The Jersey Broadcaster

A NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB



August 2000

Volume 6 Issue 8



Reported by Marv Beeferman

The July meeting opened with an update on the InfoAge project from Ray Chase; in summary, several more months remain before the environmental cleanup at Belmar (Camp Evans) is completed and a full turnover can take place. This month's *Broadcaster* features an article on NJARC participation in a salvage effort at the New Brunswick site (the sister transmitting station for the receivers at Belmar) before the bulldozers arrived and left nothing more than a pile of rubble except for one of the original four masonry fireproof 1913 buildings.

I have just received an update from Fred Carl who said that over 12 tons of "stuff" was recovered including hundreds of feet of American chestnut molding, a dozen windows, doors, hardware, light fixtures and five to 6 thousand roof tiles. Fred estimates that we have saved \$15,000 to \$20,000 on material costs for restoring the old Marconi operations building (9004) at Belmar (the one near the Shark River basin). What is more important is that we are now positioned to request matching funding from the state historic trust fund once the Army is done with remediation. If anyone has saved the articles describing this effort from the Courier News (or possibly the Coast Star and Asbury Park Press). please bring them to the August meeting.

The Fall outdoor swapmeet is scheduled for Saturday, September 23rd at the Hightstown Country Club. A flyer describing the event is included in this month's *Broadcaster*, ready for reproduction and distribution to fellow radio enthusiasts to aid the club's advertising efforts. Early reservations are always encouraged to obtain the best tables. If you're marking your **MEETING NOTICE**

The next meeting of the NJARC will take place on Friday, August 11th at 7:30 PM in the Grace Lutheran Church, corner of Route 33 and Main Street in Freehold. Contact Marv Beeferman at 609-693-9430 or Phil Vourtsis at 732-446-2427 for directions. The details of the evening's technical session still have not been finalized but an absorbing topic will no doubt materialize. We'll be getting some first-hand accounts of the New Brunswick station salvage effort and a 90-year old artifact retrieved from the site will be on display. We'll also be taking reservations for the upcoming September 23rd swapmeet.

calendar, also make room for our next repair session for a Saturday in mid-October.

Two additional upcoming events are also recommended. Hamfest by the Shore, sponsored by the Jersey Shore Amateur Radio Society, is scheduled for Sunday, August 13th. This is always a pleasurable event and takes place at the Bayville Fire House, Route 9, in Bayville



Honored guests - past President Jim Whartenby and his lovely wife Ruth who has helped support many past club events. The Whartenbys will be flying the radio collecting banner in their new home in Hot Springs, AR.

New Jersey. It features door prizes, 70 indoor tables in an air conditioned hall, food and refreshments and a visit from John Dilk's Mobile Radio Museum. For information and table reservations, contact the Hamfest Chairman at 732-269-6379. The Kutztown meet at the Renninger's Antique and Farmers Market is scheduled for August 19th. The action starts at 7:00 AM with 80+ spaces; contact Lewie Newhard at (610)-262-3255 or Dan Dewald at (610)-683-6848 for information.

Thanks to those club members who contributed items for a mini-auction which included an AK model 50 with its Kiel table, a GE portable, tube tester, CRT tester and other miscellaneous stuff.

Al Klase's tech-talk and demonstration of military transceivers is the basis of a feature article in this month's issue so we won't expand on it much here. But Al's mention of a 2E22 tube in his AN/GRC-9 elicited some interesting comments from member Larry Scharmann. The 2E22 transmitting tube used suppressor grid modulation for less power dissipation and a quick-heating 6.3 volt filament Besides the AN/GRC-9, it was also found in the BC-1306 and later TBW transceivers. With the storm clouds of the Korean War overhead, the government sought out a new source for the tube as a contingency measure - a company that was originally in the TV tube business was given the contract. But Larry related that they could not get the tube to work properly and even the OEM, Tungsol, had problems. Larry, working at Camp Evans at the time, was assigned to figure out the problem. He immediately pulled a few NOS 2E22's from the stash that was kept

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 buying and selling transactions or for any other use of the contents of this publication.



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in the Camp Evans attic for just such occasions and found that they worked just fine. After some examination, Larry found that the suppressor grid had some very unique original characteristics that even Tungsol did not realize when they tried to reproduce the tube. When all the kinks were finally worked out and the tube was ready to go back into production, the Korean War had ended and the project was canceled.

In closing, I'd like to mention an excellent restoration resource noted in the August issue of Antique Radio Classified by Sherman M. Wolf. The Rhode Island Wiring Service (P.O. Box 3737, Peace Dale, RI 02883) makes replica automotive electrical harnesses for any car manufactured between 1910 and 1960. It uses vintage braiding machines to make its own frabric-covered wire, as well as braided jackets. With these resources, the company can match any battery radio cable one might need. A typical Atwater Kent breadboard cable costs about \$35. The company can be reached at 401-789-1955.

NEW ACQUISITIONS BY OUR MEMBERS







NJARC MEMBERS HELP "RAZE" THE ROOF AT NEW BRUNSWICK By Marv Beeferman

On July 15th, fitted out in hard hats and safety glasses and with pry bars and hammers in hand, NJARC members Dave Sica, Garv D'Amico, Marv Beeferman and Donald Koetsch were among a group of InfoAge volunteers who helped "raze" the roof of the Marconi New Brunswick station. The New Brunswick site (located in Somerset, New Jersey) was the companion transmitting station to the Camp Evans receiving station in Belmar which is destined to be transformed into an Information Age Learning Center. Unfortunately, with the New Brunswick property in private hands, all remaining buildings (except for one that will be turned into office space) will be demolished to make way for a self-storage complex. However, similarity in construction of the two stations offered some prime restoration opportunities for the Belmar site.

Fred Carl, the moving force behind InfoAge, received permission from the new owners to salvage what he could from New Brunswick before the wrecking ball obliterated it for all time. Of special interest was the original unpainted chestnut used for trim, moulding, door framing,

window and doors. In addition, the original terra cotta roofing tiles have remained intact and could be used to restore two buildings at the Camp Evans site where the original tiles had been removed by the Army. At a replacement cost of \$5 each, these represent quite a resource for InfoAge, not only finanacially and historically, but as a representation of community interest and effort directed at making InfoAge a reality.

The NJARC crew arrived around 9:00 AM and was greeted by a morning downpour. The threat of rain had cancelled the help of a Boy Scout troop scheduled to do a lot of the running and hauling. But trim removal was already in progress and two large doors used to enclose the walk-in cold storage locker were ready to be moved to Fred Carl's truck. Much of the trim was easily dispensed with but the early 1900's construction philosophy of "build to stay built" prevented some pieces from being removed intact. I never encountered so many nails hammered at such ingenious angles used to hold such small sections of moulding. A lone Boy Scout volunteer who decided to brave the weather was put on nail removal duty.

By 11:00 AM, with the weather starting to clear, it was decided to concentrate on



trim - a few hundred feet were retrieved.

the roof tiles of one of the single-story buildings. Fred Carl had already done much of the preliminary work, cutting large holes in the roof for easy access from the concrete-floored attic. The terra cotta tiles were in exceptionally good condition and easily removed, being held by two roofing nails at their outer edge. The tiles



were passed through the holes to workers in the attic who stacked them. They were then moved downstairs to the porch in bucket-brigade fashion.

We attempted to speed up the process by figuring out a faster way to get the tiles from the roof to the ground. From the stacks of homework paper, reports and girlie magazines that were left behind, it appears that the two-story building was once used as dormitory space for college students. We tried to make a landing platform out of old mattresses that were left behind so that the tiles could be thrown from the roof as they were removed without having to haul them down from the attic. Although the idea was resourceful, it was unsuccessful. But we did learn that a 2.35 lb. terra cotta tile thrown from a hight of 45.7 feet onto a Sealy Posturpedic queen-size mattress will bounce an average hight of 3.2 feet into the air at any angle between 0 and 90 degrees. (Even failures can be learning experiences!)

During a break in the action, Dave and Gary decided to go on a little archaeological expedition for Marconi artifacts. Although nothing of this genre was uncovered. Dave was able to haul home a late 1940's Fada television with a 10" screen. Gary came up with a Radiola gold-plated dial cover and pointer with a Westinghouse inscription and a 227 tube. Later in the day, your editor uncovered what looked like an early receiver with a "106" marked on it but I left it where it was, not wanting to blemish the trunk of my new car with all the dirt that surrounded it.

A few days later, after returning home with that sense of accomplishment of a job well done, I received a call from Fred thanking NJARC for its participation. With the tiles that Fred had previously removed and stored, over 3,000 were recovered. (At \$5 per tile, that's \$15,000 folks!). Fred said that would cover close to 1/2 to 3/4 of the roof one of the Camp Evans buildings. At 8:00 PM on Friday of that same week, I received another call asking for our participation on Saturday morning...a little too late to get the word out to the membership. Although a sprained leg muscle prevented me from attending, I heard that there was a local newspaper account of the event. I'll try to obtain it and update you at our next meeting. By the way, I heard that a slide was obtained to move the tiles this time and it worked quite well. Too bad...I wonder how much we could have made from a Sealy Posturepedic endorsement?







Most of the trim removal took place in this building.



A second, mirror-image building will be the only one left on the site - it will be used as office space for a self-storage company.



A stack of roof tiles ready for their new home.



An InfoAge roof-rat.

THE NEW BRUNSWICK STATION AND THE ALEXANSERSON ALTERNATOR

Edited by Marv Beeferman

Leaving the complete history of the New Brunswick Station to a future article, between 1914 and 1920, the station served as an interesting focal point for some of the most important developments and rivalries in the history of wireless communication. For a few short years, it seemed that the survival of the American Marconi Company, the success of General Electric's Alexanderson alternator, government control of radio communications and the birth of RCA all centered around New Brunswick and its Alexanderson alternator.

In 1914, the American Marconi Com-

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pany began construction at New Brunswick and Belmar of high-power transmitting and receiving stations to exchange traffic with sister stations at Towyn and Carnarvon in Wales. Marconi engineers, true to their tradition, intended to use a synchronous spark at New Brunswick, but by the close of the year, the decision was being reconsidered.

In December 1914, the chief engineer for American Marconi inquired if GE could design and build an Alexanderson alternator of 200 kilowatts power and what its upper frequency limit would be. GE at the time had no such machine on the drawing boards, far less under construction. The jump from the 2 kilowatt prototype presently under construction to a 200 kilowatt operational unit would have been a challenging one, and Alexanderson's response was cautious. He suggested that a better solution would be to equip New Brunswick with three 100 kilowatt alternators, one of which would normally be a spare while the other two could be run separately or in parallel.



The 200 kilowatt alternator installed at New Brunswick.

Eventually, agreement was reached for an initial 50 kilowatt unit but since it was not ready for installation, the New Brunswick station began operations with a Marconi 350 kilowatt synchronous spark system.

In 1915, with the 50 kilowatt alternator prototype still under test at GE, the future course of events seemed predictable. The Marconi Company was in urgent need of a even a more high-powered continuous wave transmitter to stay in business and also, under pressure from the Navy Department, was looking for a way to remove the stigma of foreign control from its American counterpart. GE needed to eventually test its machines and prove their capabilities (and the radiotelegraphy system based on it) under actual service conditions. It was suggested that it would be desirable to work out long-term arrangements with an operating company such as American Marconi to install its system and put it to work.

But this was certainly to be no routine business deal. The Marconi organization was on the verge of committing itself, for the first time in its history, to an outside supplier and to a technology that up to this point it had repudiated. General Electric was about to add an important new product line, acquire a major new customer, and begin to play a key role in the communications industry.

After considerable debate on both sides, General Electric and British Marconi did sign an agreement on July 2, 1915. The machine, when perfected, was to be known as the "Alexanderson-Marconi Alternating Current High-Frequency Generator." On the face of it, the agreement was impressive with the potential for the purchase of 25, 200 kilowatt alternators each year for the term of the contract. (In reality, only 20 such devices were manufactured after the formation of RCA.) On closer examination, however, the agreement was hedged around with so many qualifications and included so many escape clauses that in effect it amounted to little more than a statement of intentions. But more importantly, the door was opened for the first time for full-scale operational tests of the 50 kilowatt machine and a firm basis for developing the 200 kilowatt machine..

Most of 1916 was taken up with tests at GE's Schenectady plant. But installation at the New Brunswick station was complete and the machine was ready for service by the end of March 1917. In April, when the United States entered the war, the Navy assumed control of the station and temporarily suspended operations. Tests finally began in May 1917.

There were, inevitably, a few anxious moments. Twice in March 1918, the drive belt slipped off the alternator's oil pump and the machine came to an abrupt halt. Fortunately, no damage was done to the bearings and Alexanderson took appropriate action. On the larger 200 kilowatt alternator then under construction at

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Schenectady, the oil pump would be driven directly from the drive shaft.

In general, the alternator performed magnificently, a fact obvious not only to GE and the Marconi Company but also to the Navy, which was running the station, and indeed to anyone who heard its clear, penetrating and distinctive signal on the air. Although only rated at 50 kilowatts, it had the ability to provide twenty-four-hour transatlantic service even in adverse propagation conditions. Compared to the arc transmitter, the alternator was more stable in frequency, its signal was purer, it radiated no backwave and it could be keyed at faster speeds. The Navy's allegiance to the arc for high-power work was about to come to an end.

How much of the alternator's success was due to the alternator itself and how much to other improvements that Alexanderson and his co-workers made to the New Brunswick station is difficult to judge. What is more significant is that the multiple-tuned antenna, the magnetic amplifier and the new vacuum tube speed regulator were as much part of Alexanderson's system as the alternator, and the New Brunswick installation made it possible to give the system a full-scale operational test for the first time. By the end of March 1918, it was clear that the 50 kilowatt unit had passed with flying colors.

The first 200 kilowatt alternator was completed at Schenectedy in May 1918 and placed in service at New Brunswick in September at GE's own expense. From that date until February 1920, it carried the bulk of radio traffic with Europe, earning an impressive reputation for reliable and trouble-free service. It became the prototype for the standard 200 kilowatt machines that GE manufactured and sold after the war. As a result of the New Brunswick installation, the proven efficiency of GE's alternator ultimately became something of a byword in international radio circles. In a sense, the machine advertised itself, for New Brunswick's radio signal - stable, consistent, free from the mush and harmonics that were making arcs unpopular could be heard by anyone with a suitable receiver.

Installation of this second alternator at New Brunswick accentuated an already unusual situation. The station was owned by the American Marconi Company; it was being operated by the Navy; but its two transmitters were the property of General Electric. At the same time, the announced intent of the Navy Department was to take the station under government ownership.

The final resolution of these conflicts could never be covered in such short space. Suffice it to say that, By 1919, in all essentials, the Alexanderson alternator was a perfected device based on its trials at New Brunswick. But with GE working on the frontiers of vacuum tube technology, the realization that its market life might be short was obvious. RCA opened its doors for business on December 1st. 1919 and on March 1st, 1920, the Navy relinquished control of its high-powered stations with RCA taking control of the transmitting station at New Brunswick and the receiving station at Belmar (Camp Evans). The drive for government ownership of wireless communications, once formidable, lost its force in Congress and in the Navy Department once the specter of foreign control was banished. **References**:

 Hugh G. J. Aitken, "The Continuous Wave," Princeton University Press, 1985.
 Susan J. Douglas, "Inventing American Broadcasting," The Johns Hopkins University Press, 1987.

3. Glen C. Fuller, "The Alexanderson System for Electro-Mechanical Production of Radio-Frequency Energy," AWA Review, Volume 3, 1988.

TECH TALK: MILITARY TRANSCEIVERS

Presented by Al Klas Edited by Marv Beeferman

Al Klase's "tech-talk" and demonstration of military transceivers at the July meeting covered two choice examples; the AN/GRC-9, or more popularly referred to as "the angry 9," and the Navy model MAB. Based on Al's notes and a few selected references, let's take a little closer look at these popular transceivers.

The AN/GRC-9 was developed in the

late 1940s and used by Army and NATO units up to the mid-1950s. It has been used on ham bands for a number of years since the 1950s. A complete set consisted of various power supplies, antenna masts, straps, a T-17 microphone, J-45 telegraph key, HS-30 headset and LS-7 speaker. The receiver-transmitter unit was called an RT-77/GRC-9 and could mount in jeeps, 3/4 ton trucks, 2-1/2 ton trucks, half tracks, landing vehicles and amphibious cargo carriers..

The complete unit provided CW, MCW (modulated CW), or AM operation from 2 to 12 Mhz in three bands. Expected range was 30 miles on CW (15 watts), 20 miles on MCW and 10 miles on voice (5 watts); shorter ranges were obtained when the unit was operated in a vehicle. Much longer ranges are common when used with a good antenna on the ham bands.

One feature that makes this radio very popular today is the different power supplies that can be selected to allow transmitter operation on 6, 12 or 24-volt batteries. The DY-88/GRC-9 dynamotor operated from 6, 12 or 24-volt batteries and the DY-105/GRC-9 operated from 24 volts only. A PE-237 vibrator power supply operating from 6, 12 or 24 volts was also available. A small hand-cranked generator, the GN-58, and a gasoline engine-driven power unit, the PE-162, could also supply power. The receiver could be operated from dry batteries or one of the above power supplies. Most present owners have constructed 110 VAC power units to permit home operation. It is believed that the military had a 120 VAC power unit, but it is very rare.

The model MAB transceiver was primarily designed to furnish an ultracompact single-frequency radio communication link between paratroop forces but was also used for reconnaissance or outpost communications. Both the radio unit and power supply fitted into a water-tight plastic case which could be carried on the operator's thigh, chest or back.

The receiver and transmitter were crystal controlled and operated on a single channel between 2.3 and 4.5 Mhz. Only voice communication (A3 emission) was available. Power output was approximately 0.2 watts and range was approximately one mile over average terrain.

Range was a little better for communication between aircraft and ground units. The unit's 4-tube receiver complement consisted of a 1R5 oscillator-mixer, a 1T4 IF amplifier, a 1S5 second detector and first audio amplifier and a 3S4 audio output stage. The transmitter section employed a 1T4 crystal oscillator, a 3S4 Class A modulator and a 3S4 power amplifier.

The unit was primarily powered from a CRF-20221 vibrator power unit from a lead acid battery. A clamping arrangement held the battery and vibrator power unit together as an integral unit. A dry battery pack was also available for emergency operation. The unit was also provided with a seven section collapsible antenna and load coil assembly could be tuned to any frequency in the 2.3 to 4.5 Mhz range by means of a slug-tuned load coil in the antenna housing. Additional accessories consisted of a CTE-51042 microphone and CTE-49214 headphone assembly.

References:

1. Hank Brown, "Collecting Military Equipment - Part 1," ARC Volume 16 (March 1999)

2. Instruction Book for Navy Model MAB Radio Telephone Transmitting and Receiving Equipment, Communications Company, Inc., October 1, 1942



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With John Ruccolo supplying motive power, Al Klase makes distant contact with Wendell Klinker. It seemed that reception got a lot better when former President Jim Whartenby took over generator duties.





NEW JERSEY ANTIQUE RADIO CLUB



ANTIQUE RADIO SWAPMEET

SATURDAY, SEPTEMBER 23, 8:00AM - 3:00PM*

HIGHTSTOWN COUNTRY CLUB, HIGHTSTOWN, NJ

NJARC presents its Fall outoor (rain or shine) swapmeet with vendors displaying a spectrum of collectible old-time radios, military and civilian communication equipment, audio equipment, phonographs, and associated parts and literature. A \$2.00 club donation is suggested to help defer rental fee. Tables are guaranteed to the first 50 reservations.

LOCATION: From NJ Turnpike Exit 8, go east on Route 33 about 200 yards. Stay to the left and turn left at the first traffic light on the center divider, crossing Route 33 west. Continue to the end of the block to Monmouth Street and turn left. The Country Club is on the left with a Ramada Inn across the street.

RATES: NJARC members \$15/table; non-members \$20/table.

CONTACTS/RESERVATIONS: Marv Beeferman, 2265 Emeralda Park Drive, Forked River, NJ 08731 (609-693-9430). Phil Vourtsis, 13 Cornell Place, Manalapan NJ 07726 (732-446-2427)



*Vendors set up at 7:00: no early admittance!

Formed in mid-1992, NJARC has a membership above 160. The club meets at Grace Lutheran Church, corner of Route 33 and Main Street in Freehold. on the second Friday of each month at 7:30 PM. Visitors are welcome. The club publishes the monthly *Jersey Broadcaster* and has a program providing members with replacement tubes and capacitors at moderate prices. Technical, restoration and historical presentations are provided by members at each meeting. Contact Phil Vourtsis (732-446-2427) for additional information.

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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</u> Review, 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.

Rider's Perpetual Troubleshooter's Manuals: Vol. 1-5 (2 each), Vol. 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22 (1 each). 18 volumes plus Master Rider Indexes. \$650 cash, no shipping (pick up only). Contact Bob at (732)-671-2809

21" Philco Predicta table model. Wood with walnut finish. Includes functional (not original) floor stand. Works, but picture is rough - \$450. RCA Radiola 18 (wooden cabinet is about 30" x 9" x 9"). Includes stand with speaker; works:
\$150. Delivery a possibility. Bruce Knapp, Rutherford, NJ; 212-337-0077 (W) 201-804-9259 (H)

Military WWII RAK-7, CND 46155 low freq., 6-band, 15kHz to 600kHz receiver with matching CND 20131 power supply and cable, all in "like new" condition; made by Andrea. \$100 Ray Chase, 1350 Malborough Ave., Plainfield, NJ 07060 (908)-757-9741 enrpnr@erols.com

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, geiger-counter 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 Military TRC-8 consisting of T-30 Transmitter, PP-115 Power Supply and CY-52 Transit Case. This is 230-250 Mhz point-topoint commm. gear from WWII. 120 VAC powered, in new original condition, 25" x 18" x16.5", about 80 lbs. Have two - \$100 each. Matching R-48 Receiver, also part of the TRC-8 system, 120 VAC, 23" x 19" x 17", about 60 lbs., new in CY-51 transit case, \$100. Pick up only. Ray Chase, 1350 Marlborough Ave., Plainfield, NJ 07060 908-757-9741, www.enrpnr@erols.com

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

Information on "Lang" radios: literature, pictures, pricing, etc. Charles J Dreitleio, 515 Elizabeth St., New Milford, NJ 07646 (201)-384-3862

Information, circuit diagram, and purpose of the following set: 30-50 MC FM monitor, Knight model KG-220 by Allied Radio, Chicago, service number 8343111-610003-6N. Alton A. Dubois Jr., Peggy Ann Rd., Queensbury, NY 12804

AM-FM-PHONO-AUX selector switch for a Sherwood Model S-7650CP stereo receiver. Alton A. Dubois, Jr., 67 Peggy Ann Rd., Queensbury, NY 12804

For RCA TK-11 camera restoration: oak field tripod (Mitchell?), chrome script "television." chrome 1.1" RCA logos, viewfinder hood and old network logo panels. Dave Abramson, (610)-827-9757, dtatv@worldnet.att.com.