# The Jersey Broadcaster

**NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB** 

A CONTRACTOR OF CONTRACTOR OF CONTRACTOR OF CONTRACTOR CONTRA





Reported by Marv Beeferman

Spring radio-fever came early in the month of March with a well-attended meeting. The <u>April</u> club meeting will be held on the 6th in lieu of the 13th... no, not because we're overly superstitious, but to avoid a conflict with Good Friday. That is why you're receiving the *Broadcaster* a little earlier this month.

Table rental is going very well for the April 21st Hightstown swapmeet and it was very pleasing to see so many hands raised when volunteers were called for.

The list includes: Richard Lee, Ray Chase, Marty Friedman (club table), Jeff Kamer (9-10), Dave Snellman, Sal Brisindi, Randy Gill, Mario Volpe and the usual Vourtsis/Beeferman duo. With this many assistants and with the availability of our new two-way radios, volunteer time should be limited to no more than an hour or so.

Dave Sica reported that the passing of the NJARC webmaster baton from John Dilks and the transition to the new site is progressing well. John received a well-deserved hand of appreciation for maintaining our site to this point; access will still default to www.eht.com/old radio until the new site is fully devel-

oped. Some of the categories that Dave is cultivating include a video library listing, a message board, advertising, a review of our various "club programs, links, a photo gallery and the usual articles and activity schedules.

John Dilks is also promoting the possibility of a bus trip to East Greenwich, RI to visit the museum of Wireless and Steam.

# **MEETING NOTICE**

Volume 7 Issue 4

**DATE CHANGE:** Due to a conflict with Good Friday (April 13th), the next meeting of the NJARC will take place on Friday, April 6th at the Grace Lutheran Church, corner of Route 33 and Main Street in Freehold. In lieu of a tech-talk, we'll be conducting another one of our popular show-andtells. Bring in one of your latest finds or an item from your collection that you're just dying to talk about. No theme for this one...just whatever suits your fancy.

There is some interest with the Old Barney amateur Radio Club in Manahawkin, but not enough for a half of a bus. A shared club trip (with perhaps other radio clubs) would be double the fun with pickups made along the Garden State Parkway. An early departure would be required for a 8 to 9 AM arrival, 5 to 6

types of early radios. Cost of the trip is unknown at this time but should run from \$30 - \$50 per person. Contact John at the NJARC web site or at 609-927-3873 if you are interested in attending.

Tom Provost announced the winners of this year's broadcast band DX contest which are published in this month's



1. Entries must have been recently constructed by the contestant and must be capable of receiving at least one station.

2. A solid state diode may be used for detection as in a reflex circuit.

3. The signal path of the radio must use only one or two tube

envelopes. Multifunction vacuum tubes are permitted.

4. Transistors or integrated circuits may be used only in the power supply. Any convenient power supply may be used.

5. Contestants should be prepared to demonstrate their creations at the May 11th, 2001 meeting and be prepared to say a few words about the design.



Phil Vourtsis extols the virtues of this black dial Zenith radio/phono console during our March mini-auction.

hours for the tour and a short stop for dinner on the return trip.

The Museum of Wireless and Steam (http://users.ids.net/~newsm/) is probably, the best radio museum within a one-day trip from New Jersey. It has an original wireless station from the early 1900s (with a wireless receiver that pre-dates 1900) and a very large display of most

### **March 2001**

THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are \$15 per year and meetings are held the second Friday of each month at the Grace Lutheran Church, corner of Route 33 and Main Street in Freehold N.J. The Editor or NJARC is not liable for any other use of the contents of this publication.

**PRESIDENT:** Phil Vourtsis 13 Cornell Place Manalapan, N.J. 07726 (732)-446-2427 VICE PRESIDENT: **Richard Lee** 154 Hudson Terrace Piermont, N.Y. 10968-1014 (845)-359-3809 **SECRETARY/EDITOR:** Marv Beeferman 2265 Emeralda Park Drive Forked River, N.J. 08731 (609)-693-9430 TREASURER: Sal Brisindi 203 Cannon Road Freehold, N.J. 07728 (732)-308-1748 SARGEANT-AT-ARMS: Dave Snellman Box 5113 New Britain, PA 18091 (215)-345-4248 **TRUSTEES:** John Ruccolo (609)-426-4568 Gary D'Amico (732)-271-0421 Martin Friedman (732)-238-1047 **TECHNICAL COORDINATOR:** Al Klase 22 Cherryville-Station Road Flemington, N.J. 08822 (908)-782-4829 **TUBE PROGRAM:** Gary D'Amico **84 Noble Street** South Bound Brook, N.J. 08880 (732)-271-0421 **SCHEMATIC PROGRAM:** Aaron Hunter 23 Lenape Trail Southampton, N.J. 08088 (609)-267-3065 **CAPACITOR PROGRAM:** John Ruccolo 335 Butcher Rd. Hightstown, N.J. 08520 (609)-426-4568 WEB COORDINATOR: John Dilks, K2TQN (609)-927-3873 http://www.eht.com/oldradio **MEMBERSHIP SECRETARY:** Marsha Simkin 33 Lakeland Drive Barnegat, N.J. 08005 (609)-660-8160

# Volume 7 Issue 3



John Dilks announces the "Dilks challenge" - a restoration project for new collectors.

6. The membership will vote for the best entries based on a) Craftsmanship b) Creativity and c) Technical Merit.

Our March mini-auction was another fun event and thanks to Steve Goulart for donating 50% of the proceeds to the club. The centerpiece was a Zenith radiophono combination, with a Blonder-Tongue Laboratories model "99" UHF converter also attracting a lot of attention. (The evolution of this converter can be traced from 1953 through 1965 in such periodicals as Radio Craft and Radio Electronics.) The "Dilks Challenge" also brought a \$40 bid for a Day Fan 5 from one of our new club members. It would be nice if we all could donate our support to get this unit up and running. Mark Mittleman has volunteered to offer the next "challenge" for our April meeting. Remember, the item will be offered at auction to new collectors (or those with a small collection) with the agreement that it be restored and displayed at a future "Show and Tell."

Some additional items which may be of interest include:

- The Camden "housecleaning" is still in the negotiating stage.
- The club has decided to buy a printer so that CD rom copies of Rider schematics are readily available at our repair clinics.
- Jon Butz Fiscina will hold his moving party on March 31th. Jon plans to sell any items that he can't stuff in the glove compartment plus he.

# Page 2

would appreciate all the free (but steady and gentle) hands he can get in hauling and packaging his collection. Jon can be reached at (908)-725-7476 for directions.

- Your editor will need a copy of Adobe Acrobat 4.0 (full version) to get the *Broadcaster* on to the web. The cost is \$229; if any club member is aware of a discounted price or has access to a version for club use, it wouldl be appreciated. Contact me at mbeeferman@cs.com or at 609-693-9430.
- Ludwell Sibley has recently completed a survey of AWA members soliciting opinions on the OTB, AWA organization and management and the Rochester Conference. I will bring some copies to the April meeting for all those who are interested.

In closing, Walt Heskes (via e-mail) suggests that before you trash a dynamic speaker because the field coil is blown or because the cone has disintegrated, you might want to contact Hank Brazeal, who specializes in repairing condemned dynamic and PM loudspeakers. With many patterns at his disposal, Hank can make the cones for AK's, the larger Philco speakers and other brands as well. Generally, his prices for reconing start at \$25 for speakers up to 7 inches and \$55 for a 15-inch speaker. Minimum charge on field coils is \$35 which can run to \$75 for a large coil or one that takes very fine wire. Most repairs are turned around in about 10 days. Hank lives in Hoover, Al and can be reached at hankspkr@home.come and his ad can be found in the AES (Antique Electronic Supply) catalog.



The Blonder-Tongue Laboratories model "99" UHF converter.



Tom Provost has announced the winners of this year's Broadcast Band DX Contest. Interestingly enough, Al Klase's homebrew "Skywaves Contest Crystal Set" took top honors with the highest posted score, putting to shame some heavy duty tubebased competition. Thanks to all who participated and to Tom for tabulating and publishing the data.

NJARC is investigating the possibility of some friendly competition with the Delaware Valley club for next year. Some nice prizes, a little rivalry and a combined awards meeting at a convenient eatery may be just the formula for increasing participation. We'll post information early for this one to give everyone enough preparation time. So check out the categories and scan your collection...you just might have **THE** radio that will put "Team NJARC" in the winner's circle.

### **CATEGORY A - Crystal Receivers**

Highest Score: Al Klase Receiver: Skywaves Contest Crystal Set, homebrew (2001) Antenna: 65' 3-wire flat top, 30' high Score: 8,631 miles

#### <u>CATEGORY B - Primitive Receivers, 1</u> or 2 Tubes

Highest Score: Tom Provost Receiver: Twinplex Special, homebrew regen. 1 tube all wave (2000) Antenna: 30' basement inverted L Score: 8,153 miles

### **CATEGORY C - 1920 Battery Sets**

Higest Score: Gary D'Amico Receiver: Radiola 20, tuned rf/regen, 5tube (1925) Antenna: 50' (approx.) longwire Score: <sup>\*</sup>8,390 miles

CATEGORY D - Receivers up to 8 Tubes (Pre-1950) Highest Score: Grant Buford

## Volume 7 Issue 4

Receiver: Philco 640, 8-tube superhet (1936) Antenna: Homebrew tunable loop Score: 7,554 miles

Frank Feczko Receiver: Philco 46-350, 6-tube superhet (1946) Antenna: Built-in loop Score: 6,946 miles

Rich Mueller

Receiver: Delco 1227, 6-tube superhet (1947) Antenna: Internal loop with 45' longwire added Score: 6,227 miles

#### CATEGORY E - Open to any Pre-1950 Receiver

Highest Score: Ludwell Sibley Receiver: R-388/URR (Collins 51J-3), circa unknown, pre-1950 design Antenna: 30' random on roof Score: 5,235 miles



Gary D'Amico's Radiola 20.



Tom Provost took top honors in the B category with his Twinplex Special homebrew.



On April 1st, the American Dairy Institute reported that, on the average, each American consumes approximately 10 pounds of cheese every year. What most people aren't aware of is that the capability to meet this huge demand can be directly attributed to one of the many dividends of early radio research.

Traditionally, cheese was made as a way of preserving the nutrients of milk; the milk of mares and goats by the ancient Greeks, camel's milk by the early Egyptians and reindeer's milk by the Laplanders. Eventually, as demand rose, increased production was aided by the application of the principles of microbiology and chemistry. But not until it was discovered that UHF radio waves could be used as a catalyst to both accelerate the manufacturing process and diversify the end product did cheese making become a major industry. Today, 85% of the cheese manufactured in Wisconsin is produced by methods first discovered in 1935.

Major credit for the application of radio waves to enhancing cheese production is given to the famous Austrian scientist Dr. Helmut von Limburger. His initial work (although derided by some colleagues as "foolish") can be found in the April 1st, 1935 edition of the "Proceedings of the Biophysical Society of Vienna." Dr. Limburger had been conducting numerous experiments to determine the influence of high frequency impulses on bacteria and ferments, and found, for example, that a certain type of bacteria treated by UHF waves over a period of 15 minutes showed a tremendous growth. But he also found that the same bacteria. when treated over a period of 45 minutes, was destroyed entirely.

While extending his field of investigation on bacteria and ferments to include milk, Dr. Limburger found some irregu-

Page 3

larities which could not be explained in the normal way. At first, he attempted to provide an explanation by controlling the lactic acid content of the material under test. When these tests proved inconclusive, he experimented with rennin. Rennin is an enzyme obtained from the fourth stomach of a suckling mammal (usually a calf or lamb) and is made into a concentrated extract known as rennet. Rennet is used in cheese making to speed up the separation process (coagulation) and for ripening.

Dr. Limburger was able to convince the owner of one of the largest Austrian dairies to obtain permission to investigate the influence of UHF waves on rennin fermentation on the raw material of cheese. The results of his experiments were surprising; it was found not only possible to shorten considerably the time previously found necessary to obtain rennin fermentation, clusive explanation could be offered as to what was exactly happening.

By 1947, however, further research brought a full understanding of the process to light. Because it is somewhat complicated, in simple terms, the application of a precise power level and specific wavelength over an exact limited time stimulates special chemical conditions to help the rennet fermentation to "grow" easier and more quickly and provides favorable conditions such that all parts of the material to be converted into cheese are "well done" at the same time. For Edam, this value is 422 watts at 33.7 Mhz for 4 hours, 43 minutes; for Gouda 345 watts at 28.2 Mhz for 3 hours, 27 minutes; for Swiss 923 watts at 39.2 Mhz for 6 hours, 22 minutes. In addition, the microbiological and biochemical content of the curd as well as the temperature and



Von Limburger's early cheese irradiation apparatus.

but also to produce a cheese of excellent variety and quality. The first experiments were made with a 100-watt transmitter, variable in frequency between 30 and 40 Mhz (10 to 8 meters); later, an 800-watt transmitter with a 3-meter wavelength was tried.

At the time, Dr. Limburger could offer no explanation of how the cheese fermentation process was speeded up or how the cheese variety was affected by applying UHF waves. At the time, the heating effect of UHF waves on various materials was understood as well as the importance of temperature in the conversion process. For example, optimum fermentation is obtained only in the temperature range of 104 to 108 °F nor is coagulation possible between 50 -59 °F or 140 - 149 °F. However, no conhumidity must also be controlled to produce the desired final product.

For those of us who enjoy a slice of Swiss to spice up that "ham" sandwich while working the airwaves or some sharp cheddar in that cheese omelet, we probably owe some gratitude to Dr. Limburger's early research.

#### References:

 Helmut Von Limburger, "Irradiation of Rennin Extracts with High Frequency Radio Waves," Proceedings of the Biophysical Society of Vienna, April 1, 1935.
I.M. Kidding, "Modern Cheese Making Practices in the United States," The Dairyman's Journal, April 1, 1953.



Page 4

The following information was provided by Ludwell Sibley in an e-mail titled, in typical Sibley fashion, "Hey, Sailor, Take a Look at This!" Although the item list is somewhat lengthy, I felt it needed to be included in its entirety to bring out, as Ludwell suggests, the "shock" value of the \$650 price tag. For new members of NJARC, Ludwell was a founding and very active member of the club, organizing and adminstering our tube programs and being the impetus for many successful swapmeets and auctions. Former editor of the OTC ("Old Timers Bulletin"), Lud is presently editor of the "Tube Collector" (bulletin of the Tube Collectors Association) and author of "Tube Lore." Credit is also given to Jerry Vanicek for providing Lud with the letter and equipment list that follows....Ed

A few years ago, when I was writing the "Before ARCA there was ARGA" item for the DVHRC "Oscillator," Jerry Vanicek sent me a faded xerocopy of a letter and attached equipment list. The following may be useful for "Broadcaster" purposes, as it has a lot of NJ content - as well as shock value in terms of what the letter was offering for \$650 in 1964 dollars. The original letter and attached list are simple typewritten copy, not on letterhead.

D'Agostino, of course, was the executive assistant to David Sarnoff for most of his career - there is a photo of him posed with Sarnoff in front of the famous Lucite-cased TRK-12 TV set at the 1939 World's Fair opening of TV service. He seems to have acquired two glorious collections: one of rare (and common) tubes, which he sold to tubemaker Delbert Replogle of General Electronics, and which was lost in a 1959 fire at the latter's plant in Passaic. The other is the material listed below. There were other goodies too - like the Felix the Cat doll from RCA's '20s disc-TV test broadcasts.

Stegner was the central figure of the Antique Radio Guild of America, a small, early collector organization. (The "Dr." title came from being a meteorologist, as I remember it.)

This item could be titled "Ear yer heart out, collectors!" Look at the list of microphones . . . check Item 62, which fairly shouts "Marconi Magnetic Detector" . . . look at Item 3, which must have been a prototype of the Westinghouse Vocarola speaker. . . scope Items 56-57-58, all that WECo gear. Items 52 and 64, the 1934 stratospheric-balloon setup, wound up in the Muchow Collection, and will probably be auctioned this August. (This was the setup featured on the front page of the "OTB," with pilot Capt. Stevens and RCA's Bob Morris, years ago.)

Don't know who actually got the gear, although the Felix doll was featured in the "ARCA Gazette." Note the simplicity of the pricing: 65 widgets, \$650 total.

> JOSEPH D'AGOSTINO 711 Sheridan Avenue Plainfield, New Jersey September 30, 1964

Dr. James H. Stegner 6913 Westmoreland Avenue Takoma Park 12, Maryland

#### Dear Dr. Stegner:

I was most interested in your kind reply to my recent letter, and somewhat bothered that we had not crossed paths sooner. Some of the names that you mention sound quite familiar. In a subsequent letter I will follow with some of the information about myself that you require.

In this letter I am sending you a tabulation of the items included in the museum collection numbering sixty five units. I would like to dispose of the entire collection at one time for a suggested price of Six Hundred and Fifty Dollars (\$650.00). This suggested price is based on the basis [sic] that items from the collection have been rented from time to time by four New York Advertising Agencies, The Columbia Broadcasting System, Harvey Radio Company and the American Broadcasting. Also the fact that two other persons are very much interested in acquiring the collection and are pressing me at this time to sell it.

I shall await your further interest and comments. I am,

Sincerely

Joseph D'Agostino

# IS DEMOCRACY STILL ON THE DIAL?

### By Robert Worth Edited by Marv Beeferman

The following piece is based on the article "Is Democracy Still on the Dial?" by Robert Worth from the March 3, 2001 edition of the New York Times and was suggested by Ray Chase...Ed.

These are dark days for local radio. The number of independent stations falls every year, and in December Congress all but killed a federal plan to license hundreds of new, noncommercial low-power stations throughout the country. But there is more at stake in the low-power debate than bringing some more diversity to the FM dial. For some scholars and advocates, Congress's action has revived an 80-year-old debate about the role that radio plays in a free society. Which promotes democracy better: a government guarantee of broader public access to the airwaves or letting free market forces reign?

To low-power advocates, radio deserves government protection because it is or ought to be the ultimate grass-roots medium. Even in this age of the Internet and cable television, radio remains. the cheapest way to be heard by your friends and neighbors. You can start a pirate station if you have the \$800 to buy a simple transmitter, an antenna and the cable to connect them. It is also the most accessible: you don't even have to be literate to listen to it.

Radio is thought as by many as "the people's medium." Radio was instrumental, for example, in bringing democracy to the former Communist bloc, where dissidents often relied on Radio Liberty and Radio Free Europe for information about their own countries. "If my fellow citizens knew me before I became president, they did so because of these stations," the Czech president, Vaclav Havel said in 1990.

It is clear that radio's local role has dwindled as big media chains have bought out smaller competitors. But most people have forgotten that when radio first appeared in the 1920's, many politicians said corporations should not be allowed to profit from advertising. The broadcast spectrum was considered a natural resource, like the air, to which every citizen had a claim. In 1922 a conservative like Secretary of Commerce Herbert Hoover could say of radio: "It is inconceivable that we should allow so great a possibility for service to be drowned in advertising chatter."

Even after commercial broadcasting gained a foothold in the late 1920's with the founding of CBS and NBC, there was a strong movement, joined by organized labor, religious and civil liberties groups, to reserve a significant part of the radio spectrum for noncommercial broadcasting. Many of these allies hoped that Franklin D. Roosevelt would side with them. But by the mid-1930's the broadcasters had powerful allies in Congress, and Roosevelt was reluctant to fight them.

When Roosevelt signed the Communications Act of 1934, the resistance to commercial broadcasting died, and the new industry tried hard to erase the notion that there had ever been an alternative. By 1937, the president of CBS, William S. Paley, declared of broadcasting that "he who attacks the American system attacks democracy itself."

After the Telecommunications Act of 1996 removed limits on the number of stations a single corporation could own, big media companies engaged in a feeding frenzy. The result has been a drastic decline in the number of independent stations on the dial. By the end of 1999, two companies, Clear Channel Communica-

tions and Infinity controlled about a third of the \$15.5 billion annual revenue of the radio industry. Critics of commercial radio argue that this is proof that the advocates of noncommercial radio in the 1920's and 30's were right: big business is killing radio's democratic promise, severely limiting the number of voices that can be heard.

Some conservative scholars argue that less government protection is the way to free up the airwaves by opening markets to additional competition. But to others, the problem with the American system is not too little democracy but too much. Antipathy to broadcast advertising seems to be strongest among the well off and well educated. However, lower down the socioeconomic scale, people mind it less and even like it.



What many critics of the American system really want is not so much more democracy as a system more like the one that evolved in Britain, where the BBC had a monopoly from its founding in 1927 until the 1950's. The BBC was financed with a tax on receivers avoiding the need for advertising. But the BBC, with impressive cultural and political programming, was hardly democratic. Its directors refused to survey listeners, rooting their choices in what the BBC's first director called "an active faith that a supply of good things will create a demand for them, not waiting for the demand to express itself." That made for high standards, but listeners grew frustrated with the BBC's austere programming, and its monopoly gradually eroded.

Meanwhile, emerging technologies could transform the debate about radio and democracy. Internet radio stations are already becoming popular, and digital and satellite technology could also expand options available to the average listener.

### Volume 7 Issue 4

HISTORICAL RADIO & TELEVISION APPARATUS MUSEUM EARLY AUTHENTIC ORIGINALS



Page 6

### Volume 7 Issue 4

Page 7



# Volume 7 Issue 4

### Page 8

CONNECTIONS

Free exposure for buyers and sellers! Unless requested otherwise, each ad will run for two months in both the *Jersey Broadcaster* and the Delaware Valley *Oscillator*. All buying and selling transactions are the responsibility of the parties involved.

# FOR SALE

Check out NJARC's capacitor program for those most commonly needed replacements. Contact John Ruccolo at any club meeting or call him at home (609)-426-4568 to find out what's available. All proceeds go to the club.

Zenith TransOceanic H500; working. Would like my Philco 40-215 repaired. Larry Hellebrandt, (908)-232-1213

Radio schematics and service data, US, Australian and Canadian receivers. #10 S.A.S.E. + \$2.50 for 1 to 5 pages of data per model; a copy charge of 20 cents per page is added for copies over 5 pages. (Questions/quotes answered by e-mail or a S.A.S.E.) Steve Rosenfeld, P.O. Box 418, Manahawkin, N.J. 08050 Phone: 609-597-2201; srosenfeld@ems.att.com

New index to AWA publications (*Old Timer's Bulletin*, <u>AWA Review</u>, misc.), 1960 through Aug. 1999. Formatted like the earlier version but with new "Author" section. Has 63 pages, 8-1/2" X 11" size. Gives 7000+ citations. \$12 postpaid anywhere. Make check/MO payable to: Ludwell Sibley, 102 McDonough Rd., Gold Hill, OR 97525.

Heathkit model XR-1L transistor radio. Working and in good condition. Call Clifford, (201)-641-3968

Andrea console entertainment center (1950), very nice condition. "I'll take almost anything for it." Douglas Eldridge, (973)-674-8194

Atwater Kent 60 with F-4A speaker; Emerson B5 wooden table model. Gary Gadec, (908)-654-6109

Emerson catalin model BT245 (green); no cracks, works. Nick, (973)-305-4861

The NJARC tube program offers clean, tested, boxed tubes at very reasonable prices with availability at any club meeting (no dealers, please...not for resale). Proceeds go to the club. Of course, donations of radio-type tubes in any condition are welcome. See Gary D'Amico at the next meeting.

1. Stromberg Carlson 1121-M-2 lowboy console (1947?0 radio phonograph, BC, SW, 2-FM bands calibrated in channel numbers. Radio works well, needs record changer. 2. Stroberg Carlson table model with same chassis as above, cabinet rough. 3. Zenith console radio phonograph, A136561, BC & SW, black dial. 4. BC & SW Silvertone tombstone farm radio, BC & SW. Any interest in the above items and I will bring them to the March meeting. These are inexpensive or will trade for junk or equal value (SW basket cases, etc.) Email or call ... Steve Goulart, sgoulart@att.com, 732-219-6193.

Selling new and used TV and radio tubes; also have some phono needles and cartridges. Send want list to: Don Smith, 2706 Cub Hill Rd, Baltimore MD 21234 or call (410)-665-8536

RADIOS: Regal 747 4-tube portable, Fisher FM-80 tuner, Philco "Tropic" portable, Zenith 10S549 console, Atwater Kent Model 40, others. PARTS: Big-pin tubes, vintage semiconductors, geigercounter parts. PAPER: Vintage Allied, Lafayette, etc. catalogs, service notes and vintage manuals - list available. John Rohr, 348 Farm Lane, North Wales, Pa., (215)-661-1134. FAX-(215)-661-2910. jaxrohr@netreach.net Lyric model 60-66 by All-American Mohawk, 3-gang TRF uses 120 VAC. Works fine. With 7 tubes: 2-226,1-326,2-227,1-71A and 1-80. Has face panel to fit into a cabinet. Asking \$50. Large 40 amp variac, G.R. Type 50A, 115 VAC in, 0-135 VAC out, 13" dia. with 7" handwheel, 85 lbs., asking \$25. Both items pickup only. Harry Kundrat, (908)-665-1873.

# WANTED

Crystals for my Viking II transmitter. Not sure of style, but pin diameter is about 0.093" and spacing just under 1/2 inch. Looking for 1800-1850 and 3500-3550. Rob Flory, 609-466-4217.

"Radio in the Home" magazine published in Philly from 1923-1926. Any condition. John Okolowicz, 624 Cedar Hill Road, Ambler, PA 19002. (215)-542-1597, john@grillcloth.com

Your surplus radio knobs. Buying bulk stock of pulls for matching service and resale. Look for Gobs of Knobs at regional swapmeets and monthly DVHRC meetings. Bring your orphans and I just might have its relatives in stock. Dial pointers also available. Mike Koste, 57 Tennis Ave., Ambler, PA 19002. (215)-646-6488

GE Semiconductor Data Handbook # 451.90 (early 70s?) or earlier. Marv Beeferman, 2265 Emeralda Park Drive, Forked River, NJ 08731 (609)-693-9430 mbeeferman@cs.com

Mitsubishi CRT's (for monitor): AT20A9LEB22TC9, AT20A9LEB229, AT20A92EB22TC9, AT20A92EB229, AT20A92EB2L5(L9)TC9, or anything close to these models. Marv Beeferman (see address on ad above).

Zenith 12-S-265 Blackdial console. Must be in excellent condition. Contact: Sal Brisindi at salb203@aol.com or 732-308-1748.