

# Proceedings of The Radio Club of America, Inc.

Volume 46, Number 1

Midsummer, 1972



Founded 1909

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THE RADIO CLUB OF AMERICA, INC.  
P.O. Box 2112, Grand Central Station, New York, N.Y. 10017

Founded 1909, New York, U.S.A.



# The Radio Club of America, Inc.

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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## PROCEEDINGS OF THE RADIO CLUB OF AMERICA

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# FROM THE PRESIDENT

In the Fall 1971 issue of the *Proceedings* I presented a number of suggestions for consideration and action by the Board. At the time I was completing my third year as President of the Club and had anticipated that implementation of any plans would be the obligation of the incoming President as of 1972.

It is now 1972 and you members have re-elected Fred Link to serve an additional two-year term as President. This honor is appreciated. However, this circumstance placed the load on me to try and get action and successfully fulfill the objectives of the program as I had outlined them in 1971. I am happy to report that many of the most important changes have been voted on and passed by the Board. Several areas still need effective action, such as our desire to encourage joint meetings with other organizations like IEEE/VTG, AFCEA, VWOA, QCWA, etc. in sections of the country other than the New York metropolitan area, as we have already been doing in the past years here in New York.

Members in Washington, Los Angeles and Detroit areas have indicated interest and offered to help get joint meetings and sectional groups organized. Maybe before the end of 1972 this interest can become factual.

Another important plan that must be successfully handled is the need to bring along replacement personalities who will be the next President and other Club officers when the 1973 election takes place. All members have a stake in this requirement, and I am hoping that all of you will not only be interested, but maybe will come forward with suggestions and offers to both work actively on committees or at least recommend highly qualified members who should be encouraged to become active in the administration of the Club. Our new slate of officers will have to come from outside the present group handling your affairs. Possibly key officers will not necessarily have to be residents of the New York area, which has seemed to be a requirement in the past. Think about it and both recommend qualified members you feel could handle Club duties, or volunteer yourself, if you have the time and are in a position to assist.

This fall we will have elections for only half our Board of Directors. This is very important; the Directors are the members the officers have to look to for leadership and policy recommendations. This means we need Directors who participate to the best of their ability in all essential meetings, either in person or by mail or telephoned comments. We have attempted to remove the pressure of the necessity of numerous personal meetings on the full Board by delegating most of the routine activities to an Executive Committee, which is small enough to be flexible. This

arrangement has worked well. At the same time we depend on the full Board for essential decisions and have been scheduling at least two major meetings each year.

This year we have had a major change in our normal operations with the resignation of Leo Sands as Executive Secretary because of press of his personal business. Leo had been such a fixture over the recent years that we failed to appreciate the added advantages the Club received through his extensive industry contacts and his complete facilities at 250 Park Avenue. At rather short notice the Club had to designate a new Executive Secretary, and for the first few months the problems were obvious. Now as we are about to enter the second half of 1972 the office of the Executive Secretary is catching up and Fred Shunaman, the new incumbent, is picking up the loose ends. By the end of this year I am satisfied that we will have very few of the items of confusion that bothered us a few months ago. Shunaman is getting a lot of help from our Treasurer, Dave Talley, and between the two of them the records are being put in shape so that any new officers, when elected, will be able to take over effectively. There are still incidental problems, and if any members have questions it is proper to address them to the Executive Secretary or the President for action.

You will note in this issue of the *Proceedings* that we have been supported by a number of commercial associates with notices and advertisements. This makes it possible for us to publish and circulate the *Proceedings* and for this support I wish in the name of the Radio Club to offer my thanks and appreciation to those companies. I might add that with over 500 members there are many of you who might wish to take notices or partial page ads in subsequent issues; this would be appreciated. A listing of special charges for these ads is published in another portion of this issue.

I have asked the Editor to include a listing of new members voted into the Radio Club in 1972. I am much impressed with the high quality of the personalities seeking membership and I believe all of you will agree with me when you glance over this list of approximately 50 new members as of June.

With the inclusion in this issue of the super-excellent talk of Edgar F. Johnson at our annual dinner meeting December 1971 as our key paper, it is important to note that another of our highly regarded members, A. Prose Walker, Chief, Amateur and Citizens Radio Division, FCC, will be the guest speaker for the annual meeting November 17, 1972.

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## D. Israel Tells of Persian, Greek TV

On the evening of February 23, Radio Club members heard radio pioneer Dorman D. Israel tell of his experiences as a business adviser in Greece and Iran. Israel, who is known to many Radio Club members through his long service as Vice President of Emerson Radio & TV, furnished executive counsel to corporations in both countries, and pointed out the similarities and differences between them in his talk.

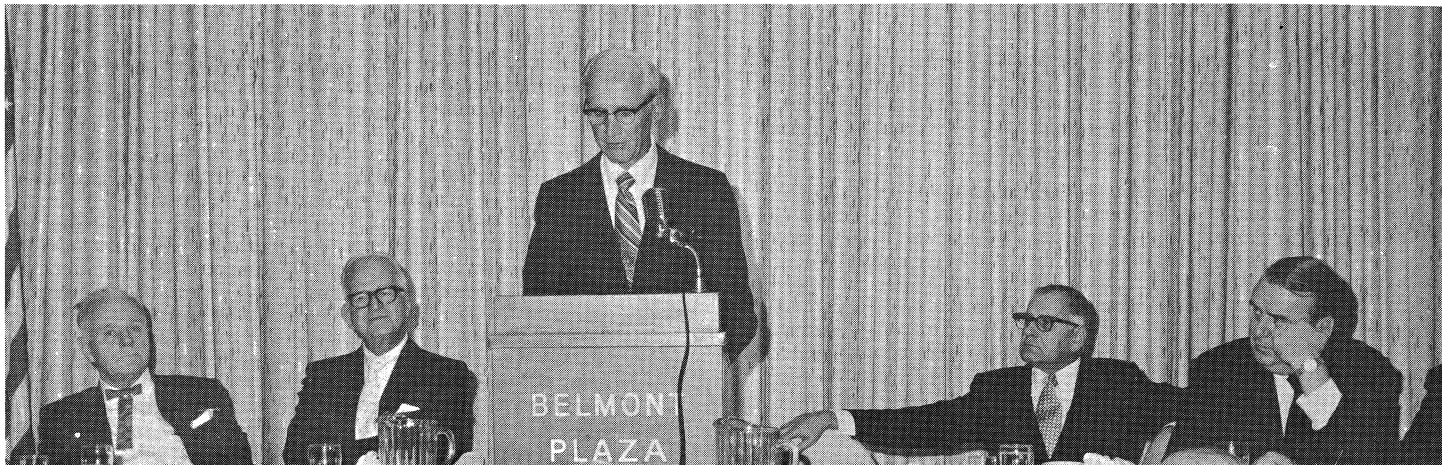
Television in both Greece and Iran is a State monopoly, and there is only one (black-and-white) station in each. TV receivers cannot be imported commercially, but must be of native manufacture. Thus, with an annual market of about 90,000 sets, Iran has 20 set manufacturers. Greece, with only about 10,000 more sales per year, has more than 50 manufacturers. Prices range from a low of \$350, to \$1000 for some of the more ornate Persian consoles.

Mr. Israel also gave interesting background information on

the life-styles of the two countries, particularly the efforts of the Shah of Iran to raise standards of living and promote domestic tranquility by land reforms for the agricultural population and profit sharing for industrial workers. A strong campaign against illiteracy is being carried on, and qualified military draftees can put in their term of compulsory service as teachers in the villages instead of in the Armed Forces.

Mr. Israel was working as a member of the International Executive Service Corps, founded nearly ten years ago by a group of dedicated business leaders to furnish competent executive advice to developing countries friendly to the United States, or to the native corporations of those countries. The advisers are unpaid volunteers, who receive only travel and living expenses. Funds for these purposes are made up of receipts from clients in the developing countries (about 20%), corporate sponsors in the USA and abroad (35%), US government (AID) grants (around 40%) and other private income sources.

# A Lifetime of Radio



Edgar F. Johnson, delivering the address, above. To his right are Shepard, Poppele; to his left, Link, Brinkley.

In 1895 Marconi, inspired by reading of Hertz's experiments, sent a message across his father's estate in Italy.

The new science must have developed rapidly, for only two years later, in 1897, Marconi organized the British company later known as Marconi Wireless Telegraph Co., Ltd. In 1899 he came here at the invitation of the New York Herald to report by wireless the progress of the America Cup Races off the New Jersey coast, and in that year incorporated the American Marconi Company. (That date, 1899, has a special significance for me, for it was the year of my birth. So, I can lay claim to a rather dubious distinction that my whole life span coincides with the entire period of commercial use of radio in this country.)

The transmission of voice by wireless must have intrigued experimenters very early. Fessenden claimed it in December of 1900, but only after he had the first high frequency alternator six years later was radio telephony a practical reality.

During the same time De Forest accomplished one of the great inventive feats of all time. Not only did he invent a much improved detector, but a versatile device that with suitable circuits would amplify and oscillate, hence generate radio energy. Not all of this was immediately apparent; it was a classical example of what we have more recently called "serendipity." Key to a modern scientific and industrial revolution, it loosed a flood of discovery and invention in the field of radio communication.

## First Beginnings

At the age of ten or twelve, a friend and I began to comprehend the age of electricity. Our first accomplishment was a Morse telegraph system between our homes. It didn't work very well, likely because of the many questionable splices in our discarded rusty iron telegraph wire. But our eyes were opened to a new world and by high school days the mystery and magic of radio telegraphy made an indelible impression. We lived a thousand miles from where everything was happening, and sources of information were few. I discovered the *Experimenter* magazine, and acquired treasured catalogs of the Electro Importing Company of New York and the William B. Duck Company of Toledo. My few pennies went for gadgets and hardware such as a coherer, headphones and the like which I couldn't very well make. One of the first (and I think I still have it) was a Geisler tube—remember it? Just a curiosity; it lit up in beautiful fluorescent colors and shapes when excited from the secondary of a Ford spark coil. But it was a promise of what has become a feature of our lives—fluorescent lighting and neon displays. Another fascinating boyhood project was a Tesla coil.

During high school days, the elements of a rudimentary ham station were acquired or built. There was no one within listening range of my feeble spark transmitter, and there was apparently no other transmitter near enough for me to hear, if indeed I ever

succeeded in locating the cat whisker on the sensitive spot of my galena crystal. World War I intervened, when the "wireless" had to be dismantled and stored. I was an electrical engineering student at the University of Minnesota, in their first course in radio theory. It was taught by C. M. Jansky Jr., later head of the consulting engineering firm of Jansky and Bailey of Washington, and a fellow of the Radio Club of America.

During the Christmas Holiday of my junior year, 51 years ago this month, I brought home a regenerative receiver I had put together. I recall I borrowed the single vacuum tube it needed. Only the month before, KDKA had made broadcasting history on November 2, 1920, by airing the results of the Harding-Cox presidential election. A few friends eagerly listened with headphones to KDKA in Pittsburgh, and the wonder of it was related in the Waseca newspapers. By the end of 1921, just a year later, 30 broadcast licenses had been granted by Secretary of Commerce Herbert Hoover. All were for operation on 360 meters. Only 14 months more, by March 1923, there were 556 stations licensed; truly a period of explosive growth.

## The Roaring Twenties

The development of broadcasting made the early 1920's a period of great activity. The popular magazine of radio was *Radio News*, edited by the prolific writer and prognosticator, Hugo Gernsback. Commenting in July 1922 about the great surge in the radio parts business he said, "... How long will the boom last? It is our opinion that the present conditions will last for at least another year and that the radio business will be a very healthy one for several years to come." That was probably his most conservative utterance!

In the August 1922 *Radio News*, an article was entitled "Advertising by Radio, Can it and Should it Be Done." The Conclusion was "No". "... It Cannot Be Done; it would ruin the radio business, for nobody would stand for it." As you know, Madison Avenue hadn't yet thought of the singing commercial!

In October the magazine offered prizes totaling \$500 in gold for articles on the subject "Who Will Save The Radio Amateur", saying "The amateur is doomed unless something is done to get him out of the present rut". The "rut" referred to was, of course, interference of ham transmissions with broadcast listeners. As we know, the amateur was eventually "saved" by frequency allocations and his own technical proficiency.

Gernsback may have been wrong as often as he was right, but he didn't hesitate or equivocate; I once saw a resume of his quasi-scientific predictions that I would like to read again, for the amazing number of now-existing inventions and developments he foretold. One in particular I remember from my boyhood days was that the molecular energy in a copper penny could drive an ocean liner across the Atlantic and back, and he said it would be done! That was nearly 60 years ago!

Volume 12 of the *Proceedings of the Institute of Radio Engineers* covered 1924. The names of great men associated with our industry alone make interesting reading, John H. Morecroft was President of IRE, John H. Dellinger, Vice President, and Alfred N. Goldsmith, Secretary. A partial list of the Board included Melville Eastham, L. A. Hazeltine, and A. H. Grebe.

In April, Greenleaf W. Pickard wrote on "Short Period Variations in Radio Reception. In October Edwin H. Armstrong discussed "The Super-Heterodyne. Its Origin, Development and Some Recent Improvements." Recalling its invention in 1918, with publication of technical details in the fall of 1919, he wrote "the purpose of this paper is to describe the development of the super-heterodyne receiver from a wartime invention, primarily intended for the exceedingly important radio telegraphic direction finding service in the Signal Corps of the American Expeditionary Force, into a type of home broadcasting receiver, which, with our present vision, is likely to become standard."

### Amateur Triumphs

Just four days from now, December 7, 1971, will be the fiftieth anniversary of one of amateur radio's greatest achievements. That night Paul F. Godley first heard transatlantic radio signals from an American amateur station. He had been sent to Scotland, you may recall, for the purpose of conducting listening tests using one of Major Armstrong's super-heterodyne receivers. He logged the signals from 6 spark transmitters and 26 CW transmitters, and ARRL was filled with joy!

On November 27, 1923 two-way amateur communication was established between Leon Delyon in France and Fred Schnell in Hartford, Connecticut. Still more notable was it, that whereas previous records were established on 200 meters or longer wavelengths, this one was on 100 meters—not long before then considered unusable! It was the beginning of the short-wave era, opening up the vast area of VHF, UHF and microwave we know today. Ham radio is fully credited with having shown the way.

In April 1923 L. A. Hazeltine wrote of "Tuned Radio Frequency Amplification with Neutralization of Capacity Coupling." Of course you remember that one, none other than the famous neutrodyne. And where was the paper presented? Before The Radio Club of America, on March 2, 1923.

### The E. F. Johnson Co.

In October 1923, in partnership with my bride of a few months, the E. F. Johnson Company began business. Our pooled capital was about \$2,500, including a few hundred dollars worth of radio parts, with a bedroom office and a few square feet of rent-free space for stock and work room. Hardly anything could have been less auspicious. The classified Ham-ad columns of QST and a mailing list of names from The Radio Amateur Call Book were our sole means of reaching potential customers. In a year we were big enough to take over a vacant store building. November 1924 saw our first display advertising—all of 2 inches one column wide in QST!

Depression days—the thirties—were hard. Yet by 1936 we were able to build our first factory and office building of 8,000 square feet and that fall moved into it with 17 employees. About 1947 we concluded it was time that someone should manufacture a complete amateur transmitter. Strangely, although factory-built receivers had long been accepted, hams were still building their own transmitters. Who better than Johnson should make them, since we had extensive transmitter experience during the war, and we had many of the components already in production? *The Viking I* transmitter followed and was an immediate success. We were really on our way!

### The TVI Crisis

Then came a period of abject gloom over all amateur activity. Television was booming. It was the modern marvel. Although neither TV broadcasting nor reception were too good, users were violent in condemning anything they thought interfered with either sound or picture. Although causes of TVI were many, the amateur operator was blamed for all. He couldn't very well hide that tower. (and now and then the complaints were justified). It looked to many that now indeed the amateur was doomed, much as Hugo Gernsback had feared in 1922.

To the rescue came a prominent amateur, Phil Rand, W1DBM, of the Remington Rand Laboratory of Advanced Research. Using a Viking transmitter to illustrate procedures which

could be applied to home-built or other transmitters, he published articles in QST and elsewhere. His approaches were straightforward but thorough, involving adequate shielding, bonding, grounding, filtering and the like—applied not only to transmitters but to faulty TV receivers and their installations. Ham radio didn't die, after all, but flourished as never before, and numerous Viking transmitters and other makes followed.

### Citizens Radio Service

In 1958 came a development which for the first time brought personal radio communication potentially to *millions* of people—the authorization by FCC of the Class D Citizens Radio Service. In the past twelve years CB transceivers estimated at from 4,000,000 to 5,000,000 units have been sold. There are today nearly 900,000 licensees, most of them owning several sets. Since family members and business employees are permitted to operate class D equipment, it follows that this service is used by approximately 5,000,000 people. Although nearly 900,000 licensees now exist, 1,750,000 licenses have been issued, 60% of these for business as well as personal use. An additional 6% have been for public service. Compared with any other radio service, *these are large numbers!* What has happened to them? Some undoubtedly just found it not to their liking and did not renew. Many, unfortunately, couldn't live with the reception conditions they encountered, so they dropped out; but others discovered its great potential utility and "graduated" to the individually licensed business service. An unknown number saved paying the renewal fee and have added to enforcement problems by operating illegally.

Who are those who are *still* finding Class D attractive? Among them are great numbers who have a good record of operating for purely personal pleasure, entirely within the regulations. But innumerable *serious* needs are being served. Highway safety is one of these, especially since channel 9 has been set aside for emergency messages. Numerous volunteer groups are using CB for public service activities. Professional users who need to keep in touch with home or office while on the road, find it invaluable as a time saver—even a possible lifesaver. Owners of farm vehicles and machines by tens of thousands are heavy users. Smaller businesses operating delivery or service vehicles have found it saves real time and money and improves service to customers. Then consider the recreation field, which is more and more valuable to private citizens. Millions of boats, vacation trailers, snowmobiles and other vehicles need communication.

### The Class E Band

An attractive way out of many of the present Class D problems is available, if the FCC were to grant the petition of the Electronic Industries Association to establish a new Class E Citizens radio band 2 MHz in width between 220 and 225 MHz. Enormously improved service is expected for many reasons: There will be 80 new channels compared to only 23 on Class D, operation will be limited to FM, transmission is line-of-sight, and skip transmission will cease to be a problem. These characteristics should substantially reduce the problems of interference and illegal use of Class D licenses, leaving the air free for a great many times the serious personal and business traffic for which citizens radio is intended. It should greatly lessen rather than increase the enforcement problems of FCC. In view of the large segment of the population which will be served it seems clearly to be in the public interest, convenience and necessity.

I am well aware that the proposal takes 2 MHz from the present 5 MHz wide amateur band, and I might be among the last to advocate any restrictions that would hamper amateurs. It so happens that this band is and has been so lightly used that the remaining 3 MHz will not approach crowding. The very reason why it is not a useful frequency for the amateur service, the short-range line-of-sight characteristic, is what makes it an ideal assignment for CB. Not only will millions of people gain a useful communications tool, but obviously it opens up a new opportunity for American business. And that leads me to some final observations.

### "Great Trouble" for Industry

Did you see the CBS TV program 2 or 3 weeks ago, showing a great selection of popular imported consumer merchandise, and dramatizing the extent to which jobs and industry in this country are being eroded by off-shore manufacturing? The

# OUR NEWEST MEMBERS

During the past several months, some 54 members have joined the Club:

Nicholas Alimpich, Michigan Bell Telephone Co., Southfield, MI.

Arthur J. Baker, General Electric Mobile Radio, Washington, DC.

Carl J. Bradshaw, President, CATV Division, Oak Electro/Netics Corp., Crystal Lake, IL.

Joseph Broslaw, retired, Hempstead, NY.

John S. Brown, Director, Cable and RF Component Engineering, Andrew Corp., Orland Park, IL.

Earl O. Burchard, Florida Highway Patrol, Tallahassee, FL.

William Caywood, Point Consulting Co., Pittsburgh, PA.

Denis E. Coggin, Executive Vice President and General Manager, The Special Industrial Radio Service Association, Inc., Rosslyn, VA.

Phillip B. Dahlen, Editor, *Electronic Technician/Dealer*, Duluth, MN.

James W. Dagleish, Director BEPI (Electronics) Ltd., Galashiels, Scotland.

Archibald C. Doty, Jr., Automobile Manufacturing Associates, South Lyon, MI.

Robert J. Freeman, Xerox Corp., Arlington, VA.

Rear Admiral Samuel L. Gravely, Jr., Director, Naval Communications, Office of CNO-OP-941, Pentagon, Washington, DC.

Arthur L. Greenberg, Owner, A. Greenberg, Inc., Industrial Supplies.

Eugene S. Goebel, State of Illinois Defense Agency, Springfield, IL.

Arthur Goldsmith, Chief, Technical Division, Office of Telecommunications, Dept. of Transportation, Washington, DC.

John R. Hall, Microwave Associates, Inc., Sunnyvale, CA.

William S. Halstead, Vice President and Director of Engineering, RTV International, Inc., New York, NY.

Charles W. Herrin, Vice President and Marketing Manager, Stetcom Corp., San Jose, CA.

L. M. Hollingsworth, RCA Communications Systems Div., 2270 Des Plaines Ave., Des Plaines, IL 60018.

John E. Jacobs, Federal Communications Commission, Washington, DC.

Douglas J. Johnson, Director of Commercial Operations, Western Tele-Communications, Inc., Denver, CO.

Robert K. Kaye, President, Urban Sciences, Inc., Wellesley, MA.

Raymond C. Krause, RCA Corp., Southfield, MI.

Robert G. Logan, Xerox Digital Communications, Xerox Corp., Arlington, VA.

Travis Marshall, Vice President, Motorola C & E, Inc., Schaumburg, IL.

Leo T. Meyerson, Chairman of the Board, World Radio, Inc., Council Bluffs, IA.

Nicholas S. Missailidis, Lieutenant and Executive Officer, Police Dept., New York, NY.

John M. Murphy, Supt. of Communications, Boston Fire Department, Boston, MA.

Robert O. Myers, Frequency Manager, Dept. of the Treasury, Washington, DC.

Natan D. McClure, Winnebago County Sheriff's Office, Rockford, IL.

George E. McKay, President, McKay Finance Co., Pomona, CA.

Allen C. Patterson, Law Enforcement Products, The Boeing Co., Seattle, WA.

Harold L. Phillips, RCA, Southfield, MI.

Maurice A. Ragland, Security Officer, Price Commission, Washington, DC.

William R. Randall, The Antenna Specialists, Cleveland, OH.

Paul B. Redding, AT&T, Engineering, New York, NY.

Alvin Reiner, Senior Project Engineer, Spectrum Management Task Force, FCC, Washington, DC.

George I. Ryan, Owner, Communications Service Co., Mapleshade, NJ.

Robert G. Stokely, Owner, Southern Sound Service, Shreveport, LA.

Charles E. Summers, IBM, Armonk, NY.

Frederick W. Swift, White House Communications Agency, Washington, DC.

James F. Swigart, TV Outlet, Service Dept., El Monte, CA.

John R. Thompson, Principal Scientist, Urban Sciences, Inc., Wellesley, MA.

Ray D. Thrower, Microflect Co., Inc., Salem, OR.

Ben H. Tongue, President, Blonder-Tongue Labs., Inc., Old Bridge, NJ.

Marshall J. Treado, Law Enforcement Standards Lab., National Bureau of Standards, Washington, DC.

Robert C. Walton, Consultant, Telecommunications Engineering, San Jose, CA.

Lowell E. White, Motorola C & E, Inc., Glen Rock, NJ.

William E. Whiting, Consultant, Public Safety Communications, Bakersfield, CA.

John W. Wilson, E. F. Johnson Co., Cherry Hill, NJ.

Leonard T. Witt, Communications Consultant, New York City Health and Hospital Corp., New York, NY.

Kent J. Worthen, Vice President-Marketing, Culbertson Industries, Palo Alto, CA.

Walter A. Zarris, Vice President-Marketing, E. F. Johnson Co., Waseca, MN.

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## A Lifetime of Radio (Continued)

evidence is everywhere, and we need desperately to face up to its effects. Many lines are in great trouble—textiles, shoes, sporting goods, automobiles, to name a few, but stop and consider the inroads into our own industry. Nine out of ten broadcast receivers are made in the Orient—in some categories it is 10 out of 10. Most black-and-white TV sets come from abroad. How many cassette tape players, how many stereo and hi-fi amplifiers, even with well known American brands on them, have that tiny name JAPAN hidden on the rear? November 22 issue of *Electronics*—only days ago—printed a survey of the Japanese electronics industry. At factory prices it is a \$5 billion industry, principally for export and that mostly headed for good old U.S.A. In the radio communications area they project an increase of 24½% from 1970 through 1972, despite the slowdown in the American market, their principal customer. Probably 95 out of 100 makers of CB equipment in the last decade have had to close up shop. Principally they couldn't make the grade against cheap imports produced with cheap labor abroad combined with every government assistance to industry, as contrasted with our pay scales and fringe benefits and the impediments placed in the way of

business by our government.

### The Way to the Future

Ladies and gentlemen, business and industry need a favorable climate at home and a reasonable chance to compete for world trade. There needs to be a new realization of partnership of purpose among industry, labor and government. President Nixon's action of last August 15 may have sobered every nation as it apparently has ours. Perhaps out of the present turmoil and uncertainty gripping our economy, this new realization may yet come about.

There have been grievous problems before, for the nation as well as our industry. They have been overcome. There is reason for great hope that we will go on from here to realize the enormous promise of the future. I said initially that radio has been good for me. Many of you—perhaps all of you—will join me in that declaration, and certainly in the hope that our children and our grandchildren will find as great satisfaction as we have received from this exciting and rewarding vocation.

# David Sarnoff

## (An Evaluation)

by Wm. H. Offenhauser, Jr.

The flood of articles, lay and technical, that have already reported his words, thoughts, adventures and efforts would make an obituary at this late date superfluous. Yet, The Radio Club of America, older by a decade than "the other RCA," cannot ignore or even treat glibly the passing of one of its most prominent, most controversial and early Honorary Members. Knowing the man, you could never be undecided, "No Opinion" about The General. He may be disliked and even very heartily in some quarters, but he cannot be ignored. Only history can pronounce the final judgment—whatever it will be.

Frederick M. Sammis, Chief Engineer of Marconi of America, hired DS first as an office boy. He was both diligent and ambitious; an early story indicates that he took letter filing very seriously. "I read every letter given to me for filing before I filed it," said the young Sarnoff. "That way, within a month I knew more about the business than any other man in the company." It was not an idle boast, but rather a keen commentary on an observable shortcoming in business acumen among many of his fellow employees.

Since many of the outstanding men of the time combined both the high-speed "key and sounder" ability of a good telegrapher with a working knowledge of the apparatus of wireless, DS at first set his sights upon both; he studied at Pratt Institute in Brooklyn. Joe Stantley Sr., Treasurer-Emeritus of The Radio Club, has often remarked over the years that his classmate, DS, worked like a beaver, never missed a class, and was outstanding in his diligence. He was eager to learn everything that was to be learned. Stick-to-it-iveness was even then characteristic of DS; it was not long before he became an astute student of people as well as of things and events.

Although wireless was glamorous and had its full share of genius-level minds such as Bob Marriott, Emil Simon, Haraden Pratt and A. N. Goldsmith, to mention just a very few, the pay of operators was neither glamorous nor reliable. DS had observed, with the help of E. J. Nally, that the attitude of people who controlled money is that business money income is productive and very desirable, while engineering is overhead, and those who make money disappear are undesirable. Obviously, the key to success is to "make money where it is coming in."

His enthusiasm for wireless engineering was badly mauled when Lee deForest, the acknowledged inventor of the Audion, was indicted for fraudulent stock selling practices in 1913. Since Bob Marriott was the spark plug behind the petition that was drafted by A. N. Goldsmith and Emil Simon to the Assistant District Attorney in deForest's behalf and signed by 49 IRE members, DS phoned Bob to ask him for lunch in 1914. After listening closely to Marriott's account, DS told his guest that he decided to give up wireless engineering. He did not think that he could be as good a wireless engineer as "you fellows," and would concentrate henceforth on selling wireless contracts and service—"bringing in the money." By April 24, 1915, when the second IRE banquet was held, DS had transferred engineers out of his "We" group into the "You fellows" category—where they remained for the rest of his lifetime, never to return.

History has already separated out the few grains of truth from the much overblown camouflage flak in the story of the Titanic. The sinking was a dramatic event: an examination of the stock market options bought after the close of the market on the fateful day, and their subsequent sale after the great news was released, would suggest that something more than mere happenstance rewarded DS with a desk just outside Nally's office, his job as Commercial Manager at 26, leading on to General Manager at 30.

His rise was meteoric; the rough-and-tumble experience in the early stock market stood him in good stead later on when he

worked with Joseph P. Kennedy and FDR behind the scenes, and Mike Meehan was "out front." In a later manipulation, RCA common stock jumped from \$22 per share in June to \$550 in November of the same year without ever paying a single penny in dividends. This was merely one facet of Joe Kennedy's very profitable pasttime of "cornering the shorts"—a game well known in Wall Street and now hopefully outlawed by the SEC.

History seems clear that DS was the right man in the right place at the right time. The sales figures of RCA tell a mute but indisputable Horatio Alger-like story of a poverty-stricken Russian Jewish boy who made good in a then WASP-dominated financial world. Without a university education, he had obtained a high school equivalency diploma to take an EE course at Pratt Institute.

With figures such as these, who needs a university education, even at the Harvard School of Business Administration!

Year	RCA Gross	Other Data
1921	\$ 1.5 million	Less than 10 broadcast station licenses
1922	11.3	28 licenses
1923	22.5	583 licenses
1929	182.1	NBC (subsidiary) grossed \$22 million alone

The significance of such growth was not wasted on Harvard; they encouraged publication of some of the RCA story.

Throughout 1920 to 1930, RCA was a sales agent only: although radio sets and other apparatus carried the RCA label, they were manufactured by General Electric (circa 60%) and Westinghouse (the remainder). DS had Elmer E. Bucher as his man Friday; he trusted EEB with everything except money. That he handled himself.

It was Bucher who was transferred from 326 Broadway to mastermind the coordination and marketing of radio; he was an outstanding success. Later (1928) when Owen D. Young decided that the Radio Group should "declare war" on ATT in sound films, DS moved Bucher into that slot at RCA Photophone Inc., another new industrial frontier.

Bucher was "a practical man"; he wrote "Practical Wireless Telegraphy"—a volume every old time brass pounder can not forget. What is still virtually unknown today is that Bucher was a teacher-historian at heart; he has written some 39 volumes of about 500 pages each on the history of RCA. These repose quietly in the Library of the David Sarnoff Research Center at Princeton, New Jersey. If as often seems the case, engineers abhor history, neither Bucher nor DS were engineers by that queer definition. Both were scholars, each in accord with his own unique and valid definition. "Those who ignore history," wrote Santayana, "shall be condemned to relive it." Neither ignored history or its teachings; such is evident today.

During that crucial decade, Owen D. Young of General Electric, perhaps the finest of America's farsighted genius industrialists, watched DS carefully indeed. Sarnoff's very mildly expressed but persistent beefs to Young about poor coordination of manufactured RCA products through the Manufacturers Design Committee and his astute observations on American finance struck a highly responsive chord with Young. When the President asked Young to negotiate a revision of the Dawes Plan for German Reparations (WW I), Young asked Sarnoff to go along as a financial technician. Both sailed from New York on Feb. 1, 1929; they had expected to return within less than two months. Negotiations with Dr. Hjalmar Schacht, the German representative, proved very sticky; it was the middle of June 1929

when they finally returned with the Young Plan as a signed document. Young never hesitated to credit Sarnoff's bulldog determination in getting the German signatures. Schacht's language, referring to Messrs "X and Y", the Americans, is not complimentary.

Before DS left for Europe, he had already obtained Young's approval of his provisional plans to take over the Victor Talking Machine Company in Camden and to start manufacturing in Camden under the RCA label. And he was more than happy to put the steam behind Young's plan to compete with the Telephone Company through RCA Photophone Inc., the sound motion picture equipment subsidiary. Obviously, too, RCA manufacturing in Camden would include not only radio equipment but sound films as well—and everything else that would be sold under the RCA label. "DS had it made." RCA started its own manufacturing in 1930. He had become the undisputed boss.

DS recognized very early that solid success in marketing derives not from advertising, but from a basic product filling a basic economic need. With GE and Westinghouse doing the manufacturing, he quickly saw his function as deciding what should be manufactured. He did not hesitate to adopt A. N. Goldsmith's magic music box and dress it up in his own language; RCA-Victor became the chosen *modus operandi*. Since music, and especially classical music, was an essential, he was deeply impressed in 1925 by the appearance on Station WEA, the Telephone Company outlet, of the Victor Orchestra and singers John McCormack and Lucrezia Bori—and resolved to sponsor and encourage the best in music, which he did. Milton Cross and the Metropolitan Opera, the New York Philharmonic Orchestra and the NBC Symphony Orchestra should never be forgotten in American cultural history.

The more DS accomplished, the more he recognized must still be done to provide a growing industry with a supporting growing American culture; Governor Nelson Rockefeller gave eloquent testimony at Temple Emanu-El to that side of his accomplishments. As a child, DS had been deprived of that culture through a devastating poverty; he was determined to use everything he had ever learned to eliminate poverty for his family and his children—and many of his (presumed) peers never knew and never understood. In so doing, he would continue to be the kingpin and therefore could feel assured that his family goals would be realized.

In 1928 while on a visit to Westinghouse in Pittsburgh, DS had an opportunity (which he had contrived) to study Vladimir Zworykin closely. Sizing up his man, he decided that Zworykin was the one he wanted to become the fountainhead of the development of television by RCA at Camden. A. N. Goldsmith had already started daily service in television transmission from the RCA Technical and Test group at Van Cortlandt Park, the "country club" of RCA. Experimental transmission started with a Nipkow disk and soon had Felix The Cat turning around slowly on a phonograph turntable as the subject to delight the very small select audience. In 1929 that setup moved to 411 Fifth Avenue, top floor, the office of the management of RCA Photophone, along with Goldsmith. In 1930, NBC took over the chore and operated the setup under the call letters W2XBS. The rest is recorded history.

What should be quite obvious by now is that DS in seeking command of RCA never shirked or neglected the duties and responsibilities that are an integral part of that command function. At the beginning the decisions that he made and carried through were neither large nor far-reaching; they did not affect large numbers of people or large sums of money. After 1921 that changed rapidly. By his very planning procedure he had set a collision course with Edwin Howard Armstrong, inventive creative genius and superb engineer from Columbia University, the protege of Prof. Michael Idvorsky Pupin, inventor of the (telephone) loading coil, the fundamental device for circuit loading. ATT had paid apparatus royalties to Pupin, making him a millionaire. Pupin often used his own money to buy for the Engineering Laboratories equipment that was purchased by him primarily for the teaching and training of Columbia University School of Engineering students; such bore a modest small nameplate; "M. I. Pupin, Columbia University New York City." Armstrong had been one such student, his favorite.

In 1929, Pupin would drive to 116th Street, parking his chauffeur-driven Rolls Royce, with uniformed chauffeur of course, in front of Alma Mater, rain or shine, instructing "his man" when he would expect to be taken home after his lectures and chores as a professor. It was Pupin who had invited the very skeptical ATT to see the closed black box that Armstrong

had used earlier to demonstrate regeneration, formally disclosed as U.S. Patent 1,113,149. That number was displayed clearly on a nameplate of virtually all RCA-licensed apparatus, the makers of which paid royalties thereon. RCA and DS did well financially on this and Armstrong's later patents such as the superheterodyne. The Radio Club had been quick to recognize the outstanding work of Armstrong; he was elected President.

In 1926 The Radio Club honored two new Honorary Members. Professor Pupin and David Sarnoff. A. N. Goldsmith had been elected an Honorary Member earlier in 1922. But only Edwin Howard Armstrong has been honored by the Radio Club by having the Armstrong Medal Award, our highest award to this very day, named for him.

The stock market crash of October 1929 and the Depression that followed did not shake DS in his confidence in his long-range plans. Although Kennedy was completely out of the market when the crash occurred, some key RCA employees, originally with GE and Westinghouse, who had invested their hard-earned savings in such RCA affiliates as RKO, recommended to them by DS, were virtually wiped out. Doggedly DS held on to his big idea that the future for DS and for RCA as run by him would be television; it was nip-and-tuck in 1932 when the gross dropped to one-third of its comfortable level of 1929 and the net became a loss of over \$1 million, a loss for the first time in more than a decade.

As each year passed after that, he saw business improving, and television development costs rising rapidly. But he also saw tangible results—and they were truly tangible—Zworykin's work was beginning to show results on the boob tube as well as in patent applications in the Patent Office. To many at the time, the optimism displayed by DS was "whistling in the dark." DS knew better. Humorists have often said, "If you want to bet on a horse race, you'd better speak to the horse in horse language." Maloff, an outstanding RCA television man, once hinted with a wry smile that for television at Princeton maybe Russian is the language. Solid accomplishments were already theirs—and DS knew it.

By the time Armstrong had patented his frequency modulation and offered it to RCA, DS was already committed far too deeply in television to back out. Perish the thought that RCA would ever go on without him but with FM. The magnitude and cost of FM operations required to buy and to market FM from the Major was far too high; and after all, a picture is worth 10,000 words. The collision, head on, was dead ahead. With full speed ahead ordered by both, the Armstrong decision made after the Sarnoff rejection, the result was devastating.

After the collision occurred, David Sarnoff had lost a life-long admired friend, perhaps the only man in the "You fellows" category that he would wish to have as one of "We." And Howard Armstrong had acquired what seemed a really vicious enemy. Neither man was entirely correct and neither was entirely wrong.

The truth, harsh as truth always is, lay in the gray area between black and white. Each man had acquired in his amazing lifetime, one in which his accomplishments can be properly called superhuman, a different set of values. The clashing values were poles apart, and a rigid setting of course with the compass heading unerringly guided by those unbending rigid values could result only in a devastating collision, with permanent injury to both.

And thus it was that when Major Armstrong died, there appeared at the church services a silent lonely man who never exchanged a word with any of the Radio Club officers or members who had come to show their respect for their fallen hero. The silent man was David Sarnoff, whose heart was filled with grief, for he had lost forever a man he had once loved and admired as a fellow man whose friendship he could now never regain.

And when the General died, a tall silent ghost was present at Temple Emanu-El. It was the ghost of Howard Armstrong. He too was silent but was not seen by any human. Perhaps at that point, Howard, who had crossed the River Styx earlier, was again joyful since the Major and the General could now discard their uniforms and ignore their military ranks, and re-establish in Valhalla that friendship which had been so rewarding to both in the beginning.

Both men were geniuses. It is a fact of life that geniuses, being what they are, are hard to live with. But this world must have genius—and it must soon prepare itself for the inconvenience and downright cussedness of genius—if it is to survive, as it most certainly will.



## How RCA specialist Bill Margiotta separated the chickens from the trucks.

It happened to Match Corporation, a heavy construction outfit in California.

Whenever they tried to reach their equipment operators by radio, they ended up talking with a chicken farmer 3,000 miles away.

Expert after expert was called in. No improvement.

Then RCA's communications consultant Bill Margiotta took over. He designed a new system around RCA capabilities. It worked perfectly. Exit chicken farmer.

RCA Mobile Communications is a team of leaders within the leader, RCA. And Bill Margiotta is a member of that team. A specialist. He gives his customers the kind of attention we think every RCA customer deserves.

That's why we hire men like Bill Margiotta. We want you to get the best possible communications performance out of your system. Whether you have two mobile radios or a hundred.

For further information on reliable mobile communications, contact Harold A. Jones, Division Vice President, RCA Mobile Communications Systems, Dept. 000, Meadow Lands, Pa. 15347.

# RCA

Mobile Communications  
Systems



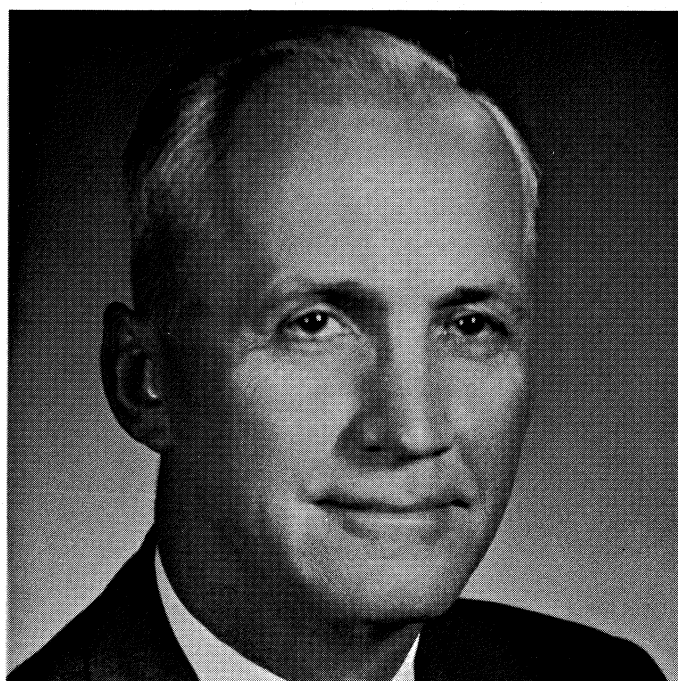
# The Specialists



# 62nd Anniversary

# Banquet

## "A Sparkling Success"



The event pictured above is the 62nd Anniversary Banquet of the Club, held in the Barbizon Plaza Hotel, New York City, December 3rd last. As mentioned in an earlier *News Letter*, one of the outstanding attractions was the ladies, who have been appearing in ever-greater numbers since the Club abandoned a long-time all-male policy three years ago.

Edgar Johnson's reminiscences—reprinted only in part in this issue—struck harmonious chords in the memories of many old-timers who—having grown up with the art like the speaker—also knew the sensation of sending signals forth into space and hearing none in return, and of the problems of constructing equipment in the days when shortage of components was matched only by shortage of knowledge.



At the speaker's table, left to right, are: David Talley, Treasurer; Frank Shepard, Secretary; Jack Poppele, Banquet Chairman; E. F. Johnson; Fred Link, President; John Brinkley, newly elected Fellow from Britain; Samuel Harmatuk, Vice-president.

The large number of prizes donated by corporate friends of the Club was attributed in part to the improvement in general business conditions. No less than 22 companies gave prizes—an increase of 100% over last year. Improvement was also noted in attendance, more than 130 tickets being sold. Sale of tickets—at \$10 each—plus raffle tickets sold at the meeting, brought in an income of \$1,810, which, after expenses, resulted in a net gain by the Club of almost \$500.

*Prizes amounting in the aggregate to a value of about \$700 were donated by our supporters below:*

Aerotron, Inc.  
Boeing Electronics  
Chilton Book Co.  
CNE Magazine  
Courier Communications  
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Lafayette Radio Electronics  
Microwave Associates  
Motorola, Inc.  
North American Philips Corp.  
Pace Division, Pathcom, Inc.  
Plessey Co., Ltd.  
Pye, Ltd.  
Repco, Inc.  
Tele-Measurements, Inc.  
Tenna Corp.  
Xerox

## May Meeting Sees 1999 Scene

The New York Chapter of the Armed Forces Communications and Electronics Association and the Radio Club of America met over a luncheon May 17, under the chairmanship of C. J. McLean of AFCEA.

Feature of the meeting was a discussion and film on "Homes of the Future" by Harry Mellinger of Philco-Ford. The home of

1999, according to the film, will be only partly automated. The housewife still has to go to the kitchen, make out the menu for lunch and feed it to the computer (which promptly rejects it as being too calorie-high and makes suggestions for substitutes). Foods are apparently stored frozen and are delivered table-ready on a conveyor. Little Johnny goes to school two mornings a week and does the rest of his lessons with the help of a teaching machine. The husband and father also leaves for the office occasionally, but does most of his work at home—on a desk with several display devices and about five keyboards.

House decor and structure will be unrecognizable in 1999, if the film can be depended on. Only the electronic organ in the music room looks slightly familiar. And, believe it or not, the clothing styles of 1999 will resemble strikingly those of 1970!

## Meeting With Hams March 22

The March meeting of the Club was held in conjunction with the Radio Amateur Luncheon Club of New York City and with the Quarter Century Wireless Association. A luncheon meeting, it was attended by 115 persons. At this meeting the grade of Fellow in the Radio Club of America was conferred on Mr. Sanford Mullings, telecommunications engineer of Jamaica, who came to New York to receive the award. The meeting was chaired by Jack G. Anderson, W1FDH, veteran officer of the QCWA, and short addresses were made by Jack Dannals, the newly elected president of the American Radio Relay League, and Fred Link, president of the Club.

The main address was by Dr. Alfred N. Goldsmith, who discussed the amateur and the future. His talk is printed in this issue.

# The Radio Ham's Universe



Left: Dr. Goldsmith; right: Director George Bailey.

My fellow radio amateurs, I propose now to take you on the longest trip you have ever made—to the very end of space and time and to the incredibly distant limits of the universe as well as the short ranges of daily communication.

Much of what I say is a hope and a dream of the future. And I start with space communication. Light, or radio, can speed around the earth more than 7 times in a second. In other words, it takes radio about 5 seconds to travel a million miles (or a megamile, to use an interesting descriptive term).

Two-way communication with the moon is over about a half-million mile span, so radio takes about 3 seconds to flash from the United States to the rocky craters of the moon and back to earth. Accordingly, the time required from the earth to the moon and back by radio is measured in seconds and is quite noticeable.

But consider what happens when we try to communicate between Terra—our own earth—and the planet Mars when Mars is at the opposite side of the sun from Terra. Radio must then travel out and back approximately 400 megamiles. If a man speaks on Terra to his companion on Mars it will take over a half hour before the reply can reach him. This will be slow communication and will have to be conducted by new methods. Probably all the comments from Terra will have to be recorded, on tape or other medium, and then sent in a constant stream with a reply beginning when the recorded tape begins to be received on Mars.

And now let us take a big jump to the nearest star to our sun, Alpha Centauri—the brightest star in the constellation of the Centaur. And let us assume that there is radio equipment on a planet orbiting Alpha Centauri. Then comes the question—how long will it take for a communication from Terra to reach the distant destination and then for the answer to be heard on Terra? The answer is astounding—more than 10 years!

Clearly, comfortable and speedy chats between such a planet and our earth are more or less out of the question. We shall require either suspended animation to permit our earthlings to await such delayed conversation or we shall have to depend upon some theoretical faster-than-light method of reaching the nearest star and its possible planet companion.

Now if we want to jump to the nearest galaxy or nebula—the galaxy of Andromeda with its billions of suns and possibly a myriad of planets—we find that it would take radio messages millions of years to travel from Andromeda to us. In other words, we seem to be really isolated in the huge universe which we are far from being able to understand or conquer.

An address to the Radio Amateur Luncheon Club meeting sponsored by the Metropolitan New York Chapter of Quarter Century Wireless Association and the Radio Club of America, at the Engineers' Club (New York) March 21, 1972.

By Dr. Alfred N. Goldsmith

You can begin to agree at this point that the Unidentified Flying Objects (UFO's) must take a long time to travel from even the nearest star to earth and communication with them must indeed be difficult.

To get closer to some of the possibilities of today, the United States was considering sending a space ship with communications equipment on "The Grand Tour" from the earth to such distant planets as Jupiter, and beyond. Such a trip will take a long time, and communication will be far from speedy even using the winged messenger: radio. But let us come still closer to earth and consider the synchronous satellite which is now so well known. This satellite, poised in space approximately 22,000 miles above the equator, is capable of communication over large segments of the earth's surface. Typical examples are communications of the Olympic Games from Japan to the United States via satellite. Another example will be programs to villages and schools in India and its teeming population.

Among the oddities of today is laser communication over one to ten miles, from ship to ship for example, using a modulated laser beam to carry the telephone messages over the ocean. Using a device that resembles a large binocular or hand telescope, one can speak from ship to ship directly by this new device.

All sorts of new communication methods loom up before us. For example, facsimile communication will enable us to send documents, drawings, or messages directly from the home to any desired destination. Thus we will realize the old dream of the "printing press in the home."

Also on the horizon, and as a most attractive addition to our present day broadcasting, will be the three-dimensional color television of the future. In such a system the home viewer will in effect be attending a so-called "legitimate theater show" and will see before him, in full depth and realism, the broadcast event or other program material of the future. In effect, 3-dimensional television annuls space and takes the viewer to the scene of action!

I would like to suggest that somewhere in this setup, the amateur will find his well-deserved place. A satellite for amateur communication could be placed in space and allotted, on a scheduled basis, to those eminent amateurs who have made especially interesting or useful additions to the amateur communications field. Such a prize would indeed be a fine reward for the enterprising and inventive amateur of the future.

If time permitted, I could go on indefinitely telling you of new applications, new methods, and new capabilities of the radio of the future. But I believe it is enough to say that the horizons are indeed wide and that the amateur will play his enterprising and helpful part in the future of our chosen and exciting field.

## Book by Radio Club Member

*Interurban Interlude*, A history of the North Jersey Rapid Transit Co., by E. J. Quinby, told in narrative form by one of its former motormen. History, mystery, tragedy, comedy, but never the planned connection with the Hudson Tubes for commuters to New York. Photos, maps, timetables. \$7.95. Carsten Publications, Ramsey, NJ 07446.

## Obituary

The Radio Club notes the passing of the following members:

Name	Joined	Died
Minton Cronkwhite	1919	Nov. 1971
Lincoln Walsh	1934	Nov. 1971
Orson B. Sloat	1971	Jan. 1972
Frank Holacek	1969	Feb. 1972
Charles H. Singer	1947	Mar. 1972
Olof G. R. Fridman	1970	1972

A distinguished member of the Club, Lloyd Jacquet, died March 1, 1971. Preparations were made to publish a notice with a photograph. Unfortunately, in waiting for the photograph, the next issue was published with no mention of Mr. Jacquet's passing. Though two years have passed, we are noting Mr. Jacquet's death in the belief that some Club members may not have heard of it.

Our thanks to those members and companies who have supported the Club by placing advertisements in this issue. Ad space in future issues is available at \$100 for full pages, \$75 for a half page, \$50 for a third page and \$25 for ads or notices of one-sixth page or less. Communicate with Club headquarters for information, issue dates, etc.

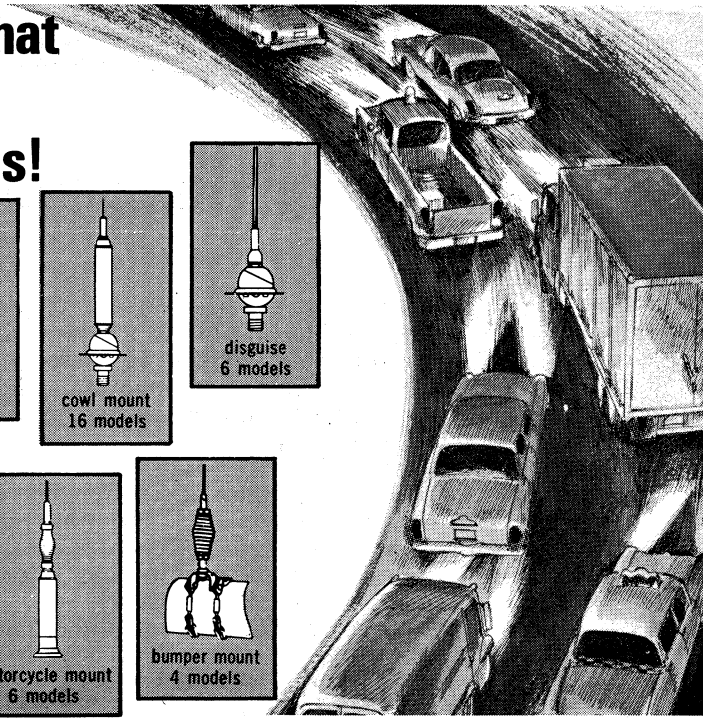
## Jamaica Engineer Honored

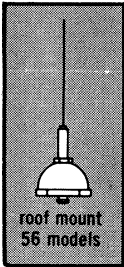
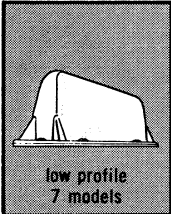
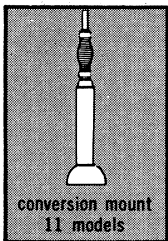
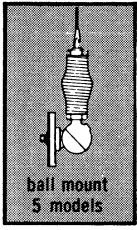
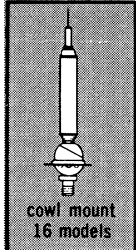
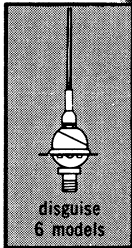
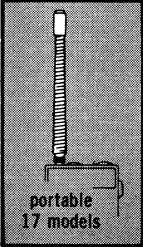
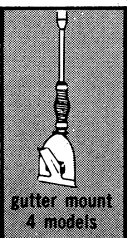
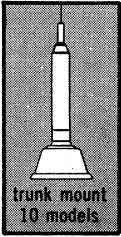
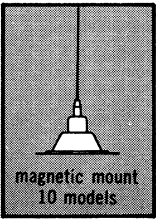
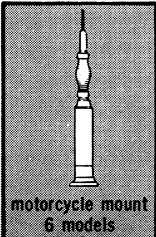
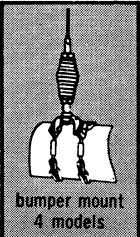


Telecommunications engineer Sanford A. Mullings, Deputy Supervisor, Constabulary Forces, Jamaica, was given the certificate of Fellow in a special ceremony at the March 21 meeting of the Club. Mr. Mullings, who has charge of police communications for the whole island of Jamaica, came to New York for the special purpose of receiving the award. In the photograph, Mr. Mullings is seen receiving his certificate from President Fred Link.

Radio Club of America lapel pins-tie tacks are available to members of the Club. If you are a member, send \$2.50 for the gold-on-black pin-tie tack. If you are a Fellow, send \$4.00 for the black-on-gold one, to the Radio Club of America, P.O. Box 2112, Grand Central Station, New York, NY 10017.

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**AT OUR**

# **63<sup>RD</sup> ANNIVERSARY BANQUET**

**Date:** Friday, November 17, 1972. **Place:** The Belmont-Plaza Hotel, Lexington Avenue and 49th St. (across from the Waldorf-Astoria) New York City. Reception, 5:30 pm; dinner 7 pm.

Members and non-members are invited. Ladies especially welcome! Out-of-town members attending the banquet may reserve rooms at a discount rate by addressing reservations to Trudy Cohen, Belmont-Plaza

Hotel, New York, NY 10022 (Telephone 212/751-5200) and stating that you are attending the Radio Club of America function.

Time to order tickets is now! Send check for \$10 per ticket to The Radio Club of America, Inc., P.O. Box 2112, Grand Central Station, New York, NY 10017. Early reservations are especially important for tables of ten.

## *SPEAKER OF THE EVENING: A. PROSE WALKER*

Speaker of the evening is A. Prose Walker, Chief of the Amateur and Citizens Division of the Federal Communications Commission. Mr. Walker has served on numerous government-industry committees whose decisions have had a powerful impact on the progress of the telecommunications art.

In 1964, Mr. Walker was made a Fellow of the IEEE for his "contributions to international standards in the utilization of the radio spectrum." He has been reelected every three years since 1953 as chairman of Study Group 10 (aural broadcasting) of the International Radio Consultative Committee. (CCIR).

Among the other important decision-making committees on which he has served are: the Field Test Panel of the National Stereophonic Radio Committee (chairman); NAB Disc Recording/Reproducing Committee (chairman); Television Allocation Study Organization (TASO) and several others. He is the author of numerous technical papers and articles and has spoken to various technical groups throughout the world.



**A. Prose Walker,  
Chief, Amateur and Citizens Division,  
Federal Communications Commission.**

## New Fellows Honored



The above fifteen newly elected Fellows of the Radio Club of America were presented their certificates at the Annual Banquet Meeting last December. Dr. Victor J. Andrew, who was elected a Fellow at the same time, died shortly before the meeting. Short citations describing the achievements of the new Fellows appeared in Volume 45, No. 2 of the *Proceedings*, on page 14. Left to right: Robert E. Tall, editor and publisher, *Industrial Communications*; Joseph R. Sims, consultant (formerly RCA); Charles Holt, Los Angeles Police Department; William Morton, U.S. Department of Agriculture; John Brinkley, Redifon; Val Williams, executive

secretary of NABER, accepting for Norman Bach, Supervisor of Communications, Monsanto Co.; Edgar P. Grim, Chief, Communications and Special Services, City of Philadelphia; Aubrey Childers, Defense Communications Agency; Norman Colby, RCA; Bernard Flood, Arizona Department of Public Safety (past president of APCO); Stephen Walsh, Inspector, New York Police Department; Arthur Byrne, American Can Co.; Richard Schomburg, retired; Robert F. Burns, communications editor, *CNE Magazine*; John McCormick, G-E.

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## Honorary Members, New Fellows Elected

Three new Honorary Members were elected by the Board of Directors at their mid-year meeting, held July 17 in New York City. The new honorary members are W. Walter Watts of RCA, who has a long history of service to the art, and W.E.D. Stokes and Frank King, founding members of the Club who have remained active during the 63 years of its existence, as well as most of their own lives (Stokes was 13 and King 16 when the Club was founded).

Twenty-two members were proposed for the grade of Fellows. They are:

Lee M. Augustus, Supervisor of Communications, Michigan Bell Telephone Co.

Louis E. Brown, Vice President Communications Industries, former president Decibel Products Inc.

William Bryson, Chief Engineer, Communications Products (Division of Phelps Dodge Co.)

R. D. Darrell, audio authority and writer, member since 1946.

R. J. Evans, Director, Michigan State Office of Law Enforcement (formerly chief engineer, Michigan State Police Radio System).

Joseph Gagne, Supervisor of Radio Systems, LIRR.

Frank Genochio, President, Catel Corp.

Bruce Kelley, Curator, Antique Wireless Association Museum (Holcomb, N.Y.)

William M. Lee, President, Associated Police Communications Officers (APCO).

Robert Mason, Director, radio systems, Santa Clara County.

Ray E. Meyers, pioneer communications man.

Ramsey McDonald, first proponent of dial radio mobile telephone service.

David Niblack, Director, Dept. of Communications, State of Colorado.

Thomas Regan, Communications Supervisor, New York State Police.

Fred Shunaman, technical writer and editor, Radio Club executive secretary and Proceedings editor.

Marshall Treado, Manager, Law Enforcement Standard Labs, Communications Dept., National Bureau of Standards.

Nils Tuxen, former manager, Communications Division, North American Philips Corp.

Wm. H. Vogel, Senior Project Engineer, Measurements, (Div. of McGraw Edison Co.) communications specialist, amateur since 1931.

A. Prose Walker, Chief, Amateur and Citizens Div., FCC.

Herbert Watson, communications consultant, amateur since 1923.

Jack Wayman, EIA executive; expert, consumer electronics. Jerome Zauderer, product line director, Hazeltine Corp.

Other Fellows will probably be proposed before the annual Meeting, at which the candidates will be elevated to the grade of Fellow.

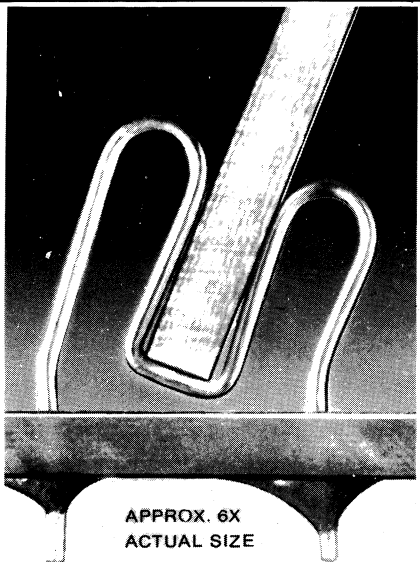
It was reported that there were 482 members in good standing as of July 15. Some 71 members have not yet paid their 1972 dues. The executive secretary was instructed to contact the delinquents and take what action appeared necessary.

The President noted that Mr. A. Prose Walker of the FCC will be the speaker at our 63rd Annual Banquet, and that therefore he would like to invite other kindred organizations such as VWOA, QCWA, AFCEA and various amateur radio clubs to attend. Mr. Talley agreed to contact those groups.

## Harvey Gernsback Honored

Radio Club member Harvey Gernsback, Editor-in-Chief and publisher of the magazine *Radio-Electronics*, has been made an Honorary Member of the Veteran Wireless Operators Association. Mr. Gernsback has been associated with electronics since his graduation from Columbia in 1935, and during World War II, headed a technician group writing technical manuals for the Signal Corps at Fort Monmouth, N.J. He is an avid audio enthusiast and experimenter, and (in 1935) was one of the first to use the term "High Fidelity."





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## Club Members WOR Guests

Jack Poppele and Leo Sands, representing the club, Lionel M. Rodgers, traffic engineer, and Harold A. Jones, an RCA vice president, recently appeared as guests on the Barry Farber Show on radio station WOR in New York where they discussed radio communication in public safety and security applications.

## Leo Sands Heads NY Group

Leo G. Sands, director and former executive secretary of the Club, was elected chairman of the New York Section IEEE Vehicular Technology Group at the group's June 28 meeting. Holmes Bailey was elected vice chairman and club member Lionel M. Rodgers was elected secretary-treasurer.

## Special Rates on CNE

Members of The Radio Club of America may subscribe to CNE (*Communication/Navigation Electronics*) Magazine at the special rate of \$10 per year. The regular rate is \$12. The magazine is edited by Leo G. Sands, former executive secretary of the club. Directors of the publishing firm include Jack Poppele and David Talley, both directors of the club. The magazine is a monthly technical journal covering land mobile radio, marine electronics and avionics. Send orders to CNE Magazine, 250 Park Ave., New York, N.Y. 10017.

## Thanks to Life Members

The Board wishes to express its appreciation to those Life Members who so generously responded to the letter of May 22, asking for small contributions to Club expenses. These little extra bonuses make it possible to supply extra services that might otherwise be difficult or impossible.

## Membership Certificates

We have secured a supply of membership certificates and expect shortly to begin mailing them out to all members who have joined recently.

In the past, membership certificates have been sent out during certain periods of our history and not during others. If you are an older member who does not have a certificate and wants one, please write the Club—at P.O. Box 2112, Grand Central Station, New York, NY 10017—and one will be sent you.

Some members have noted that our present certificate looks somewhat bland and lacking in oomph—is indeed a bit drab—and have suggested that we get out a special certificate including gold, color and modern design, for those members who want one. The idea seems to have merit, but the certificates would be expensive and could presumably be offered only as an optional feature at the member's expense. What do you think? How many members would be willing to pay, say, \$5 for such a certificate? Let us hear from you!

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**CONSTITUTION and BY-LAWS**  
of  
**THE RADIO CLUB OF AMERICA, Inc.**

(Founded 1909)

**ARTICLE 1—NAME AND PURPOSE**

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

**Sec. 2.** Its purposes shall be:

a. To promote cooperation among those interested in scientific investigation and amateur operation in the art of radio communication.

b. To support educational and scientific research studies to advance the radio communications art and its related electronic techniques.

**ARTICLE II—MEMBERSHIP**

**Sec. 1.** The membership of the Club shall consist of those persons who have signed the Certification 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.

**THE RADIO CLUB BY-LAWS**

**ARTICLE I—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 payable on application for membership shall be three dollars (\$3.00). The annual dues payable by Members and Fellows shall be ten dollars (\$10.00). 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 July 1st of any year shall pay only one-half of the specified dues for that 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 dollars (\$100) 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 twenty-five (\$25) if he has been a member for twenty (20) or more years, or upon payment of fifty dollars (\$50) if he has been a member for ten (10) or more years.

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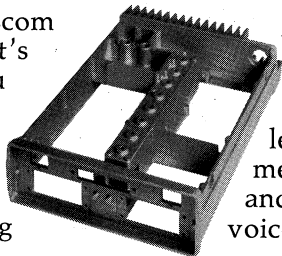
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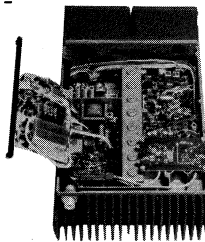
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