

Proceedings of The Radio Club of America, Inc.

Volume 50, Number 1



March, 1976

Founded 1909

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THE RADIO CLUB OF AMERICA, INC.

P.O. Box 2112, Grand Central Station, New York, N.Y. 10017

The Radio Club of America, Inc.

Price \$2.50

BOX 2112, GRAND CENTRAL STATION, NEW YORK, N. Y. 10017

Organized for the interchange of knowledge of the radio art, the promotion of good fellowship among the members thereof, and the advancement of public interest in radio.

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TREASURER'S REPORT, 1975

SUMMARY OF 1975 FINANCIAL REPORT

Receipts:

1. Dues from Members and Fellows	\$ 5,187.20
2. Sale of Club pins and Fellow Certificates	422.50
3. Interest and Dividends earned	967.52
4. Surplus from 66th Annual Banquet	209.98
5. Contributions and Miscellaneous	30.00

Total Receipts: \$ 6,817.20

Expenditures:

1. Administration expenses of Executive Secretary including rent of facilities, stationery, printing, office supplies and services	1,065.49
2. Consulting services of Executive Secretary	1,800.00
3. Meetings and related mailing expenses	632.21
4. Insurance and legal expenses	395.56
5. Awards, pins and plaques	300.87
6. Publication and related mailing expenses of 4 Newsletters	392.69
7. Publication and mailing expenses of 2 PROCEEDINGS	
issues:	\$ 3,480.98
Less Advertising receipts	-2,932.00
	548.98

Total Expenditures: \$ 5,135.80

Balance: \$ 1,681.40

BALANCE SHEET AS OF DECEMBER 31, 1975

1. Cash:

a. Checking account in Irving Trust Co.	\$ 2,504.35
b. Saveway (5%) account in Irving Trust Co.	8,295.36
c. Life Membership Fund in Emigrant Savings	
Bank (5 1/4%)	2,926.59
	<u>\$ 13,726.30</u>

2. Investments:

a. 100 Shares AT&T Co. stock (@\$52)	5,200.00
b. 3 AT&T Co. 8 3/4% Debentures	300.00
	<u>5,500.00</u>

3. Club Properties:

a. 1 Projection Screen (cost)	78.39
b. 88 Fellow Club Pins (selling price \$3.00)	264.00
c. 77 Member Club Pins (selling price \$2.50)	192.50
d. Miscellaneous furniture and fixtures	1.00
	<u>535.89</u>

4. Total Assets \$ 19,887.19

5. Liabilities:

a. Dues paid by 99 Members for 1976-1980 period	1,677.68
b. Dues paid by 32 Fellows for the 1976-1977 period	533.12
	<u>2,210.80</u>

7. Net Worth: (Line 5-Line 6) \$ 17,676.39

CHANGING CONCEPTS IN REGULATION

A report on the presentation by Charles A. Higginbotham of the FCC to the afternoon seminar of the Radio Club of America, November 21, 1975.

By **ROBERT E. TALL**
Fellow, R.C.A.

Open and frank suggestions as to "what the Commission should do next" were asked by FCC Safety and Special Radio Services Bureau Chief Charles A. Higginbotham, chief speaker at the Radio Club's afternoon session, preceding the Annual Meeting and Banquet November 21 last. The suggestions were requested in anticipation of a "one or two-day conference in the Spring," to discuss "the alternatives we are now facing."

The title of Mr. Higginbotham's overall presentation was "Changes in the FCC Regulatory Concepts for the Safety & Special Radio Services," which, he said, reflects today's situation in which "it is recognized universally that mobile radio is an indispensable tool in practically every worthwhile activity of local government, industry, and commerce," and can "provide many benefits to the general public as well, as illustrated by the tremendous growth of CB radio during the last year." The FCC's approach, he said, has "evolved from restriction to expansion in the use of radio, and the issue the Commission has been concentrating on during the past few years is how to accommodate the greatly expanded use of radio communications."

Noting that the Commission's Chicago Regional Center has been turned over to his Bureau, Mr. Higginbotham pointed out that the spectrum management effort of the Commission is up for review and cautioned that "the land mobile community is going to be very much affected, whatever happens," and "its members should play an active role in deciding" what is to be in store.

"By asking for participation," he said, "I do not have in mind the filing of formal comments filled with a lot of well-meaning generalities... I have been in the land mobile community long enough to know what your general problems are and to know how great the need is for additional frequency allocations. There is a proper time and place for such comments," he added, "but that isn't what I had in mind in this situation."

The Safety-Special Bureau Chief then asked for "specific comments and suggestions about the future direction that you think land mobile spectrum management should take. If you think (what is going on now) does not meet the needs of the land mobile community, then tell us that. More importantly, if you have recommendations for changes that would make the program better, then please make them. If you have good things to say about the program, by all means let us hear them. And if you have bad things to say about the program, please realize that it is absolutely essential that you tell us what they are. If we don't know what the program doesn't do, then we certainly cannot decide what it should do."

"To encourage the candor that I hope to elicit from (the land mobile community)," Mr. Higginbotham said, "let me



be candid. I frankly do not know what approach to take in Chicago. I see a number of alternatives that could be pursued, but at the moment, no alternative seems conclusively better than the others. Nor do I have any non-negotiable preconceptions about the way things ought to be handled. Like everyone else, I want to do what is in the best interests of the public; whatever will have a positive impact on the users of the land mobile spectrum.

"If I have a bias in the matter," he said, "it is an understandable bias toward the land mobile community and its worthwhile efforts to enjoy a fair share of the Commission's attention and resources. Other than that, I am completely open to suggestions concerning the future of the program. Should we continue it or not? Should we attempt to launch inter-service sharing or not? Let me know what you think. The final decision must rest with the Commission, but we undoubtedly will influence their decision if we can formulate a constructive course of action."

"Over the next several weeks," Mr. Higginbotham invited, "I would very much enjoy hearing your comments informally and off the record. There should be a free and uninhibited dialogue between us—out of which should come a number of specific conclusions and recommendations. If there is sufficient interest, we propose to host a one or two-way conference in the spring between members of the land mobile community and members of the Safety Bureau. We can sit down together and discuss the alternatives that we are facing. These will be specific alternatives and will cover the full range of options that are available.

"If it is the consensus of the conferees that we do so," he said, "the Safety Bureau will present the record of its proceedings to the Commission and ask the Commission to consider them when it meets to chart the course of land mobile spectrum management."

The spectrum management effort in Chicago is "part of

this approach, looking to determine if spectrum management, using spectrum monitoring and engineering frequency assignment models with computer assistance, can improve frequency utilization. The jury is still out on this question," he said, "but we have learned a lot and I expect that the final outcome will be even greater knowledge and many useful frequency assignment techniques."

Noting rule changes in the past several years to permit the introduction in the land mobile radio services of such techniques as teleprinters, automatic vehicle location, facsimile, and other non-voice communications techniques, Mr. Higginbotham pointed to a new FCC contract study which will begin a "look into the possibilities of encouraging even greater use of non-voice technology in the land mobile radio services, including digitized voice."

Touching on the 900 megahertz area, the Safety-Special Bureau Chief pointed to the Chicago developmental cellular application of Illinois Bell Telephone Co. "Unfortunately," he said, "regulatory delays have already begun. Without commenting on the merits of this case, and not being directly involved in its disposition, I'd like to say that we have to find ways to remove some of these delays, so as to give these new concepts an opportunity to be tested where it really matters, in the market place. It seems to me," he said, "that the enlightened approach on the part of the entire industry, the telephone companies, the radio common carriers, the radio equipment suppliers and others, would be to promote the growth of these new services because, in my view, exploring the potential vast market would benefit not only the public but also all members of the industry."

As for public safety, industrial and land transportation radio services at 900 MHz, Mr. Higginbotham said, "The block method of frequency allocation has been discarded" as "no longer appropriate", and "instead of asking the users to work out among themselves frequency coordination arrangements, the Commission will undertake to do this job. Frequency assignments at 900 MHz," he said, "will be made by the Commission based on varying frequency loading standards and geographic operations. The assignment standards adopted in Docket 18262 are rather crude but they will serve as a beginning and they will be, I am sure, refined or changed as we gain experience with them."

The "rather novel, and highly controversial 'specialized mobile radio' licensing approach," he said, "was designed in large part to make trunked systems commercially possible. Under the SMR approach, entrepreneurs will be authorized to build and operate trunked and also conventional systems and make their use available commercially, but without common carrier regulations. This matter, along with other aspects of the 900 MHz decision, is now before the courts. The issue before the court is very significant, and I am hoping for a clear decision, so that we can readily determine the extent to which we can introduce competition in the land mobile radio services."

Mr. Higginbotham said he expects "new microwave and land mobile application forms to come out early next year," with "emphasis on obtaining enough technical information to help us do a decent job in assigning frequencies and in developing a data base which will be useful not only to the Commission but to industry as well."

On the citizens radio service, Mr. Higginbotham mentioned the proposed expansion of the service, with the comment that "presently I lean towards a 50-channel service with AM and SSB as now permitted on 23 channels."



Jerry Stover, President of Communications Industries, Dallas, presents the special award to **Fred Link**. The inscription reads:

In recognition of your continued
dedication and service as President
of the Radio Club of America, and for
your contributions in developing the
great expanding world of electronics.
from the
OFFICERS, DIRECTORS and MEMBERS
on the occasion of our
66th Annual Awards Banquet
November 21, 1975

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SUPER SPEED ACCLAIMED

At Radio Club Annual Banquet
Bill Eitel Accepts 80-WPM Plaudit

By **ERO ERICKSON**

Publicity Committee, Radio Club of America

William Eitel, WA7LRU, Dayton, NV, was awarded a special 5-Star Citation for being able to receive and intelligently reply to International Code sent at 80 words per minute. The unusual award was presented by Gene Lombardi, W2KFA, at the 66th Anniversary Banquet in New York last November 21, in recognition of an elite telegraphing group of amateur radio operators called "5 Star" organized by Bill Eitel, who now look better than the worthy professionals by liberating the human mind from the bondage of mechanized teletype and restoring man as the master of the machine. In a special afternoon session featuring Mr. Charles Higginbotham (W3CAH) of the FCC Washington office, a tape recording of an exchange between Gene Farthing, K4KHT, of Miami, Gene Lombardi, W2KFA, of Port Chester NY, and Bill Eitel, WA7LRU, at Dayton Nevada was played to a disbelieving audience of radio experts.

The majority of the old time radiomen present weren't too sure that this wasn't some type of gimmickery, in light of the hard-copy performance at 73 WPM by Ted McElroy in the mid 1940's. The question of verification immediately came up in the search for positive proof that the human mind could be trained to double conventional speeds of 50 WPM.

In a later interview, Mr. Eitel explained that members of this CW group, of which he is 8th in the order of acceptance, have carefully calibrated their sending keyboards, some of which are adjustable in 1-word increments. The proof of eligibility for membership rests with the ability to answer the 80 WPM questions properly and with accurate comprehension. Faked-up responses are easily detected.

Bill said that what sets this fantastic method apart from the teletype method of amateur radio and other communication is that it is an extension of the customary method of CW break-in conversations. He said that with mechanized teletype it is not possible to interrupt a transmission until the sending end turns it over. By using a keyboard, without employing

Ero Erickson, W9HPJ, after an early career as radio operator at sea and on the Great Lakes, served 29 years with the Illinois State Police Bureau of Radio. Retiring 15 years ago, he operates his own two-way service company in Chicago, publishing a newsletter, "Rain Static," as an avocation. Most prized of all the awards and honors he has received, he says, are his Fellow Award in the Club and his First Class Radio-telegraph operator's license.



Bill Eitel, left, receives the 5-Star Award from Gene Lombardi, W2KFA

the storage memory feature but being right on top of it "live", instant break-in is easily achieved. The sending is so fast that most listeners mistake it for teletype. The tape we heard had an interfering station who apparently thought he was breaking up teletype copy. Eitel explained that this was really no problem because once you got blotted out, the receiving operator merely broke in and the frequency was slightly shifted up or down to get in the clear. Most of the contacts are around 7035 kHz in the 40-meter band of 1403 kHz on twenty, he said, and added that CW even at super speeds will get there when single sideband won't.

In explaining the equipment, Eitel said he procured what he considers the "Cadillac" of keyboards, known as the Curtis, which has a 66-word "buffer" (storage). This sender is made by Jack Curtis in Sunnysvale, CA, has a one-word-per-minute incremental adjustment of extreme accuracy and costs \$500. He said that there is also the HAL keyboard from Champaign IL, who also have a model that sends the landline railroad code as well as Continental. He had spent hundreds of hours learning first the TO electronic keyer, which he had to "unlearn" to operate keyboard. Gene Lombardi, W2KFA, who attended the meeting of the club, can read 100 WPM.

The world's oldest radio club, organized in 1909, also awarded 22 memberships of Fellow Grade to industry leaders and pioneers at the Awards Banquet. Dr. Henri G. Busignies, Chief Scientist emeritus of ITT and holder of 140 patents on radio direction finding and radionavigation, was awarded the Armstrong Medal for his important contributions to Radio Art and Science.

The Sarnoff Citation for significant electronic communications contributions went to Mr. Edgar F. Johnson of the E.F. Johnson Co. of Waseca, Minn. for his leadership in radio equipment manufacturing since 1923. Mr. Johnson started communicating via "barbed wire" telegraph in his home town as a boy until he learned of the existence of radio.

The keynote speaker Frank P. Barnes, Sr. Vice President of the International Telephone and Telegraph Company and a Fellow of the Club, spoke about the "Quenched Gap to Fiber Optics" progress in electronic communications. A worldwide traveler for ITT, Mr. Barnes told of having received his 2nd class commercial radio operator's license before he went to college (Stanford), which he put to good use in operating his father's spark transmitter at an Alaskan fish cannery location.

The venerable Radio Club of America is expanding under the direction of President Fred Link. There are now plans to open up regional sections, the first being in Washington DC, with a midyear meeting under the guidance of Stu Meyer, formerly of RCA. A California section is now in its early organizational phase sparked by Loren McQueen, of Communications & Control Inc. of San Jose.

FROM QUENCHED GAP to FIBER OPTICS

Address to the 66th Anniversary Banquet
of the Radio Club of America

by FRANK P. BARNES

(Senior V.P., ITT; Fellow, RC of A)

It says in the program that I am a pioneer in radio-electronics. But after listening to the wealth of talent and experience that has spoken before, I feel more like an apprentice, and am very humble about it. When Fred first asked me about speaking at this dinner tonight the subject was going to be my experiences on the delegation to China, along with Ed Johnson. Unfortunately, instead of landing in Red China that week, I found myself in Saudi Arabia. So I had to make a change, and the subject I decided on was a bit of nostalgia in radio communication.

I suggested to Fred that the title be "From Quenched Gap to Fiber Optics." Fred said, "Many of the people at the Radio Club won't know what a quenched gap is!" Well, after listening tonight, I think there is as much knowledge here of the quenched gap as of fiber optics.

Let me just explain why I started in with the quenched gap. I think everyone of you can remember specifically when you became interested in radio. It happened to me while I was still in grade school. An amateur who owned a broadcast station started a code class. I happened to be listening the first evening, became intrigued and followed every lesson until I got my amateur license. I listened with amazement tonight to the 100-words-plus per minute of Morse code. At 12 words a minute, in those days, and knowing how to explain how a hydrogen-arc converter worked, you could get a second-class commercial radio operator's license—and I got it.

I was too young to be an operator in a commercial station. But my father owned a salmon cannery up in Alaska. We were about 40 miles—which in those days was a half-day boat trip—from the nearest town with outside communications. So he bought a Kilburn & Clark transmitter for communication with the Wrangel station of the Washington-and-Alaska Cable and Telegraph. And that is how I learned to clean the gaps in a spark transmitter, and why my career in radio started with a quenched gap.

In the *Proceedings* of the Radio Club of America I read an article by Don deNeuf (who dropped me a note the other day, saying he was sorry he was not going to be here). In that article he spoke of a transatlantic cable, and the use of a tape recorder to record the pulses. Would you believe that the military station in Wrangel, Alaska, at that time—and it's not so far back—received all its messages from Seattle by underseas cable telegraphy and recorded it with a black siphon pen, wiggling back and forth on a strip of paper?

Getting started in radio like that allowed me—when I had a



chance to go on to college—to study under one of the great professors of radio engineering, Dr. Frederick Terman. I spent nearly six years working with him at Stanford University, and can remember some of the things that happened during that period that were meaningful later on in my radio career.

For example, my physics professor was Bill Hansen—I am sure many of you remember him. I remember him taking me into the laboratory one day and showing me a copper can he had devised and into which he introduced pulses of energy that caused it to resonate. He called it a *rhumbatron*, because the energy danced back and forth. And out of that rhumbatron very shortly thereafter—through the work of Sig. Varian—was developed the klystron, the forerunner of so many of the cavity resonating tubes that were so important in later communications.

At the same time, I also remember going to the laboratory of Philo Farnsworth in San Francisco, and for the first time seeing television on a cathode-ray tube. Philo Farnsworth, as you all recall, was the inventor of the image dissector tube, one of the first pickup tubes for television cameras.

Shortly afterward, the war came along, and I became involved in some work at Boeing Aircraft. I had the opportunity to participate in the gigahertz tailduct radar for the B-29. This was, of course, a period when developments came along fast and furious in the radio field, and I think that probably at that time the great leap forward happened in radio and electronics. Afterward, what came out of the work in radar and pulse communications was television and microwave. I can recall that I worked with people like Frank Gunther, who was a competitor at the time in the field of frequency modulation broadcasting. An early TV association

was with Jack Poppele, and also about that time, in FM radio communication, with Fred Link, Jerry Stover and many others.

During the 1950's a tremendous change took place in radio communications. That was the introduction of the transistor. I can recall that many arguments were held about whether or not the vacuum tube would ever be replaced by the transistor. As we all know, the transistor completely dominated electronics and we were able to miniaturize many of our devices. I can recall as recently as 1952 participating in a decision as to whether or not we should go transistor all solid-state for microwave. The decision taken at that time was to do so, and of course, as we look back now, it was obvious that there was no other way to go.

Another invention of the time that has been so important to us in radio and communications, was the ability to put a satellite into orbit at 22,000 miles and thereby have a stand-alone microwave tower in the sky. Satellite communications did a tremendous lot to further communications all over the world, and as a result it is now possible to communicate to all countries on an instantaneous basis.

I guess that would bring me more or less up to the present time, when I think we're entering into an exciting new kind of technical concept—that of fiber optics. I am sure all of you have seen in some of the novelty stores, bundles of fibers with a light at one end and a sparkle at the other. It is this phenomenon that is being used in the new technology of fiber optics. As a result it will soon be possible—it is already possible—to transmit modulated light beams along great lengths of glass fibers to carry all those signals—television and voice.

When I started with the quenched gap spark transmitter, the wavelengths used at that time were a thousand meters. I would have to say that the evolution of radio communications has seen the wavelengths getting shorter and shorter. Now as we are in the era of fiber optics and laser transmission, we are utilizing frequencies of *one billionth of a meter*. This has been a tremendous reduction in wavelength and a tremendous advance, and has resulted in the ability to receive and transmit vast quantities of information.

I think as we go forward we are seeing a number of things—we are seeing additional miniaturization because of the application of these solid-state devices with the large-scale integrated circuits, enabling our technologists and engineers to put vast numbers of circuits on a small chip. I remember my first ham transmitter—it was a Hartley—with probably half a dozen circuit elements. Now it is possible, on a chip the size of one's fingernail or smaller, to put thousands of circuit elements. The result is of course going to be more miniaturization, more digitalization, the ability to transmit greater bandwidths, and therefore more effective information transfer at lower cost. Well, this forward acceleration in communications is perhaps not equalled by any other technology, and the engineers, experimenters and scientists should be very proud.

But I guess I have to be a bit profound here, and say that technology is not an end. It must be a means to an end, and that end is the continuing enhancement of the social and economic well-being of mankind. Communications is the infrastructure to achieve this. Nearly two hundred countries of the world are now tied together in the global network providing virtually instantaneous voice and telegraphic communication among all people.

No matter where you go in the world—no matter how

quaint the village—you will see the houses with a forest of television antennas sticking up from the roofs. The international communications satellite relays make possible the instantaneous transmission of television signals, for us to see what's going on in these days in Beirut, in Asia, and all over the world.

Developing countries are explosively applying these technologies for the expansion of their communications networks. In Saudi Arabia, where for centuries communication was by camel caravan, now a network of microwave and line transmission is being laid. Very shortly, Bedouin tent communities will become modern villages with automatic telephone service. A domestic transmission system utilizing satellites will soon connect the thousands of islands in the Indonesian archipelago. In India, a proposed domestic satellite system will carry educational information to remote villages throughout this vast subcontinent. Similar networks are planned for the pan-Arab countries, Iran, the African countries, Brazil. These all have significant social implications.

Metaphorically, providing communication of information is sort of a giant game of humanity, and members of the Club and people like you are the players in the field. I think that the future is going to be even more exciting than the past. Thank you.

ARMSTRONG MEDAL RECIPIENTS of the RADIO CLUB OF AMERICA

Alan Hazeltine	1937
Harold H. Beverage	1938
Greenleaf Whittier Pickard	1940
Harry W. Houck	1941
Carman Randolph Runyon, Jr.	1945
Charles Stuart Ballantine	1946
John V. L. Hogan	1947
Captain Henry J. Round	1952
Raymond A. Heising	1953
Melville Eastham	1956
John Bose	1959
Paul Ware	1962
Harold A. Wheeler	1964
Ernest V. Amy	1965
John Bertrand Johnson	1967
Jerry B. Minter	1968
Francis H. Shepard, Jr.	1969
Frank A. Gunther	1970
Renville H. McMann, Jr.	1972
Lewis M. Hull	1974
Henri Busignies	1975

IMPORTANT AWARDS TO BUSIGNIES, JOHNSON



Edgar F. Johnson

The Armstrong Medal, highest honor of the Radio Club of America, was awarded to Henri Busignies, Chief Scientist Emeritus of ITT and distinguished inventor of radio direction finding and radio navigation devices, at the 66th Annual Awards Banquet November 21, 1975. The Sarnoff Citation "for significant contributions in electronic communications" went to Edgar F. Johnson, who in 1923 founded the E. F. Johnson Co., which served the amateur in those early days by supplying hard-to-get parts. Brief biographies of Busignies and Johnson appeared in the October, 1975, *Proceedings*. A special award was given as a surprise to Fred M. Link, hard-working and progressive president of the Club. The full text of the award appears below the photo on page 4.

Edgar F. Johnson, left, received his award from President Fred Link. Mr. Johnson was the principal speaker at the Radio Club Banquet in 1972, and his story of his life in radio appears as "A Lifetime of Radio," in Volume 46, No. 1, of the *Proceedings*, published in midsummer 1973. It describes his early adventures with a barb-wire telephone, how he later changed to radio, and how he and his bride set up a mail-order company to supply amateurs with their needs. Mr. Johnson had recently returned from China, where he was a member of a trade delegation.



Henri G. Busignies

Henri G. Busignies, right, receives the Armstrong Medal from Club Fellow and Past President Frank Gunther. In accepting the award, Dr. Busignies told of the influence Major Armstrong had on him as a young student of radio:

"I heard about Armstrong about 1922 or 1923, when I was a young student in Paris. The news came of a new way of receiving and amplifying signals, that was called superregeneration or superreaction, and during that period I read avidly the descriptions of the circuit. Of course, I had to make it work practically. I made my own version and made it work eventually, so I was already feeling the quality of this invention of Armstrong's, which preceded his invention of frequency modulation.

I made some notes of the work I had done and sent them to the equivalent of the Radio Club of France, and I have here a copy of their issue of April, 1924, in which they decided to publish the few pages I had sent them, 51 years ago! And my first lecture in the United States, on radio direction finding, I gave before the Radio Club of America on September 30, 1937. Along with the invitation to lecture was an invitation for a first class dinner—for 85¢! So there also things have changed!

The *Proceedings* published the lecture in February, 1938. So I'm quite proud of having so long roots in the Radio Club of America.

Another thing I should mention is the inspiration the work of Armstrong was for many of us. I'm sure many others have been inspired by the quality of his inventions. I think I have to thank Armstrong for the influence he has had on me right from the first, when I was playing with crystals and tubes."



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Existing users of two-way radio know that radio telephones make cost effective sense in running a business. They know that it permits instant, clear and therefore efficient direction of personnel and vehicles beyond ordinary beck and call. And that in so doing it saves time and fuel and effort – all of which amount to money.

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Nineteen of the 22 members elected to the status of Fellow at the 1975 Annual Meeting were present to receive their certificates in person. Some came long distances to receive the honor, most notable Ron Grove, of Cambridge, England. Three of them, Art Collins, A. C. Simmons and Jerry Stover, came from Texas, Two, Vinton Long and Leslie Thomas, were from Florida, and Harry Gartsman and Loren McQueen from California.

Standing, left to right, are: **Jerry S. Stover**, President, Communications Industries, Dallas, TX; **Lt-Gen Walter E. Lotz, Jr.**, Deputy Director Defense Research and Evaluation, Department of Defense, Washington, DC; **William L. Miller**, now Assistant Deputy Superintendent of the Chicago Police Department; **William Eitel**, founder of EIMAC and active amateur, Dayton, NV; **Ronald E. Grove**, General Manager, Product Planning, Pye Telecommunications Ltd.; **Harry Gartsman**, President, Alvarado Industries, Santa Monica, CA; **Loren McQueen**, President, Communications and Control Inc., Campbell, CA; **Ero Erickson**, publisher of *Rain Static* and author of *Wind Static*; **Colonel Grant Williams** retired (formerly Chief Signal Officer, First Army, during World War II); **Benjamin Oliver**, retired (formerly AT&T Vice President); **A. C. Simmons**, Executive Vice President and General Manager, Decibel Products Co., Dallas, TX; **John J. Shafer**, Physicist, National Bureau of Standards, Boulder, CO.

Seated: **Edward Borden**, retired AT&T engineer; **Arthur Collins**, founder of Collins Radio; **F. Vinton Long**, retired communications consultant to the petroleum industry; **Vivian A. Carr**, Supervisor, Corporate Planning, Executive Department AT&T; **Leslie Thomas**, retired inventor and factory manager; **Milton Fruehauf**, retired AT&T engineer, air-ground radio systems; **David Warshaw**, retired ITT radio propagation expert and solar flare student. The three fellows who were unable to be present are **E. Stuart Davis**, **Harvey Gernsback** and **Robert Leo**.



BEST WISHES
TO THE
RADIO CLUB OF AMERICA
FROM
Radio Electronics
and
**Merchandising
2-Way Radio**

Merchandising
2-Way Radio



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FOUR SPECIAL PRESENTATIONS



The Pioneer Citation tribute to **Ernest V. Amy**, one of the Founders of the Radio Club of America and a faithful worker in one official position or another from that day to this, was presented specifically “for his participation in the IBCG Transatlantic Tests and his continued contributions to the progress of the Radio Club of America.” The plaque is being received from Vice President Sam Harmatuk by Frank King, another Founder of the Club, since Mr. Amy — now a Director Emeritus — was unable to attend.



Richard W. Konter, dean of U.S. signalmen, receives the **Century Award** from Banquet Chairman Jack Poppele. Konter was a youthful Apprentice Signalman in 1897, when Navy signalling was carried on with wig-wag flags instead of radio, and retired in 1927 as a Chief Radio Operator, afterward editing until the early '70's a publication, “Trade Winds,” that circulated among the members of the U.S. Naval Ex-Apprentices Association. The inscription reads: “In recognition of a lifetime in radio communications and club activities, and at 94, the oldest living radio operator.”



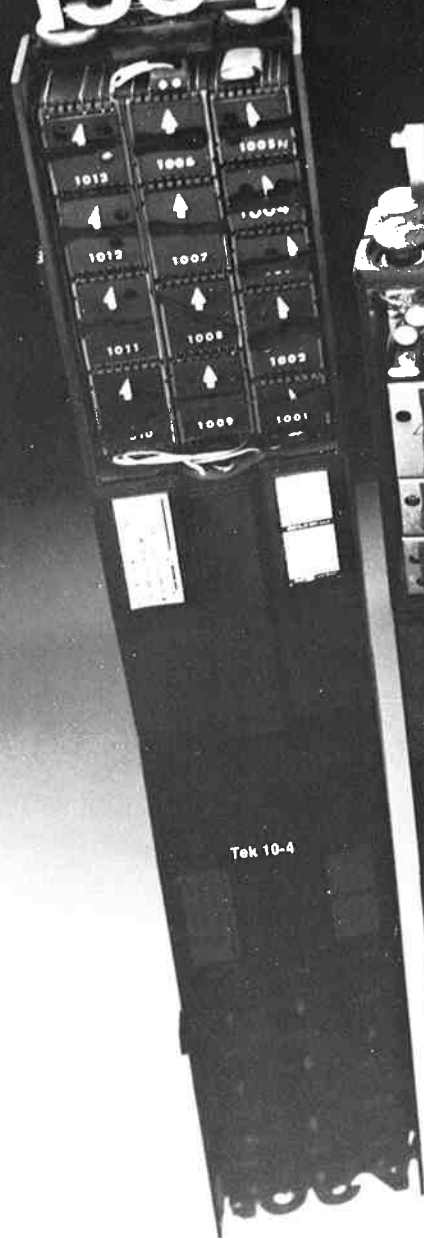
Wm. H. Offenhauser, Jr., receives the first **Ralph Batcher Memorial Award** from James Morelock. (Both are Past Presidents of the Club.) Mr. Offenhauser received the award for his constant efforts to preserve the history of radio and electronics. He has collected material and forwarded it to the Smithsonian Institution and other museums, and at this Banquet, presented the British Library with a collection of Ralph Batcher's clippings and other material, chiefly of Canadian telegraph history.

The inscription reads: “For insuring a permanent place in electronic history of important radio and communications records.”



Ron Grove, (of Pye Telecommunications Ltd., England) a Fellow of the Club, receives from William Offenhauser the microfilm of Ralph Batcher's collection of memorabilia on Canadian telegraph history. The material was delivered by Mr. Grove on December 9, 1975, to Mr. P. Harris, Deputy Keeper of the British Library, for preservation among the historical records of the Library.

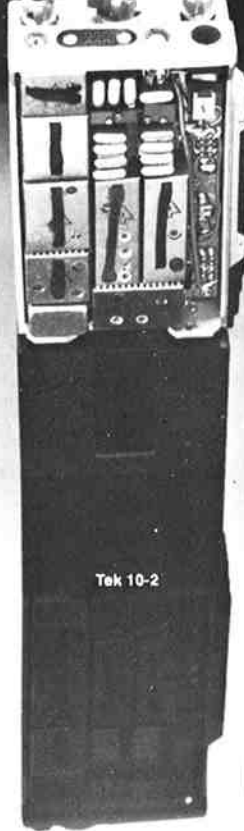
1964



1967



1971



1976



Thanks big boy, for plugging our idea.

Back in 1964, Repco introduced plug-in modules for two-way hand held portable radios. We designed and built our radios with plug-in modules because they gave our customers more reliable operation, made servicing fast and easy, and cut downtime to an absolute minimum.

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Recently, Motorola introduced its newest hand held two-way radio. In advertising, they say: "Plug-in hybrid modules give you improved reliability, fast, easy servicing, cut maintenance costs and practically eliminate downtime."

We couldn't agree with them more! Repco's Tek 10-4, introduced in 1964, was the first demonstration of these facts! Of course, we've come a long way since then . . . and we're not through yet. **The best is yet to come!**

We can't make a big splash about plug-in modules now . . . we did that eleven years ago. We will mention that Repco radio users have been enjoying excellent MTBF* and MTTR* for all these years.

Unlike Motorola, we don't offer you a choice of six hand-held cases: just **one**. But within that single case, Repco's hand-held portables house up to 6 channels

Tx-Rx **without** chassis modification. 2 or 4 watt (UHF), 2 or 5 watt (VHF) RF output. Which means you can buy a standard single channel radio today . . . and add multiple channels and other options later, without having to re-buy a new radio!

We've proven our concept . . . and our radios . . . all over the world. All models shown above are still in service . . . parts still available . . . though rarely needed.

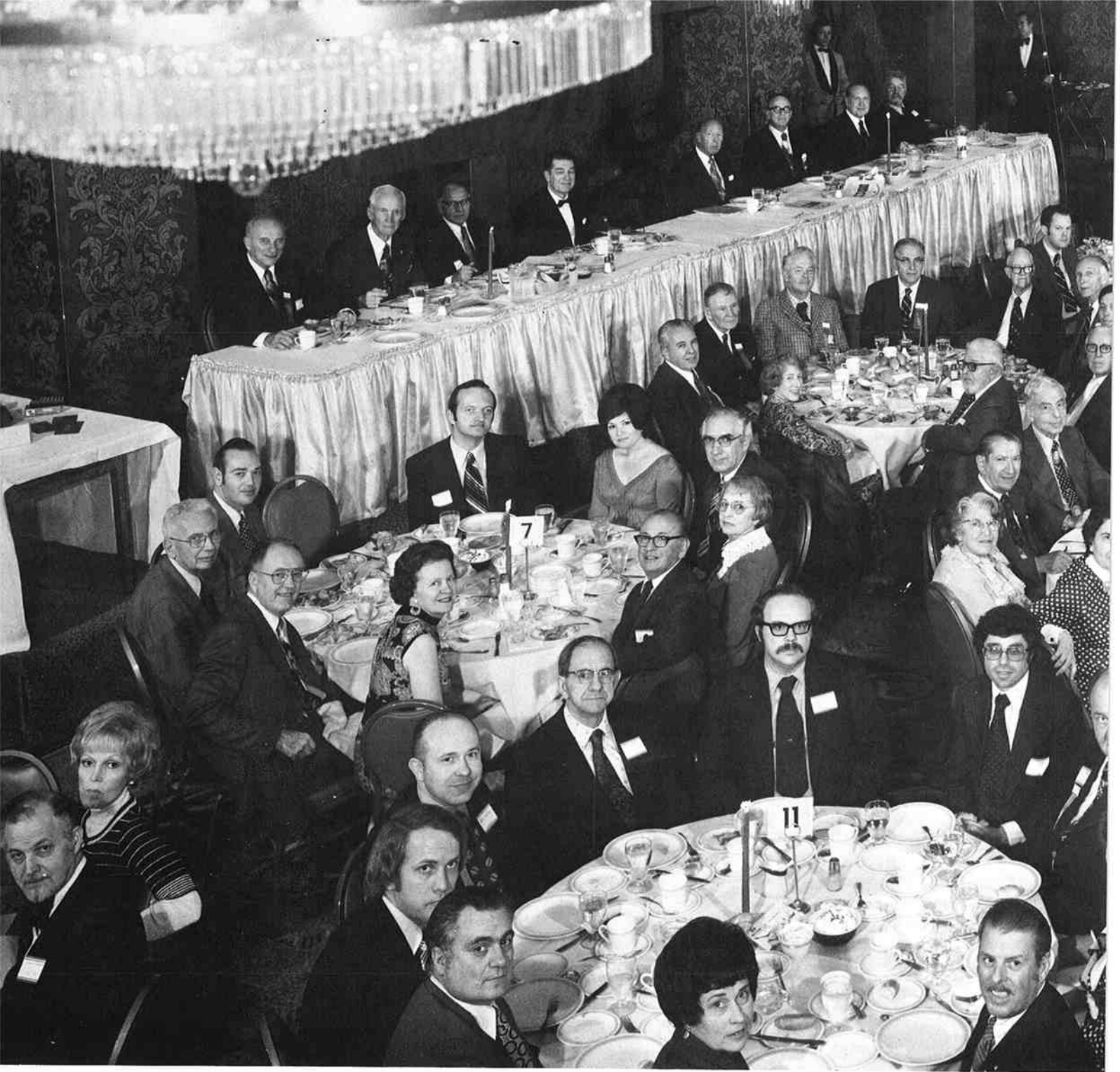
If you're interested in a two-way radio, it will pay you to "Get to Know Repco". You'll find plug-in modules are just the beginning of a long list of Repco design innovations.

And thanks, Motorola, for supporting our design concept. Eleven years wasn't such a long time to wait. *MTBF — meantime before failure *MTTR — meantime to repair

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Radio Club Celebrates

The Radio Club of America celebrated two-thirds of a century of progress on Friday, November 21, 1975, at the 66th Annual Awards Banquet, held in the Grand Ballroom of the New York Sheraton Hotel. The attendance of over 300 members and guests touched a high-water mark and attested to the growing interest in the Club and its activities and service to the membership.

Dr. Henri G. Busignies, chief scientist emeritus of ITT, was awarded the Club's highest award, the Armstrong Medal, for his significant contributions to electronic art and science. Edgar Johnson, chairman of E. F. Johnson Company, was awarded the Sarnoff citation in recognition of his contributions in electronic communications.

Fellowship certificates were presented to 22 members who by their personal and collective efforts, have added significantly to the art.

Several special plaque awards were presented. One, the Pioneer Award, was to Ernest Amy, a founder and former president of the Club. William (Bill) Offenhauser was recognized as the historian and archivist of Radio Club memorabilia by presentation to him of the Ralph Batcher Memorial Award. Richard Konter, the Club's oldest living member (93) was presented with a "Century" Radio Club plaque as one of the earliest Navy signalmen, before the turn of the 20th century, and a member of Admiral Byrd's South Pole expedition.



66th Anniversary

All certificates were presented to the awardees on attractive, handsome plasticized panels, ready for immediate display in the office or den. The Fellow awards were presented by Fred M. Link, Club president.

Frank P. Barnes, Senior Vice President of ITT, delivered the main address covering the entire growth of our amazing electronics industry, the span from "The Quenched Gap to Fiber Optics".

Stuart (Stu) F. Meyer, our Master of Ceremonies, conducted the evening program with the precision of Maestro Toscanini leading the New York Philharmonic.

Our new Radio Club banner, which served as a backdrop for the dais, was a gift of our new Fellow, Loren McQueen,

from California. Bob Harvey led the parade with an exquisite assortment of prizes, donated by members of the Club. Photographs, which are a happy reminder of the evening's proceedings, were arranged and directed by Mal Gurian.

Welcoming our guests were Ming Ashton, Joanne Sotres, Vivian Carr, June Poppele, Lorraine Poppele Flower, and Pauline Poppele, who managed to maintain the flow of members as they entered the Grand Ballroom. Special applause goes to the organizations who provided the get-together, "Meet Your Friends" cocktail hour: ITT, E. F. Johnson Co., Comsat General, and General Electric.

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THE 66th BANQUET HONORS OUR PAST PRESIDENTS

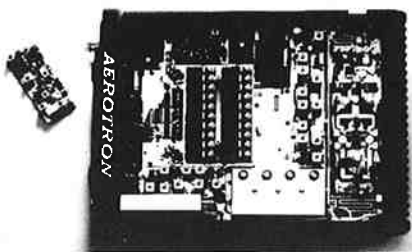
The list below is that of past presidents of the organization, to whose dedication and hard labor the Club owes much of its present status. A special effort was made to honor these important figures at the last Annual Banquet, and a special table was set aside for them. Those who attended are marked on the list with an asterisk. Among those who could not make it to the Banquet but sent their regrets were founders and past presidents Ernest Amy & W.E.D. Stokes.

**W.E.D. Stokes, Jr.	1909-1911
*Frank King	1911-1914
George J. Eltz, Jr.	1915
Edwin H. Armstrong	1916-1920
George E. Burghard	1921-1925
Ernest V. Amy	1926-1928
*Lewis M. Clement	1929
Louis G. Pacent	1930
Harry Sadenwater	1931
Lawrence C. F. Horle	1932
Charles W. Horn	1933
Harry W. Houck	1934
Ralph H. Langley	1935-1936
John H. Miller	1937-1938
Paul F. Godley	1939
Keith Henney	1940
John L. Callahan	1941
Paul Ware	1942-1943
Fred Klingenschmitt	1944-1945
Louis Alan Hazeltine	1946-1947
*Jerry B. Minter	1948-1949
*James Morelock	1950-1951
*John H. Bose	1952-1953
*Francis H. Shepard, Jr.	1954-1955
*Frank A. Gunther	1956-1957
Walter A. Knoop	1958-1959
Renville H. McMann, Jr.	1960-1962
Ralph R. Batcher	1963-1964
*Jerry B. Minter	1965-1966
Harry W. Houck	1967
*Wm. H. Offenhauser, Jr.	1968
*Fred Link	1969-1976

**President, Junior Wireless Club

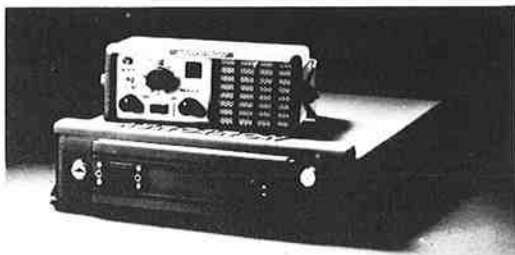
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Let's get right to the heart of this trunk-mount transceiver. Modular construction. That lets you always plug in advanced electronics so your Mpac never becomes obsolete. And should it need service, your technician simply pulls out the old and plugs in the new module. In just minutes you're back on the air. Back on the road. Modules really do make it better.



**2:
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public safety
authorities.**

This is the radio federal and state public safety engineers tested and retested, shaken and baked, rattled and rolled, and then approved. So you know it's rugged. It's all solid state. Even the power and antenna switching. And it has no relays, no contacts, no arcing, no corrosion. Just tough professional FM radio circuitry that makes it better.



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that speaks
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Whatever you need, you'll find it in Mpac. Up to 12 channels and 110 Watts of RF power for versatility and range. With outstanding sensitivity and selectivity in all three frequency bands. And Aerotron's exclusive SCAN 10 control head lets you monitor up to 10 channels with priority channel selection. Plus an outstanding selection of plug-in options and accessories that makes it even better.

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BOOKS BY RADIO CLUB MEMBERS

A FLICK OF THE SWITCH, 1930-1950, by Morgan E. McMahon. Vintage Radio, P.O. Box 2045, Palos Verdes Peninsula, CA 90274. 5½ x 8½ inches, 312 pages, \$9.95 hardcover, \$6.95 handbook edition.

The book begins where **Vintage Radio** left off, with 150 pages of photographs of radios used by the broadcast listener between 1930 and 1950, and a 39-page prose introduction that gives the history of broadcast radio.

There is a surprising (for a non-ham book) section on amateur radio, starting with 19 pages of text and illustration, then 44 pages of solid photography. The pictures begin with old-time ham shacks from QST, then show ham receivers and, as they began to be manufactured, transmitters, ending with the Viking, with a 1950 manufacturing date.

Other chapters cover military radio, the radioman (and woman) and the now so popular subject of collecting.

Basic Electronic Switching for Telephone Systems, by David Talley. Hayden Book Co., 50 Essex St., Rochelle Park, NJ 07662. 6 x 9 inches, 240 pages. Softcover \$6.95.

Updating and complementing the author's earlier **Basic Telephone Switching Systems**, this book reviews the fundamentals of electromechanical switching systems from the direct control step-by-step to the common control panel, rotary and crossbar types. Design principles and operation of modern systems are analyzed, with special attention to the Bell System's No. 1 and No. 2 ESS. Sufficient material on binary numbers, binary logic systems and logic circuits is included to give the reader an understanding of the stored program concept now used in electronic switching systems.

The way that calls are handled with the help of "computer" techniques is covered in detail. One chapter of the eight in the book is devoted to central processor fundamentals, another to the central control unit, and a chapter each to memory systems and to stored program control and call handling.

Dial 911: Modern Emergency Communications Systems, by George Leon and Leo G. Sands. Hayden Book Co., Inc., 50 Essex St., Rochelle Park, NJ 07662. 5½ x 8 inches, 128 pages. Softcover \$3.95.

Dialling the number 911 puts the citizen in direct touch with the local police department's emergency section in more than 370 communities of the United States. How these calls are handled is explained in detail, so the reader not familiar with communications systems and equipment can understand.

Various systems are described, including that of New York City, where the city police, the subway police and the Housing Authority have separate systems. Non-emergency police communications, such as methods of instant car location, one-way radio paging and the use of helicopters, is also covered, as well as other uses of electronics in security work: bugging, lie detectors and voice identification, and public medical aid.

ENCYCLOPEDIA OF ELECTRONIC CIRCUITS, by Leo G. Sands and Donald R. Mackenroth. Parker Publishing Co., Inc.,

West Nyack, NY 11801. 7 x 10 inches, 288 pages, Hardcover \$15.95.

With nearly 300 pages showing more than 360 circuits and giving short descriptions of their operation, this is probably the most ambitious book of the kind ever published.

A chapter each is given to: amplifier, audio control, biasing, control, coupling, frequency conversion, and multiplication, indication, logic, modulation and demodulation, power supply, signal conditioning and signal generation circuits. There is text and a diagram (many with full circuit constants) for each circuit.

IDA Was a Tramp – and Other Reflections, by E. J. Quinby. Exposition Press, Inc., 900 South Oyster Bay Road, Hicksville, NY 11801. 6 x 9 inches, 277 pages (plus end-paper maps.) \$10.00.

"Only a veteran operator could have written this book," says one enthusiastic reviewer. And only an operator with an intense curiosity about all things technical, a deep interest in the world around him, and a skilled hand on the typewriter, could have done so. The story not only relates the adventures of a "young operator" through two wars, a revolution, a mutiny and a few responses to SOS calls, but takes off on other and unexpected angles. We learn about the behind-the-scenes activity that caused the young Quinby to be fired from Marconi, only to be rehired by RCA in the next line of the radiogram, and even hear of the English Marconi scandal. Quinby's technical bent gives us a description of "one of the most unusual steamboats in history," the ahead-of-its-time **Baikal**, with "three tracks on her decks that could accommodate the longest train operated over the (Trans-Siberia) line." We get other technical features the tourist seldom notes, and learn the speed (6 mph) of the San Francisco cable cars.

The young operator even found himself involved in international politics. Ida arrived in Vladivostock just at the beginning of the revolution, leaving immediately with the cargo it had brought, plus a few beautiful refugees and some grim stories about the campaigns of Admiral Kolchak. Less than a year later, on another ship, he finds himself taking an active part in the Polish Pilsudski's struggle for the freedom of his country.

The book ends on a quieter and more autobiographical note, telling of his adventures with matrimony and with antique Mississippi River steamers, as well as his involvement with the organ, which began with a 75-yen purchase on his first run to Japan and continues to the 1,000-pipe organ that now occupies the entire first floor of his New Jersey home.

Know Your VOM-VTVM, by Joseph A. Risse. Howard W. Sams, & Co., Inc., 4300 West 62nd St., Indianapolis, IN 46206. 5½ x 8½ inches, 176 pages, \$5.50.

The third edition of this authoritative text has been brought thoroughly up to date, with chapters on solid-state and digital VOM's in addition to the thorough coverage of VTVM-VOM principles and uses. As an aid to students, the author, who is director of the International Correspondence Schools School of Television, has included a set of review questions at the end of each chapter. There is an excellent index.

NEWS OF THE MEMBERS

FRANK DEVINE, President of APCO, has left the New York Police Department (where he was in charge of the police radio system) to take on a top position as Communications Specialist for the New Jersey State Law Enforcement Agency (SLEPA). This was a major shift and a surprise to the industry.

WILLIAM L. MILLER, head of the Communications Division of the Chicago Police Department, has been made Assistant Deputy Superintendent of the Department. In announcing the promotion, Superintendent Rochford particularly commended Mr. Miller for "an outstanding job" in setting up the Department's "911" emergency telephone system, which will go into operation during 1976.

JACK RENNER, Fellow of the Club, has been elected a Fellow of the Institute of Electrical and Electronics Engineers (IEEE).

PRESIDENT LINK, who was an active amateur back in the '20's, has been licensed again with the call W2ALU, which was his call when he ceased to be active as an amateur. He expects to go on the air again shortly, has joined QCWA and received his 50-year award.

STUART F. MEYER, has been appointed to the new position of Manager of Government and in Industry Relations, Mr. Richard E. Horner, president of the E. F. Johnson Co., announced.

Before joining the E. F. Johnson Co., Mr. Meyer held a similar position with RCA Corp Mobile Communications Systems. He is a Fellow and Executive Vice President of the Radio Club, and an active amateur, having chaired the ARRL National Convention at Reston, VA, last year. He is also Chairman of the 1976 IEEE VTG Conference at Washington, DC.

Call for Papers

Meetings Chairman Mal Gurian is calling for papers to be presented before the Club membership during 1976. While most of the papers presented at Radio Club meetings deal with advances in the field of electronics, papers need not necessarily be of a technical nature. Talks on industry trends or similar subjects will be welcome.

Will anyone interested please contact Mal Gurian, Aerotron, Inc., 442 Main Street, Fort Lee, NJ 07024, phone 201-947-3460.

Membership Totals

The membership of the Club as of February 17, 1976, is 654. Of these, eight are Honorary members, 117 Life members, 141 Fellows who are not Life members and 388 regular members.

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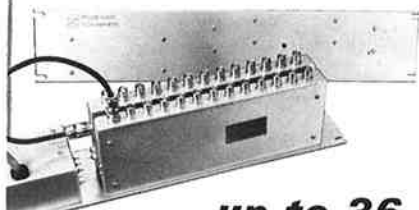
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- Currents
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- Optional Intercom
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NEW MEMBERS

Since the Directory was issued in October, 1975, 31 new members had joined the Radio Club of America.

APFEL, George J. Piezo Electronic Research Inc. (Upper Saddle River, NJ). 105 Riverdale Road, Park Ridge, NJ 07656.

BATTS, Robert L. (Retired telecommunications engineer). 13 Todd Way, Imperial Terrace, Tavares, FL 32778.

BECHBERGER, Paul F. Retired. (Amateur since 1921). 51 Palmer Ave., Tenafly, NJ 07670.

BECKEN, Eugene D. RCA Global Communications, Inc., 52 Rutland Road, Glen Rock, NJ 07452.

BOWER, A.T. Bell & Howell Comms. Co., 78 Blanchard Road, Burlington, MA 01803.

BRUMBAUGH, Joseph W., FCC—S & SRS Bureau. 506 Mashie Drive, Vienna, VA 22180.

CETTIE, Ronald. Sinclair Radio Labs, Inc., 17 Kinderhook Court, E. Amherst, NY 14051.

COHEN, Monte. General Instrument Corp. (Chicopee, MA). 508 Laurel St., Longmeadow, MA 01106.

DeCOSTE, Ernest A. National Museum of Science & Technology (Ottawa, Canada), 1959 Conrad Ave., Ottawa, Canada K1H 6V7.

ELMS, Robert I. Custom Comms. Eng. Inc., Smithtown Road, Budd Lake, NJ 07828.

FRANZ, Alfred G. FCC (Washington, DC), 10105 Hereford Place, Silver Springs, MD 20901.

FULLER, Stephen H. Barnstable Co. Police Radio System, 337 S. Main St., Centerville, MA 02632.

GLODELL, Leroy M. Lecturer, language consultant. 143 Institute Rd., Worcester, MA 01602.

GOULD, Wm. B., 3rd. Retired. 926 Woodgate Ave., Elberon, NJ 07740.

HANSEN, John R. FCC, Amateur & Citizens Div., Suite 203, 431 N. Frerick Ave., Gaithersburg, MD 20760.

HARRIS, Jack R. Pinkerton Computer Consultants, Inc., 65 West St. Rd. Warminster, PA 18974.

HILL, Dean G. Myse & Hill, 2000 L St. N.W., Washington, DC 20036.

JUMPER, Bill B. Intech, Inc., 282 Brokaw Rd. Santa Clara, CA 95050.

KAELIN, Walter E. Intech, Inc. 282 Brokaw Rd., Santa Clara, CA 95050.

KAVANAUGH, Michael F. Roanoke Co. Sheriff's Div., Route 2, Box 458, Boones Mill, VA 24065.

KRAUS, C. Raymond. Consulting Comms. Eng. Inc., 845 Mt. Moro Rd., Villanova, PA 19085.

MEHALL, David. Aerotron, Inc., U.S. Highway 1 North, Raleigh, NC 27608.

MILLER, J. William. Consultant. 10919 Woodfair Rd., Fairfax Station, VA 22039.

MURRAY, W. Wallace. AT&T (New York, NY). 30 Preston Drive, Somerville, NJ 08876.

PARTEN, Merle B. Eimac, Div of Varian. 341 Laurel St., San Carlos, CA 94070.

PETERSEN, Martin J., Jr. WOR-KO General. 33 Hillcrest Terrace, Lincoln Park, NJ 07035.

QUANTZ, Richard G. Washington State Patrol. 20015 Marine View Dr., S.W., Seattle, WA 98166.

ROHDE, Ulrich L. Rohde & Schwarz Sales Co., Inc., 14 Gloria Lane, Fairfield, NJ 07006.

STOLL, Eric. ADT Security Systems. 117 Hillside Ave., Teaneck, NJ 07666.

TURNER, Derek. Pye Telecommunications Ltd. Pentland North Road, Whittlesford, Cambridge, England.

VASHROW, Leo M. New York State Police. 284 Vly Rd. Schenectady, NY 12309.

APCO Holds Gala Affair

Since many Club members are also members of the Associated Public Safety Communications Officers, they will be interested to know that a gala Manapco event will take place the evening of Wednesday, August 4, during the APCO National Conference in New York City.

Manapco chairman Mal Gurian confirms that the 210-foot steamer *Duchess* has been chartered for a 4-hour cruise, starting in daylight around New York City, then up the Hudson during the evening. Features of the evening include a buffet-style supper, drinks, dancing and entertainment. Bus transportation, passing many noted New York landmarks, will be provided for APCO guests to and from the historic Battery Park where the *Duchess* embarks and debarks.

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*Pre-punched customer address card and Mark Sensing order cards.



International Crystal Manufacturing Co., Inc.
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405/236-3741

TAX-EXEMPT STATUS IS NOW APPROVED

On November 28, 1975, the Internal Revenue Service determined that The Radio Club of America, Inc. was exempt from Federal income tax under Section 501 (c) (3) of the Internal Revenue Code.; This action by the IRS culminated more than a year's hard work on this project by the Ad Hoc Committee comprising David Talley and Stuart F. Meyer. Considerable historical research was required in addition to "mountains" of paperwork, financial records, computations, and much legwork. Valuable legal assistance was obtained from Attorney Herbert H. Chavis in the final preparation of the required forms documents.

Our new tax-exempt status means that any contributions made to the Club by members or anyone are deductible from income taxes. Also, bequests, legacies, devises, transfers, or gifts to the Club or for its use are deductible for Federal estate and gift tax purposes. Moreover, the Club is exempt from State and City sales taxes and can utilize the lower non-profit postage rates for bulk mailing of its Newsletters and Proceedings.

Life Members may now make contributions, in lieu of yearly dues, and deduct the amount for tax purposes.

STANDING COMMITTEES, 1976

Affiliations	Harry Dannels , Stu Meyer, Jerry Stover, Charles Summers.
Awards	Stu Meyer , Harry Houck, Jim Morelock, Bill Offenhauser, Jack Poppele, Jerry Stover.
Banquet	Jack Poppele , Mal Gurian, Bob Harvey, Loren McQueen, etc.
Constitution	Stu Meyer , Vivian Carr, Harry Houck, Dave Talley.
Finance	Bill Finch , Nathan Schnoll, Jerry Stover, Charles Summers.
Meetings	Mal Gurian , Stu Meyer, Nat Pfeffer, Dave Talley.
Membership	Vivian Carr , Mal Gurian, Jack Poppele, Leo Sands.
Papers	Wm. Fingerle , Charles Dorian, John Rider, T. C. Tsao.
Publications	Jim Morelock , Harvey Gernsback, Al Menegus, Jerry Minter, Jay Quinby.
Publicity	Leo Sands , Ken Bourne, Ero Erickson, Al Menegus, Bob Tall.
Research Awards	Jack Poppele , Henri Busignies, Arthur Collins, Bill Finch, T. T. Goldsmith, Bill Lear, Charles Summers.
Scholarships	John Bose , Bill Eitel, Edgar Johnson, Tom Jones, Bob Leo, Jerry Minter, Jerry Stover, Charles Summers.
Proceedings	Editor —Fred Shunaman Advertising-Budget —Stu Meyer.
Fellowships	Full Executive Committee plus Chairman of Awards Committee.

Fellowship nominations to be accepted from any Fellow, Officer or Committee Chairman. They shall be sent to the President or Executive Committee for initial consideration and discussion before presenting them to the Board.

Washington Section Established —California Under Way



Shirley Ashton accepts the Section One Charter from President Link

The charter of the Washington, DC, Section of The Radio Club of America was formally presented to Shirley Ashton, Vice Chairman of the new Section One, by President Link at the Annual Banquet November 21, 1975. Formation of this new Section culminates efforts that started nearly four years ago. Efforts are also being made to form a California Section, where temporary officers have already been elected, and there has been discussion of chapters in Chicago and other places.

The new Section has 21 members. They have elected Stuart Meyer Chairman; Shirley Ashton, Vice Chairman; Ed. Redington, Secretary, and Aubrey Childers, Treasurer. The Section's first big meeting will be the Semi-Annual Radio Club of America banquet, to be held March 25th at the Statler-Hilton Hotel, 16th and K Streets.

The California Section is temporarily organized, with James J. (Jim) Lamb as Honorary Chairman, Ray Griese Secretary-Chairman and Lew Best, Treasurer. Somewhat disappointed at not being in time to be Section No. 1, Section member Loren McQueen points out that the designation No. 2 carries with it the implied obligation to "try harder!" The Section plans to hold its first regular meeting as a "Charter Meeting," late in March.

The idea of local chapters or sections is by no means new. A Chicago Section was authorized by the Board of Directors in 1921. Despite the efforts of such members as Sylvan Harris and McMurdo Silver, it never became active, though efforts continued until at least 1926.

Will all Fellows who know of some member who should be a Fellow please send in—by early April—the name of your nominee(s), *together with a short paragraph telling why the member should be elevated to Fellow status.* This information will be necessary for the Executive Committee in screening the names of the nominees for presentation to the summer Directors Meeting.

Please mail your nominations to Fred M. Link, Robin Hill Farms, Pittstown, NJ 08867.

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GENERAL COMMUNICATIONS SERVICE

CONSTITUTION OF THE RADIO CLUB OF AMERICA, INC.

ARTICLE I — NAME AND PURPOSE

Sec. 1. The name of this organization shall be THE RADIO CLUB OF AMERICA, Inc.

Sec. 2. Its purpose shall be:

a. To operate exclusively for charitable, educational and scientific purposes, entitling the corporation to exemption under the provisions of section 501 (c) (3) of the Internal Revenue Code of 1954, and more specifically to study and contribute to the development of radio communication programs and provide a scholarship fund for needy and worthy students for the study of radio communication.

b. In furtherance of its corporate purposes, the corporation shall have all general powers enumerated in section 202 N-PCL together with the power to solicit grants and contributions for corporate purposes.

c. Nothing herein shall authorize this corporation, directly or indirectly, to engage in or include among its purposes, any of the activities mentioned in Not-For-Profit Corporation Law, Section 404 (b) - (p) or Executive Law, Section 757.

d. No part of the income of the corporation shall inure to the benefit of any member, trustee, director, officer of the corporation, or any private individual (except that reasonable compensation may be paid for services rendered to or for the corporation affecting one or more of its purposes) and no member, trustee, officer of the corporation or any private individual shall be entitled to share in the distribution of any of the corporate assets on dissolution of the corporation.

e. No part of the activities of the corporation shall be carrying on propaganda, or otherwise attempting to influence legislation, or participating in, or intervening in (including the publication or distribution of, statements) any political campaign on behalf of any candidate for public office.

f. In the event of dissolution, all the remaining assets and property of the corporation shall after necessary expenses thereof be distributed to such organizations as shall qualify under section 501 (c) (3) of the Internal Revenue Code of 1954, as amended, subject to an order of a Justice of the Supreme Court of the State of New York.

g. The corporation shall distribute its income for each taxable year at such time and in such manner as not to subject it to tax under Section 4942 of the Internal Revenue Code of 1954, as amended; and the corporation shall not (a) engage in any act of self-dealing as defined in Section 4941 (d) of the code; (b) retain any excess business holdings as defined in Section 4943 (c) of the Code; (c) make any investments in such manner as to subject the corporation to tax under section 4944 of the Code; or (d) make any taxable expenditures as defined in Section 4945 (d) of the Code.

ARTICLE II — MEMBERSHIP

Sec. 1. The membership of the Club shall consist of those persons who have signed the Certificate of Incorporation together with all persons who are hereafter received in or elected to membership as herein provided.

Sec. 2. Any person is eligible for membership who has been interested in the investigation of the principles of radio communication and in radio operation for at least one year.

Sec. 3. The classes of membership and the fees therefor will be prescribed in the By-Laws.

Sec. 4. Any member may withdraw from the Club by presenting to the Secretary a written statement of resignation.

Sec. 5. A member may be expelled for violation of the By-Laws of the Club or for other cause prejudicial to the best interest of the Club. Such expulsion may be effected by a two-thirds vote of the Board of Directors at a duly called meeting.

Sec. 6. Any resigned or expelled member forfeits all rights and privileges of the Club.

ARTICLE III — GOVERNMENT

Sec. 1. The general management of the affairs of the Club shall be vested in the Board of Directors who shall be elected as provided in the By-Laws.

Sec. 2. The governing body of the Club shall be the Board of Directors comprising the Officers and fourteen Directors.

Sec. 3. The officers of the Club shall consist of a President, Vice President, Secretary and Treasurer, and such other Officers as the Board from time to time may designate.

Sec. 4. The Board of Directors shall meet at least once each year and at the call of the President. At least one-half of the Board members shall be present to constitute a quorum.

Sec. 5. If a vacancy occurs among the Officers or in the Board of Directors, such vacancy shall be filled for the unexpired term by the Board of Directors.

Sec. 6. The President shall be a member ex-officio of all Committees.

ARTICLE IV — MEETINGS

Sec. 1. The Club shall hold an Annual Meeting before the end of each calendar year at a time and place to be designated by the Board of Directors.

Sec. 2. Other meetings of the Club may be held throughout the year, the time and place to be designated by the Board of Directors.

ARTICLE V — FINANCIAL OBLIGATIONS

Sec. 1. No financial obligation shall be incurred on behalf of the Club except by the approval of the Board of Directors as covered in the By-Laws.

Sec. 2. All obligations incurred by the Club shall be solely corporate obligations and no personal liability whatsoever shall attach to, or be incurred by any member, Officer or Director of the Club by reason of any such corporate obligation.

ARTICLE VI — AMENDMENTS

Sec. 1. Proposed amendments to this Constitution must be reduced to writing and signed by not less than twenty-five Members or Fellows and be submitted to the membership who shall vote thereupon by letter ballot. The amendment shall be adopted if seventy-five per cent of the votes received are in favor of such action, the polls having been open for at least one month after mailing to the qualified membership notices of the proposed amendments.

BY-LAWS

ARTICLE 1 — MEMBERSHIP

Sec. 1. The membership of the Club shall consist of the following grades:

a. Members; **b.** Fellows; **c.** Honorary Members

They shall be entitled to all privileges of the Club except that Honorary Members may not hold office or be elected to the Board of Directors.

Sec. 2. A Fellow shall have been a member of the Club for at least five years or one whose contributions to the Radio Art are of such a nature as to qualify him for the grade of Fellow.

Sec. 3. An Honorary Member shall be a person of high professional standing who is interested in the activities of the Club.

Sec. 4. Election or transfer to the grade of Fellow or Honorary Member shall be by a majority vote of the Board of Directors.

Sec. 5. A person eligible for membership may apply by making application, on the form prescribed by the Board of Directors, to the Executive Secretary, and submitting with the application the entrance fee and initial dues payments.

Sec. 6. Each application for membership shall be considered by the membership committee and its recommendations shall be submitted to the Board of Directors. If the applicant is approved by the Board of Directors, the Executive Secretary shall notify the applicant of his election to membership, and shall forward to him a statement of entrance fee and initial dues if not previously paid.

ARTICLE II — ENTRANCE FEE AND DUES

Sec. 1. The entrance fee for new members shall be Three Dollars (\$3.00). The annual dues payable by Members and Fellows shall be Ten Dollars (\$10.00). Three years dues may be paid in advance for Twenty-Five Dollars (\$25.00). Honorary members shall be exempt from payment of any dues or fees.

Sec. 2. The annual dues shall be payable on the first day of each calendar year, in advance for the ensuing year. It shall be the duty of the Executive Secretary to notify each Member or Fellow of the amount due.

Sec. 3. All members in good standing shall be furnished with permanent membership cards bearing the signature of the Executive Secretary.

Sec. 4. Persons elected to membership after Sept. 1 of any year shall pay only half the specified dues for that year. Persons elected to membership in December shall pay dues to be credited to the following year.

Sec. 5. Any Member or Fellow whose dues become two months in arrears shall be notified by the Executive Secretary. Should his dues then become four months in arrears, he shall again be notified by the Executive Secretary. Should his dues then become six months in arrears, his name shall be submitted to the Board of Directors for further action. The Board of Directors may, however, for sufficient cause temporarily excuse from payment of annual dues any Member or Fellow or extend the time for payment.

Sec. 6. Every person admitted to the Club shall be considered as belonging thereto and liable for the payment of all dues (except as per Sec. 7. of this Article) until he shall have resigned, been expelled, or have been relieved therefrom by the Board of Directors.

Sec. 7. Any Member or Fellow not in arrears, upon payment of One Hundred Fifty Dollars (\$150.00) shall be exempt for life from the payment of annual dues. Effective January 1, 1970, any Member or Fellow not in arrears shall be exempt for life from the payment of annual dues providing that his age plus years of membership equal one hundred (100); or provided he is sixty (60) or more years of age, upon the payment of Thirty-Seven Dollars Fifty Cents (\$37.50) if he has been a member for twenty (20) or more years, or upon payment of Seventy-Five Dollars (\$75.00) if he has been a member for ten (10) or more years.

ARTICLE III — BOARD OF DIRECTORS

Sec. 1. The Board of Directors shall manage the affairs of the Club in conformity with the provisions of the Constitution and the By-Laws. It shall direct the care and appropriation of the funds of the Club; act upon applications for membership as heretofore provided; recommend Honorary Members; exercise discretionary power in the election to the grade of Fellow of Members or original applicants having the qualifications therefor; take measures to advance the interests of the Club, and generally direct its business. It may appoint an Executive Secretary and fix his compensation. It may appoint an Executive Committee to carry out certain specified responsibilities in the interim period between meetings of the Board of Directors.

Sec. 2. No Officer or Director shall receive remuneration for his services in any capacity.

Sec. 3. The Officers and Directors of the Club shall serve for a term of two (2) years or until their successors are duly elected. One-half (7) of the fourteen (14) members of the Board of Directors shall be elected each year. Seven of the fourteen Directors to be elected in 1969 shall be for only a term of one year.

Sec. 4. The Executive Committee, appointed by the Board of Directors, shall consist of the President, Vice President, Secretary, Treasurer and three members of the Board of Directors other than Officers.

Sec. 5. The Executive Committee shall carry out only the specific responsibilities that are authorized by the Board of Directors in the interim period between meetings of the Board of Directors. These responsibilities shall include approval of new applications for membership, arrangements for meetings and general direction of the Club's operations including those of the Treasurer and the Executive Secretary. The Executive Committee shall not control the care and appropriation of the funds of the Club. All actions of the Executive Committee shall be subject to approval by the Board of Directors.

ARTICLE IV — DUTIES OF OFFICERS

Sec. 1. The President shall have general supervision of the affairs of the Club. He shall preside at meetings of the Club and of the Board of Directors at which he may be present. He shall appoint such committees as he or the Board of Directors shall consider expedient or necessary.

Sec. 2. The Vice President shall assume all the duties of the President during the President's absence from meetings or whenever the President is otherwise unable to perform such duties. In the event of the Vice President's inability to assume these duties; a Chairman pro-tem shall be appointed by those present at a meeting.

Sec. 3. The Treasurer shall be responsible for the funds of the Club and accountable to the Board of Directors. He shall make such payments for the Club as are ordered by the Board of Directors. He shall report on the Club's financial status at each meeting of the Board of Directors.

Sec. 4. The Secretary shall be responsible for the records of the Club, and shall duly record the minutes of the meetings of the Board of Directors and of the Executive Committee.

Sec. 5. The Executive Secretary as appointed by the Board of Directors shall conduct the administrative duties of the Club and shall be generally responsible to the Board of Directors. He shall conduct the correspondence of the Club, collect and receive all dues and fees which he shall deposit for the account of the Club as directed by the Treasurer. He shall duly record the proceedings of all meetings of the Club. He shall have custody of all applications of persons admitted to membership and all other current records of the Club.

Sec. 6. The President, subsequent to the Annual meeting, shall appoint from the membership the following Standing Committees: **A.** Awards Committee; **B.** Finance Committee; **C.** Membership Committee; **D.** Meetings Committee; **E.** Papers Committee; **F.** Publications Committee; **G.** Publicity Committee; **H.** Research Projects Committee, and **I.** Scholarships Committee.

ARTICLE V — NOMINATIONS AND ELECTIONS

Sec. 1. At least sixty (60) days prior to the Annual Meeting each year, the President shall appoint a Nominating Committee subject to the approval of the Board of Directors. The report of this Committee shall be submitted to the membership at least twenty (20) days prior to the Annual Meeting in each year together with a ballot form. The Nominating Committee shall submit eligible candidates for President, Vice President, Secretary, Treasurer and seven (7) Directors each odd-numbered year and for seven (7) Directors only in each even-numbered year.

Sec. 2. Notwithstanding the foregoing, a petition signed by twenty-five (25) members in good standing may be submitted to the Secretary post-marked at least sixty (60) days prior to the Annual Meeting, nominating any eligible member in good standing for any office or directorship to be filled at the Annual Meeting.

Sec. 3. The election of the candidates shall be by written ballot vote of a majority of the members in good standing voting before closing of the polls. The polls shall close twenty-four (24) hours before the opening of the Annual Meeting.

ARTICLE VI — CLUB EMBLEM

Sec. 1. The emblem of the Club shall be that shown in the margin. This emblem shall be made in the form of a pin and may be purchased from the Executive Secretary.

Sec. 2. The emblem for Fellow shall be the reverse of that for Member (black insignia on a gold background).

Sec. 3. Honorary Members shall be presented with the Club pin.

ARTICLE VII — SECTIONS AND AFFILIATED ORGANIZATIONS

Sec. 1. SECTIONS may be formed on approval of the Board of Directors. The requirements for a SECTION shall be:

a. A SECTION must have at least fifteen (15) members residing in the same geographical area, or who are members of an organization affiliated with the Radio Club of America, Inc.

b. Each SECTION member must be a member in good standing of the Radio Club of America, Inc., and shall remit the prescribed annual dues directly to the Club.

c. SECTION members shall be governed by the Constitution and By-Laws of the Radio Club of America, Inc.

d. Each SECTION may elect its own officers and Board of Directors, which shall include a Chairman and Secretary who shall correspond with the Radio Club of America, Inc., and keep the Club currently informed of the activities of the SECTION.

e. Each SECTION must be financially self-supporting. It may have such local business and social meetings as it wishes, the purposes

of which shall conform to the principles of the Radio Club of America, Inc. as expressed in the Constitution and By-Laws.

f. Each SECTION member may attend all meetings and functions of the Radio Club of America, Inc. and enjoy all its benefits and privileges.

Sec. 2. Kindred non-profit organizations may affiliate with the Radio Club of America, Inc. upon approval of the Board of Directors. The general requirements for affiliation shall be:

a. The affiliated organization must have at least twenty-five (25) members in good standing, and must agree to be bound by the Constitution and By-Laws of the Radio Club of America, Inc.

b. Each member of the affiliated organization shall qualify as a member in good standing of the Radio Club of America, Inc., and shall remit the prescribed annual dues directly to the Radio Club of America, Inc.

c. The affiliated organization may elect its own officers and Board of Directors, which shall include a President and Secretary, who shall correspond with the Radio Club of America, Inc., and keep the Club informed of the activities of the affiliated organization.

d. The affiliated organization must be financially self-supporting. It may have such local business and social meetings as it wishes, the purposes of which shall conform to the principles of the Radio Club of America, Inc. as expressed in the Constitution and By-Laws.

e. Each member of the affiliated organization may attend all meetings of the Radio Club of America, Inc., and enjoy all its benefits and privileges.

ARTICLE VIII – AMENDMENTS

Sec. 1. These By-Laws may be amended from time to time by affirmative vote of a majority of the Board of Directors at any regularly called meeting of the Board of Directors.

OBITUARY

Two members of the Club have passed on since the last issue of the *Proceedings*:

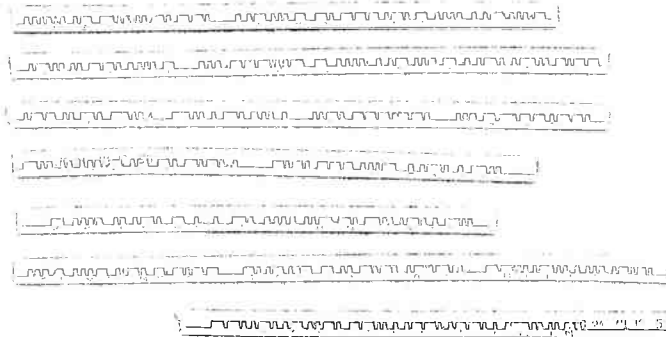
BARRY GENSLER, W2LNI, was drowned last October 12 when his cabin cruiser, *Barry Lect*, was wrecked on Long Island Sound. Well known to New York area members as proprietor of Barry Electronics, he was an old-time amateur and member of QCWA, ARRL, AFCEA and IEEE.

RENVILLE H. McMANN, Sr., a Fellow of the Club from 1926 (joined 1920) and an amateur from 1915 to 1928, died January 6, 1976, at the age of 80. In his later years he was best known as an administrative figure in tennis, and was said to have influenced major changes in the game. These included permitting "open tournaments" in which professionals and amateurs could compete, and removal of racial and religious bars to participation in the games. He was President of the United States Lawn Tennis Association in 1956 and 1957.

His son, Renville McMann, Jr., a Fellow of the Club since 1944, was the recipient of the Armstrong Award in 1972.

It has been called to our attention by Robert Finlay that a former member, Francis H. Engel, died October 22, 1975. He had worked under Dr. Goldsmith in the RCA Laboratory, and later, with Meade Brunet, set up the Technical and Test Department of RCA's new tube plant at Harrison, NJ.

THE DIRIGIBLE'S CONTRIBUTION TO RADIO PROGRESS



Radio signals recorded from the Graf Zeppelin August 24th 1929 during its flight from Tokyo, Japan, to Seattle. At this time the ship was approximately half-way over the Pacific Ocean.

During the 1920's many people believed that the airplane would never be big enough to carry passengers or freight great distances, and experiments with dirigibles were made by several countries, including the United States. Germany, the home of the dirigible, was most successful, and in 1929 the Graf Zeppelin (named in honor of the inventor of this type of aircraft) made a round-the-world flight, starting and ending at Lakehurst, New Jersey.

Because of their size, dirigibles were able to use high-powered radio equipment (impossible to planes in those days of low payloads and bulky radio equipment). The Graf Zeppelin was able to keep in touch with land throughout its flight.

Radio Club Fellow Don deNeuf was with RCA in San Francisco at the time and was appointed West Coast communicator for the long flight. He sent the *Proceedings* a copy of a portion of the actual ink undulator tape recording of the signals he made from DENNE, the Graf Zeppelin's radio. Club members can amuse themselves spelling it out.

The trip was highly successful, but dirigibles as a mode of transport were not. The hydrogen gas used by all other countries than the United States (where huge supplies of helium were available) was highly explosive. The German dirigible *Hindenburg* exploded and burned during a landing at Lakehurst, and two days later, the *Hindenburg*, returning from a trip to South America, was retired from service permanently.

The huge craft were also especially vulnerable when encountering violent storms. The United States lost two of its dirigibles, the *Shenandoah* and the *Los Angeles*, in such storms. Aeronautical design engineers were forced to conclude that this type of aircraft was not practical.

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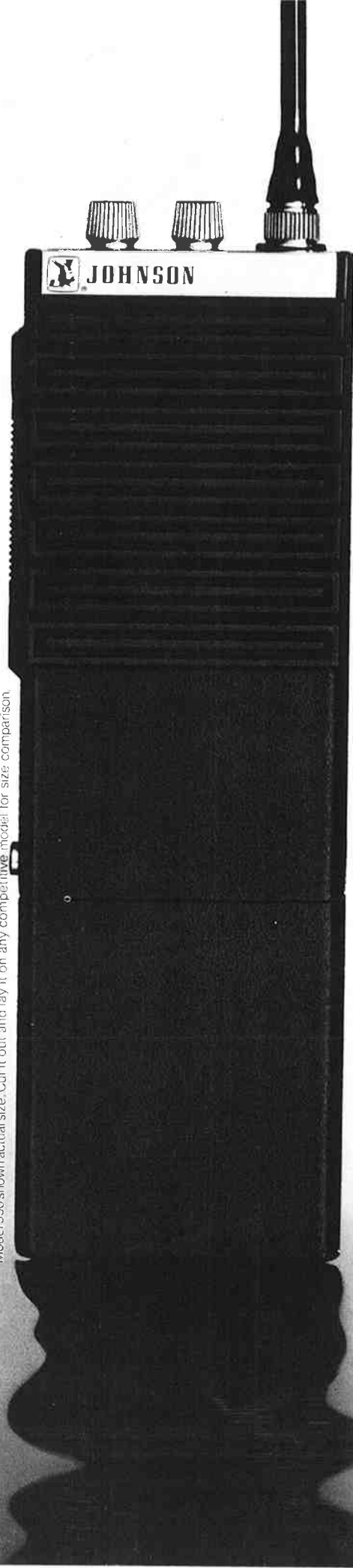
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