



New Jersey Antique Radio Club News

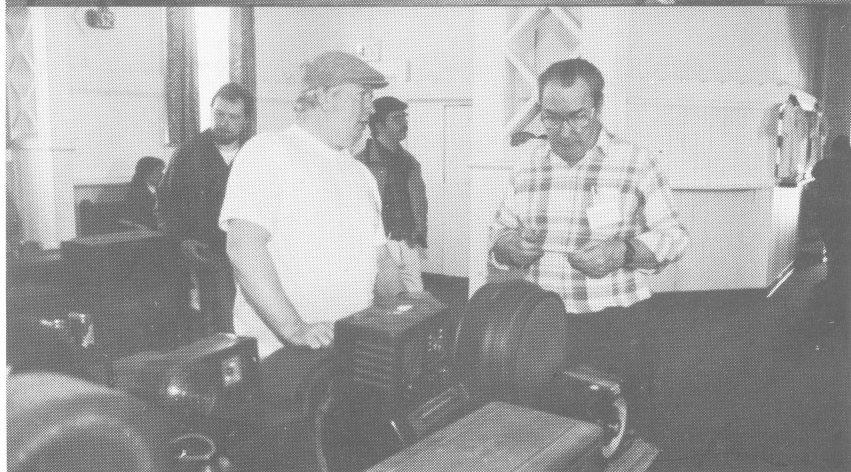
Volume 1

Summer 1993

Number 2

NJARC Swapmeets a big hit!

Story on page 4.



Inside this issue:

- Constitution & By-Laws
- Swapmeets
- Meeting Reviews
- The "Marlodyne" Story
- Full Membership Roster
- Buy/Sell Ads

The New Jersey Antique Radio Club News is published monthly, on a volunteer bases, by and for members of the New Jersey Antique Radio Club. The New Jersey Antique Radio Club News is distributed by mail to club members. NJARC can not be responsible for transactions between buyers and sellers advertising in the newsletter.

Dues and address changes: Kathleen Flanagan, Secretary, 92 Joysan Terrace, Freehold, NJ 07728 ☎(908) 462-6638. Make check payable to NJARC. Dues: \$10.00 per year (includes NJARC News). A one dollar donation is collected at each meeting to help offset the cost of the meeting space rental.

Newsletter Articles, Classified Ads: David Sica, Newsletter Editor, 1459 St. Georges Avenue, Rahway, NJ 07065 ☎(908) 382-0618.

Swapmeet: John Ruccolo, 335 Butcher Road, Hightstown, NJ 08520. (609) 426-4568.

Official Business: Tony Flanagan, President, 92 Joysan Terrace, Freehold, NJ 07728. ☎(908) 462-6638

Officers

President: Charles A. "Tony" Flanagan, Jr. (908) 462-6638

Vice President: Michael Hammer (908) 255-7865

Secretary/Treasurer: Kathleen Flanagan (908) 462-6638

Technical Coordinator: Thomas Provost (609) 259-7634

Sergeant-at-Arms/Steward: Don Cruse (908) 542-2848

Newsletter Editor: David Sica (908) 382-0618

Trustees: Mark Mittleman, Ludwell Sibley

Calendar of Events

July

- 24 Summer '93 Swapmeet
- 25 Rain Date for Swapmeet

August

- 13 Regular monthly meeting.

September

- 10 Regular monthly meeting

October

- 08 Regular monthly meeting
- 23 Fall '93 Swapmeet

MEMBERSHIP BENEFITS

- Monthly Meetings
- Technical Seminars
- Swap Meets
- NJARC News
- Free Buy/Sell Classified Ads
- Tube Program
- Tube Testing
- Informal Networking with local collectors.

Monthly Meetings. Collectors in the New Jersey area finally have an opportunity to get together with other collectors on a regular basis to keep abreast on what's happening in the field.

Technical Seminars. Featured presentations at the monthly meetings focus on various issues related to collecting antique radios. At our past meetings, we've covered topics from Vintage Equipment operating demonstrations to a review of Military Communications Equipment.

Swap Meets. Held 3 times annually, the NJARC Swap Meets have quickly become the most eagerly awaited events of the year. Vendors from near and far gather to offer a rich and varied assortment of radios and related items for sale.

NJARC News. The club newsletter serves to keep members informed about club events, providing notice of upcoming events, reviews of past events and other club-related information. The newsletter also serves as a forum for member interaction and offers free classified ads to members and non-members alike for the purposes of buying, selling or trading radio-related items.

Tube Program. The club offers tested, cleaned and boxed tubes to members at bargain rates. Tubes are available at each meeting, and all proceeds benefit NJARC.

Tube Testing. Members can bring tubes to any meeting for free testing on a high quality tube tester.

Networking. For too long, New Jersey collectors operated in isolation, or in small, informal networks of a few collectors. Collectors have an opportunity to get together with those of like interests to share tips, techniques and "war stories" and socializing. NJARC offers the opportunity for collectors from all over the area to share their expertise and their experiences.

Organizational News

The **NJARC Constitution** is completed! The Constitution Committee, consisting of Tom Provost, Don Cruise, Ludwell Sibley, Tony Flanagan, Kathleen Flanagan, Mike Hammer, and Mark Mittelman has been meeting diligently for the past few months in an effort to develop a draft of the club constitution and by-laws.

The committee has completed its work and presents in this issue the fruits of its labor. The proposed Constitution and By-Laws of the New Jersey Antique Radio Club will be presented to the membership for a formal vote at the August meeting.

The committee has done an extremely thorough and diligent job in preparing the Constitution and By-Laws, and their efforts will help to ensure the smooth functioning and continuing viability of our organization.

The **Program Committee** solicits information from members on restoration, repair, collecting tips and other topics of interest to the membership. Please contact Tom Provost or Tony Flanagan regarding any skills, expertise, information, anecdotes, etc. which you are willing to share with other NJARC members.

First Anniversary

NJARC was born one year ago this July. One year ago, 13 enthusiastic collectors gathered at the Monmouth County Library under the guidance of Tony Flanagan to form what was to become the New Jersey Antique Radio Club. NJARC has grown rapidly, passing the 80-member point. The official count was 84 members as of our July 9 meeting. We have achieved a number of impressive goals in one short year of existence:

- NJARC is now incorporated as a non-profit organization under the laws of the State of New Jersey
- We have a Constitution and By-Laws under which we operate
- Our tube program is an important member service and contributes to the financial health of our organization
- Our newsletter serves to keep members informed of club activities
- Our monthly meetings are well attended, with active member participation
- Interesting and useful programming has been presented at each of our meetings
- The club has hosted 3 swapmeets as of July, 1993

- We carry a \$1,000,000 liability insurance policy for the protection of the club and its members

This is a lot of progress for a such a young organization. Many thanks to the Executive Board and all members who have worked so hard to bring about this level of professionalism to our organization. We're looking forward to an even better second year!

Club Members

NJARC membership currently stands at over 80 members. The current membership roster includes:

*[Charter members are marked with a *]*

*Pat Bailey
Donald J. Ball
Lucas Bazin
Marvin Beeferman
Ralph Bonamo
George Bonnano
Charles A. Breen, Sr.
Richard Brill
Marty Bunis
Sue Bunis
Joseph Burke
Joe Butterfield
Brian Centofanti
Bob Chemelli
Robert Chis
David Chmielewski
John Conti
*Donald Cruise
*Gary D'Amico
Hugh Davey
Bob Dennison W2HBE
Frank Feczko
Mike Feher
Jon Butz Fiscina
James Fisher
Onalee Fisher
*Tony Flanagan
*Kathleen Flanagan
Martin Friedman
Robert W. Hamilton
*Michael Hammer
*Ernest Hartman
Bob Haworth W2PUA
George Hennicke
Edward W. Herold
Norm Hertz
Bryan Hodgson
Jeff Holz
Elwood Hunt

SPRING RADIO SHOW AND SWAP MEET

by Kathleen Flanagan

On Saturday, March 20, 1993, NJARC held its Spring Radio Show and Swapmeet. The second event of its type, this meet was well reviewed by those in attendance. Approximately 50 tables were sold, with vendors and attendees coming from as far away as Ohio, south Carolina and New York. The meet was held at the Hightstown Country Club, and a wide variety of radios, parts and related items were offered for sale or trade.

There are many "behind-the-scenes" activities which must take place before and during the event to have a successful swap meet. An event of this magnitude cannot take place without the hard work of many people. Tony and I want to thank everyone who worked so hard to make this event a success, particularly the following members:

Advertising Committee: **Ernie Hartman** and **Marv Beeferman**. The show was listed in seven different newspapers, and we had a feature story in the Star Ledger. A New Brunswick radio station contacted Tony the day before the show and interviewed him over the telephone after seeing the newspaper story. Also, thanks to Ludwell Sibley for the flyers and John Ruccolo for taking telephone calls.

Set-Up Committee: **Tom Provost**, **Mark Mittleman**, **Gary D'Amico**, **Larry Rubens** and **John Ruccolo**. We know you guys are dedicated when you can get up at 4:00 am.

Clean-Up Committee: **Mark Mittleman**, **Don Cruse**, **Larry Rubens**, **Gary D'Amico** and **Ludwell Sibley**.

Special thanks to Marv Beeferman for teaching my sons how to make coffee and pitching in and helping us out with whatever needed to be done.

I want to thank my sons **Patrick** and **Brian** for getting up at 5:00 am without too much complaining and working for six hours selling food.

I especially want to thank **Sue Mittleman** for all her assistance in helping me with registering the vendors., T-shirt sales, new memberships, tube sales, collecting admittance fees and generally helping to keep my blood pressure down.

And Tony, thanks for not coming home from the show and talking about the next one like you did in October!!!

*(See related story on this summer's
Radio Show and Swap Meet on page 10.)*

NJARC TUBE PROGRAM - Status Update 7/93

by Ludwell Sibley

Thanks to eighteen donations, the tube stock currently contains 377 types, up from 310 in March. This reflects new types received balanced against losses (sales of the last tube of a given type). All tubes donated have been tested and organized.

The tubes are a combination of New Old Stock, new-but-reboxed, and used. As a guess, about 40% of the tubers are new. Regardless of origin, each has been tested.

As a result of the gains and losses of types, if a given type is unavailable one month, it is wise to check the next month. Also: manufacturers sometimes used odd-sized boxes, so it is possible to find, for example, a 1A7GT in a "G" size box, or a miniature 6AF3 among the octal-size boxes.

Where possible, tubes that came in both "S" and "ST" bulbs, or in both "G" and "GT" sizes, both are stocked. This often makes it possible to find, say, a "correct" factory-style "G" 6A8 for a '30s Zenith.

Pricing is an attempt to balance the need of members for affordable tubes with the need of the club for revenue. "A buck a tube" seems reasonable for most types; however, the scarcer ones are a special case. We have been charging \$2 for "S" bulb types and other hard-to-find types. John Ruccolo has pointed out that Antique Electronic Supply is buying tubes of a few rarer types, particularly the scarcer audio output tubes. It seems appropriate to price tubes that are on the A.E.S. "buy" list at, say, half the A.E.S. offered price to discourage speculative purchases.

The stock is organized in there parcels:

- Primarily sales stock: three trays of tubes in a suitcase, comprising in essence one sample of each of the most popular home-radio types. This is the case that Tom Provost brings to each meeting.
- Supplementary sale stock: six boxes with multiple samples of each type, plus "G" version of some types that appear in the primary stock only in the "GT" size, plus a few large bulb types like 5U4Gs. This stock is used both for sale display and to restock the primary supply at meets.
- Backup stock: currently eight boxes of sale-ready tubes, plus some unboxed spares.

(Continued on back cover.)

MEETING REVIEW

by Dave Sica

Friday, April 9: Mark Mittleman "1920's Battery Sets" - overview, tips on restoration and collectability.

Club member Mark Mittleman presented the first part of this two-part series on "Battery Sets", with a discussion of "collectability" and an overview of restoration techniques particular to these types of sets.

"What makes a set collectible?", Mittleman asked. His answer may have been surprising to some. A collectible set includes both the characteristics of desirability and restorability, that is, it should be both something you want, and something you can restore to operating condition. Mark was quite outspoken on his belief that sets should be restored to both look good and work well. A set which does not operate gives him little pleasure, while listening to an operating set and the restoration process which resulted in its operability are both primary benefits of the hobby to Mark.

"Determining desirability is a personal preference", states Mark. A rare and valuable set may rate as collectible in nearly any hobbyist's opinion. But a more common piece may, for one reason or another, be equally as desirable to you. In each case, caution was advised in the following areas:

- Is it worth what the seller is asking?
- Is it missing any parts you'll have trouble obtaining?

The first caution, that of worth, is a very subjective matter. Worth relates to the condition of the set, how badly the seller wants to sell, and how badly the buyer wants to buy. The second caution about the condition of the set is more quantifiable, and was illustrated by some dramatic and rather surprising examples.

Mittleman strongly recommended that restoration be approached in two phases, cosmetic and electronic. By completing one phase before starting the other, a logical sequence of progression is followed, making the project easier to manage. Equally important, the "reward" of seeing the fruit of your labor as each stage is completed offers satisfaction, rather than frustration if you must wait for the entire job to be completed piecemeal before the results of your efforts start to take shape.

One set displayed, a Clapp-Eastham HR, was purchased in "unrestored" condition. Unrestored in this case meant complete with rodent nest and rodent by-products. Because of the rarity and value of the set, the effort necessary to restore it was deemed worthwhile. Mark allowed that the set was in "rough" shape when he began his restoration,

presenting both a visual appearance in need of some TLC and a rather strong fragrance. A complete disassembly allowed Mark to work on the cabinet unimpeded by circuitry. Rather surprisingly, after a bit of surface preparation, a simple coat of varnish effectively sealed in the objectionable odor while simultaneously providing the desired finish to the wood. The once offensive cabinet was transformed into a handsome (and odorless) showpiece. Following electronic restoration, the piece was ready to be proudly displayed in Mark's extensive collection of sets.

The surprising thing about evaluating the condition of a set to determine its collectability is that some seemingly insurmountable flaws are actually rather easily restored, while other simpler-looking problems can prove difficult or impossible to overcome. The trick, of course, is to be able to determine the difference. In the previous case, the collectability of the set was high, and what appeared to be a serious problem (the odor) was a easy fix. In the next case, a seemingly insurmountable problem again proved relatively easy for a knowledgeable collector-restorer to conquer.

Mittleman's second display piece was a Sherman Radio 3-dialer in "as found" condition. Although complete, it was by any account a rough-looking sight! Mark observed that he had placed the set for sale numerous times at swap meets, asking only \$25, yet had no takers. The reason for the lack of response, he speculated, was almost certainly the appearance of the Bakelite front panel, which was severely water stained and faded from its original glossy black appearance to a mottled grayish brown, with a big piece missing out of one of the large tuning dials.

Mittleman then shared one of his restoration "secrets" with the group: many of his show pieces, with polished, gleaming, front panels started out in similar condition to the "untouchable" example currently on display. Although the Bakelite can't be polished up to its original color and luster, some skillful work with black paint (along with a bit of white to bring back the contrast of the faded engraving) results in a panel which looks "factory fresh" and gives the piece an elegant new lease on life.

Doing an "end run" in this way, coming up with an alternate method of creating an look which simulates the original appearance offers the restorer a method of redefining what first looks to be a "difficult" restoration project as a relatively simple one.

(Continued on page 15.)

MEETING REVIEWS

by Dave Sica

Friday, May 14: Mark Mittleman "1920's Battery Sets" - demonstration of operation

In the second installment of his two-part presentation on "Battery Sets", Mark Mittleman offered the group a demonstration of two different operating pieces from his collection.

Mittleman observed that his personal philosophy on collecting is that a set should operate. "I like to listen to the sets, to enjoy them in operation, the way they were intended when they were new", he stated. For this reason, his restoration work emphasizes both aesthetic and electronic work equally. Seeing pieces from Mark's collection will convince any observer that he values a clean, correct appearance, and that he has the skills to achieve it. Today, the club was ready to listen to a demonstration of the operability of his sets.

A 1924 ERLA and an Atwater Kent breadboard of 1922 vintage were used in the demonstration. Batteries breathed life into the ERLA, while the A-K set also required the addition of an external antenna and horn speaker. All equipment used in the demonstration was from the Mark Mittleman collection.

The ERLA pierced the room with relatively loud audio emanating from its built-in speaker. Tuning through a variety of signals, the ERLA gave a strong performance under the skillful "tweaking" of its owner.

The breadboard set seemed to require more critical adjustments, issuing a relatively faint, but clearly audible signal from its speaker when adjusted correctly. Both sets were of the regenerative type, and from the perspective of today's integrated-circuit, automatic-everything world, it was easy to see how these pioneer radios had to struggle to gain household acceptance with the masses. It was not easy to hook up or operate a 1920s vintage radio in the '20s, and its no easier 70 years later!

Thus, this fascinating demonstration illustrated both the pleasures and the pitfalls of early radio listening. To those of us in the audience who were hearing a 20s-vintage set in operation for the first time, it was an eye and ear-opening experience which will not soon be forgotten. Thanks to Mark Mittleman for sharing his collection and his insights with the group.

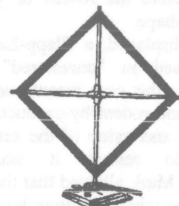
Friday, July 9: Tom Provost "Active Antenna" demonstration

Our July meeting included a demonstration of "active antennas". This may have been inspired by activities at a meeting a few months prior, since setting up for a demonstration of a 1920s vintage breadboard radio necessarily included connecting an antenna to the set. Needless to say, the meeting room neither contained a permanently installed long-wire antenna nor offered much opportunity to temporarily erect one. The demonstration sufficed with an improvised antenna, essentially a hunk of wire connected to the antenna terminal. Not exactly the best setup, but all too common. It's difficult or impossible for many hobbyist to construct a long-wire antenna of appropriate size and height.

Yet, many of the early sets required, or at least performed optimally with this type of antenna. Aside from compromising on performance with a low, short antenna, what other options are there? Perhaps the simplest, most effective compromise is the use of a device called an "active antenna". An active antenna is essentially an amplifier which boosts the signal from a short wire or telescoping whip antenna to more closely match the signal level and electrical characteristics of a traditional long-wire antenna.

Club member Tom Provost demonstrated a home-brew active antenna to the group. Provost built the antenna himself, and provided club members with copies of the schematic diagram of the circuit for those interested in duplicating his efforts. He noted that active antennas are also available in both kit and finished form from a number of suppliers. He uses his active antenna with sets in his collection to boost performance (and his listening pleasure!).

It's a simple concept, an easy construction project and a snap to use. Thanks to Tom Provost for showing the group what an active antenna can do to improve the performance of sets in our collections.



THE MARLODYNE: A MAN AND HIS RADIO

by Bob Haworth, W2PUA

112 Tilford Rd., Somerdale, NJ 08083

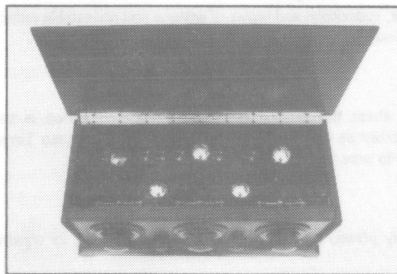
Reprinted with permission from the AWA *Old Timer's Bulletin*, Feb. 1990

Although the exact number is unknown, the "Marlodyne" radio must have had one of the shortest production runs in the history of the radio business. This, at a time when anything that called itself a radio was salable.

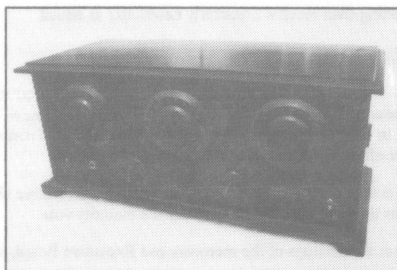
Ralph Longley's Set Catalog and Index - January 1921-1933 gives an insight into just how short the production run was. His compilation - based on manufacturers who advertised nationally - shows a listing for the Marlodyne for the year 1926 only. The set didn't make it into Rider's either.

I acquired one of these radios recently. In restoring it to "like new" condition, I became aware of the attention to detail that the manufacturer employed in its construction. The set itself is of the conventional TRF type with two stages of RF gain, a detector, and two cascaded audio amplifiers - typical for the 1926 period. The construction details were typical of manufacturers who did not have access to a machine shop or metal fabrication facilities. The chassis is a Bakelite sheet supported by right-angle brackets from the front panel. Battery and antenna connections between the chassis and the cabinet rear are provided by jumper wires and terminals, thus making the chassis rigid enough to support the machined tube sockets, capacitors, coils, etc. Coils are basket-weave types like those in the

Freshman Masterpiece, but angled to reduce coupling. Bus-bar construction is used throughout.



like a novel way to picture the set connections: the wrong battery hookup could cost you a set of tubes.



The most interesting part of the construction is the rear of the wood cabinet. The entire rear surface is covered with a blueprint which depicts two triangular radio towers with a lead into the antenna terminal, with pictorials of all batteries and a water-pipe ground. Seemed

like a novel way to picture the set connections: the wrong battery hookup could cost you a set of tubes. As I restored the set, I became interested in determining more about the Ernest Marlow Company, since the set was manufactured in Asbury Park, New Jersey - my home state. A letter to the Asbury Park Chamber of Commerce helped fill in some

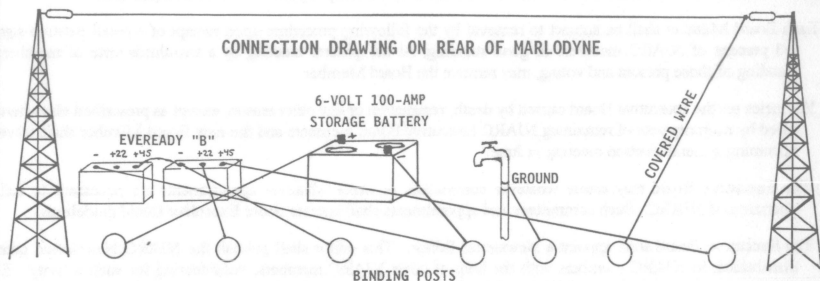
detail. It seems there was no listing for a radio manufacturer at 613 Bangs Avenue - the address on the blueprint of the set. Further, the "old timers" of the Asbury Park area could not recall an Ernest Marlow. Rosemarie Porter of the Chamber of Commerce did graciously provide a few hints, however.

In the early Twenties, references such as Polk's Asbury Park Directory were available. These directories were a miniature Bureau of the Census - although probably more useful.

(Continued on page 15.)

They listed all residents with their addresses,

CONNECTION DRAWING ON REAR OF MARLODYNE



Constitution New Jersey Ant

Article I: Name

The name of this organization shall be "New Jersey Antique Radio Club, Inc." and shall be referred to in this document as "NJARC."

Article II: Purpose

To promote the collection, restoration and repair of antique and collectable radios TVs and related equipment. This club is non-profit and holds incorporated non-profit status with the State of new Jersey.

Article III: Location

The office of NJARC, where the general business of the corporation is transacted and where the records of the corporation are kept, is the residence of Charles A. Flanagan, Jr., 92 Joysan Terrace, Freehold, New Jersey 07728/ This address may change from time to time.

Article IV: Membership

- A) Membership is open to any person interested in collecting, restoring, or repairing antique and collectible radios, TVs and/or related activities.
- B) A member in good standing is a member whose dues are current.
 - 1. A member in good standing shall be afforded the privilege of voting, whether by mail or person.
 - 2. A member in good standing shall receive a quarterly newsletter as issued.

Article V: Officers and Executive Board

- A) In June every two years, the membership shall elect five of its members in good standing to the offices of President, Vice-President, Secretary-Treasurer, Sgt.-at-Arms/Steward and Trustee. The new President will then upon taking office, name one Trustee and if in order, the outgoing President will become a Trustee until the new President leaves office. The new officers will take office the month after the election.
- B) The Executive Board will convene when appropriate to set policy. Executive Board members may serve an indefinite number of terms as long as they continue to be elected by the majority vote.
- C) The President shall preside at all meetings of the members and Executive Board, and assume leadership and responsibility for NJARC business.
- D) The Vice-President, in the absence of the President, or in case of the President's death, resignation or inability to act, will assume the rights, powers and duties of the President until a new President can be elected.
- E) The Secretary shall maintain minutes of Executive Board and general meetings and report on the minutes to NJARC members at general meetings. In addition, the Secretary will maintain an up-to-date register of the names and addresses of all NJARC members in good standing.
- F) The Treasurer shall be responsible for all moneys, debts, obligations, documents, contracts and other financially related papers belonging to NJARC, in addition to paying NJARC bills and maintaining a record of receipts and expenses. The Treasurer shall receive all moneys of NJARC and deposit same in the bank account approved by the Executive Board. The Treasurer shall make reports on the financial state of NJARC at NJARC meetings.
- G) The Sergeant-at-Arms/Steward shall be responsible for helping go maintain order at all meetings. At meetings the Steward will be responsible for preparing all foods and beverages. At the conclusion of the meeting, the Steward will assure that the meeting hall is in the same condition as when the members arrived.
- H) The Trustees shall sit on the Executive Board and act in an advisory capacity and have an equal vote.
- I) Each Board Member shall be subject to removal by the following procedure upon receipt of a recall petition signed by 33 1/3 percent of NJARC members in good standing: At the general meeting by a two-thirds vote of members in good standing of those present and voting, may remove the Board Member.
- J) Vacancies on the Executive Board caused by death, resignation or any other reason, except as prescribed elsewhere, shall be filled by majority vote of remaining NJARC Executive Board members and the new Board Member shall serve until the upcoming general election meeting in June.
- K) The Executive Board may create whatever committees or make whatever appointments are necessary to facilitate the operation of NJARC. Such committees and appointments shall operate under Executive Board guidelines.
- L) The Executive Board shall appoint a Newsletter Editor. This editor shall publish the NJARC Newsletter, quarterly, for distribution to NJARC members with the help of other NJARC members, volunteering for such activity. Except for

and By-Laws Antique Radio Club

official NJARC By-Laws and policies, and subject to future review by the NJARC Executive Board or NJARC membership the Newsletter Editor shall have maximum discretion in deciding newsletter content and layout within our means.

Article VI: Meetings

- A) NJARC shall hold monthly meetings.
- B) The June meeting every two years will serve as the monthly meeting at which time election of Board members will be held. Instead of a nominating committee, all nominations will come from the floor.
- C) Notice of all meetings setting forth date, time and place of the meeting shall be mailed to NJARC members at least seven days prior to the meeting and may be made part of the newsletter and/or put as notification in a publication such as *Antique Radio Classified*.
- D) A Quorum shall be required for transaction of all business before the general membership. A quorum shall consist of at least 20 percent (or 15) members, whichever is fewer) of NJARC members in good standing, present or represented by written proxy.
 - 1. A written proxy is a signed, dated statement by a member in good standing, giving another members his vote.
- E) When not inconsistent with provisions of the NJARC Constitution and By-Laws, Robert's Rules of Order shall govern the conduct of all meetings. However, these rules may be suspended at any time by majority vote of the Executive Board, or by majority vote of a quorum at NJARC general meetings.
- F) Each NJARC member in good standing for at least 30 days shall be entitled to one vote. Proxies authorized in writing may be given by any NJARC member to another NJARC member in good standing for presentation. The NJARC Secretary shall be the authority on members in good standing based on membership records, and will pass on the validity of any proxy accordingly.

Article VII: Personal Liability

All persons or corporations extending credit to, contracting with or having any claim against NJARC or its Board members shall look only to the funds and property of NJARC for payment of any contract of claim or for payment of any debt or any money that might otherwise become due or payable to them from NJARC, or NJARC officers, respectively, so that neither NJARC members or NJARC Board members, present or future, shall be personally liable therefor.

Article VIII: By-Laws

The Constitution and By-Laws shall be adopted at a general meeting of NJARC by a vote of 20 percent of NJARC members in good standing, or two-thirds of those voting, whichever is smaller. Any article may also be rescinded or amended by a similar vote.

Article IX: Dissolution

Upon dissolution of NJARC, any assets, in the form of money in the treasury of NJARC, will be evenly divided among all members in good standing. Any other assets owned by NJARC will be liquidated and the assets divided among remaining members in good standing, except that any property held but not owned by NJARC will be returned to its rightful owner, and that any distribution shall be consistent with existing government laws that apply.

Article X: Dues and Assessments

- A) Annual dues are \$10.00. Changes may be made at monthly meetings by majority vote of a quorum, providing notice of such proposals have been given to members at least 7 days before the meeting.
- B) The Executive Board may assess participants in swap meets, auctions, special events or at meetings an amount above the membership dues to cover costs to NJARC.

Article XI: Compensation

No part of the net earning of NJARC shall inure to the benefit of, or be distributable to NJARC members, Board members, or other private persons, except that NJARC is authorized to pay reasonable compensation for services rendered, reimburse out-of-pocket costs of NJARC members for approved activities, and spend money on other activities in furtherance of purposes set forth in its Constitution and By-Laws.

Article XII: Adoption of Constitution and By-Laws

This constitution shall become effective immediately following its adoption by consent of the majority of NJARC members present at the June, 1993 meeting of NJARC, with notice to be given, and the Constitution to be included in the Summer 1993 NJARC Newsletter or handed out at the July, 1993 meeting.

MEETING REVIEW

by Dave Sica

Friday, June 11: Ludwell Sibley "World War II era Military Communications Equipment"

Our June 11 meeting featured NJARC member Ludwell Sibley, who discussed "World War II-Era Military Communications Equipment". Lud's presentation included a slide show and exhibits.

Focusing on military surplus equipment from the 30's, 40's 50's, the presentation included slides and actual samples of a number of interesting pieces. Sibley noted that ham radio flea markets are a great source of this type of equipment.

Some pieces of Sibley's collection which were highlighted included a World War I vintage backpack walkie talkie, a knapsack radio with a hand-held antenna, for use by paratroopers, and some World War II vintage Handi-Talkies, of which later models of the same type of sets remained in use into the nineteen sixties.

Other equipment discussed included non-radio (but related technology) items such as wire-line telephones. Foreign equipment is also represented in Sibley's collection: Examples of British, Japanese and Russian technology were shown to the group.

A highlight of the presentation was demonstration of a working example of the "Gibson Girl" distress transmitter. The unit is operated by turning a generator with a crank after raising the antenna with either a hydrogen balloon or a kite. Sure enough, turning the crank resulted in the set automatically emanating a repeating "S-O-S" signal to a nearby receiver, with the unit operating into a fluorescent tube which served as a dummy antenna and provided a visual display of the signal to the group. (Although it sure would have been interesting to see Lud running with the kite while cranking the "Gibson Girl"!)

(See Ludwell Sibley's article on page 11 of this issue for a summary of the presentation.)

Oops X

In the previous newsletter, it was reported that a 10% donation will be collected from all sales. This is incorrect: **No percentage of sales will be collected at swapmeets!** The cost of table rental is the only cost to the vendor at swapmeets. The 10% assessment (\$3.00 per item maximum) applies **only** to transactions at regular monthly club meetings.

SUMMER '93 SWAP MEET

by Dave Sica

The third NJARC Swapmeet will be held on Saturday, July 24. The event will once again be held at the Hightstown Country Club. The rain date is Sunday, July 25. The meet will be held from 8:00 am to 1:00 pm. A \$2.00 parking fee will be collected to help defray costs.

In order to address the need for fairness to all, no one will be admitted prior to the 8:00 am start time, and all vendors are requested to remain until the 1:00 close time. In this way the pre-dawn rush will be eliminated, ensuring that those collectors who must travel great distances can get here for opening time without finding the bones picked clean upon arrival. Similarly, although collectors arriving prior to the official closing time may find that some bargains were scooped up earlier in the day, they have a right to expect that vendors participating in the event will still be present. In light of the fact that shelves began to become bare and activity began to trail off after noon time in previous meets, the 1:00 pm closing time of this event reflects that reality.

Building on the success of our first two swapmeets, this third event promises to be the biggest and best yet! (See Kathleen Flanagan's article elsewhere in this issue for a review of the Second Swapmeet.)

The Hightstown Country Club is located near Exit 8 of the New Jersey Turnpike and Route 33. From the Turnpike, go east on Route 33 approximately 200 yards (beyond Mom's Peppermill restaurant); continue ¼ mile to the first jughandle and go west. At the first traffic light, take Monmouth Street 300 yards to the Country Club on the left.

Pre-registration is required for all sellers: members. Rates are \$12 per table for NJARC members; \$15 for non-members. For out-of-area visitors, accommodations are available at the Town House Motel on Route 33 at special rates - mention the NJARC meet. Telephone numbers of the Town House are (609) 448-2400 within New Jersey, and (800) 922-0622 out of state. Ramada Inn and Days Inn motel accommodations are also nearby.

NJARC will host one additional swapmeet this year, in the fall. For additional information, contact John Ruccolo at (609)

COLLECTING AND RESTORING MILITARY EQUIPMENT

by Ludwell Sibley

Presentation to NJARC, 6-11-93

Military radios and other electronic equipment of the '30s-'50s period is a well developed specialty of radio collecting. This summary covers the main sources of such equipment, of technical documentation for repair and restoration, and of information on the actual use of the equipment. It is pointed mainly toward communication gear; other items like navigation equipment, countermeasures systems, radar, etc. are important historically but less available.

SOURCES OF EQUIPMENT

Most of the equipment coming into collectors' hands today is gleaned from radio-amateur flea markets (hamfests). A remarkable volume of equipment, "war surplus" in its day, appears in this fashion. Most of it was converted, modified, and "improved" by previous owners, frequently make it necessary to combine two or three "junkie" sets to get one good one. (It is inappropriate to sneer too loudly at the previous owner who mutilated the set: the equipment is still here because that owner modified the item, used it, respected it, and kept it around.)

There is also an active market among individual collector-dealers, many of whom offer extensive lists of gear and manuals. A look through the ads in *Antique Radio Classified* will turn up such sources.

A perennial source of unmodified equipment is Fair Radio Sales, the last remaining dealer of the postwar period (1016 E. Eureka St., Lima, OH 45802, 419-223-2196). Their yearly catalog is highly informative. They offer sets, hard-to-find parts like dynamotors, and tech manuals.

The annual Communications Equipment Auction at the AWA Conference is a modest but consistent source of this equipment

SOURCES OF REPAIR

DOCUMENTATION

- Repair and restoration, as well as basic understanding of the functioning of a set, require schematic diagrams and alignment information.
- Several classic publications focused on military radios occasionally turn up in flea markets:
- Surplus Radio Conversion Manual (R. C. Evenson and O. R. Beach, Editors and Engineers, Ltd., 1948) - three volumes covering about 40 sets.

- Surplus Conversion Handbook (T. Kneitel, Cowan Pub. Co., 1964) - 192 pp. of articles reprinted from *CQ*.
- Command Sets (Cowan Pub. Co., 1957) - 136 pp. of *CQ* reprints exclusively on the SCR-274N and ARC-5 family of receivers and transmitters.
- Surplus Schematics Handbook (K. B. Grayson, Cowan Pub. Co., 1960) - 111 pages of diagrams and brief technical summaries on about 120 sets.
- Index to Surplus (R. E. Pafenberg, Amateur Radio Publishing, Inc., 1962) - an index to 1945-62 conversion articles appearing in *CQ*, *QST*, 73, *Electronics World*, and *Radio-Electronics*.

CQ magazine made military conversions a major editorial thrust in its 1947-75 issues, running hundreds of articles in this area and having a monthly "Surplus" column during most of the '60s. (By contrast, *QST* abandoned this topic area about 1948.) Back issues of *CQ* routinely appear cheaply at hamfests. *CQ* continues to print occasional stories on historic military equipment, U.S. and foreign.

AWA has extensively documented many military sets. Of the '30s-'50s period, the following items are covered in the *OTB*. Listings are by volume, number, and page. Most of the cited issues are still available.

RECEIVERS

AN/ARR-6	33-1-13
AN/SRR-3	33-4-16
ARB	31-2-43, 31-2-53,
	32-1-18
BC-131	4-4-6
BC-224/348 Family	27-2-15, 27-3-20
BC-312/314/342	27-4-20
Family	
General	26-2-19
Military Equivalents	32-1-14
of Civilian	
RAK-RAL	30-3-24
RAS	31-3-33
RBO	33-4-14
RCK	33-4-15
RDG	32-2-46
REE	33-4-16
SLR-12	33-4-15
SLRM	33-4-17
TCS	30-3-15
VLF Receivers	33-2-19
Tabulation	

(Continued on next page.)

TRANSMITTERS/TRANSCIVERS

Air-Sea Rescue	31-4-17, 33-1-9
AN/APS-4 Radar	31-2-47
AN/ARC-2	33-1-16
Transmitter	
AN/CPT-2 Rescue	33-1-13
Beacon	
AN/CRT-2 Jammer	34-1-48, 34-2-28
AN/CRT-3 Gibson	31-4-17
Girl	
AN/PRT-1 Jammer	34-2-28
AN/URT-22	33-2-21, 33-3-34
Transmitter	
ATB/ARB	32-1-18, 32-2-31
Transmitter	
BC-191/375 Xmtr,	32-2-35
Origin of	
BC-655 Test	32-2-35
Transmitter	
RS-6 Radio Station	34-1-47
(RT-6, RR-6, RA-6)	
SCR-270 Radar	22-3-12
SCR-578/BC-778	31-4-17, 33-1-9
Distress Xmtr	

FOREIGN GEAR

Funk Peil ("Direction Finder") 2C	26-1-37
LWAW (Australian) Radar	31-4-37
NS2 Distress	31-4-17
Transmitter	
NSG4 Distress	33-1-12
Transmitter	
R1155 Receiver and	31-4-11
T1154 Xmtr	
R1545 Receiver	34-2-67
T1333 Distress	33-1-9
Transmitter	
T3180 "Walter"	33-1-9

The Nov. 1989 *OTB* was a "military special" issue. Other material that is helpful to the military collector includes the following:

- Tubes: conversion from Signal Corps "VT" numbers to civilian types (e.g., VT-86 → 6K7) - 31-3-11.
- Tubes: conversion from Navy stock codes to civilian types (e.g., CW-38768F → 6F8) - 30-3-31.
- "AN" designation code (e.g., AN/ARC-3) and its elements - 31-3-20.
- Signal Corps equipment: 1916-42 directory of BC Basic Components, SCR Signal Corps Radio systems, and RC Radio Component subsystems - *AWA Review*, Vol. 6 (35 pp.)
- Equipment-Manufacturer Code (originally Navy, not tri-service) e.g., CGG → Galvin/Motorola - *AWA Review*, Vol. 7 (19 pp.)

The monthly *Electric Radio* (PO Box 57, Hesperus, CO 81326, \$24/yr. second class, \$34/yr.. first class) routinely publishes articles on military radios. Items on the TBY transistor and a multi-part story on the R-390A/URR receiver come readily to mind.

SOURCES OF USE DOCUMENTATION

A given equipment item becomes much more meaningful if the owner knows its original use. Several books, mainly Government-produced, are helpful in this area.

The History of communications-Electronics in the United States Navy (L. S. Howeth, U. S. Gov't Printing Office, 1963) is out of print but available via interlibrary loan. It covers ca. 1900-1945. Another possibility is The Evolution of Naval Radio-Electronics and the Contributions of the Naval Research Laboratory (L. A. Gebhart, USGPO, 1981).

Still in print and available dirt cheap is the three-volume series The U. S. Army in World War II - the Technical Services - the Signal Corps. OTB 33-4-58 has USGPO ordering codes, prices, telephone number, etc.

Substantial information on a wide range of Army radios (and some Navy and British) is in TM 11-486, Electrical Communication Systems Engineering, April 1945.

For the many military systems designed at Bell Labs, A History of Engineering and Science in the Bell System - National Service in War and Peace (1925-1975) (M. D. Fagen, ed., Bell Telephone Laboratories, Inc. 1978) is excellent. It is out of print but widely available in New Jersey libraries.

The surplus-equipment ads in '50s issues of popular radio magazines are quite instructive, but the best of all are those in *Electronics* in the 1947-52 period: more comprehensive, and covering a wider range of equipment.

Two museums stand out in terms of their military coverage: the Communications-Electronics Museum at Ft. Monmouth (908-532-2445, weekdays), and the Westinghouse-sponsored Historical Electronics Museum outside Baltimore (301-765-2345, weekdays).

RESTORATION HINTS

This gear was built to last, and thus is more likely to work (and to still be in alignment) than civilian sets. Restoration involves "auto body" talents like fixing dents, filling holes, and repainting with crackle paint. "On Collecting and Restoring WW II Military Equipment") *OTB*, 30-3-13) has ideas along this line. Specialty parts like dynamotors and unique connectors are still available despite the need to search them out. Tubes are not much of a problem today, nor is the obtaining of 24-volt power to run the aircraft gear.

FAMOUS SITES IN NEW JERSEY RADIO HISTORY

by Ludwell Sibley

Numerous towns in the Garden State figured heavily in the development of "wireless" and later of radio communication. Here are a few that were important.

Aldene. This site, a stop on the Jersey Central Railroad in Roselle Park, is the site of a 1900-vintage brick building that was the American Marconi factory. During World War I it produced Marconi 106 and CM-294 receivers, P-4 spark transmitters, spark transmitters for submarines, etc. The building was transferred to General Electric when Marconi assets were redistributed upon formation of RCA in 1919. As of 1922 RCA operated a broadcast station, WDY, here. The building, still in commercial use, has been declared a historic landmark.

Atlantic Highlands. The "twin towers" figured in Marconi's reporting of the Americas Cup yacht races for the old New York Herald in 1899 - they were used to support the antenna for a portable station, communicating with boats offshore. A stream of flash reports came in throughout the race, to the delight of press reporters who could write their stories while the contestants were far out at sea.

This site became important a second way: Looking out over the New York harbor, it was a good place to test radar sets before and during World War II. For most of the war years, new and secret equipment covered the site.

Boonton. One hardly thinks of this town as a high-tech location, but in the '30s to '50s it housed the Aircraft Radio Corporation, Ballantine Laboratories, Boonton Radio Corporation, Ferris Instruments, and Measurements Corporation. A. R. C., a pioneer in avionics in the '30s, is most famous as designer of the SCR-274N and AN/ARC-5 "command sets" of World War II. The others were important producers of test equipment through the Sixties.

Camden. This was the home, from about 1898 to 1927, of the Victor Phonograph Company, which had a dozen or so factory

buildings downtown. When Victor's sales fell off during the late '20s, RCA, which was only a marketing company lacking manufacturing facilities, bought the company and revitalized it. Besides masses of home radios and phonographs, RCA Victor produced ship and aircraft communications equipment and radio-TV broadcast gear here.

Deal Beach. This was, from about 1920 to 1935, a major radio research site for Bell Laboratories. Experiments were carried out with trans-oceanic radio transmission, leading to opening of telephone service to England in the 1920s. Related locations were Hadley Field in South Plainfield, where the Bell Labs radio-test airplanes (a Fokker and a Ford Trimotor) was based, Holmdel (a humble field station at the time) and Whippany, where radio equipment - broadcast,

aviation, police - was developed.

Eagleswood. RCA Globe Communications, operated a marine station at West Creek/Eagleswood in southern Ocean County after the closing of Tuckerton. It employed eight Morse operators up until closing in 1978, when all East Coast ship-to-shore traffic was transferred to RCA's station WCC at South Wellfleet, Mass..

Ft. Monmouth. Starting as Camp Evans, a signal training facility in WW I, Ft. Monmouth became established as a permanent site in the '20s and site of the Signal Corps Engineering Laboratories. During the Thirties the Army's first radar sets (SCR-268, SCR-270) were developed here; in 1946 a couple of SCR-270 antenna assemblies were combined with various cast-off equipment to get the first American radar echoes from the moon. Such other equipment as the BC-342 and BC-348 receivers originated from programs originated at SCEL. The Fort Monmouth museum in Kaplan Hall, near the rear of the main post, is open 12:00-4:00 weekdays; phone (201) 532-2445. It has a wide variety of displays, from telegraph to radar.

(Continued on following page.)

"Historic Radio in New Jersey"



An NJARC Exclusive!

Look for additional stories on New
Jersey radio history to appear in
future issues of NJARC News.

HISTORIC RADIO IN NEW JERSEY

(Continued from preceding page)

Lawrenceville. When transoceanic telephone service via high frequencies opened to Europe in 1927, it relied on Lawrenceville as the transmitter site. Additional antennas were added to reach such locations as Buenos Aires. The associated receiver site was Netcong.

New Brunswick. This was the location of a high-power wireless station, built by American Marconi for communication with Europe. Originally a spark station, and taken over by the Navy during WW II, it was equipped with a pair of 200-kilowatt Alexanderson alternators on 21.8 and 22.6 kHz, callsigns WII and WRT, in 1921. The antenna was a huge "multiple tuned" flat-top-type on steel towers, over a mile long. The station was active as late as the early Sixties.

Newark. The New York City - Newark area was the Silicon Valley of the '20s. Newark was the home of boundless small tube manufacturers in the '20s. Most of them were legitimate, having licenses from RCA to make tubes under RCA's patent rights, but many were basement "bootleg" operations which, tracked down by RCA's legal staff, would move out and go back into business at a different address and with a different name almost overnight. The 1925 Radio Trade Directory lists 29 tube makers in the North Jersey area, including such major names as GE at Harrison (after 1930, RCA), Westinghouse at Bloomfield, and De Forest at Jersey City (later Passaic). Some smaller brands originating in Newark were Airtron, Amplitron, Claritron, Conqueror, Durotron, Dynatron, Loudspeaker, Marathon, Mastertone, and Thermatron. East Orange gave us Apollo, Dextron, Hercules, and Regal.

Shark River. This was a minor Marconi station, equipped with a 97-foot tower that today appears on the insignia of Wall Township. The tower itself was damaged by a storm in 1971, taken down, and re-erected as a monument at Ft. Monmouth.

Tuckerton. This was the site of the Atlantic Wireless Co. transatlantic station, financed by German capital in 1912 for communication with the station at Nauen. The station initially had an 825-foot tower supporting a huge "umbrella" antenna, fed by a 100-kW Goldschmidt alternator on 40 kHz. Later equipped with Federal arc transmitters and then with two Alexanderson alternators on 18.4 and 22.1 kHz (callsigns WCI and WGG), the station was sold to RCA in 1920, operated through the '40s, and torn down in

1955. The station building and antenna piers are reportedly still standing, in the middle of the "Mystic Islands" housing development on Hickory Island. The associated receiving station was originally at Deering, Maine; then Belmar, NJ.

FROM THE BOARD ROOM

(Continued)

Club Members (Continued from page 3.)

Aaron Hunter
Stipo Ivanko
W.R. Johnson
Peter Kloverhorm
Joseph W. Kouten, Jr.
John Kara
Gene Katz
Bill Kehoe
Steve Kramer
Sal Lentine
Joseph Loubriel
Robert Lynn
Alan MacDonald
Joe Milano
Bruce Mittleman
*Mark Mittleman
Michael Molnar
Harvey Nash
John Okolowicz
Bob Olawski
Eugene Patrick
James Patterson
Harry Poster
*Thomas Provost
*Monty Purviance
Earl Reynolds, Jr.
Larry Rubins
John Ruccolo
*Norm Sandbach
Paul Sass
Lew Seto
Ludwell Sibley
*Dave Sica
*Steve Sideroff
*Jerry Simkin
Irwin Sobelman
Bob Taplinger
John V. Terrey W5DTQ
Stanley H. Thompson
James Troe
John Trosky
Phil Vourtsis
*Rick Weibezahl
James Whartenby
Ruth Whartenby
Dennis Willard

APRIL MEETING REVIEW

(Continued from page 5.)

Mittleman concluded by observing that the flip side of the situation is when something that seems simple to deal with proves to be difficult. "Be particularly careful about missing parts" he cautioned. "The cracked knob on the demonstration set is a common piece, used on many sets. It would be easy to find a replacement at a swapmeet. The need for a new knob of this type shouldn't downgrade the collectability of this set much in your mind."

But the group was cautioned that other parts might prove difficult or impossible to obtain, delaying a complete restoration indefinitely or making it prohibitively expensive." Again, the key is to learn the difference between things which look difficult but are actually easy, and those which may look easy, but are actually difficult. Knowing the difference can mean acquiring "bargains" for easy restoration and avoiding tempting "white elephants" which don't have the potential to become fully restored additions to your collection.

MARLODYNE

(Continued from page 7.)

occupations, etc. Rosemarie located the 1924 through 1931 directories and the pieces of the Marlodyne mystery started to fall into place.

It seems the Marlodyne was manufactured by a salesman whose name was Ernest Moberg. In 1926, both he and his brother (or father) did assemble radios in Bradley Beach: not Asbury Park, but close by. By 1928, the two Mobergs ran the Bradley Beach Radio Company, but no mention was made of the manufacturing aspect. By 1931, Ernest Moberg's occupation was again listed as a salesman working out of New York City. No mention of his partner or the radio company is made by that time.

My search for the man and his radio ended abruptly with this information - just as the production run of the Marlodyne had done years before. Incidentally, the radio operates very well although, typical of TRFs with grid-leak detectors and no AGC, it tends to overload on locals and its lack of selectivity makes it tough to get DX.

Classified Ads

WANTED: Need the following W.E. tubes: 101D/F, 104D, 205D/F, 252A, 274A/B, 275A, 300A/B, 350B, VT-25, VT-52. Richard Brill, P.O. Box 5361, Old Bridge, NJ 08857. Tel: (908) 679-8026 Fax: (908) 679-8524,

FOR SALE: Used and out of print books on telegraph, wireless, radio and TV bought and sold. Jerry Simkin, 10 Avalon Lane, Matawan, NJ 07747 (908) 583-5196.

WANTED: Philmore #400 Crystal Set (original N.I.B. a plus). Frank Feczko, 37 E. 26th Street, Bayone, NJ 07002. (201) 437-6895.

WANTED: Idler wheel for an RCA 45-J-2 changer. Frank Feczko, 37 E. 26th Street, Bayone, NJ 07002. (201) 437-6895.

WANTED: Rider's Manuals, Nos. 2, 3, 4, 5, 12, 16-23. Tom Provost (609) 259-7034

FOR SALE. The *AWA Review* vols. 1, 2, 3, 6 & 7 are available at NJARC meetings at the special discount "conference" price (\$10.00 each). Also, back issues of the *AWA Old Timer's Bulletin* can be purchased at the conference price (\$2.00 each).

WANTED: Plastic dial cover and telescopic antenna for Zenith Trans-Oceanic 8G005. Tom Provost (609) 259-7034.

WANTED: Plastic dial cover and telescopic antenna for Zenith Trans-Oceanic 8G005. Tom Provost (609) 259-7034.

WANTED: AK55 Second RF coil. Gary D'Amico (908) 526-7640.

FOR SALE: Atwater Kent F-4 speaker, \$45.00. Tony Flanagan (908) 462-6638

WANTED: Schematic or manual-to-copy for Navy RBB and/or RBM receiver. Ludwell Sibley (908) 782-4804

WANTED: Long Wave receivers: National, RBL, etc. Tom Provost (609) 259-7634

FOR SALE: Farrand Junior speaker, \$35.00. Tony Flanagan (908) 462-6638

WANTED: Cathedral, RCA R-8, in good shape and reasonably priced. Frank Feczko, 37 E. 36th Street, Bayonne, NJ 07002 (201) 437-6895

FOR SALE: Radio Matic (early 1940's), \$15.00. Tony Flanagan (908) 462-6638

WANTED: Triode Tube Amps that may be HiFi, using 2A3 or 50 tubes (i.e. Summit Sound RA15, Mills Novelty MCP5500, even homemade amps and parts units). Have tubes and equipment to swap, or will purchase for cash. Larry Rubins (609) 426-9744



New Jersey
Antique Radio Club
92 Joysan Terrace
Freehold NJ 07728

First Anniversary Issue

Happy Birthday W.F.A.R.C.!

TUBE PROGRAM

(Continued from page 4)

For prospective donors: we welcome *all* types, even quantities of tubes that appear to be only "TV" versions. Some of these are useful elsewhere - for example, a friend of mine recently needed a 6BC4, an obscure TV-tuner tube, to fix his Hewlett-Packard 608 signal generator. Some of the not-obviously-useful Compactrons are used in '60s amateur radios. Even the otherwise useless 6BG6 was used in a few '50s hi-fi amplifiers.

Ludwell Sibley

Ludwell Sibley
Tube Chaplain