draw interest from new people who have discovered us. Most of them are becoming members and some are actively volunteering. Thanks for your participation.

The agreement for CHRS to purchase the KRE building and grounds has been put on hold for now by the owner, Inner Cities Broadcasting Co. They asked CHRS to check back in 6 months. Stay tuned.

The building and grounds continue to improve. We are going back to the original exterior colors of the KRE building as described by people who worked there in the 1940s. To go with the nautical style of the building, the trim color is now being painted a beautiful blue. This color blue paint happens to be called "Jazz" on the color chart. And inside, we have made much progress on the Maxwell Library. Also we have new shelves on our walls to display many more radios. And, our upstairs bathroom is being updated.

People make CHRS the fine organization it is. Our volunteers are second to none and from time to time we like to mention them and thank them for their good work for CHRS. These people have volunteered in the last few months at KRE and have helped with the massive Jim Coleman radio collection. CHRS is grateful for their help: Scott Robinson, Robert & Reina Swart, Walt Hayden, Rod Wentler, Jim Bradt, John Staples, Jaime Arbona, Jerry Cantou, Bart Lee, Larry Drees, Janice Kushman, Butch McDonald, Maria Palting, Dennis Monticelli, Gilles Vrignaud, Paul Shinn, Dave Harris, Larry Williams, Elsa Trexler, Al Norman, Brent Hokanson, Bill Voigt, Steve Stephens, Steve Webster, Art Lebermann, Lou Rinaldi, Hil Hampton, Lew Doty and Jon Pszenitzki. And special thanks to Editor Rod for turning out another great "CHRS Signal". If I have forgotten anyone, I apologize. Again, thank you all!

The Big Day is upon us. **Next Saturday July 18th** is our annual extravaganza. This is shaping up to be quite an event. Thanks to our pal **David Jackson**, we have great publicity and are expecting a large turnout. We are looking forward to the **Hot House Swing Band's** variety of

vintage jazz sounds. And celebrate 100 years of broadcasting with us as the Broadcast Legends present, "The KQW Story", beginning in 1909 with the first regular broadcasts from "San Jose Calling" by Charles D. 'Doc' Herrold and his students from his San Jose school of electricity. This station became KQW and later became KCBS.

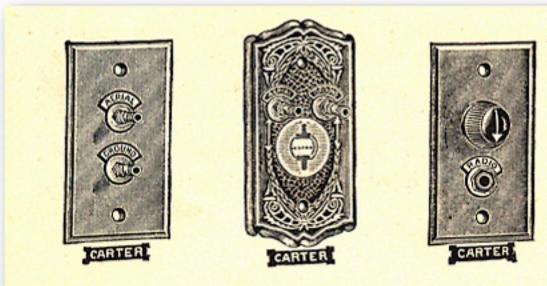
Our auction will run differently that it has in the past. There are no secret reserves. Each item or set has a minimum starting price in the catalog listing. These minimums will not be altered. This should move the auction along much faster than in past years. CHRS is offering some beautifully restored radios from the James O. Coleman collection and a variety of other interesting equipment. Here is the address for the catalog:

http://www.californiahistoricalradio.com/KRELive2009.html



Live at KRE 2009 attendees will enjoy the Hot House Swing Band

And finally some thoughts about this coming LIVE! at KRE... CHRS usually doesn't have a lot of outside participation at our events, except for this event. In addition to the invited public, there are people other than CHRS members who come for CHRS and try to make the event pleasant, safe and fun for all. So, CHRS members need to be good hosts. For example, our performers should have our attention and equipment brought in for the event should be respected. So, have lots of fun and don't forget to bid high. Remember that this is a fund raising day for CHRS and an important source of revenue for our continued existence. So please try to support CHRS any way you can on this day, and all others!



CARTER RADIO OUTLET PLATES

Carter plates are made in sixteen different styles and combinations to meet all usual installation requirements. Specified and used by modern architects and contractors. Write for our attractive booklet. It carries many practical suggestions on how to use these conveniences to advantage.



Signing off...

Whew!

This issue of the CHRS Signal has sure been a long time coming! As you have seen, this spring has been filled with event. Nonetheless, the many hours of volunteer effort are certainly paying off. I hope you can all make it to Live at KRE on July 18th. The facility is something we can all be proud of.

When I think of all the hard work I am reminded of a fortune cookie that my wife once got. It read "Better to wear out than to rust out". Ain't that the truth!

Keep the articles and comments coming! You can write me at rodwentler@yahoo.com

