Volume 29 March 2012 Number 3

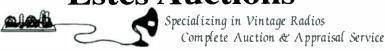


Tube Testing Tips for the Serious Collector (page 6)

A.R.C. – The International Publication For Buyers & Sellers Of Old Radios & Related Items

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Vintage Radio Auction Saturday, April, 21 2012 - 10AM EST

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ANTIQUE RADIO CLASSIFIED

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- 3 Publisher's Comments
- 4 Scott's Wartime Low-Radiation Receivers by Alan Douglas
- 6 Testing Tubes for Radio Service—Part II by Daniel Shoo
- 12 Servicing an EICO MX-99 by John Vuolo

- 16 Photo Review
- 20 Classified Advertisements
- 28 Coming Radio Events
- 37 Radio Clubs

Coming Up...

Stay tuned for more radio memories with a nostalgic look at the RCA 9K2.

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Publisher's Comments

s I said in the last issue, with the warm weather coming it's that time of year for everyone to get out and attend their local radio meet or swap fest.

A.R.C. will be at the Tri-State Radio Fest in Monaca, Pennsylvania, near Pittsburgh, on April 22. This is a well-run event with an auction conducted by Rich Estes of Estes Auctions. The meet is sponsored by the Pittsburgh Antique Radio Society (PARS) and the Buckeye Antique Radio and Phonograph Club (BARPC). Speaking of Rich Estes, the day before the Tri-State event, we will be at the Estes Auction in Burbank, Ohio. The auction looks like it's gearing up to be another wonderful event from the Estes organization.

A.R.C. Index

I just received a phone call from a long-time San Diego, California, reader who first subscribed about 20 years ago. He asked about the availability of an A.R.C. index that would cover the entire run of the magazine since its inception in 1984. We are presently working on putting together such an index and hope to have it ready by the end of this year. In the meantime, I pointed out that on our website's home page there is a free "Search Box" function that readers can use to find articles presently on the website. For example, this particular reader was looking for articles on Leutz brand radios. I typed Leutz in the search box and found a half dozen relevant articles as well as multiple mentions of Leutz in other contexts, such as auction results, and anywhere else the name appeared on the website. While I know some readers don't have a computer, just about every library in the country now has one that can be used at no charge by the public.

This Month

This month Alan Douglas shares his excellent article on Scott's Wartime Low-Radiation Receivers. These receivers were used during World War II on ships when spurious signals had to be minimized so as not to cause interference with other communications equipment. In this issue, we also have the second part of "Testing

Tubes for Radio Service" by Daniel Schoo. In Part II he talks about tube failure, various testing methods, and appropriate use of testers. Finally, many readers have been asking for articles on vintage audio equipment, and John Vuolo answers the call with his discussion of the Eico MX-99 multiplex adapter. Many of us have seen these "MPX adapters" over the years and John looks at the Eico version and describes their uses.

An Invitation to Curators, and Others...

Over the next few months we plan to visit various radio museums around the country. Not long ago we ran an article on the New Jersey Antique Radio Club Museum. We can't get to every museum so we are inviting museum curators to write an article on their collections. The summer months are a nice time to travel to a museum and learn about radios and get to see them in person. Of course, we also continue to invite readers to share their personal collections with us, in the form of "With the Collector" features. Clubs, too, are encouraged to contact us so their success stories can be featured in the magazine. All clubs should also send us their updated meet schedule for inclusion in the magazine and on our website. Starting a couple of months ago, we began sending out a monthly email listing highlighting the coming events for the following month. Be on the lookout for those!

And, as always we invite our readers to contribute articles as well as photos for the Photo Review section of the magazine.

Until next time, happy collecting.

Jon Kummer Publisher

On The Cover

Our cover photo shows the Tektronix 577 semiconductor curve tracer with a homebrew tube adapter module plugged into the test pad. The tubes shown are a pair of 6L6Gs. See "Testing Tubes for Radio Service—Part II" by Daniel Shoo, starting on page 6.

RADIOS IN HISTORY

Scott's Wartime Low-Radiation Receivers

BY ALAN DOUGLAS

f you search for George Gobel on YouTube and click on the clip of his appearance on NBC's The Tonight Show, you can hear him recounting to Johnny Carson his World War II service as a B26 instructor. "I fought the whole war in Oklahoma...There was not one Japanese aircraft got past Tulsa," said George in a classic TV moment.

What does this have to do with Scott low-radiation receivers? There was no documented instance of a German submarine ever homing on a shipboard radio either. But the threat was sufficient to make low-radiation receivers the entire output of E.H. Scott Radio Laboratories during the war. And there were other benefits, too. For one thing, in the crowded airwaves of a Navy ship, there was no room for spurious signals interfering with other receivers.

Scott had correctly guessed that the Navy would be interested in "morale" radios for crew entertainment, and it submitted a modified civilian model to the Naval Research Lab in mid-1941. The design was fine, said the Navy, except that it radiated far too much local-oscillator signal, just like every other manufacturer's submission. Quoting Marvin Hobbs, Scott's Chief Engineer at the time, "So we had received either bad news or good news. The bad news was that we could not sell our radio in its present form to

the Navy. The good news was that if we could solve the radiation problem, we could look forward to a considerable demand."1 A formal Navy request for a low-radiation receiver came on October 16, 1941.

Hobbs applied his experience with auto radios to the problem and devised a circuit that would meet the requirements. It was novel enough to earn US Patent 2,314,309, which was applied for on February 2, 1942. The Navy approved a Scott-prototype just 36 days after the October request, and design for what would be the model RBO began, with the formal contract signed on March 18, 1942. After June 16, 1942, the Maritime Commission also bought the sets under the designation SLR-12, "SLR" meaning either "super low radiation" or "Scott low radiation," perhaps both. Large vessels could have many RBOs installed, each one tuned to a particular station under the control of the morale officer, with the audio outputs piped around the ship for selection at the various locations. An SLR-H model, with greater output and a BFO, was also made.

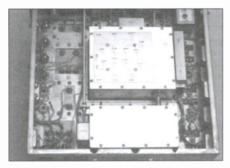
The Navy then asked Scott to design a primary communications receiver, which was designated the RCH, for small vessels. Most of the surviving examples date from late in the war, and these were sometimes installed as morale receivers in the years following. Maritime Com-



Grainy shot of the Scott SLR-12A.



Scott's RCH primary communications receiver.



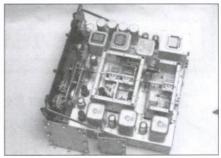
RCH chassis

mission SLR-F versions also went on merchant marine vessels and even appear in the 1950 reference The Radio Manual2 as part of Mackay radio consoles.

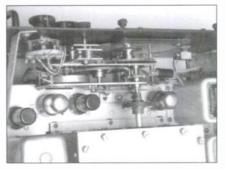
But it seems evident that the original intention was to design a communications receiver that could swiwtch headphones to either its own output or to an auxiliary receiver tuned to the 500 kHz distress frequency, or that could mix both outputs. Also, the RCH dial mechanism, with its weighted flywheel and smooth gearing, was more elaborate than was needed for a morale set. There's just no comparison with tuning an RBO or SLR-12.

At some point the Maritime Commission asked for a stand-alone communications receiver with a panel loudspeaker and powered by AC or DC (many ships had floating DC mains rather than AC). This was the SLRM ("Maritime") and it was produced right at the end of the war. I have

		Navy Mo	lavy Models			
	RBO	CZC-46139	NOs-99260 (18 March 1942)			
	RBO-1	CZC-46224	NXss-30313 NXsr-33642 (15 Nov 1945)			
ı	RBO-2	CZC-46225	NXsr-38078			
ı	RBO-3	CZC-46225A				
	RCH	CZC-46209	NXss-24276 24 (Feb 1943) NXss-45471 (1 Sept. 1944)			
	REE	CZC-46270	NXsr-87719 (22 Jan 1945) NXsr-88836 (6 Feb 1945)			



Interior of the RCH.



The RCH dial drive.

never seen one without the very-civilian-looking nameplate, and I believe most were sold after the war when contracts were cancelled and Scott was stuck with large inventories. There was also a Navy model of the SLRM, called the REE, but I'm not aware that any exist, unless of course all the SLRMs began life as REEs.

During the war, low-radiation receivers for merchant vessels were also produced by Technical Radio in San Francisco. These were dubbed the LRR-4 and LRR-5.

Author's Note: Thanks to Norman Braithwaite, and Kent King's AWA Review article (vol. 11, 1998)

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Alan Douglas works at Teledyne Benthos, building oceanographic research equipment. He also builds stone walls, tends a vegetable and fruit garden, and writes books (not necessarily in that order of preference).

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TUBE TECHNOLOGY

Testing Tubes for Radio Service— Part II

BY DANIEL SCHOO

n Part I of this article I talked about what a vacuum tube is, why it's necessary to conserve them, and why testing on a tube tester is not necessarily the final arbiter of whether a tube needs to be replaced. In Part II, I'll talk about tube failures, the various testing methods available, and appropriate use of testers for amateur restorers.

Basics

Before we get started on the details of tube failures, let's define some terms, specifically filament, heater, and cathode. Sometimes they are used interchangeably, but for our discussion it's important to understand exactly what I'm referring to when I talk about them. A filament, also called a directly heated cathode, is similar to the filament in a light bulb and directly emits the electron stream when heated by a flow of cur-

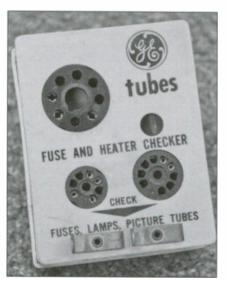


Figure 1. GE heater checker.

rent. Filamentary tubes do not have a separate cathode. Examples of filamentary tubes would be 01A, 26, 45, 1A6, 1R5, 3Q5, and 5Y3. The portable dry battery sets of the late 1930s, 40s and early 50s used tubes with directly heated filaments. They required very little filament current so the battery life was extended.

A heater/cathode tube, also called an indirectly heated cathode, has a heater inside a separate electrically isolated cathode sleeve. The cathode emits the electrons independently of the heater. There are many electrical advantages to this kind of construction, but these devices use substantially more current to heat the cathode than do many filamentary types. Examples of indirectly heated cathode tubes are 12BA6, 35Z5, and 50L6.

Aside from gross physical damage due to envelope breakage or electrical overloads. tubes fail in one or more of several ways. They can fail quickly by having the filament, heater, or some other electrical connection break. They can develop intermittent or permanent leakage or shorts between the various elements or, for indirectly heated tubes, between the heater and cathode. Heater-to-cathode leakage or shorts are fairly common, especially in the higher heater voltage series string tubes like the 50L6 or 50C5 audio output tubes. It usually shows up as a 60 Hz hum in the audio that is not dependent on the volume setting and can sometimes start only after the tube has warmed up for a few minutes. Tubes can fail slowly from the loss of electron emission and transconductance due to time in service. They can become gassy where the vacuum inside the envelope is spoiled by leakage to the outside atmosphere or by release of gas from the internal parts.

Testing Methods

There are several ways to test tubes depending on what you are looking for and how



Figure 2. Seco-GCT-5 grid circuit tester.

thoroughly you want to test. For service work you don't need detailed information about the characteristics, only a rough estimate of the functional ability. The first test is visual. If the silvering inside the tube has turned white the tube has lost vacuum and the metallic coating has absorbed air.

The most basic electrical test is a filament/ heater continuity test. Some small inexpensive testers like the one shown in Figure 1 check only the continuity of the filament or heater. They can be useful when you are working on a table radio that has gone dead because one of the series string heaters has gone open. You test each tube to find the one with the open heater and then replace the bad tube. Any ohmmeter can do the same thing, and these testers aren't really more than a cheap novelty item.

Leakage and short tests in service type testers are commonly done with neon lamp indicators because they are inexpensive and easy to use. Each of the elements of the tube is connected in sequence to a source of voltage through a selector switch. One or more of the other elements in the tube are grounded. The neon lamp and a limiting resistor are connected in series with the source of voltage, and if there is any leakage between the element being tested and the other elements the lamp lights up. This is a fairly sensitive test because neon lamps require very little current to light up. More sophisticated testers use a meter instead of a neon lamp. A meter reading allows you to evaluate the test based on the indicated value of leakage resistance.

For leakage and shorts an interesting niche market tester was the Seco VT Grid Circuit

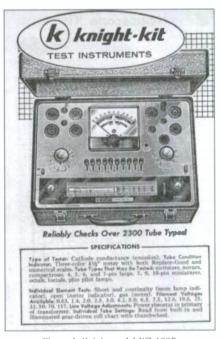


Figure 3. Knight model KG-600B.

Tester, shown in Figure 2. The grid circuit tester was a specialty of Seco. It tested the tube for small values of interelectrode leakage, grid current, and gas. While this information is useful for some applications it isn't the main reason most tubes fail and additional information is necessary for service work. Most service shop testers check for these things and more.

The two most popular methods for testing tubes in service work are emission and trans-

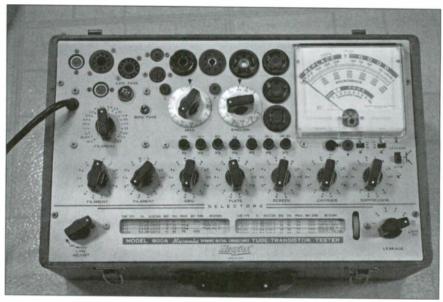


Figure 4. Hickok 800A transconductance tester.



MODELS 202 AND 203 SELF-SERVICE TUBE TESTERS

Here is everyll log you want in self-service tube testers at down-to-carth prices. More wereastilly: lest-en-ission shorts and gas of over L200 tube types including the very latest. Nuxletors, Nuxleto, Compactrons, etc. Who test-tupes plot lights, 6 and 12 hours, Compactrons, etc. Who test-tupes plot lights, 6 and 12 hours, compactrons, etc. Who test-tupes plot lights, 6 and 12 hours, compactrons, etc. Who test-tupes plot lights, 6 and 12 hours, considering self-service conditions. The experiment Contest and tube Lasy to-read quick lift tube charts list over 1.200 tost any tube Lasy to-read quick lift tube charts list over 1.200 tube (types. Pantiswer) to accommodate new tube type as they some appearance. Lone-file man tuber always relative to handsome lone for the planting of the light contest of the lone of the lone file man darkers have the division and drawer sheets for automated inventor; control. Colorful filluminated display tops earlief.

Figure 5. Mercury self-service tube testers.

conductance. Service type testers for either method are available. A service tester is an instrument designed and sold to test tubes in a repair shop environment in order to assist in troubleshooting. They were usually not very expensive, like the Knight KG-600B emission tester shown in Figure 3, which had a selling price of \$39.95 for the kit version, or \$53.95 assembled, in 1964. Some of the better ones, like the Hickok model 800A transconductance tester shown in Figure 4, sold for \$199.50. Most testers are fairly easy to set up with minimal adjustments and will offer moderate accuracy. While for troubleshooting this is quite adequate, they are not laboratory instruments and should not be used as such.

Emission testing measures the gross amount of current that the cathode in a tube can provide and not how well a tube can amplify a signal. To make an emission test, the cathode is grounded and a positive voltage is applied to the plate. The tester displays the resulting DC plate current on a panel meter using some arbitrary scale since the actual plate current in milliamps has no meaning to the user. The higher the value of the current the more electron emission the tube has available. For each tester model the manufacturer determines the minimal emission current that is acceptable for any particular tube type and they calibrate the meter based on those criteria. The

test voltage and meter range controls were adjusted for each of the various tube types in such a way that the results were shown with an easy to read GOOD - WEAK - BAD or similar scale marked on the meter. The do-it-yourself "drug store" testers shown in Figure 5 were the emission type.

Every diode/rectifier tube is tested using the emission test since its function is to simply pass current in one direction and not control the intensity in any way. Triodes and other tubes with grids can be tested for emission in the same way by connecting anything inside the tube, other than the cathode, to the plate and measuring the available current as if the tube were a diode.

For service work, emission testers can give a good indication of how well the tube is working, even though they don't actually tell you how much gain a tube has. Emission testers also include a test for leakage, gas, and shorted elements. Emission testers are totally useless for matching one tube to another since emission is only casually related to gain.

The other popular test is transconductance. also known as a mutual conductance test. The Hickok 800A (Figure 4) is a transconductance tester. Transconductance refers to the ability of a tube to control a relatively large amount of plate current with a small grid voltage and to provide amplification. The unit of measurement for transconductance is the mho (ohm spelled backwards). The engineering symbol for transconductance is gm. Since the typical value of transconductance for most tubes is quite a bit smaller than a mho, the micromho (one millionth of a mho) is the common term used in databooks. The larger the change in plate current for a change in grid voltage, the larger the transconductance the tube has.

The effect is shown graphically in Figure 6. Each curve represents a 2-volt increment in grid voltage. You can see the amount that the plate current changes from the distance between each curve for an increment in grid voltage. This is most like what the tube is doing in a radio circuit. The decrease of the transconductance of a tube with age follows the loss of emission and is not likely to change independently of emission. This can be seen by comparing Figures 7 and 8. Figure 7 shows a normal 6V6GT, while Figure 8 shows one that has lost emission and transconductance, which lowers the plate current and condenses the separation between the curves. By this we can see that emission testers measure how high the plate current goes for a given plate voltage, and a transconductance

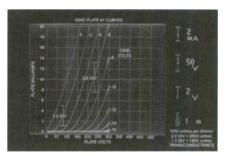


Figure 6. 6SN7 transconductance.

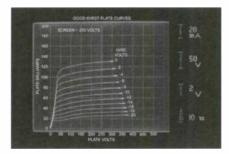


Figure 7. 6V6GT plate curves, good.

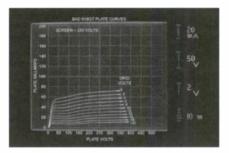


Figure 8. 6V6GT plate curves, bad.

tester measures the distance between two of the curves. Either test will give you an indication of how the tube compares to one having data book values.

The transconductance test requires more complicated circuits to perform and transconductance testers tend to be more expensive and complicated to operate. They also tend to be more accurate and give results more consistent with the actual condition of the tube. To do this test, suitable operating voltages are applied to the various elements in the tube. A DC bias and an AC signal voltage are applied to the control grid. The AC plate current is measured and displayed on the meter. This is exactly how a tube is used in service. The AC plate current

is directly proportional to the AC grid voltage times the transconductance of the tube. If the transconductance has suffered with age the AC plate current diminishes with it.

The meter is calibrated to indicate whether the tube is within acceptable limits given the applied operating voltages and signals that the manufacturer of the tester has determined. Much like the emission tester, the meter scale is usually printed with a GOOD, WEAK/?. and BAD/REPLACE areas to indicate the condition of the tube, as shown in Figure 9. Some testers show a percentage type scale where the reading on the meter is indicated as some percentage of value where 100 percent is a typical value for a new tube. Other testers may indicate the minimum acceptable value of transconductance on the roll chart and the meter scale reads out in micromhos. These testers also include the circuits and setups to test for shorts/leakage, gas, and emission tests for diodes/rectifiers.

Tube characteristics such as transconductance are heavily dependent on the operating voltages. Different operating voltages applied to a tube will give different values of transconductance, as you can see in Figure 6. A service-type transconductance tester will tell you the value at only one operating point. A transconductance tester can tell you if any two tubes are not matched but cannot tell you if they are. Two tubes that have equal transconductance at the one operating point where the tester makes the measurement may not match at other points. Furthermore, the transconductance may match but the tester does not take into account the value of the plate current. which could be quite different for the two tubes. To get conclusive proof that two tubes match over the normal range of operating voltages and currents, the tubes have to be verified at every operating point within that range for not just transconductance but also plate cur-

High power audio tubes such as the 6L6GC, 6550, or KT-88 cannot be fully tested by a service-type tester. These types of tubes can test satisfactory at the relatively moderate plate currents that a service-type tube tester supplies, but a well-used tube may be incapable of reaching full rated plate current. For more complete characterization or for matching tubes only a lab grade instrument, like the Weston CA-1630 or RCA WT-100A, shown in Figure 10, with adjustable regulated power supplies and a calibrated transconductance measurement circuit, will suffice. This instrument sold for \$989 in 1965 and you would not have seen one in a service shop. The ability to program the full range of regulated operating voltages allows you to set up the test for data book operating values and gives you multiple points to look at with sufficient accuracy.

Even with this capability no lab tester comes close to the utility and ease of use of a good curve tracer. Characteristic curves show you many values of plate current, plate voltage, grid voltage, transconductance, plate resistance, and amplification factor within normal operating parameters all at once. The curves shown in Figures 6, 7, and 8 were obtained from a Tektronix 576 Semiconductor Curve Tracer. In addition the curve tracer allows you to compare one tube to another over the entire range of values instantly by toggling an A-B test switch between two sample tubes. The Tektronix 570 Vacuum Tube Curve Tracer was one such instrument designed specifically for vacuum tubes. The Tektronix 576 and 577 Semiconductor Curve Tracers are also very



Figure 9, Hickok 800A meter.



Figure 10. RCA WT-100A lab tester.

adaptable for testing tubes. Figure 11 shows the characteristic curves of a pair of 6L6G tubes being compared on a Tektronix model 577 using a special home-built tube adapter module plugged into the test pad.

There are other tests that can be done, such as the power output test described in the RCA RC series Receiving Tube Manuals. According to RCA "The power-output test probably gives the best correlation between test results and the actual operating performance of the tube." Essentially the power output test applies a set of operating voltages and a grid signal to the tube, much as a transconductance tester does. but it measures the resulting amount of output power the tube can produce. This test is particularly good for testing audio power output tubes that may be capable of the emission and transconductance necessary in the center of the normal operating range but run out of power when they get to high plate currents. This is more of a laboratory test and I am not aware of any service-type tester that works this way. A curve tracer does this test as an innerent part of displaying the plate curves at the design limits of plate voltage and current.

Different makes and models of tube testers make the test under different operating conditions. No tube will display the same emission or transconductance for every operating voltage. This is why there is little if any correlation between the readings of one tester to another, even within the same manufacturer's product line. This is especially true for testers with unregulated power supplies. The tester manufacturers knew that for some tubes that drew a lot of heater and plate current the power supply voltages were going to sag. The easy solution for the manufacturer is to compensate by adjusting the control setups and the roll chart numbers to make the test results useable even with unregulated test voltages. For service work this is perfectly acceptable because you aren't looking for lab-grade accuracy, only a rough estimate of whether the tube is a dud or not. For radio repair either type of tester will provide valuable information on the condition of a tube and guide the operator to the goal of getting that old treasure playing again.

The Ultimate Test

To sum up, I would like to quote a paragraph that was included, in some form or



Figure 11. Tektronix 577 testing 6L6G tubes.

other, in every RCA RC series tube manual, from the first RC-11 published in 1934 through RC-30 in 1975. They said it far better than I can:

A tube testing device can only indicate the difference between a given tube's characteristics and those which are standard for that particular type. Since the operating conditions imposed upon a tube of a given type may vary within wide limits, it is impossible for a tube-testing device to evaluate tubes in terms of performance capabilities for all applications. The tube tester, therefore, cannot be looked upon as a final authority in determining whether or not a tube is always satisfactory. Actual operating test in the equipment in which the tube is to be used will give the best possible indication of a tube's worth.

Daniel Schoo is a professional electronics design engineer at Fermilab in Batavia, Illinois. His interest in electronics started as a child growing up in the 1950s and 60s when he began fixing up radios and TV sets he found in the trash.

Contact Daniel at xenongas@hotmail.com.

Attention Subscribers: You can access a color version of this article on the A.R.C. website at www.antiqueradio.com.

VINTAGE AUDIO

Servicing an EICO MX-99

BY JOHN VUOLO

am a very fortunate collector in that I have a factory-built EICO MX-99 as well as a kit version that I assembled. For A.R.C. readers who are, or may become, lucky enough to encounter one themselves, following is a brief summary of my experience, plus some useful manufacturer information

Over the years I found that in both MX-99s I had to replace the electrolytic capacitors as well as a few resistors that went up in value, and of course the neon lamp. Also, if the adaptor is being used extensively, it's a good idea to periodically realign it, as age and heat will cause some of the components to change in

value and affect the stereo operation. I found that the placement of some of the capacitors and wiring was critical for properly aligning the adapter. In some cases the EICO instructions (see sidebar below) don't provide the same level of detail as, say, Heathkit. Also, good soldering skills are needed for the kit because even a little too much solder can affect the alignment for stereo operation.

The EICO MX-99 comes in its own external case, but two templates are also provided for mounting the MX-99 into a different cabinet. Its tube complement is 2-12AU7, 1-12AT7, 1-6AU6, 1-6D10, 1-6X4 and six diodes.

The EICO MX-99 Multiplex Auto Adaptor



EICO MX-99 front view.

This section provides relevant information about the EICO MX-99 Multiplex Auto Adaptor excerpted from its instruction book.—ed.

The...EICO MX-99 Multiplex Auto Adaptor employs an original method of zero phase shift, filter-less detection of multiplexed signals. This unit automatically delivers stereo on a stereo broadcast signal and mono from a mono signal without spurious signals in either case.



EICO MX-99 rear view.

The stereo signal is automatically equal from both outputs without adjustment. An indicator lamp lights up when the selected station is broadcasting multiplex stereo. [See EICO MX-99 front view.]

The design features freedom from phase distorting filters in either the main or sub channel paths which cause loss of separation. Nevertheless this design provides the required, or better-than-required, suppression of all spurious signals, including SCA (67kc) background music carrier, reinserted 38kc subcarrier, 19kc pilot carrier, and all harmonics thereof. This is achieved partly through an original technique for deriving the left and right signals, and partly by sharp ultrasonic filters after the signals are derived. All of the foregoing is very important for high quality tape recording, where spurious signals can beat against the tape recorder bias oscillator and cause spurious tones in a recording. This adapter will synchronize with any usable output from the FM tuner and will demodulate without significant distortion tuner (composite signal) as high as 5 volts peak-to-peak.

The MX-99 is self powered, and includes low impedance cathode follower outputs. External controls include an oscillator turn-off switch to permit interference-free listening to mono stations having low sub-carrier frequency SCA store-casting and a separation control. A separation of 30db between channels is typical and an overall gain of unity is provided from input to output on both stereo and mono. The MX-99 [was] designed specifically for all EICO FM equipment (HFT90, HFT92, ST96), and any other wide band FM tuner that provides a multiplex output... [See EICO MX-99 rear view.]

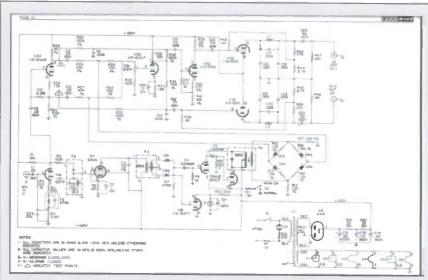
NOTES:

The MX-99 is designed for use with component-type FM (or FM-AM) high fidelity tuners of wide-band design equipped with a multiplex output jack. Not included are non-component type ac-dc equipment (severe shock hazard), [or] tuners without one or more limiting stages ahead of the detector (excessive output may overload the adaptor)...

NOTE: The MX STEREO lamp may glow at some off-station points on the dial. These are spurious indications and should be ignored...

Circuit Description

The composite stereo signal as received from the ratio detector is amplified by V1A (12AT7)...The 19kc pilot signal is isolated and amplified by V4 [6AU6]. Frequency doubling is done by the use of a full wave rectifier (CR1, CR2) at the plate of V4, and the 38kc signal thus obtained is then used to synchronize a 38kc push-pull oscillator V5 [12AU7] which drives a ring



EICO MX-99 schematic.

modulator (CR3-CR6, R12-17). In addition to a strong 38kc component, the full-wave rectifier delivers a negative DC voltage when the 19kc pilot carrier is received. This DC voltage is used to cut off switching tube V1B [12AT7)], and thus ignite the MX STEREO neon pilot lamp II, indicating that a stereo broadcast is in progress. [See EICO MX99 schematic].

V1A [12AT7] also delivers the amplified composite stereo signal to the grid of a split load phase inverter V2A [12AT7]. V2A provides two outputs which differ in phase by 180° and which are alternately sampled by the ring modulator at a 38kc rate. The two sampled outputs are then added and amplified by V2B [12AT7]. Adding the two alternately sampled out of phase signals effectively produces an output which is the input signal multiplied by a 38kc switching function of zero average value and odd symmetry. The audible portion of the signal is (L-R).

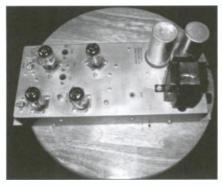
The output of V2B (L-R) is mixed with the two outputs of V2A (L+R, -L-R), available at the plate and cathode of V2A, respectively, to derive L and -R. De-emphasis is accomplished in the mixing networks. Evidently the phase of one signal must be reversed to duplicate the original phase relationship, and this is accomplished by V3A [6D10]. The signal inverted by V3A is fed to the grid of cathode follower V3B and the other signal (not inverted) is fed to the grid of V3C.

Channel separation is controlled by varying the amount of the (L-R) signal which is injected into the mixing network. This is effected by a gain control in the grid of V2B [12AU7]. The output signal level under the condition of optimum separation is thus determined by the direct (L+R) component and is virtually independent of the phase of the re-injected carrier. An error in the phase of the injected carrier will simply require a higher setting of the separation control...

Note that the demodulator is of the balanced type so that the potentially troublesome 38kc carrier does not appear in the adaptor output. The presence of this signal might conceivably introduce beat notes with tape recorder bias oscillators.

Cathode follower outputs (V3B and V3C) are provided in each channel and filtering of the output waveforms is done in these stages. Filtering attenuates the high frequency components which are introduced during the demodulation process, and which, while substantially attenuated by the de-emphasis networks, may become a problem in tape recording. In addition, the filters are designed to remove the 19kc pilot signal which is usually present to a noticeable degree in the output signals.

—From the EICO MX-99 Manual, with FM Multiplex for Stereo by Leonard Feldmanand Introduction to FM by John Rider



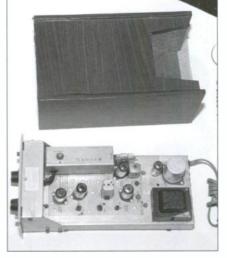
Ampex MPX



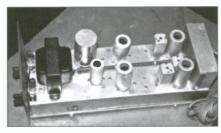
McIntosh MA6



General Electric



Scott LM-35



Fisher MPX-100

Other MPX adapters

There were, of course, many other manufacturers that also made these adapters to go with their own FM tuners. The concept behind all of them was the same, but it is fascinating to see the great lengths that some of these companies went to (or not, in some cases) in designing their MPX adapters. As a point of interest, I have included several pictures of some of the adapters produced by other manufacturers (see the accompany-

ing photos of the Ampex, General Electric, Fisher MPX100, Sherwood, and the McIntosh MA6 devices).

John Vuolo has been working in the telecommunications industry for 34 years. He has been restoring and collecting antique radios, tube amplifiers and receivers, TVs, phonographs, and reel-to-reel machines for 40 years.

Contact John at jvuolo9603@aol.com.

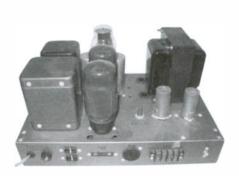
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PHOTO REVIEW



This column presents in pictorial form many of the more unusual radios, speakers, tubes, advertising, and other old radio-related items from our readers' collections. The photos are meant to help increase awareness of what's available in the radio collecting hobby. Send in any size photos from your collection. Photos must be sharp in detail, contain a single item, and preferably have a light-colored background. A short, descriptive paragraph MUST be included with each photo. Please note that receipt of photos is not acknowledged, publishing is not guaranteed, and photos are not returned.





Heathkit model W5M Amplifier – This is a late 1950s mono audio amplifier offered by Heathkit in kit form. It uses two KT66 output tubes. Very popular amplifier that is often used today as a mono block amp. Larry Smith, Bolton Landing, NY



Grundig model 4006 radio – Grundig manufactured this radio in 1959/1960 for both the international and USA market. It uses eight tubes and covers the AM, FM, and shortwave bands. Alvin Pretorius, Oklahoma City, OK



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PHOTO REVIEW -



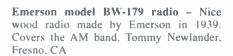


Fada model A60W radio – Made in 1938 this radio covers the AM band. It has five tubes and a Bakelite cabinet. Melvin Bishop, Kansas City, KS

Crosley Jr. crystal set – This tiny crystal set was made about 1923. It uses a Wireless Specialty Apparatus detector, which was also used on Crosley's Model 1. Dave Crocker, Mashpee, MA









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- PHOTO REVIEW —





Silvertone model 6320 radio – Manufactured in 1938 by Sears. Cabinet is wood with metal escutcheon. There are four pushbuttons. Chassis is mounted from bottom. Chassis number 101.585. Steven Kirschner, Atlanta, GA





Sterling Concertone model F radio – Manufactured in 1931. This cathedral shaped radio covers the AM band. The label says it was manufactured by Loftin White. Ed Whiteman, Provo, UT

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PHOTO REVIEW



Weltron model 2001 AM/FM 8 Track – This "modernistic" AM, FM, and 3 track player was made in 1970. It is solid-state and was powered by AC or battery. Available in many colors including red, yellow, black, and white. Thad Bookbinder, Phoenix, AZ







Zenith model 6S229 radio – Attractive 1937 tombstone radio that covered the AM and shortwave bands. There are six tubes in the #5638 chassis. Arnold Bloor, Wheeling, WV

...find out how by visiting us today at www.antiqueradio.com.



FOR SALE: Speakers military antique stereo other. Call me and will send list. Howard Felder, 7517 Granada Dr., Bethesda, MD 20817. (301) 320-3028.

FOR SALE: Old tubes used but tested good. UX type 01-A's \$12; ST type 26's \$6; 42's \$5; IL6 \$20; UX199's \$15; 24-A's \$8; 27's \$6; 6E5 \$8; 6G5 \$7; 45 \$20; 78 \$5; 6C6 \$5; UX-874 \$20; I-V \$5; UX120 \$18; 56 Crosley globe \$10. Also books: Rado Simplified 1922 \$15; Standard Polyphase Apparatus and Systems 1900 \$12; Vintage Radio 1972 \$4; Radio for the Millions (reprint) \$8. 1923 Crosley model VI \$170 plus \$10 s/h. Other items add \$3 per item. Harvey E. Faulkner Jr., PO Box 1731, Elkton, MD 21922. (302) 521-3683 after 9pm. E-mail: yevrah75@yahoo.com.

FOR SALE: Uniden President HR2600 ten meter transceiver very nice like new condition. \$50. Ed Fluehe WA7DAX, 1649 E. Stratford Ave., Salt Lake City, UT 84106. (801) 598-9217.

FOR SALE: AK70 in custom cabinet. Pictured in Smithsonian Magazine. Atlas, lions heads. Zenith models 39 & 40. Model 40 has a 39 chassis and is missing speaker grille & phonograph drawer, but cabinet is VG+. Jim Leckrone, 6683 Spruce Dr., Benzonia, MI 49616. (231) 383-4077. E-mail: clickaway75@yahoo.com.

FOR SALE: Heathkit VTVM IM-5228 \$25; Orthosonic AM 4 tube aluminum case \$15; GE 440 \$25; Philco 40-120 wood 1940 \$35; Traveler 5008 1946 \$20; Freshman Equaphase G1 \$30; Audiomatic record player P-702 \$25; Simpson field strength meter 488 \$20; RCA 4-C-672 AM clock radio \$35. Paul Liskowski, 5603 E. 100 N., Knox, IN 46534.



FOR SALE: 7, (Seven), brass and ceramic base 01A tubes. All filaments test good. Notice, one of them is a DeForest. Most have tips. All for \$165. Dave Crocker, 35 Santuit Pond Rd, #4B, Mashpee, Cape Cod, MA 02649. Tel. (508) 477-1578, before 9 p.m., EST please.

FOR SALE: Atwater Kent 55C chassis with tubes and in working condition \$89.95; Harmon Kardon AM-FM tuner #T12 working condition with case \$34.95; RCA model T60 table model with good tuning eye in working condition \$49.95. Bob Fuerderer, Holly Farm, 813 Route 12A, Surry, NH 03431. (603) 352-3005.

FOR SALE: McIntosh model C8 audio compensator has built in power supply excellent condition; Readrite tube checker model 430 small in oak case 1938 works great \$30; Hallicrafters \$X101 communication receiver working lookys great \$60; Hallicrafters S85 communication receiver excellent condition working \$75; Fisher model 40 FM tuner 8 tubes working very compact beautiful brass escutcheon; Hallicrafters S20R Sky Champion working \$75; Realistic DX160 communications receiver in original carton \$75; many Hickok tube checkers very reasonable; Harmon Kardon model 1001 receiver; Dual automatic turntable excellent: Kenwood model 4140 tuner amp. Check last months A.R.C. for more items. Bill Kalcik, Meadowbrook Resort, 1533 River Rd., Wisconsin Dells, WI 53965. (608) 253-9855.

FOR SALE: Very nice radios and grandfather clock. Clock is a three chime design and used for 2 months. Radios include a Radiola 20; Radiola Special mint; 2 Radiola 60's; Radiola 103 tapestry speaker; Radiola VIIB chassis, Radiola VIIB mint cabinet; Radiola 17 console cabinet; Radiola 62 console cabinet – both units are mint and work. Pick up only. William Boyd, 74 Atsion Ct., Medford, NJ 08055. (609) 654-0299.

FOR SALE: Simpson 260; Seco model 88; Motorola C2W clock radio; Motorola 56W1B; Motorola 5P32Y 600 series; 66L1U; Jan 5FP7A CRT; B-K 400 CRT checker; UTC PA2L6 transformer; 262kc coils; Fujiya 5" R2R; 78 RPM wireless changer by Galvin. Robert Rossi, 10936 Melbourne Ave., Allen Park, MI 48101. (313) 386-1184.

FOR SALE: Yahama PX-3 liniar tracking turntable Excellent cosmetic condition Make offer Untested Picture available. William Mittler, 4575 Sleepy Hollow Rd., Medina, OH 44256. (330) 225-3667. Email: wvm42@yahoo.com.

FOR SALE: Projects 1 won't get to: Radiola #44 \$50; #80 \$60, American Bosch #28 \$50; EH Scott Metropolitan \$75 pick up in Ann Arbor, MI preferred. Also a table radio collection – List available. Radley Smith, 3188 Runsey Dr., Ann Arbor, MI 48105. (734) 769-2663. E-mail: wesmiths@comcast.net.

WANTED: Escutcheon w/without glass and pointer(s) for RCA model # 87T. Pay your price! Thanks! Michael K. Tremper KC2HFR. 110 Lynncrest Ter., Cheektowaga, N.Y. 14225, mktube @yahoo.com; (716)-834-9190

WANTED: Good quality analog VOM in operating condition. Ed Fluehe WA7DAX, 1649 E. Stratford Ave., Salt Lake City, UT 84106. (801) 598-9217.

WANTED: 10/11 meter mobile linear amplifier. Ed Fluehe WA7DAX, 1649 E. Stratford Ave., Salt Lake City, UT 84106. (801) 598-9217.

WANTED: Stromberg Carlson model 1204 T.M. as parts unit. Looking for a Hallicrafters HT33 amplifier or parts unit. Need early issues of Electric Radio magazine. Also a few good 12BZ6 tubes NOS or used. John Smart, 1344 McDonald Hill Rd., Frankfort, OH 45628. (740) 600-3256. E-mail: bkw3910@aol.com.

WANTED: RCA 45 RPM players models 45EY-1 and 6BY4 series AM radio/45 RPM battery portable. Louis Yadevia. 249 Priscilla Ln., Aldan, PA 19018. (610) 622-2573.

WANTED: Volume control Zenith #63-112; Zenith 807 chassis & speaker: Philco 19 chassis; glassware for Baradio. Ye Olde Radio Shoppe, 228 Beck Rd., Avon Lake, OH 44012. (440) 933-5668. Fax (440) 933-8864. E-mail: yeolderadioshoppe@on.rr.com.

WANTED: Record player from Zenith console model 6R087. Pictured in 1946 Photofact 467-32. Would consider buying the complete console to get it. Glen Mears, 4110 S. Troost Pl., Tulsa, OK 74105.

WANTED: Collector seeks early RCA type electron microscope – finders fee paid. Also need Zenith type 33X. Allan Weiner, 274 Britton Rd., Monticello, ME 04760, (207) 286-5483.

WANTED: 9 pin minature tube bases up to 50. \$1 each, William Turner, 1117 Pike St., Saint Charles, MO 63301.

WANTED: Black plastic case for Zenith Royal 300 transistor radio. Must have no cracks or chips. Will buy junker set if necessary. William Dalton, Jr., 1392 Wood Ave. Bridgeport, CT 06604. (203) 335-9885. E-mail: antiqueradiowilliam1@hotmail.com.



WANTED: RCA 5T4 wood-case table radio and Philmore 1001C kit set. Contact me for e-mail picture if desired for identification. 5T4 was an export unit sold mainly in Europe before WWII. Dave Smith, k9uim, Box 81, Olney, ILL. 62450 618-843-6601 or k9uim@frontier.com.

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FOR SALE: (Bottom) 1924 Freed-Eismann NR-6 in exceptionally fine, clean condition. Comes with all good tubes, original parts, audios, instruction plates, and...it works! A bargain for \$112. Also (top) 1924 A.C. Dayton XL-5 receiver. All there in very nice condition, with tubes (worth the price alone), has original instruction placque inside the lid. A great example of the Dayton series. \$112. Dave Crocker, 35 Santuit Pond Rd., #4B, Mashpee, Cape Cod, MA 02649. Tel. (508) 477-1578, before 9 p.m. EST, please.

FOR SALE: Many Sams sets \$2 each plus postage. Riders 6 to 17, \$15 each plus shipping. Old broadcast equipment, list for SASE. Pix and list email. Tom Earnest, PO Box 62032, San Angelo, TX 76906. E-mail: theufol@wcc.net.

FOR SALE: Airline DC-6 battery set, Kennedy 66B chassis, AK 55C chassis, GE model 250 fliptop with wet cell, Phileo 42-355, Record players for: Sparton model 7-46, for Magnavox model 43 (CR-151, CPAR389), Girrard Model RC-80M. John Zima, 1360 Reed Rd., Churchville, NY 14428. (585) 293-3023.

FOR SALE: Huge Quantities, Tubes, Picture Tubes, Needles, Cartridges, Parts, Semiconductors, Data, Radios, Phonographs, Televisions, Test Equipment. Sales support our self-funded museum. Ray Seppeler, Sunshine Radio Museum, 8 East Main Street, Sodus, NY 14551. (315) 483-8451. Web: http://www.SunshineRadioMuseum,org/collector.

FOR SALE: Full set of Rider manuals. (1 thru 23) plus indexes. \$110.00 or best offer. Dick Bergeron, PO Box 652, Spring Vale, ME 04083. (207) 490-5698, E-mail: dick@etetubes.com.

FOR SALE: German table radios. Use your tax return for excellent to near mint and working units. Grundig 3035, \$150: 3095-56, \$200: 4019, \$200: 4090, \$200: 5299, \$225: 5490, \$250: 6199, \$400. Emud T-7 \$125, Senior 60 (blonde, and dark), \$150 each. Korting 1085FX Stereo, \$200. Philips Capella Tonmeister 842, \$225. Blaupunkt Granada 60, \$150, Sultan 2320, \$175, Nordmende 3004, \$250, Graetz Fantasia 1022ES, \$275. Kuba Console, \$75. Parts sets too. All plus shipping. Ed Kalpa, 4622 Melbourne Ave, Los Angeles, CA 90027, (310) 795-7925.

WANTED: 1942 Motorola AM portable radios (models 61L11 & 61L12) and 1959 Zenith AM portable radio (Royal 900 in white & gold color). Both radios should be in excellent cosmetic and playing condition only. Original owners manuas & box for these sets also wanted. Send photo & complete description. M Hanke, PO Box 773, Wausau, WI 54402.

WANTED: Selenium Rectifier for a Grundig radio B-250 C75 AEG. This is from a 2260-U radio. S R-Fredericks, 22 Leonard Rd., Melrose, MA 02176, E-mail: lomax-2006@peoplepc.com.

WANTED: For model 29 or similar model Philco, a working shadow tuning meter. Part number in parts list 6497 and on the meter 45-2028. Only part needed to complete restoration. Irv Sanders, 100 North Larkspur Dr., Apt 119, Palmyra, PA 17078. E-mail: radioirv@comcast.net.

WANTED: Selectivity knob and S meter for Hallicrafter SX 42 Frank Martinho, 3511 Rowley Dr. San Jose, CA 95132. (408) 946-2041. E-mail: martinho67@earthlink.net.

WANTED: I would like to purchase a Radio Keg. Just the keg in nice condition. Jerry Fay, 117 N Sunderland Rd., Spokane Valley WA 99206. (509) 922-3715. E-mail: funtunes2000@yahoo.com.

Wanted: Bezel and dial glass for RCA model 810K1 and Silvertone model 4786 radios. Martin Gottstine, 3882 N. Boston Road, Eden, NY 14057. (716) 202-4575. E-mail:amflyer1956@roadrunner.com.

FOR SALE/TRADE: Beautiful Western Electric WE-540 Double Cone Speaker, fully restored with an exact reproduction cone by Buford Chidester. Great ORIGINAL paint and decal on an excellent frame and driver, the best sounding battery set speaker, \$350. See my previous ads for many great consoles still available. WANTED: Airite/Kadette Deskset and/or pen & clock. C.R. Nevins Museum of Radio. Ken Nevins. 406 Jipson St., Blissfield, MI 49228. (517) 486-3019 evenings. E-mail: mailto:ken@kennevins.com>ken@kennevins.com.

WANTED: Olympic model 445 radio, and an Olympic model 447 radio. Thanks! Charles Harper, 2000 Jackstown Road. Paris, KY 40361. Phone (859) 484-9393. Email: brdcster@gmail.com.

WANTED: New old stock 45 adapters, centerposts, idler wheels. Sears phono idler wheels. 1499-37 dead or alive. Voice of Music, Zenith, RCA record player NOS factory service parts. Shure needles. Gary Stork, 37530 E. Meadowhill. Northville, MI 48167. (248) 478 0990. Visit www.thevoiceofmusic.com or email info@thevoiceofmusic.com

WANTED: HELP! I need an 8" speaker for an Airline model 326W Cathedral radio. 1150 ohms. I'm told that the Glorytone has the same speaker. Pictures upon request. HELP me out please guys. Charlie Poplin, 3518 Courtland Dr., Durham, NC 27707. E-mail: Popawapadol@Yahoo.com.



WANTED: (Photo above) RCA 143 tombstone. Mark Murphy, 931 Village Blvd., Ste. 905-381, West Palm Beach, FL 33409; (561) 801-1478; E-mail: markmnurphy@att.net.

WANTED: Collector looking to buy a Hudson-Ross Three Little Pigs cathedral radio also looking for any interesting radio advertising, no pamplets or catalogues please, thank you. Kirk Lahey, 58 Fury Dr. Dartmouth, NS B3A 4Y2 Canada. (902) 434-7877. E-mail: radios@ns.sympatico.ca.

WANTED: Teleflash: trademark for Philco tabletop loudspeaker cabinet, c.1940. Manual or schematic, photocopy or original, for the National R-1230/FLR countermeasures receiver. Will pay for photocopy. Hal Layer, PO Box 620660, Woodside, CA 94062, kk6hy@arrl.net.

WANTED: Zenith Service Manual Volume 4 & 5 & up (c. 1949 to 1950's); also wishing to hear from those attempting to complete RCA Victor service bulletins --the loose leaf series 1946 into the 1960's. I need a few and have many duplicates to trade. Gary A. Micanek, 226 Henry Ave., Manchester, MO 63011, (636) 227-7046. E-mail: micanek@att.net.

WANTED: LOOKING TO BUY SHORTWAVE/ HAM/CB RADIO COLLECTIONS.ANY CON-DITION IN NY TRI STATE AREA.CASH PAID ASAP. Juan Remus KC2ZTE, 2 Springbriar Ln., Kings Park, NY 11754. (631) 697-5850. E-mail: stocpro47@yahoo.com

WANTED: Stereo/Hifi/Commercial Tube Gear, Amps/Speakers/Parts/etc, Guitars, Guitar amps/Pedals/Parts, Tube Testers and Audio Tubes. Sonny Goldson, 520 Pocahontas Dr., Fort Walton Beach, FL 32547, (850) 314-0321. E-mail: sonnysound@aol.com.

WANTED: Do you have so many vacuum tubes that you don't know what to do with them? Before you trash those tubes call me and I'll try to find a home for them. Jeff Arndt, 4021 S. Parker Way, De Pere, WI 54115, (920) 323-6789.

FOR SALE: Emerson 641 Brown. Zenith Z615R Clean, both work \$15.00 each, Philco 80 Cath, chassis and speaker working, clean \$40.00. Thomas Guastella, 1633 West 11TH St., Brooklyn, NY 11223, (718) 256-8367. E-mail: radiovin119@verizon.net.



FOR SALE: 1925 Crosley Trirdyn 3-R-3 "Special." Nice, original, solid cabinet, very clean inside, has complete warrantee card and good decal in lid. This is a fine example of the Trirdyn series. Worth the price for the two good audios, all binding post tops. and three good tubes! \$95. Dave Crocker, 35 Santuit Pond Rd., #4B, Mashpee, Cape Cod, MA 02649. Tel (508) 477-1578 before 9 p.m. EST please.

FOR SALE: Chassis, tubes knobs for RCA Model 45. RCA console radio model 45. Andy Colgan, 8174 Dog Creek Rd., Middle Point, OH 45863. (419) 605-8053.

FOR SALE: FSOT, CMPD, FOR SALE OR TRADE. CONSIDER MERE PAPER DOLLARS! Heathkit DX 100 super clean original outside and inside; Heath Apache also very nice; BC 375 E working with several tuning units and PE 73 Dynamotor/cables. GRC 9, very good, working with DY 88, cables, and T17 mic. All you need is a ticket. Hammarlund SP 600 in case, very nice, works fine; HRO RAS Navy version, several coils and power supply; BC 654, nice all original and working, also have new/old stock PE 103 Dynamotor; Collins 323 V nice, working; BC 669 transceiver with original power supply; Drake TR7 with PS 7, very nice and working; HRO 50T1, rackmount, nice working. have several coil sets; HRO 50T1 cabinet model, has been recapped, was working fine, now need to find error in recapping! Several coils available. HRO Senior rackmount power supply, several coils; Webcor 210-1-C collectible early Webcor wire. ALWAYS BUYING: Early and interesting wire and tape recorders, disc cutters, broadcast and recording mics, tube pre-amps, compressors, early hi-fi, cash or trade for any of above. Prefer pick-up on heavy items, but can ship. Ward Kremer, K14JHA, 57262 Poppy Rd., South Bend, IN 46619. (574) 204-2877. E-mail: witzend99@comcast. net, website: http://www.radioattic.com/kremer.

FOR SALE: Federal 8, 9, 55, 56 reproduction cabinets. For details, contact John Terrey, Old Tech -Books & Things, PO Box 803, Carlisle, MA 01741. E-mail: jvt@oldtech.com.

FOR SALE: American Bosch console radio model 58, 1930's serial no. 47967 44 x 28 x13 inches (HWD), \$40 obo, see pictures at, www.buyat.20m. com. Alex Taranko, 3515 Old Yorktown Rd., Yorktown Heights NY 10598. (914) 962-2350. E-mail: sci983art@aol.com.

FOR SALE: See items at http://antiqueradioexchange.com/http://antiqueradioexchange.com/ sold by richsequip, most listed under TEST EOUIP-MENT with photos & detailed descriptions. Many seldom offered for sale & going back as far as 1936. Richard Flaws, 212 Mondovi Dr., Oswego, IL 60543. (630) 554-9207 (Before 9pm CT). E-mail: flaws2@att.net.

FOR SALE: Antique radio schematics \$4, TV \$5 postpaid. Joseph R. Forth, 119 Long Vue Acres Rd., Wheeling, WV 26003.

FOR SALE: Books on Wireless & Pre 1920 Radio, Medical Electricity and X-Rays. Also books by and about Nikola Tesla and Tesla Coils. To see our listings, visit our web page www.begbooks.com Direct orders get 10% discount. BEQUAERT OLD BOOKS, PO Box 775, Fitzwilliam, NH 03447. (603) 585-3448. E-mail: info@beqbooks.com.

FOR SALE: Classic-looking 1932 Philco Model 71 cathedral, solid cabinet (redone), with no vineer problems. Has nice grille cloth. The 7-tube chassis is nice and clean with all good tubes, power cord is original and nice. Chassis has good power Xformer and everything lights up, hums. \$135. Dave Crocker, 35 Santuit Pond Rd., #4B, Mashpee, Cape Cod, MA 02649. Tel. (508) 477-1578, before 9 p.m. EST please.



Ushbullons, For 1940 models: Translucent wine red pushbuttons, set of eight \$16. For 1941 models: Escutcheon \$29.95, Knobs, set of four \$20, Push-

buttons, set of eight \$16 opaque brown. For 1942 models: Escutcheon with gold trim as per original \$32.95. Knobs. set of four \$20, Pushbuttons, set of nine \$31.50.

Money order gets immediate shipment. Add \$5 s&h. California residents add 9.75% sales tax.



1942 models 42-355. 355T, 380, 380X, 390. and 390X

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OLD TIME REPLICATIONS, 5744 Tobias Ave. Sherman Oaks, CA 91411. Phone 818-786-2500. Email oldtimerep@aol.com. www.antiqueradioknobs.com

WANTED: Grigsby Grunow (Majestic) AM radio models 61, 62 (1928). These radios can be in any condition, working or not working, for a refurbishment project. If you haved any or all of these radios available for sale, please contact me. If you know of anyone interested in selling any of these models, please contact me with their information. Richard Blum, PO Box 2626, Palos Verdes Peninsula, CA 90274. E-mail: richieraider@juno.com.

SERVICES: Repairs to vintage tube equipment including home receivers, phonographs, and auto radios. South Bay Radio, 7187 Lakeshore Rd., Cicero, NY 13039, (315) 699-7341.

SERVICES: All American table radio restoration specials: 5-tube \$49.99; 6-tube \$59.99. Other flat rate restorations for larger radios, car rdios & TVs. Send E-mail, write, call, or visit my web sites for details. Dave's Antique Radio and TV Restorations, PO Box 285, Liverpool, NY 13088. E-mail: dave2@ dreamscape.com or dave2@tubesandtransistorsandmore.com. Web sites: www.dreamscape.com/dave2/daves.htm or www.tubesandtransistorsandmore.com. (315) 944-0265.

SERVICES: Logan's TV & Radio Repair. Logan's has over 3,000 rare radio tubes for sale. We also repair old radios, through our repair and ship service. Please contact: George for further details at Logan's, Rear 526 Mt. Pleasant St., Greensburg, PA 15601. (724) 836-2163.

SERVICES: Since 1987 Sound Remedy has specialized in reconing vintage loudspeakers used in antique radios, automobiles, jukeboxes and musical instruments as well as stereo and high-power Prospeakers. Our repair work is meticulous and guaranteed. Contact Sound Remedy, 331 Virginia Ave, Collingswood, NJ 08108. (856) 869-0238. E-mail: soundremedy@aol.com.

SERVICES: Antique Radio of lowa & vintage furniture restorations. All bands electronic chassis repair. Sorry, no foreign units or conversions. Speaker service wood & veneer cabinet restoration. Plasti/bakelite repair and painting. Vintage auto radio repair. Tybe hybrid, all transistor, 8 track, 1930s to 1960s. Check out my eBay Store: iowacollectablesusa. PayPal and cashiers check welcome. 7 days a week. Don Nordboe, 3131 Avenue A, Council Bluffs, IA 51501. (712) 322-2255. E-mail: dnordboe@aol.com. Web: www.antiqueradioofiowa.com

SERVICES: Repair of old radio, car radio, audio, stereo. Free estimate, reasonable cost, #1 Google "Vintage Hi-Fi repair". Mike Urban, 37 Elm St., Windsor, CT 06095, (203) 877-2409. Web: www.urban-antiqueradio.com

SERVICES: Do you need your test equipment repaired or calibrated? I can help. Very reasonable rates. Rod Galloway. 2961 SE 152nd Ave., Morriston, FL 32668. (352) 528-9499. E-mail: rodgall@wildblue.net.

SERVICES: Utah Reconing your full service speaker reconing and repair shop. Fast turn around specializing in antique radio speakers as well as a full service reconer. 22 years experience, reasonable prices, quick turn around. Matt Shelton, Utah Reconing, 7120 Camelot Way, West Jordan, UT 84084, (801) 694-0166. E-mail: redmatt2@juno.com.

SERVICES: Northern Arizona sales, service, and parts for tube radios, amplifiers, auto radios. Vintage Radio, 440 W. Palomino Dr., Chino Valley, AZ 86323 next to our Radio Shack store. (928) 636-5140. E-mail: info@azvintageradio.com. www.azvintageradio.com.

SERVICES: Tube radio and some instrument repairs for the Rocky Mtn. region. For Sale: Selection of repaired, refurbished, and calibrated radio and TV test equipment. Includes RCA, EICO, Heathkit, PACO, etc. David Boyle 1058 Colt Cir. Castle Rock, CO, 80109, (303) 681-3258, djboylesr@msn.com

Place your classified ad today! Visit wwww.antiqueradio.com

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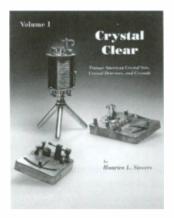
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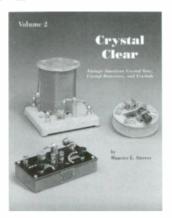
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Crystal Clear, Vol. 2 supplements the first volume. It identifies an additional 172 crystal radiosets, 91 crystal detectors and 26 crystals by manufacturer, model, year produced, description and original selling price. Further research on many of the crystal sets covered in Volume 1. Detailed history on the Philmore Manufacturing Company and the Western Manufacturing Company. 8 ½" x 11", 252 pages.

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CALIFORNIA - March 3 CHRS - SACRAMENTO CHAPTER SWAP MEET

Sylvan Oaks Library, 9:00am 6700 Auburn Blvd. Web: www.californiahistorcialradio.com

NEW YORK - March 4 GREATER NEW YORK VINTAGE WIRELESS ASSOCIATION SWAP MEET & MEETING

Long Island, NY - Seaford Train Station Parking Lot, 7 am - 11 am Info: Jim Koehler - (516) 623-0035 Rich Lee - (914) 589-3751 Web: www.nyantiqueradio.org

OKLAHOMA - March 10 OKLAHOMA VINTAGE RADIO COLLECTORS MEETING

Oklahoma City, OK Hometown Buffet 3900 N.W. 63rd St. Dinner 6:00pm, Meeting 7:00pm Info: Jim Collings - (405) 755-4139 jrcradio@cox.net;`www.okvrc.org

PENNSYLVANIA -March 10

PITTSBURGH ANTIQUE RADIO SOCIETY CLUB MEETING 10 am to 2 pm. Chrome Grill & Metal

Radios, Radio Clinic Brentwood Presbyterian Church 3725 Brownsville Rd., Brentwood, PA Info: Chris Wells (724) 942-1113, Regis Flaherty (724) 969-0643 Web site: www.pittantiqueradios.org

MISSOURI - March 10 MID AMERICA ANTIQUE RADIO CLUB SWAP MEET

8 am, Hickman Mills Community Christian Cburch 5809 East Red Bridge Rd., Kansas City, MO Info: Bob Lutz (913) 634-0816 Web site: http://sites.google.com/site/ midamericaantiqueradioclub/

PENNSYLVANIA - March 13

DELAWARE VALLEY HISTORIC RADIO CLUB MONTHLY MEETING

Twins & Clone Radios – 7:30 pm Telford Community Center, Telford, PA Info: www.dvhrc.info

OHIO – March 13 SOCIETY FOR THE PRESERVATION OF ANTIQUE RADIO KNOWLEDGE (SPARK) MEETING

Kettering, OH - Parkview Comm. Ctr 4100 Glenheath 7:30 pm Info: Dan Casey (513) 265-8466 E-mail: dansradioland@gmail.com

MISSOURI -March 13

ANTIQUE RADIO COLL. & HIST. OF GREATER ST. LOUIS MEETING

Kirkwood, MO
Kirkwood Community Center
111 S. Geyer Rd., Room 201-A
7:30 pm Meeting, Show & Tell, Swap Table
Info: Joe Tauser - (314) 61-6745
joe@jtauser.com
Web: www.archradioclub.com

TEXAS – March 17 VINTAGE RADIO & PHONOGRAPH SOCIETY SPRING AUCTION

Senter East Building, Irving, TX 6:00am to 5:00pm Info: (817) 292-7435 Web: www.vrps.org

MARYLAND -March 18

MID-ATLANTIC ANTIQUE RADIO CLUB MEETING

Davidsonville, MD
Davidsonville Family Recreational Center
Tailgating: 11:30 - Meeting: 1:30 pm
Info: Geoff Sbearer (703) 818-2686
Web: www.maarc.org

WASHINGTON -March 18

PUGET SOUND ANTIQUE RADIO ASSN. MEETING

Seattle Scottish Rite Masonic Center 1207 N. 152nd, Seattle 10:00 am - 12 noon: Tailgate Swap 12 noon: Meeting, Program, Show & Tell Info: Lynda Glaspey (425) 478-3643 Web: www.eskimo.com/~hhagen/psara

FLORIDA - March 19 JACKSONVILLE ANTIQUE RADIO SOCIETY MONTHLY MEETING

Countryside Village Clubhouse, 1:30pm 19060 Beach Blvd.

1nfo: Sean Olin – (904) 386-8332 Web: www.jarsradioclub.com

OHIO – March 21 CENTRAL OHIO ANTIQUE RADIO ASSOCIATION QUARTERLY MEET-

ING
DeVry University – 7:30pm
Info: Dave Poland (614) 890-5422
Barry Gould (614) 442-1518
www.members.tripod.com/-coara/index.html

OHIO - March 21 CINCINNATI ANTIQUE RADIO SOCIETY CLUB MEETING

Fairfield Pavillion, Rte 4, Fairfield, OH Info: Bob Pohl E-mail: bobpohl@fuse.net

NORTH CAROLINA – March 22-24 CC-AWA CHAPTER

ANTIQUE RADIO CHARLOTTE Sheraton Charlotte Airport Hotel 3315 Scott Futrell Drive, Charlotte, NC Info: Ron Lawrence w4ron@carolina. rr.com 704-289-1166

http://antiqueradiocharlotte.homestead.com

TEXAS - March 24 TEXAS ANTIQUE RADIO CLUB MEETING

Kyle, TX - Railroad BBQ 9:30 am Info: Ed Engelken - EdEngel@gvtc.com (830) 899-3864

Web: www.gvtc.com/~edengel/TARC.htm

WISCONSIN - March 25 WISCONSIN ANTIQUE RADIO CLUB

SWAP MEET

8:00am to 11:00am 5917 S. Howell, Milwaukee, WI Web: www.warci.org

NEW YORK - March 25 SCHENECTADY ANTIQUE

RADIO CLUB

St. Roses College, Madison Ave. Albany, NY – 12Noon Info: Louis DeGonzague E-mail: zenith6@verizon.net

ALABAMA – March 26 ALABAMA HISTORICAL RADIO SOCIETY MEETING

Birmingham, AL – Alabama Power Bldg. 1801 Abraham Woods Blvd. – 7:00 pm Info: Dee Haynes (205) 841-4630 www.alabamahistoricalradiosociety.org

ALABAMA - March 26 ALABAMA HISTORICAL RADIO SOCIETY MEETING

Birmingham, AL – Alabama Power Bldg. 1801 Abraham Woods Blvd. – 7:00 pm Info: Dee Haynes (205) 841-4630 www.alabamahistoricalradiosociety.org

VIRGINIA - March 27 TIDEWATER ANTIQUE RADIO & PHONOGRAPH ASSOC. (TARPA) CLUB MEETING

7 pm, Pretlow Library, Ocean View, Norfolk, VA

Info: Barry Callis (757) 427-9667 E-mail: betty3689@aol.com

TEXAS – March 31 HOUSTON VINTAGE RADIO ASSOCIATION MEGA AUCTION

9:30am, Bayland Park Community Center 6400 Bissonnet, Houston, TX Info: Bill Werzner (281) 721-2242 E-mail: werz1943@gmail.com Web: www.hvra.org

NEW YORK - April 1 GREATER NEW YORK VINTAGE WIRELESS ASSOCIATION SWAP MEET & MEETING

Long Island, NY - Seaford Train Station Parking Lot, 7 am - 11 am Info: Jim Koehler - (516) 623-0035 Rich Lee - (914) 589-3751

Web: www.nvantiqueradio.org

CALIFORNIA – April 7 CALIFORNIA HISTORICAL RADIO SOCIETY

Radio Activity Day/Radio Clinic 9:00am, KRE Building, Berkeley, CA Info: www.californiahistoricalradio.com

GEORGIA – April 9 SOUTHEASTERN ANTIQUE RADIO SOCIETY MEETING

6:30 pm, Norcross, GA Fire Mountain Rest. Jimmy Carter Blvd. Info: Rich Rodgers - (678) 591-3619 Web: www.sarsradio.com

MISSOURI - April 10 ANTIQUE RADIO COLL. & HIST. OF GREATER ST. LOUIS MEETING

Kirkwood, MO - Kirkwood Comm. Ctr 111 S. Geyer Rd., Room 201-A 7:30 pm Meeting, Show & Tell, Swap Table Info: Joe Tauser - (314) 616-0745 ioe@itauser.com

Web: www.archradioclub.com

PENNSYLVANIA – April 10

DELAWARE VALLEY HISTORIC RADIO CLUB MONTHLY MEETING

Color Radios, 7:30pm Telford Community Center, Telford, PA Info: www.dvhrc.info

OHIO – April 10 SOCIETY FOR THE PRESERVATION OF ANTIQUE RADIO KNOWLEDGE (SPARK) MEETING

Kettering, OH - Parkview Comm. Ctr 4100 Glenheath 7:30 pm Info: Dan Casey (513) 265-8466 E-mail: dansradioland@gmail.com

NEW JERSEY - April 13 NEW JERSEY ANTIQUE

RADIO CLUB

Wall, NJ, InfoAge Science Bldg, L-9032A 2201 Marconi Rd., 7:30 pm 1nfo: Marv Beeferman (609) 693-9430 Rich Lee (914) 589-3751 E-mail: radiorich@prodigy.net

Join us on our live webcast: www.njarc.org

WEST VIRGINIA – April 14

MUSEUM OF RADIO & TECHNOLOGY SPRING FEVER TRADERS SHOW & AUCTION

1640 Florence Ave., Huntington, WV Info: 304-525-8890 Web: www.mrtwv.org

MICHIGAN – April 14 MICHIGAN ANTIQUE RADIO CLUB SPRING MEET

Midland, MI, Valley Plaza Resort Info: Ray Brown (734) 812-2075 Web: www.michiganantiqueradio.org

OKLAHOMA - April 14 OKLAHOMA VINTAGE RADIO COLLECTORS SWAP MEET, AUCTION, AND CONTEST

8:00 am, Midwest City Midwest Community Ctr., 100 Midwest Blvd. Info: Jim Collings - (405) 755-4139 jrcradio@cox.net - www.okvrc.org

MARYLAND – April 15 MID-ATLANTIC ANTIQUE RADIO CLUB MEETING

Centreville, VA Sully Station Community Center Tailgating: 11:30 - Meeting: 1:30 pm Info: Geoff Shearer - (703) 818-2686 Web: www.maarc.org

WASHINGTON - April 15 PUGET SOUND ANTIQUE RADIO ASSN. MEETING

Seattle, WA - Seattle Scottish Rite Masonic Center, 1207 N. 152nd, Seattle 10:00 am - 12 noon: Tailgate Swap 12 noon: Meeting, Program, Show & Tell Info: Lynda Glaspey (425) 478-3643 Web: www.eskimo.com/~hhagen/psara

ILLINOIS – April 15 ANTIQUE RADIO CLUB OF ILLINOIS OUTDOOR SWAP MEET

7:00 am - 11:00 am Inside Business Meeting 9:30 am American Legion Hall, Carol Stream, 11. Info: www.antique-radios.org

TEXAS – April 15 TEXAS ANTIQUE RADIO CLUB MEETING

Schertz, TX - VFW Hall - 2 pm Info: Ed Engelken - EdEngel@gvtc.com (830) 899-3864

Web: www.gvtc.com/~edengel/TARC.htm

FLORIDA – April 16 JACKSONVILLE ANTIQUE RADIO SOCIETY MONTHLY MEETING

1:30 pm, Countryside Village Clubhouse, 19060 Beach Blvd. 1nfo: Sean Olin – (904) 386-8332 Web: www.jarsradioclub.com

OHIO – April 18

CINCINNATI ANTIQUE RADIO SOCIETY CLUB MEETING

Fairfield Pavillion, Rte 4, Fairfield, OH Info: Bob Pohl E-mail: bobpohl@fuse.net

NEW YORK - April 20 HUDSON VALLEY ANTIQUE RADIO & PHONOGRAPH SOCIETY CLUB MEETING

Episcopal Church of Suffern 65 Washington Street 7:30 pm Info: Dale Cranston (845) 357-1615

CALIFORNIA – April 21

SOUTHERN CÂLIFORNIA ANTIQUE RADIO SOCIETY SWAP MEET & BRUNCH

7:30 am Marie Callendar's Restaurant, Corona, CA

Info: www.antiqueradios.org

NEW JERSEY – April 21 NEW JERSEY ANTIQUE RADIO CLUB SWAP MEET

Parsippany, NJ – Parsippany PAL 33 Baldwin Rd. Info: Mary Beeferman (609) 693-9430

Rich 1.ee (914) 589-3751 E-mail: radiorich@prodigy.net Join us on our live webcast: www.niarc.org

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Hayrack items, if consigned, start at 9:00AM Auction Building at Hawkeye Downs, 4400 6th Street SW

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The Only Major Antique Radio and Related Items Auction in Iowa for 2012

Radio check in and auction set up will be Thursday and Friday, May 3rd and 4th from 9:00AM to 5:00PM. (New: \$1 per lot item minimum commission) Timely item submission allows inclusion in the printed auction list. Sellers should send digital photos of auction items to Dwight Baker for use in promoting the auction. The auction will be professionally conducted by Brent Wears, one of Iowa's leading auctioneers. Please check the Wears Auctioneering website for featured radios and the latest auction information. If you have questions, please contact us:

Sponsored by Iowa Antique Radio Club and Historical Society

TEXAS – April 21 VINTAGE RADIO & PHONOGRAPH SOCIETY MEETING

Garden and Arts Building 1 pm to 5 pm, Irving, TX Info: (817) 292-7435 Web: www.vrps.org

PENNSYLVANIA – April 22

TRI STATE RADIO FEST
PITTSBURGH ANTIQUE RADIO
SOCIETY BUCKEYE ANTIQUE RADIO
& PHONOGRAPH CLUB

Center State Banquet Hall, Monaca, PA 1495 Old Brodhead Rd.

Flea Market 8:30 am to noon – Auction noon Web: www.pittantiqueradios.org

NEW YORK - April 22 SCHENECTADY ANTIQUE RADIO CLUB

St. Roses College, Madison Ave.,
Albany, NY – Noon
Info: Louis DeGonzague
E-mail: zenith6@verizon.net

ALABAMA – April 23 ALABAMA HISTORICAL RADIO SOCIETY MEETING

Birmingham, AL – Alabama Power Bldg. 1801 Abraham Woods Blvd. – 7 pm Info: Dee Haynes (205) 841-4630 www.alabamahistoricalradiosociety.org

CALIFORNIA – April 23 SOUTHERN CALIFORNIA ANTIQUE RADIO SOCIETY SWAP MEET & BRUNCH

7:00 am, Marie Callender's Restaurant 160 E Rincon St, Corona, CA Info: Barry Dagestino (714) 281-5190 Web Site: www.antiqueradios.org

VIRGINIA - April 24 TIDEWATER ANTIQUE RADIO & PHONOGRAPH ASSOC. (TARPA) CLUB MEETING

7 pm, Norfolk, VA, Pretlow Library, Ocean View Info: Barry Callis (757) 427-9667 E-mail: betty3689@aol.com

KENTUCKY - April 28 MID-SOUTH ANTIQUE RADIO COLLECTORS SPRING MEET

Lexington, KY Info: Terry Layman E-mail: layvinrad@insightbb.com

TENNESSEE – April 28 NASHVILLE MUSIC CITY VINTAGE RADIO CLUB SPRING INDOOR SWAP MEET

7:00am to Noon, Nashville, TN
Associated Builders & Contractors Building
1604 Elm Hill Pike

Info: Larry Chambers (615) 355-2005 Kelton Trammell (615) 962-4310 E-mail: rktramm@aol.com Web: www.musiccityvintageradio.org

TEXAS - April 28 HOUSTON VINTAGE RADIO ASSN. MONTHLY MEETING

9:30 am, Bayland Park Community Center 6400 Bissonnet, Houston, TX Info: Bill Werzner (281) 721-2242 E-mail: werz1943@gmail.com Web Site: www.hvra.org

INDIANA - May 4-5 INDIANA HISTORICAL RADIO SO-CIETY

AWA 41st Annual Spring Meet Friday – 4:00pm to 8:00pm; Saturday – 8:00am – 11:00am Kokomo Quality Inn Info: Fred Prohl (812) 988-1761 Herman Gross (765) 459-8308 www.indianahistoricalradio.org

NEW JERSEY – May 4 NEW JERSEY ANTIQUE RADIO CLUB

Wall, NJ – InfoAge Science Bldg. L-9032A 2201 Marconi Rd., 7:30 pm Info: Marv Beeferman (609) 693-9430 Rich Lee (914) 589-3751 E-mail: radiorich@prodigy.net Join us on our live webcast: www.niarc.org

CALIFORNIA - May 5 CALIFORNIA HISTORICAL

RADIO SOCIETY Swap Meet – 9:00am Foothill College, Los Altos Hills, CA Info: www.californiahistoricalradio.com

NEW YORK - May 6 GREATER NEW YORK VINTAGE WIRELESS ASSOCIATION

Swap Meet & Meeting Long Island, NY - Seaford Train Station 7 am - 11 am, Parking Lot Info: Jim Koehler (516) 623-0035 Rich Lee (914) 589-3751 Web site: www.nyantiqueradio.org

WISCONSIN - May 6 WISCONSIN ANTIQUE RADIO CLUB

Swap Meet 5917 S. Howell, 8:00am to 11:00am Milwaukee, WI Info: www.warci.org

PENNSYLVANIA – May 8 DELAWARE VALLEY HISTORIC RADIO CLUB

Monthly Meeting Kutztown Prep – 7:30pm Telford Community Center, Telford, PA Info: www.dyhrc.info

PENNSYLVANIA – May 10-11

KUTZTOWN XXVI MEET
Kutztown, PA
Info: www.dyhrc.info

MISSOURI - May 8 ANTIQUE RADIO COLL. & HIST. OF GREATER ST. LOUIS

Meeting Kirkwood, MO
Kirkwood Comm. Ctr
111 S. Geyer Rd., Room 201-A
7:30 pm Meeting, Show & Tell, Swap Table
Info: Joe@jtauser.com
Web site: www.archradioclub.com

OHIO - May 8 SOCIETY FOR THE PRESERVATION OF ANTIQUE RADIO KNOWLEDGE

(SPARK)
Meeting Kettering, OH - Parkview Comm Ctr
4100 Glenheath 7:30 pm
Info: Dan Casey (513) 265-8466
E-mail: dansradioland@gmail.com

OKLAHOMA - May 12 OKLAHOMA VINTAGE RADIO COLLECTORS

Meeting, Oklahoma City, OK Hometown Buffet 3900 N.W. 63rd St Dinner 6:00pm, Meeting 7:00pm Info: Jim Collings - (405) 755-4139 jrcradio@cox.net - www.okvrc.org

OLD TECH



BOOKS & THINGS

A 2,000 sq. ft. museum is not enough space for my 1000+ set collection. And, hundreds of boxes await either space in the museum or sale. Some things must go! Choices must be made. As the late Dr. Muchow said, "As collectors, we truly are temporary caretakers of these historical artifacts."

Items for sale are either dulicates or the result of fine-tuning the scope of my collection.

For details on these items and much more, visit:

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For Sale

Western Electric Items:

2-A Tuning Unit 2-B Tuning Unit 3A Radio Receiver

3B Radio Receiver

4B Radio Receiver 4C Radio Receiver

4D Radio Receiver

2-A Current Supply 10-A Battery Box for Radio Receiver Loop Antenna for Radio Receiver 20-A Filter for Radio Receiver

24-B Amplifier 7-A Amplifier

14-A Ampifier/Speaker
"STANRAD" 1-tube RF Amp matches

the W.E. Radio Receivers

Marconi of America Items:

Type 122
Type CM294A

Magnetic Detector RCA Items:

106D (Factory Conversion from 106C)

OREGON - May 12 NORTHWEST VINTAGE RADIO SOCIETY

Antique Radio Show & Sale 9:00am to 3:00pm American Legion Hall, 21510 Main St., Aurora, OR Info: Mike McCrow (503) 730-4639

E-mail: tranny53@frontier.com

GEORGIA – May 14 SOUTHEASTERN ANTIQUE RADIO SOCIETY

Meeting – 6:30pm Norcross, GA - Fire Mountain Rest. Jimmy Carter Blvd.

Info: Rich Rodgers - (678) 591-3619 web site: www.sarsradio.com

OHIO – May 16 CINCINNATI ANTIQUE RADIO SOCIETY

Club Meeting Fairfield Pavillion, Rte 4, Fairfield, OH Info: Bob Pohl E-mail: bobpohl@fuse.net

Alabama Historical Radio Society Swap Meet & Open House

April 21, 2012

1801 Reverend Abraham Woods Jr. Blvd. (corner of 18th St. No & 8th Ave. No.) Downtown Birmingham, Alabama 35203

Gate opens at 7:00 AM
Tailgate Swap Meet, Free Parking to All

Our facility includes a state-of-the-art shop (1960's), extensive electronics library, broadcast and communication equipment museum, and a functional 1960's broadcast studio will be open for inspection.

Please contact us to reserve your free parking spot in the tailgate sales area.

The Alabama Historical Radio Society is also opening the doors to our large miscellaneous radio and electronic equipment storage basement. The equipment, parts, etc. are for sale.

(If you are in town on Friday before the meet on Saturday, check out our equipment and radio history display in the Alabama Power Building Atrium at 600 18th Street, Birmingham, Alabama 35203. Just down the street from our facility.)

Steven Westbrook (205) 305-0679 Dee Haynes (205) 243-4630

Check out our website at alabamahistoricalradiosociety.com

NEW YORK - May 18

HUDSON VALLEY ANTIQUE RADIO & PHONOGRAPH SOCIETY

Club Meeting Episcopal Church of Suffern 65 Washington Street 7:30pm Info: Dale Cranston (845) 357-1615

MINNESOTA - May 18-19 NORTHLAND ANTIQUE RADIO CLUB

Radio Daze 2012

Info: www.northlandantiqueradioclub.com

TEXAS – May 19 VINTAGE RADIO & PHONOGRAPH SOCIETY

Swap Meet, Senter East Building 8:00am to 12Noon Irving, TX Info: (817) 292-7435 Web Site: www.yrps.org

TEXAS - May 19

TEXAS ANTIQUE RADIO CLUB

Meeting, Kyle, TX - Railroad BBQ 9:30 am

Info: Ed Engelken - EdEngel@gvtc.com (830) 899-3864

Web: www.gvtc.com/~edengel/TARC.htm

COLORADO - May 20 COLORADO RADIO COLLECTORS

Meeting – Ipm Info: David Boyle - (303) 681-3258 www.radioace.com

MARYLAND - May 20 MID-ATLANTIC ANTIQUE RADIO CLUB

Meeting, Davidsonville, MD Davidsonville Family Recreational Center Tailgating: 11:30 - Meeting: 1:30 pm Info: Geoff Shearer - (703) 818-2686 web site: www.maarc.org

MISSOURI - May 20 MID AMERICA ANTIQUE RADIO CLUB

Auction – 10:00am, Best Western Inn 501 SouthWest Blvd., Kansas City, MO Info: Bob Lutz (913) 634-0816 Web site: http://sites.google.com/site/ midamericaantiqueradioclub/

WASHINGTON - May 20 PUGET SOUND ANTIQUE

RADIO ASSOCIATION

Meeting, Seattle, WA
Seattle Scottish Rite Masonic Center
1207 N. 152nd, Seattle
10:00 am - 12 noon: Tailgate Swap
12 noon: Meeting, Program, Show & Tell
Info: Lynda Glaspey (425) 478-3643
http://www.eskimo.com/~hhagen/psara

FLORIDA – May 21 JACKSONVILLE ANTIQUE RADIO SOCIETY

Monthly Meeting 1:30pm Countryside Village Clubhouse, 19060 Beach Blvd. Info: Sean Olin – (904) 386-8332 Weh Site: www.jarsradioclub.com

VIRGINIA – May 22 TIDEWATER ANTIQUE RADIO & PHONOGRAPH ASSOC. (TARPA)

Club Meeting - 7pm Norfolk, VA - Pretlow Library, Ocean View Info: Barry Callis (757) 427-9667 E-mail: betty3689@aol.com

TEXAS - May 26 HOUSTON VINTAGE RADIO ASSOCIATION

Monthly Meeting – 9:30am Bayland Park Community Center 6400 Bissonnet, Houston, TX Info: Bill Werzner (281) 721-2242 E-mail: werz1943@gmail.com Web Site: www.hyra,org

NEW YORK - May 27 SCHENECTADY ANTIQUE RADIO CLUB

St. Roses College, Madison Ave., Albany, NY = 12Noon Info: Louis DeGonzague E-mail: zenith6@verizon.net

ALABAMA - May 28 ALABAMA HISTORICAL RADIO SOCIETY

Meeting, Birmingham, AL Alabama Power Bldg. 1801 Abraham Woods Blvd. – 7:00 pm Info: Dee Haynes (205) 841-4630 www.alabamahistoricalradiosociety.org

UPCOMING INTERNATIONAL EVENTS

(A.R.C. would l'ike to hear about other international radio events)

CANADA - March 21 ANTIQUE RADIO CLUB OF VICTORIA, BC CLUB MEETING

7 pm to 8:30 pm Pluto's, 1150 Cook St., Victoria, BC Info: http://groups.yahoo.com/group/ VicRadioGroup/

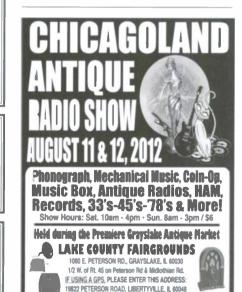
HOLLAND -March 23-25

LEDERLANDSE VERENIGING VOOR DE HISTORIE VAN DE RADIO (NVHR) "35 YEARS NVHR" EVENT

> Hotel Zuiderduin, Egmond aan Zee Weh: www.nvhr.nl/agenda.asp

HOLLAND - April 14 NEDERLANDSE VERENIGING VOOR DE HISTORIE VAN DE RADIO (NVHR) YEARLY MEMBER MEETING

Hoenderdaal, Driebergen Web: www.nvhr.nl/agenda.asp



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CANADA - April 18 ANTIQUE RADIO CLUB OF VICTORIA, BC CLUB MEETING

7 pm to 8:30 pm
Pluto's, 1150 Cook St., Victoria, BC
Info: http://groups.yahoo.com/group/VicRadioGroup/

HOLLAND - April 28 NEDERLANDSE VERENIGING VOOR DE HISTORIE VAN DE RADIO (NVHR) NVHR SWAP MEET EVENT

Hoenderdaal, Driebergen Weh: www.nvhr.nl/agenda.asp

GERMANY - May 11-13 GESELLSCHAFT DER FREUNDE

DELLSCHAFT DER FREUND
DER GESCHICHTE DES
FUNKWESENS E.V.
GENERAL MEETING
Friedrichsdorf, Germany
Weh: www.gfgf.org

GERMANY – June 22-24 HAM RADIO FRIEDRICHSHAFEN INTERNATIONAL HAM RADIO & ANTIQUE RADIO EXHIBITION

Friedrichshafen, Germany Weh: www.hamradio-friedrichshafen.de

NOTE: Changes, cancellations and errors do occur. To avoid disappointment, verify place, date and time, especially for events which are new to you.

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CLUBS: Send antique radio club and meet information to A.R.C. for free listing here, as space permits. Sorry, we don't have room for hamfests. Always send a SASE when writing to clubs!

NATIONAL CLUBS

Antique Wireless Association (AWA). PO Box 421, Bloomfield, NY 14469. Pub: The AWA Journal, quarterly. Dues: \$25(U.S.A) \$30 (elsewhere). National annual conference and regional meets. Museum. www.antiquewireless.org. AWA World Convention: http://awamuseum.org/

REGIONAL CLUBS

Alabama Historical Radio Society (AHRS). PO Box 131418, Birmingham, AL 35213. Pub: The Superflex, monthly. Dues: \$20. Meetings, Every Sat. morning and 4th Mon. evening each month but Dec., annual show/swap meet. Don Kresge Radio Museum, Lobby of the Alabama Power Bldg., 600 North 18th Street, Birmingham, AL 35203. Contact Dee Haynes (205) 841-4630. www.alabamahistoricalradiosociety.org.

Antique Radio Club of Illinois (ARCI). PO Box 1139, LaGrange Park, IL 60526. Art Bilski (630) 739-1060. Pubs: ARCI News, monthly and ARCI Update, periodically. Dues \$20. Annual August Radiofest and bimonthly swap meets. www.antique-radios.org. clubinfo@antique-radios.org.

Antique Radio Collectors Club of Ft. Smith, Arkansas (ARCC). Paul Tucker 479-782-8178, 4700 N. "N" St., Fort Smith, AR 72904. Dues: \$10. Meets first Thursday of month.

Antique Radio Collectors & Historians (ARCH) of Greater St. Louis. Joe Tauser, joe@jtauser.com. Dues: \$15. Monthly newsletter and meetings, annual picnic/swap meet. www.archradioclub.com.

Antique Radio Collectors of Ohio (ARCO). Karl Koogle, 2929 Hazelwood Ave., Dayton, OH 45419. E-mail: karlkrad@gmail.com. Arkansas Chapter/AWA. Arkansas Antique Radio Club (AARC). Tom Burgess, PO Box 191117, Little Rock, AR 72219. Info: Tom Burgess (501) 455-0773.

Arizona Antique Radio Club (AZARC). 1080 E. Pecos Rd., Suite 18, PMB 105, Chandler, AZ 85225-2426. Pub: The Arizona Antique Radio Club News, quarterly. Dues: \$20. Meetings, swap meets, Arizona Radio Roundup. www.azarc.org.

Buckeye Antique Radio and Phonograph Club (BARPC). Jon Jansma, 31051 Fox Hollow Dr., Pepper Pike, OH 44124. (216) 591-0121. Pub: Soundings, bimonthly. Dues: \$10.00. Monthly meetings in Akron, Spring and Fall auctions, April joint meeting with PARS.

California Historical Radio Society (CHRS). CHRS, PO Box 31659, San Francisco, CA 94131. CHRS Hotline: (415) 821-9800. Steve Kushman, 4233 25th St., San Francisco, CA 94114. Pubs: The Journal, quarterly; 20 Years of CHRS, Hints & Kinks, free with membership. Dues: \$20. 13 events per year. www.californiahistorical radio.com.

CHRS/Sacramento Chapter (CHRS). PO Box 162612, Sacramento, CA 95816-9998. Pub: The Announcer, quarterly. Dues: \$10. Special meets, monthly meetings. www.californiahistoricalradio.com.

Carolinas Chapter/AWA (CC-AWA). Ron Lawrence, PO Box 3015, Matthews, NC 28106. Pub: Radio Daze, quarterly. Dues: \$10. Quarterly swapmeets. www.cc-awa.org.

Central Ohio Antique Radio Association (COARA). Dave Poland, Westerville,OH (614) 890-5422. E-mail: dcp944@yahoo. com. Quartly meetings in March, June, September, and December. January Cabin Fever & July Tailgate Meet. Dues: \$12. www.members.tripod.com/~COARA/index.html.

Cincinnati Antique Radio Society. (CARS) Bob White (513) 385-8291. Monthly mtgs. Colorado Radio Collectors (CRC). David Boyle, 1058 Colt Cir., Castle Rock, CO 80109. (303) 681-3258. Newsletter "The Flash", bimonthly starting in Jan. Dues: \$12. Annual Spring Show & Fall BBQ/Auction. www.radioace.com.

Cumberland Valley Radio Society (CVRS). HC-66 Box 1604, Barbourville, KY 40906. Weekly meetings, quarterly swap meets.

Delaware Valley Historic Radio Club (DVHRC). DVHRC PO Box 5053, New Britain, PA 18901. Pub: The Oscillator, monthly. Dues: \$20. Monthly meetings with swap meet in July. Sponsors twice-yearly Kutztown Radio Show (May and Sept). Web site: www.dvhrc.info.

East Carolina Antique Radio Club (EC-ARC). Bill Engstrom, 218 Bent Creek Dr., Greenville, NC 27834.

Florida Antique Wireless Group (FAWG). c/o Radio Relics, 1987 Corporate Square, #151, Longwood, FL 32750. (407) 895-9075. E-mail: oldradio@cfl.rr.com.

Greater New York Vintage Wireless Association (GNYVWA). Jim Koehler 516-623-0035, Rich Lee 914-589-3751. Swap meet first Sunday of the month at Seaford, NY Long Island Rail Road Parking Lot. Web site: www.nyantiqueradio.org.

Heartland Antique Radio Association (HLARA). Gene Vickery, 7201 E. 64th St., Tulsa, OK 74133. E-mail: gene.vickery@hlara.org. Dues \$15. See Web site for more info. www.hlara.org.

Houston Vintage Radio Association (HVRA). PO Box 31276, Houston, TX 77231-1276. Membership info: Tom Burslem, tomburslem@yahoo.com. Pub: The Grid Leak, bi-monthly. Dues: \$20. Monthly meetings and auctions held 4th Saturday of each month. Web site: www.hvra.org.

Hudson Valley Antique Radio and Phonograph Society-AWA (HARPS). meets third Friday of the month at the Episcopal Church of Suffern, 65 Washington St., Suffern, NY 10901. Info: Dale Cranston (845) 357-1615 dale.cranston@gmail.com.

Indiana Historical Radio Society (IHRS). 245 N. Oakland Ave., Indianapolis, IN 46201-3360. Pub: IHRS Bulletin, quarterly. Dues: \$15 per year. Quarterly swap meets in various areas of the state. Web site: www. indiana historicalradio.org.

Iowa Antique Radio Club and Historical Society (IARCHS). Dwight Baker, President. E-mail: vtaudio@hotmail.com. Pub: IARCHS Newsletter, quarterly. Dues: \$10. Annual Radiofest. www.iowa-antique-radio-club.com.

Jacksonville Antique Radio Society (JARS). Sean Olin (904) 386-8332, oldradios@bell-south.net. www.jarsradioclub.com.

Long Island Radio and TV Historical Society (LIRTVHS). 43 Sayville Blvd., Sayville, NY 11782. Membership \$25 per year. E-mail: liwhs@gmail.com. Web site: www.lirtvhs.org.

Memphis Antique Radio Club (MARC). President, Ray Eaton, 459 Second St., Henderson, TN 38340. E-mail: MARCMemphis @gmail.com.

Michigan Antique Radio Club (MARC). Don Colbert, MARC, membership@michiganantiqueradio.org. Pub: The Michigan Antique Radio Chronicle, quarterly. Dues: \$20. Annual Extravaganza and other quarterly meets. www.michiganantiqueradio.org.

Mid-America Antique Radio Club (MAARC). Claude Chafin, 4223 E. 42nd St. Way, Independence, MO 64055. Pub: The Broadcaster, quarterly. Dues: \$15. Semi-annual auctions and swap meets. http://sites.google.com/site/midamericaantiqueradioclub/.

Mid-Atlantic Antique Radio Club (MAARC). Geoff Shearer, 14408 Brookmere Dr., Centreville, VA 20120 (703) 818-2686. E-mail: gshearer2@verizon.net. Pub: Radio Age, monthly. Dues: \$20. Monthly meetings. www.maarc.org.

Mid-South Antique Radio Collectors (MSARC). Terry Layman, 130 Saint Margaret Dr., Lexington, KY 40502. E-mail: layvin-rad@insightbb.com. Meets last Saturday in April and October.

Military Radio Collectors Association (MRCA). Pete Hamersma, PO Box 467, Holderness, NH 03245. Web site: www.mrca. ar88.net.

Military Radio Collector's Group (MRCG). Lynn Fielding KE6JZD, PO Box 11322, Torrance, CA 90501-1322. Ifielding@elcamino. edu; Web site: www.syzen.com/milradio/.

Museum of Broadcast Communications, 360 N. State St., Chicago, IL 60654. Dues; \$30. (312) 245-8200. Web site: www.museum.tv.

Museum of Radio & Technology, 1640 Florence Ave., Huntington, WV 25701. Web site: www. mrtwv.org.

Nashville Vintage Radio Cluh (NVRC). 514 E. Kings Rd., Smyrna, TN 37167. (615) 355-2005. Web site: www.musiccityvintage radio.org.

New England Antique Radio Cluh (NE-ARC). Info: (603) 898-4821. Charlie Perkett, 16 Sunset Rd., Salem, NH 03079-1704. Pub: NEARC Radio News, quarterly. Dues: \$12. Two swap meets/year in April and October. Web site: www.nearc.net.

New Jersey Antique Radio Club (NJARC). Richard Lee - President (914) 589-3751; radio rich@prodigy.net. Membership: Marsha Simkin, 33 Lakeland Dr., Barnegat, NJ 08005. Meetings are 2nd Friday of the month from 7 to 10 pm alternating between Info Age, 2201 Marconi Rd., Wall Township. NJ 07719 and Bowen Hall, Princeton University. Monthly newsletter "The Jersey Broadcaster." Dues \$20. 3 swap meets and 4 repair clinics a year. December holiday party. Web site: www.njarc.org.

New Mexico Radio Collectors Club (NMRCC). Contact Ron Monty at ronmonty @comcast.net. Pub: New Mexico Radio Collectors Club Newsletter, monthly. Dues: \$20. Annual Sale & Show and monthly meetings. Web site: www.newmexicoradio collectorsclub.com/.

Niagara Frontier Wireless Association (NFWA). Gary Parzy, 135 Autumnwood, Cheektowaga, NY 14227. Regional meets. Display at the Amherst Museum, Amherst, NY.

Northland Antique Radio Club (NARC). PO Box 18362, Minneapolis, MN 55418. Pub: The NARC Newsletter, four/year. Dues: \$10. Four meets (including 2 swap meets) per year and Radio Daze event. Web site: www.northlandantiqueradioclub.com.

Northwest Vintage Radio Society (NWVRS). PO Box 82379, Portland, OR 97282-0379. Pub: The Call Letter, monthly. Dues: \$25 a year. Monthly meetings. http://nwvrs.org.

Oklahoma Vintage Radio Collectors, OK City Chapter (OKVRC). Jim Collings, jrcradio @cox.net, PO Box 50625, Midwest City, OK 73140-5625. Pub: OKVRC Broadcast News, monthly. Dues: \$15 per year. Monthly meetings, spring and fall swap meets. For more information, vist http://www.okvrc.org.

Pittsburgh Antique Radio Society, Inc. (PARS). Chris Wells, 110 Fawn Valley Dr., McMurray, PA 15317. (724) 942-1113. Pub: The Pittsburgh Oscillator, quarterly. Dues: \$10. There are 8 meets a year including the April Tri State Radio Fest. www.pittantiqueradios.org.

Puget Sound Antique Radio Association (PSARA). PO Box 7567, Tacoma, WA 98417. Contact Linda Glaspey (425) 478-3643. Pub: The Horn of Plenty, monthly. Dues: \$25 per year. Monthly meetings & swap meets, Nov. show & Aug. swap meet. www.eskimo.com/~hhagen/psara/index.html.

Radio Enthusiasts of Puget Sound (REPS). REPS Membership, 17334 Densmore Ave. N. Shoreline, WA 98133. Pub: Air Check, 9 times a year. Dues: \$20 per year. Monthly meetings, annual Radio Showcase. www.repsonline.org.

Radio History Society, Inc. (RHS). Radio & Television Museum, 2608 Mitchellville Rd., Bowie MD 20716. Rusty Wallace, Membership Chair. Quarterly publication: Dials and Channels. Dues: \$25 per year. Email: radiotymuseum@verizon.net. www.radiohistory.org.

Roanoke Antique Radio Enthusiasts (RARE). Frank G. Smith, WPXR-TV 38, 3819 Bloonsboro Rd., Lynchburg, VA 24503.

Schenectady Antique Radio Club (SARC). Louis DeGonzague, 15 Gail Ln., Latham, NY 12110. (518) 391-9239. E-mail: zenith6@ verizon.net. Dues: \$3. Meets the 4th Sunday of each month at St. Roses College, Madison Ave., Albany, NY at 12 noon.

Society for the Preservation of Antique Radio Knowledge (SPARK). Dues: \$15. Annual Swap Meet, Monthly meeting, 7:30 pm Parkview Community Center, Kettering, OH. Contact: Dan Casey (513) 265-8466; E-mail: dansradioland@gmail.com. www.antiqueradios.com/spark.

South Florida Antique Radio Collectors. Thomas Valenti, 2651 N.W. 19 Ave., Oakland Park, FL. 33311. Ph. (954) 662-3689.

Southeastern Antique Radio Society (SARS). Rich Rodgers, President, 113 Laurel Ridge Dr., Alpharetta, GA 30004. Pub: Newsletter, quarterly. Dues: \$16. Spring, Fall and Winter swap meets. Monthly dinner meetings, 2nd Monday of each month, in Norcross, GA. www.sarsradio.com.

Southern California Antique Radio Society (SCARS). Jim Garrett, 15621 Fox Hills St., Westminster, CA 92683. (714) 891-1689. wa6yos@juno.com. Pub: SCARS Gazette, quarterly. Dues: \$20. Web site: www.antique radios.org.

Texas Antique Radio Club (TARC). Ed Engelken, 680 Lake Forest, Canyon Lake, TX 78133. Pub: Lone Star Waveform, monthly. Monthly meetings. Web site: www.gvtc.com/~edengel/TARC.htm.

Texas Panhandle Vintage Radio Society (TPVRS). Eloy A. Heras, 4086 Business Park Dr., Amarillo, TX 79110. Dues: \$5. Quarterly meetings.

Tidewater Antique Radio and Phonograph Association (TARPA). Barry Callis, 3689 N. Landstown Rd., Virginia Beach, VA 23456. (757) 427-9667. E-mail: betty 3689@aol.com. Meets last Tuesday of each month at the Mary Pretlow Library.

Vintage Radio & Communications Museum (VRCM). 115 Pierson Ln., Windsor, CT 06095. (860) 683-2903. Web site: www.vrcmct.org.

Vintage Radio & Phonograph Society (VRPS). PO Box 165345, Irving, TX 75016. Pub: The Soundwaves is published quarterly. Dues: \$20.00 annually. Monthly meetings, swap meets, Spring auction, annual convention. More information at Web site: www. vrps.org.

W. Va. Chapter, AWA (AWA-WVC). Geoff Bourne, 405 8th Ave., St. Albans, WV 25177. Newsletter, monthly. Dues: \$25.00 (includes museum membership). Quarterly meets, monthly meetings, classes.

Wisconsin Antique Radio Club, Inc. (WAR-Cl). Bill Engaas, 18265 W. Thornapple Ln., New Berlin, Wl 53146. Dues: \$15. Web site: www.warci.org.

INTERNATIONAL CLUBS

(A.R.C. would like to hear about other international antique radio clubs.)

Australia: Historical Radio Society of Australia (HRSA). Membership Secretary, PO Box 2283, Mt. Waverley, Victoria 3149, Australia. Pub: Radio Waves, quarterly. Dues: \$35 Australian. Monthly Meetings. http://hrsa.asn.au.

Australia: Historical Wireless Society of South East Queensland (HWS of SEQ). Pub: Wireless Review, quarterly. Membership: membership@hws.org.au. Web: www.hws.org.au.

Australia: Vintage Radio Club of North Eastern Victoria. Meetings 4th Saturday of the month. Alternate between R.I.S.E. Special Needs Centre, Shepparton, Vic. and Uniting Chruch Benalla Vic. (no December meeting). Info: Marcus Chick, PO Box 637, Wangaratta, Vic 3676. 03 5725 3276. Web: chickmbv@bigpond.com.

Australia: Australia Vintage Radio Society Inc. Monthly meetings, workshops, tech. assistance, etc. Bi-monthly newsletter. Overseas memberships are \$35pa + \$5 joining fee. AVRS Secretary, PO Box 3099, Syndal LPO, Victoria, Australia 3150. Web: www.avrs.org.au.

Belgium: Belgische Radio Club. Francois Marschang, Kromvendreef 53, B-2900, Schoten, Belgium.

Belgium: Vlaamse Liefhebbers Van Der Historiche Radiotechniek (VLHR). Rudi Sillen, Limberg 31, B-2230, Herselt, Belgium. Pub: Retro-Radio, quarterly. Dues: \$20.

Bosnia: Radio Historijsko Udruzenje Jelah. Web: www.rhu.jelah.ba

Brazil: Antique Radios in Brazil. João Mello, PO Box 101, São Roque, Brazil 18130-000.

Canada: Canadian Vintage Radio Society (CVRS). CVRS, 10271 Algonquin Dr., Richmond, British Columbia V7A 3A5. membership@canadianvintageradio.com. Newsletter is available by print or email. See web site for dues. www.canadianvintageradio.com.

Alberta Chapter/CVRS, Rick Williams, rich@canadianvintageradio.com. Secretary CVRS Alberta, 9611 142 St., Edmonton, Alberta T5N 2M8.

British Columbia Chapter/CVRS, Bill West-Sells, westsells@telus.net.

Manitoba Chapter/CVRS, volunteer needed, vactube@hotmail.com.

New Brunswick Chapter/CVRS, W.H. Gentleman, bill@canadianvintageradio.com. 17 Maple Cresc., Rothesay, New Brunswick E2E 2A4.

Newfoundland Chapter/CVRS, John Bray, john@canadianvintageradio.com.

Nova Scotia Chapter/CVRS, Brian McKeigan, brian@canadianvintageradio.com. 4 Baird St., North Sydney, Nova Scotia B2A 2B3.

Ontario Chapter/CVRS, Paul Martin, paulmartin8@yahoo.com.

Saskatchewan Chapter/CVRS, Stan Marlin, smarlin@sasktel.net.

Yukon and NWT Chapter/CVRS, volunteer needed.

Canada, British Columbia: Antique Radio Club of Victoria, BC. Meets 3rd Wednesday of the month at Pluto's, 1150 Cook St., Victoria, BC 7:00pm to 8:30pm. http://groups.yahoo.com/group/VicRadioGroup/.

Canada: Society for the Preservation of Antique Radio in Canada (SPARC). Bruce Winter, 4757 London Green Pl., Delta, BC V4K4X1 Canada E-mail: winter@dcnet.com. Pub: Periodic newsletters. Dues: \$20. Annual open house and show, periodic shows and displays, and museum. www3.bc.sympatico.ca/radiomuseum/.

Canada, Ontario: London Vintage Radio Club (LVRC). Davd Noon, 19 Honeysuckle Crescent, London, ON N5Y4P3, Canada Email: va3dn@execulink.com. Pub: LVRC Newsletter "The Loudspeaker," bimonthly. Dues: \$15 Canadian. Six meetings yearly. www.lvrc.homestead.com/index.html.

Canada, Ontario: Ottawa Vintage Radio Club (OVRC). Lea Barker, barker@ca.inter.net. Pub: OVRC. Monthly meetings. www.ovrc.org.

Canada, Ontario: Ontario Vintage Radio Association (OVRA). Ted Catton. www.ovra. ca.

Canada, Quebec: Quebec Society for Vintage Radio Collectors (QSVRC). SQCRA, Daniel Labelle, 538 Judd, St-Eustache, Quebec, Canada J7R 4N8. Pub: Radiophilie Quebec, bimonthly.www.sqcra.qc.ca.

Czech Republic: Historicy Radioclub Ceskoslovensky (HRCS). Nadrazni 1394/53, CZ 589 01 Trest. Pub: Radiojournal, 3 per year. Meetings: 4 per year. Dues: 25 Euro/Year. Web: www.radiojournal.cz. England: British Vintage Wireless Society (BVWS). Mike Barker, Pound Cottage, Coate, Devizes, Wiltshire SN10 3LG, England. Pubs: BVWS Bulletin, quarterly; BVWS Newsletter, five times/year. Dues: £25. Meetings and swap. www.bvws.org.uk.

England: Eddystone User Group (EUG). Online only. Web Site: www.eddystoneuser-group.org.uk/.

France: Association des Amis du Musée de l'Electro-Acoustique les Radiophiles Français (A.E.A.). Jean-Claude Montagné, President, 35 rue Salvador Allende, F92220, Bagneux, France. Pub: Bulletin of the A.E.A. Dues: \$46. http://perso.wanadoo.fr/clubaea/gindex.htm.

France: Club Histoire et Collection Radio (CHCR). Chez Gilbert Gorin, 3 rue Capitaine H. Maizan, 80160 Plachy-Buyon, France. Pub: Telegraphie et Telephonie Sans Fil Electricite Ancienne, quarterly. Library. Annual May event in Riquewihr, Sept. Bar Le Duc event, meetings. Website: www.chcr. asso.fr.

France: Radiofil. Jean-Paul Delattre, Secretaire general, 2 Rue de la Clairiere, 54425, Pulnoy, France. Email: secretaire-general@radiofil.com. Pub: Radiofil Magazine, 6 issues/year. Dues: euro 39/year. http://www.radiofil.com.

Germany: Gesellschaft der Freunde der Geschichte des Funkwesens e.V. (German Society of Wireless History). Germany's largest radio and tube collectors and historians association with app. 2500 members) Publication: Funkgeschichte, bimonthly, many events, website: www.gfgf.org.

Hungary: Hungarian Radio Collectors Club. Laszlo Koger, H-8900 Szekesfehervar Sajo U 9. Meetings twice a year, bi-monthly news.

Ireland: Irish Vintage Radio & Sound Society. Henry Moore, 9 Auburn Close, Killiney, Co. Dublin, Ireland. Quarterly nfewsletter. 26 weekly and six monthly meetings.

Israel: Antique Radio and Broadcasting Museum. Museum in Tel-Aviv. Bruno Pinto, 24 Remez St., #7, Tel-Aviv, Israel 62192.

Italy: Associazione Italiana per la Radio d'Epoca (AIRE). Nerio Neri, President, Musco della Comunicazione, via de Ricasoli 22, 52100 Arezzo, Italy. Pub: La Scala Parlante, bimonthly. Web site: http://www.aireradio.org.

Japan: Antique Wireless Club (AWC). Noriyoshi Tezuka, JAINTF, Secretary AWC, Telephone: +81-45-949-3195, Kagahara 1-24-6-115. Tsuzuki-ku, Yokohama 224-0055, Japan. Monthly meetings and newsletter. Email: n-tezuka@pop16.odn.ne.jp. Web site: http://blog.goo.ne.jp/vrc-tezuka.

Netherlands: Nederlandse Vereniging voor de Historie van de Radio (NVHR). Van Aduardstraat 21, 6671 ZD Zetten, The Netherlands, www.nvhr.nl.

New Zealand: New Zealand Vintage Radio Society (NZVRS). David Crozier, PO Box 13873, Onehunga, Auckland, New Zealand 1643. NZVRS Bulletin, quarterly, monthly meetings. Dues: \$15. www.nzvrs.pl.net.

Norway: The Norwegian Radiohistoric Society. Mekanikerveien 32, N-0683 Oslo, Norway, Pub.: Hallo Hallo, quarterly. Dues: \$40. Regular meetings every Tuesday; Auctions a couple of times per year. Web site: www.nrhf.no.

Romania: Pro Radio Antic. P-ta. Acad. Cajus lacob, Nr.4, Bl.R, Sc.A, Et.8, Ap.29; 310136 Arad, Romania, www.proradioantic.ro.

Spain: Spanish Vintage Wireless Club (Associacio Cultural Amicos de la Radio). Rei Jaume, 55, 08840 Cardedeu, Spain, http:// rt00117m.eresmas.net/amg-2.htm.

Sweden: The Radio History Society of West Sweden, Anders Carlssons, Gata 2, SE-417 55 Gothenburg, Sweden, Pub; Audionen. Amateur radio station: SK6RM. Museum: www.radiomuseet.se. E-mail: info@ radiomuseet.se.

Sweden: Sveriges Radio Historiska Forening (SRHF). Contact Johan van der Levin: johan@ johansoldradios.se. www.radiohistoriska.se.

Switzerland: Club der Radio-und Grammosammler (CRGS), Johannes M. Gutekunst, Lenzhardstrasse 22, 5102 Rupperswil, Switzerland. Ouarterly newsletter. www.crgs.ch/.

Tube Collectors Association, PO Box 636. Ashland, OR 97520 USA. Pub: Tube Collector, 6 times a year. Dues: \$20 per year to the US and Canada. See the web site for multiple year dues and foreign membership dues, www.tubecollectors.org.

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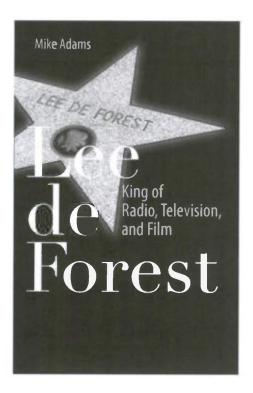






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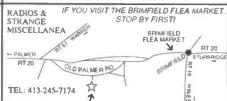
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These have included both our print subscribers as well as our online edition subscribers. The only difference between the print and online subscribers is that the online subscribers pay a reduced subscription rate and don't receive the print magazine.

Many of the people I spoke with didn't know about our subscription benefits

Let's take a look at them:

ABILITY TO LOOK AT THE

As a print or online subscriber you can look at the latest issue of the magazine online on our web site. This is the entire issue of the magazine and not an abbreviated edition. Subscribers can look at the last four issues of the magazine. Non-subscribers can look at earlier editions of the magazine at no cost.

One advantage of the online edition is that any photograph sent to us in color is posted in color!

ABILITY TO LOOK AT PAST AUCTION RESULTS

Almost every month we publish auction results in the magazine. Did you know that we have a database of the auction prices online on our web

site? Subscribers can look at the auction results and they are SEARCHABLE! If you want to see if a specific radio, piece of equipment, tube, magazine, etc. that has been sold, all you have to do is enter the item and see every time the item has been sold as well as the price, auction house, and date!

ABILITY TO LOOK AT ONLY THE CLASSIFIED ADS

Subscribers can also look only at the classified ads without downloading the entire magazine. This is very useful for readers who just want to read the classified ads. Readers with dial up Internet service will save a lot of downloading time.

FREE MONTHLY CLASSIFIED AD

Each month a paid subscriber is entitled to place a free classified ad in the magazine. The classified ad can be up to 50 words. Additional words are 10 cents each. Classified ads can be submitted by email, fax, or mail. Typewritten preferred to reduce possible errors. Name, address and telephone number count as 6 words. Full name and address are required in all classified ads.

Of course the most important benefit to the subscribers of *Antique Radio Classified* are the articles containing information that will help you in increasing your knowledge of our hobby.

HOW DO I ACCESS THESE BENEFITS?



Your print subscriber user ID and password are on your mailing label. Online subscribers are emailed their user ID and password. Your user ID is the number after "SUB#" on your mailing label. Your password is the digits in brackets [xxxx] after your "SUB#".



On the Subscriber-Only Access page you can click on the Full Issue you would like to view or click on the Classified Ads section from that issue.



Go to A.R.C.'s home page <u>www.antiqueradio.com</u> and click on Subscriber Only Page.



Or you can click on the Auction Prices Data Base. Just enter the item that you are researching.



Tri-State Radio Fest

Sunday, April 22, 2012

8th Annual Antique Radio Flea Market and Auction

Vintage TV, Amateur Radio, Audio & Phonograph Welcome - No Computer.

Vendor set-up at 6:30 - 8:30 am 6' Tables are \$20 each

- Additional tables \$15
- Entrance fee included for vendors

Open to buyers from 8:30 am - 12:00 noon

- Entrance fee is \$5.00

Door Prizes drawn at 12:00 noon, Auction following

Check-in for auction items 9:00 am to 12:00 noon

Auctioneer: Richard Estes - www.EstesAuctions.com

Featured: Contest - Tombstone Radios

Center Stage Banquet Hall

1495 Old Brodhead Rd, Monaca, PA 15061

I-376 Fxit 39, Route 18 North

- Near the border of Pennsylvania & Ohio
- Near the Beaver Valley Mall, food and lodging close by
- Look for TSRF signs leading the way!

Sponsored by:

Pittsburgh Antique Radio Society (PARS)

The Buckeye Antique Radio and Phonograph Club (BARPC)

For more detailed information

Visit: www.PittAntiqueRadios.org

or Call: Chris Wells 724-942-1113

Regis Flaherty 724-969-0643

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CLASSIFIED AD DEADLINE March 30 Noon Eastern Time