

Proceedings of The Radio Club of America, Inc.

Volume 51, Number 1



March, 1977

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.

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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Summary of Treasurer's Report for 1976

1. Receipts:	
a. 1976 Dues from membership including 77 new members and 1 Life Membership . . .	\$ 4,673.43
b. Sale of club pins and Fellow plaques	525.00
c. Advertisements in 2 issues of <i>Proceedings</i> . .	3,561.98
d. Interest and dividends earned	938.53
e. Contributions from 51 Life Members	835.00
f. Surplus from 67th Annual Meeting	401.79
Total Receipts	\$10,935.73
2. Expenditures:	
a. Rent for use of facilities	500.04
b. Stationery, printing, tel., office services and general postage expenses	841.34
c. Meeting expenses, including mailing	821.54
d. Publication of 2 <i>Proceedings</i> and 4 Newsletters, including mailing	4,239.78
e. Awards and plaques presented	534.22
f. Insurance and legal fees	42.56
g. Exec. Sec'y's consulting fees for:	
1. Administration activities	700.00
2. Editorial work for <i>Proceedings</i>	1,400.00
h. Contributions made to tax-exempt activities	850.00
i. Miscellaneous	17.20
Total Expenditures	\$ 9,946.68
Excess Over Expenditures	\$ 989.05

Balance Sheet as of December 31, 1976

1. Cash:	
Checking and savings accounts, including Life Membership fund	\$15,139.52
2. Investments:	
AT&T Co. stock and debentures	6,650.00
3. Club Properties:	
Inventory of Club pins, furniture, etc.	460.89
4. Outstanding Accounts Receivable:	
Advertisements in Oct., 1976 <i>Proceedings</i> . .	550.00
5. Total Assets:	\$22,800.41
6. Liabilities:	
Dues paid for 1977, 1978 and 1979	\$-1,184.57
7. Net Worth:	\$21,615.84

David Talley
Treasurer

Jan. 10, 1977

W1KH

Dr. George Bailey is one of the very few persons who built up their careers after the normal individual would consider himself retired. Born in Quincy, Massachusetts, in 1887, he received his A.B. from Harvard in 1907. He started his industrial life as a machinist, then became an executive in the shoe factory with which he was connected. When that company was absorbed by another, he started with a concern that was pioneering the manufacture of rubber floor tile. It was also taken over by a larger company and moved to Pennsylvania. Not wishing to follow, Bailey for a time operated his own floor tile company.

He was interested in amateur radio from 1923 and made a number of accomplishments while he was engaged full-time in business. He installed a radiophone in his car in 1933, and in 1935 was the first amateur to be heard in Europe on the 5-meter band. For twelve years (1930 to 1941) he was the liaison station with the Grenfell Mission in Labrador, maintaining a daily schedule at 6:30 a.m. For six months of the year he was their only contact. When the Mission's hospital burned down and it was necessary to get materials for rebuilding it on the first ship that could reach the mission, Bailey's station handled all the communications and all plans and orders went through W1KH.

After the sale of his floor tile business in 1937, George Bailey planned to spend more time with radio, and to study the subject intensively. He was closely involved with the American Radio Relay League, becoming first the Director, Northeast Region, then in 1936 vice-president of the League, and in 1940 its president, a post he held for 12 years. In this office and its concurrent position, president of the International Amateur Radio Union, he was officially the leader of and spokesman for the amateurs of the whole world.

In 1941 the Government decided to take advantage of his organizing ability and called him to Washington as a special assistant to Dr. James B. Conant, to recruit an electronics training group under the National Defense Research

GEORGE BAILEY

1887 — 1976



Council. He was chairman of its Research Section, Office of Scientific Personnel until 1943. From 1944 through 1946 he was Chief of Scientific Research and Development, under Dr. Vannevar Bush. For his work in these agencies, and for his services on a number of defense-oriented committees, he received the Certificate of Merit from President Harry Truman for his "invaluable contribution to the war effort of the United States."

After the war he became a charter member of the Armed Forces Communications and Electronics Association (AFCEA) and was its president for two consecutive terms. He was on the Engineering Services Advisory Committee for the Selective Service System from 1950 to 1953 and was made Foreign Affairs Officer, Consultant on Telecommunications, to the Undersecretary of State in charge of Economic Affairs in 1957.

In 1945, Bailey became the Executive Secretary of the Institute of Radio Engineers, which grew from 13,000 to over 100,000 members during his tenure there. When the IRE joined with the American Institute of Electrical Engineers in 1963, to become the Institute of Electrical and Electronic Engineers, he became the Institute's Executive Consultant, a position he held until his retirement from the IEEE in 1966.

In 1958 he received the degree of Doctor of Science from Lawrence College. Dr. Bailey's numerous citations and awards include the Marconi Medal of Service of the Veteran Wireless

Operators Association, a special citation from the 1956 Edison Radio Amateur Award Committee, and Certificate No. 1 from the ARRL for being the first amateur to contact all states on single sideband telephone. In 1962 he received the Distinguished Service Award from the IRE for his achievements as Executive Secretary.

Dr. Bailey was a Fellow of the IEEE and of the Radio Club of America, and was a Director of the club from 1969 to 1974, in which year he was made an Honorary Member. He was also an honorary life member and director of the Quarter Century Wireless Association, director of the Braille Technical Press, member of the Broadcast Pioneers, and member emeritus and a director of the New York Academy of Sciences, from which he received its Edison Citation.

As a ham operator Dr. Bailey was associated with two events in which he received wide publicity as the only contact with the outside world. When the steamship *Viking*, on a motion-picture filming expedition off the coast of Newfoundland, blew up, Bailey received the first news, got the survivors' names, telephoned relatives, and was the sole source of information to the press. A similar situation occurred during the Long Beach, CA, earthquake in 1933. Bailey received a live eye-witness account direct from a ham in the midst of the disaster area. Again he was the sole source of information to the outside world—all means of communication other than amateur radio were out.

IS BUSINESS A DIRTY WORD?

Remarks at the club's annual meeting and banquet,
November 19, 1976 by William J. Weisz
President and Chief Operating Officer, Motorola, Inc.
Fellow, Radio Club of America



Tonight, I could have given an interesting talk about electronics and given Motorola, in particular, a plug. I could have told you about our equipment on the Mars Viking Lander and Orbiter, or the use of Motorola pagers at the Olympics, or our components in calculator watches. But, every time I get the opportunity to talk on a subject of my choice these days, I talk about one of the most serious concerns I have!

I'm not concerned about our ability to take on competition if it's really fair competition and not subsidized by foreign governments. I *know* our products work for the good of society—in hospitals, businesses, the national defense, and in all walks of everyday life. But I am concerned about the depths to which business—mainly big business—has fallen in the public's eye *and* the possible consequent actions that could occur as a result. The public's attitude toward business has been steadily and seriously declining since 1965.

These days business is accused of making too much profit, paying no taxes, exploiting its customers and employees, polluting the environment, bribes, payoffs, political contributions, etc.—everything but taking the Lord's name in vain.

I do not subscribe to the common

comment that “that's the way it is in business.” It isn't that way. Yes, these conditions probably exist in some companies, some places, but not in the vast majority—there are no more crooked businessmen than there are crooked doctors, lawyers, plumbers, factory workers, teachers or radio club members for that matter. It's time businessmen stood up and said so.

I don't know who isn't paying taxes. We paid 47% of our income in 1975 to state and federal governments. As for outrageous profits, the profit of the average business is 4 to 8%. True, you can put your money in risk-free, tax-free municipal bonds that yield 4 to 6%.

Honesty Is a Good Policy

We don't have to cheat and bribe and frankly most companies don't—we don't and we're not afraid to say so—it's time we did say so. We refuse the business rather than do so.

We have had 48 years of high-integrity operation. Long before it was fashionable, Motorola issued a document called “For Which We Stand”—describing our objectives, principles and ethics. Now, I can't guarantee that in a company of 50,000 people, tomorrow morning we won't find some misguided person doing

something wrong—but if we do, we will deal forthrightly with it.

Without question the leaders of business, of government, of labor, of all organizations must set an example in their performance. I deplore the actions of any who have been guilty of not doing so. We must not allow deviations from the morally proper. We must discipline non-adherence to high standards. But, all persons from the president to the janitor, must put their own houses in order.

We must realize that the big ideals of freedom, peace and prosperity can only be achieved if *everyone* has important personal and individual traits like the simple ones of honesty, integrity, perseverance, loyalty, the willingness to work hard, and all those things that are the underpinnings of the big ideals. Because the whole is purely the sum of the parts, we can achieve the very lofty ideals spoken about almost everywhere only if lots of people down at the grass roots practice those lofty ideals *every day in every way*. Accomplishment of the simple, personal ideals leads to the accomplishment of the big ones.

Productivity Makes Progress

Increased progress in anything has a cost. This cost must be paid for. I believe that it can only come from increased productivity, which is derived from *successful*, ethical, profitable business growth. Our fantastic increased standard of living in America was no *accident*. It was the result of technological achievement made practical, and delivered to the public in an affordable manner, *by business* down through the ages. If problems are to be solved, it must be done within the relevance of the society that exists and each of you must play a role.

You all know the law of conservation of energy — you can't have perpetual motion. You can't get something for nothing. This same theory applies in the field of economics. It is stated by the American economic foundation in this way:

"Nothing in our material world can come from nowhere or go nowhere, nor can it be free; everything in our economic life has a source, a destination, and a cost that must be paid."

The improvement of society must be

paid for in some way. But where does the money come from? Take government aid funds for example. They come from taxes, which come from the people. It is money, *taken from the people directly*, or from business, which collects it from its customers as part of the selling price — and then, returned to the people, *minus the government's cost* of administering the funds. Thus to support direct, or indirect, programs of social welfare, money must be earned and spent. People and businesses must earn more in order to afford such programs.

To earn more money, they must produce more. There must be increased gross national product. There must be increased business growth. Without it, the funds to support social, cultural or environmental progress are not forthcoming. There is no shortcut. My first fact — rather than opinion — is that successful business is the source of the funds and affluence that supports progress. Without successful business, there would be no growth in other areas.

Second fact: Technical innovation, that is, creating new processes and products, or techniques and services, is the major source of business growth. Now if you accept my first thesis that business is the provider for progress, then it follows that technological innovation and change is what really funds that progress. The first prehistoric man had to spend all of his time just worrying about eating, sleeping, clothing, and protecting himself. It was only technical innovation — fire, the wheel, the bow and arrow that gave him the time to spend on other things such as painting and building the prehistoric version of the great society.

The Role of Business

It is true that without scientific achievement, there can be no progress, but a pioneering new invention or discovery is absolutely no good if it cannot be turned into something practical and usable for people. It must not only be developed well and be economically feasible, but it must be manufactured properly, merchandised and distributed well, and taken care of, if necessary, after it is in use. Thus, engineering is but one partner in a successful business venture. *Every* partner is absolutely essential.

In short, business must be concerned about people — whether those people are employees, customers, suppliers of parts, or shareholders.

But the good businesses have always been people-oriented and have always been addressing themselves to social concerns like safety, like health, like service to the community, in the same way that the good private citizen has. In fact, the social ideals that so many people feel cannot be served *in or by* private business can be realized *only* through economic growth, which in the U.S. means the expansion of private business.

Let's examine my definition of the purpose of a business more closely. In Motorola's case, our products do indeed serve the needs of the community. They not only provide entertainment, but help fight crime, work for industry, support the national defense, and lead scientific breakthroughs.

What Is Profit?

Now, what about the words, "At a profit"? Profit is probably one of the most misunderstood and maligned words in our vocabulary. To some foes of the American system it has become a dirty word. To those who really understand why the United States has achieved a standard of living superior to all others, it is a very important concept.

Let me read you a quote — "The worst crime an employer can commit against the worker is to fail to make a profit." That statement was not made by a big businessman. It was made by Samuel Gompers, founder of the labor union movement in America. What did he mean.

Profit is important not simply because a company greedily wants to make money, but profit is important because of *what it does for people*. Profit gives a company, which is after all basically just a big group of people, the ability through the distribution of that profit, to raise the standard of living of the people associated with the company.

Whether it is in salaries or profit sharing to the employees, in dividends to the stockholders, or the increasing price of its shares on the stock market that occurs only if a company is successful and profitable — whether in educational assistance, or suggestion

(continued on page 17)

The FCC, OTP Communicate

Through the NABER Senior Communications Symposium and the Radio Club's Round Table '76, held in connection with the Annual Meeting Nov. 19, 1976

by **Robert E. Tall**

Publisher, Industrial Communications
Fellow, Radio Club of America

Preceding the Radio Club of America Nov. 19 banquet was a morning **Senior Communications Symposium**, sponsored by the National Association of Business & Educational Radio and moderated by Stuart Meyer, of the E. F. Johnson Co., Executive Vice President of the Radio Club, who serves as Chairman of NABER's Educational Committee, and an afternoon **Round Table '76** question and answer session sponsored by the Radio Club and moderated by Jerry S. Stover, Chairman of the Board, Communications Industries, Dallas, TX, and a Fellow and a Director of the Radio Club of America.

Participants in both sessions—making direct presentations in the morning, and answering questions in the afternoon—were FCC Safety & Special Radio Services Bureau Chief Charles A. Higginbotham; FCC Chief Engineer Raymond E. Spence; FCC Common Carrier Bureau Mobile Services Division Chief Sam McConoughey; and Office of Telecommunications Policy Acting Assistant Director-Frequency Management Samuel E. Probst.

Among other things, **Mr. Higginbotham** observed:

The citizens band radio situation has gotten the FCC Safety-Special Bureau "more attention on Capitol Hill" in the past year than "all other subjects combined in the last 25 years."

The FCC staff is planning for a "system" identification procedure, to simplify the present procedures in the land mobile radio services involving individual station call signs.

The team of negotiators who have been working on land mobile radio border concerns with Canada and Mexico feels that some resolution of the problems at 900 megahertz will be coming "very shortly."

The Safety-Special Bureau is "hoping" that it will be able to come out with some "definitive" rules as a result of its current inquiry in the private mobile radio

interconnection proceeding. Mr. Higginbotham said he "personally would like to be able to permit unrestricted interconnection," but doesn't "think that is possible," because of its impact on the radio spectrum. He said he does not feel that the current inquiry will lead to a situation where the interconnecting privileges allowed to private mobile radio operations will do away with the requirements for common carrier, interconnected mobile radiotelephone service.

The Safety-Special Bureau is "ready" to "take to the Commission" its recommendations for a consolidated "Part 90" set of rules which combine the present public safety, industrial and land transportation radio services, and is planning to "do the same thing" in other areas, such as the maritime and aviation rules. In the maritime, for instance, he said, the plan is to "give the recreational boater what he needs—a one-page set of rules encapsulated in plastic" that he can hang by his transmitter on the boat.

The Bureau is in the process of establishing an "LEAA Coordinating" office, which will enable law enforcement agencies receiving financial aid from the Law Enforcement Assistance Administration to clear necessary frequencies before LEAA funding commitments are made.

The Bureau "hopes" to take to the Commission "before the end of this year" recommendations for progressing the development of a new nationwide mobile radio data base.

Sachs/Freeman Associates, the Washington-area consulting firm that is conducting the Commission's contract study of "digital uses and standards for land mobile channels," which the agency expects to assist it "in determining whether or not new rules should be adopted to permit the growth of digital techniques" in the "public safety, industrial and land transportation radio services, is nearing the completion of its work.

(continued)

In connection with the latter, a rough draft of the study report was due at the Commission Nov. 24, it was understood, and after a review period by the FCC and possible finishing touches thereafter by Sachs/Freeman, a final report is expected to be submitted before the end of the year. As outlined by the Commission when the contract was being placed, the study is expected to "consider such digital techniques as remote control, digitized voice, canned messages, data transmission, mobile telemetry, silent alarm, and other digital functions now in use and those projected by users, manufacturers and other interested parties." The Commission said at that time that there "seems to be a growing demand for these types of services and it may be necessary to develop new rules to accommodate them. For example," it said, "the rules adopted for the 900-megahertz band include some provisions to encourage digital uses, but it was stated (in Docket 18262) that further study is necessary to determine what further rule changes will be necessary to do this."

The "central technical issue," the Commission said, "is whether or not digital transmissions are more efficient in transmitting certain types of information than analog voice transmissions and are thus more effective in the use of the spectrum. This question," it said, "cannot be answered on a broad general basis but must be addressed from the point of view of each particular application of digital functions."

Mr. Spence concentrated his direct presentation on an upcoming series of "inquiries" in which the FCC Office of Chief Engineer hopes to accomplish tighter overall RF equipment standards,

while at the same time "balancing" to a greater degree the requirements on transmitters, on the one hand, and receivers, on the other.

"The next few months," he said, should turn out inquiries involving RF equipment operating below 1 gigahertz in the land mobile, television and amateur radio services. He emphasized that the Commission is "learning a great deal more about the industries we regulate," from economic and marketing considerations, and the inquiries will reflect that, rather than being based "strictly on engineering," as has often been the case in the past.

Mr. McConoughey's direct presentation role was to describe the Commission's efforts with respect to 900-megahertz "cellular" mobile radiotelephone systems. The "next move" with respect to the Bell System's pilot 900-MHz cellular application for a system in Chicago, he said, is "now up to the Commission," and the agency "hopes" it can take its next step "within the next two weeks."

Mr. Probst outlined for the group the preparatory work being done in connection with the upcoming 1979 General World Administrative Radio Conference, and the considerations involved in the overall US planning.

In the question-and-answer session, Mr. Spence said the commission expects that the so-called "Goldwater-Vanik" bill will be reintroduced in Congress in January, and "hopefully" will be enacted into law to give the agency authority to get at the root of interference to non-RF devices. The measure looks toward the requirement that manufacturers of home entertainment devices install in their products sufficient filtering capability to preclude interference to them from

lawfully operated radio transmitting devices.

Questioned as to the status of the 470-512 megahertz channels allocated to radio common carriers in FCC Docket 18261—the proceeding involving sharing of the lower seven UHF television channels by land mobile services in some of the nation's top metropolitan areas—Mr. McConoughey explained that "open entry" vs. "closed entry" questions which held up the use of the channels initially have been resolved in favor of the "open entry" approach, and that a series of staff recommendations have been explored over the past months. "We're now hopeful," he said, that "we'll be coming out with some within the next month or two," and possibly within a matter of weeks.

The three FCC officials were in agreement with respect to questions about the possible further "splitting" of land mobile radio channels—a cautioning answer that direct "splitting" of the channels as has been done in the past is probably not in the cards, but, as Mr. Higginbotham ventured, "we must, long-range, of course, always be thinking about going to narrower FM channels at 150 and 450 megahertz."

Questioned about the different technical standards for land mobile radio equipment in the different services, Mr. Spence said the matter is one of increasing concern to the Commission, and "I think we will be looking into this," though priorities in staff assignments put it some time in the future. Mr. Higginbotham said he would expect, "in time," that there will be "one set of technical standards for all land mobile services," with the possible exception of the common carrier services, but differences between land mobile and aviation and maritime services will probably continue to be observed.

Asked about the lack of success in clearing the citizens radio service of linear amplifiers, the FCC officials noted that there has been some success, but that stronger measures are being planned. There should be amateur rule changes proposed in a couple of weeks involving linears in that service, they said, and "another approach, already in draft, would ban linears in all services."



Sam McConoughey, Jerry Stover, Raymond Spence, Samuel E. Probst and Charles Higginbotham, the chief participants in the two symposia that preceded the Radio Club meeting and banquet.

LAST-MINUTE FLASH!

The Film; *Parade of the Tall Ships*

The story of Operation Sail,
the outstanding event in the
Bicentennial Celebration,
New York City, July 4, 1976

will be the premier feature of

THE RADIO CLUB OF AMERICA BANQUET

Orlando Hyatt House, Thursday, March 17
Reception and Banquet: 7:30 to 9:30 PM

DON'T MISS IT!

CLUB GIVES FUNDS FOR SCHOLARSHIP, RESEARCH

In furtherance of the objective of the Club, as laid down in the Constitution of 1969: "To support educational and scientific research studies to advance the radio communications art and its related electronic techniques," the Club has made a contribution of \$500 to the Armstrong Memorial Research Foundation and one of \$250 to the Foundation for Amateur Radio, Inc.

In the course of conversation with Professor Goldstein of the Foundation, the fact that Major Armstrong's papers—donated to the Foundation some years ago—are yet to be classified and filed, was discussed. At an executive committee meeting January 6, the Foundation voted to use the Club's contribution to catalog and index these papers. It is estimated that these may fill from 60 to 80 file drawers.

Monies collected in the 1976 appeal to Life Members supplied the funds for these grants. However, it is not intended to limit contributions to Life Members. So that the Club can award scholarships and research grants, all members are urged to contribute what they can to the Scholarship & Research Fund of The Radio Club of America. Since the Club is classed as a tax exempt, not-for-profit corporation, all contributions are deductible from taxable income. Contribution checks should be made payable to The Radio Club of America and may be mailed to the Club at P.O. Box 2112, Grand Central Station, New York, N.Y. 10017. Checks should be marked "Scholarship & Research Fund." Contributions may be added to dues checks. On the back (or front) of the check, the amount of the dues and the amount of the contribution to the Scholarship & Research Fund should be noted.

Any of the above issues may be obtained from Fred Shunaman, Executive Secretary, at 933 East Seventh St., Plainfield, NJ 07062, for \$1.00 for the first copy, 50 cents for all succeeding copies (same issue or assorted). If you can drop by and pick them up, they are free of charge—the above prices are simply to cover costs of packaging and postage.

BACK-NUMBER PROCEEDINGS AVAILABLE

In preparing to clear out old material, we find moderate numbers of some old *Proceedings*. Our members may find some of these interesting or useful. Dates and the leading article of each issue are:

- Vol. 41, No. 1. May 1965 (*Bagno, Modulated Optical Alarm System*)
Vol. 41, No. 3. December 1965 (*Knowlton, Computer-Produced Movies.*)
Vol. 42, No. 1. April 1966 (*Rechtin, Communications to the Moon and Planets.*)
Vol. 42, No. 2. June 1966 (*Offenhauser, Mosquito Metrology and Communications.*)
Vol. 45, No. 1. March 1971 (*Kahn, AM Stereo Broadcast System.*)
Vol. 47, No. 1. February 1973 (*Directory issue: Prose Walker, Evolution of Spectrum Management.*)
Vol. 48, No. 2. November 1974 (*Meyer, 900-MHz Tests in Hilly Urban Terrain.*)
Vol. 49, No. 1. March 1975 (*Nelson, Interview with Paul Godley.*)
Vol. 50, No. 1. March 1975 (*Three articles; Club Constitution and By-Laws.*)
Vol. 50, No. 2. October 1976 (*Brinkley, Fifty Years of Mobile Radio.*)

WHAT "UNCLE CHARLIE" TOLD THEM DOWN AT THE RADIO CLUB.

by Ero Erickson, W9HPJ

Fellow, Radio Club of America

A detailed story of the Symposium and Round Table '76 appears elsewhere in this issue. Below are the casual observations of an old-timer from the Chicago area

"Let's not knock CB, because the citizens band is getting more attention 'on the Hill' (Congress) than Public Safety radio has gotten in 20 years.", said Charles H. Higginbotham, Chief of Safety and Special Radio Services, Federal Communications Commission. He was speaking from the podium of a Commission-staffed panel at the Senior Communications Symposium, early morning opener arranged by NABER (National Association of Business and Educational Radio, Inc.) in co-operation with the Radio Club of America 67th Anniversary Awards Meeting and Banquet, in New York on November 19, 1976.

Speaking about deregulation and proposed new rules, Mr. Higginbotham, who had inherited the "handle" Uncle Charlie, which the CBers in particular apply to the FCC as a whole, said that Public Safety, Land Mobile and Business Radio will be combined in the consolidated new rules.

He indicated that the station call letters will be identical for all stations of a system, which will make the call letter a "system ID", instead of an identification for one individual station. It may make it easier for the dispatchers who have a hard time recalling what transmitter they are using. There may be 100 stations with one call sign, he said.

At this New York Sheraton meeting, with several hundred members of the most prestigious and oldest radio club in the world, which included in attendance



Jerry Stover at the podium, with Charlie Higginbotham checking his notes, at the November 19 presentation.

Dr. Harold Beverage of long wire antenna history, FCC's Higginbotham addressed himself to the shortest-antenna-dimensioned 900-MHz problems. He revealed that his staff wanted to start work on 900 MHz as soon as the Canadians approved mutual border proposals. They have been meeting since July, he said, and hoped to provide incentives for manufacturers to proceed with equipment.

Later on, Sam McConoughey, Chief of Mobile Services Division, Common Carrier Bureau, stated that he (Sam) is hopeful of seeing in the near future, mobile units "in the \$500 to \$600 price range" for the 900-MHz cellular

systems. The proposed Chicago common carrier system of this type is still at dead center (not moving) due to legislation and litigation involving the radio common carriers.

An interesting dilemma was discussed by the panel, also rostered by Ray Spence, FCC Chief Engineer and Samuel E. Probst, Acting Assistant Director, Frequency Management, Office of Telecommunications Policy, (White House), now working on "WARC '79". "Ed" Probst has been Chairman of IRAC (Interdepartmental Radio Advisory Committee) for many years in the past. Back to the dilemma. An undisclosed law enforcement
(continued on page 22)

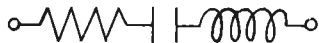
Now Available!



**FROM
TIN FOIL
TO
STEREO**

Here's your second edition of the 1877-1959 phono classic, now extended to 1976.

Discover the story of recorded music in 30 fascinating chapters. Enjoy photos of exotic music machines from early cylinder phonographs to stereo. Own THE reference for phonograph enthusiasts. \$19.95 hardcover, \$9.95 soft.



SILVER GHOSTS: 76 beautiful pages of Scott radios, from the earliest 1940's. Puett's classic with pictures, old ads and diagrams. \$10.00.

VINTAGE RADIO, 1887-1929: Pictorial story of pioneer days, 1,000 photos, 263 pages. \$10.95 hard-cover, \$8.95 soft.

A FLICK OF THE SWITCH, 1930-50: Fun picture reference of home, military, Ham, professional radio-TV-electronics, 312 pages. \$10.95 hard-cover, \$8.95 soft.

RADIO ENCYCLOPEDIA, Gernsback's 1927 classic beautifully recreated, 175 pages. \$14.95 hard-cover.

RADIO COLLECTOR'S GUIDE, 1921-32: Data book with 50,000 facts on 9,000 models by 1,100 makers, 264 pages, \$6.95.

1926-38 RADIO DIAGRAMS: Beitman's classic of 600 models, 240 pages, \$7.00.



CIRCUIT DIAGRAMS for any pre-1951 radio, just \$3.50. Send model number.

SEND TODAY to Vintage Radio, Dep't F, Box 2045, Palos Verdes, Ca. 90274. We pay postage. Calif. residents add 6%.

_____ \$ _____
 _____ \$ _____
 _____ \$ _____
 _____ \$ _____
TOTAL \$ _____

Name _____
 Street _____
 City _____ St. _____ Zip _____
FREE! Age Guide with each order. FREE!

You'll Enjoy It!

SECTION REPORTS

California Section reports: The Fall meeting of 29 September brought out over two dozen members and guests. Our best effort to date!

The presentation of the RCA Memorial Award to Morgan McMahon, Rolling Hills Estates, was made by Asst. to Pres. Stuart Meyer in fine style. But hard luck again plagued the picture-taking activities. Would you believe the electronics of the camera flash mechanism just quit? So our pictorial archives will be a bit lean on this meeting.

The presentation of the past history of FM development in the East by Stuart Meyer was well done and well received. It was something of a surprise to realize how quickly the East Coast developments appeared on the West Coast in the form of finished products. It appears that FM development was pretty well localized in the New York City area by the pioneering work of Armstrong, Link and others who became interested.

The pictures of the Club meetings in New York were most interesting. It was

a lot of fun to tie the names and faces together of the Club members. Many of the names were well known to us from publications and news reports we've read in the trade journals over the years.

Washington Section is busily engaged with the Club's second Semi-Annual Banquet, assisting the Orlando, Florida, group in preparing for this event.

The 1977 Semi-Annual Banquet will be held Thursday, March 17, with the cooperation of the IEEE 27th annual Vehicular Technology Conference. Co-chairmen of this year's banquet are John Daly and Mel Kelch (both of Repco, Inc.). Additional information may be obtained from Stuart Meyer in Washington.

The Washington Section will elect permanent officers during the Spring. All Washington Section members of record as of March 1, 1977, will receive ballots during the month. Those wishing additional balloting information on this section may contact Stuart Meyer at his Washington, DC, office, 1523 "O" St. N.W., Washington, DC 20005, Phone 202-387-3100.

SAFETY AIDS FOR MOTORISTS

Jack Renner, Fellow of the Club, brought up the role of communications equipment in motorists' safety, at a joint meeting of the Club and the Quarter Century Wireless Association at Luchow's Restaurant, New York City, November 10, 1976.

First to be considered, he pointed out, is the explosion in the use of two-way radio by private citizens. Two years ago, there were only seven million land-mobile units in the country. Now the number is greater than twenty million. One in every 10 vehicles have two-way radios.

Citizens Band radio is evolving into a motorists' aid system, due in large part to the fact that the public needs and wants such a safety service—radio as a motorists' aid. Could we develop an approach to the use of vehicular radio by the public—a system parallel to CB or one incorporating CB as part of the system?

In any approach, one point must stand out clear: use of the system must be under the absolute control of those

responsible for the safety of the highway, Renner emphasized.

NOTICE

Many interesting things are happening to our members all the time—things other members would be interested in. Usually the *Proceedings* hears about such events only by accident. (More than 50 per cent of our news items are sent in by 0.2 per cent of our members.)

You can remedy this! If you have experienced an interesting event—or know of one that happened to a fellow-member—drop the *Proceedings* a line. Have you had a promotion, started a new business, won first place at a hang-glider meet? Send us the story. We hope to be able to use it. Direct all news items direct to Fred Shunaman, Editor, *Proceedings*, 933 East 7th St., Plainfield, NJ 07062

TWENTYFIVE MEMBERS BECOME FELLOWS IN 1976



TWENTY-FIVE MEMBERS BECOME FELLOWS IN 1976

Standing, left to right: Mal Gurian, Lowell White, William Shand, R.D. Mignault, Samuel R. McConoughey, Milton Friedberg, Eugene Becken, Frank Devine, John B. Runyon, Charles E. Summers, Douglas J. Johnson, Victor Colaguori. Seated: Lewis A. Bondon, Francis T. Cassidy, William J. Weisz, Kenneth Richardson, Harold V.B. Vorhis, William S. Halstead, Theodore P. Rykala, S. Edwin Piller, Amory H. Waite, Jr., Robert S. Black, Thomas A. Campobasso, Max Elliott and Richard E. Horner were unable to be present.

(The Citations to the 1976 Fellows appeared in the October, 1976 issue of the *Proceedings*, on page 18.)



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FROM
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and
**Merchandising
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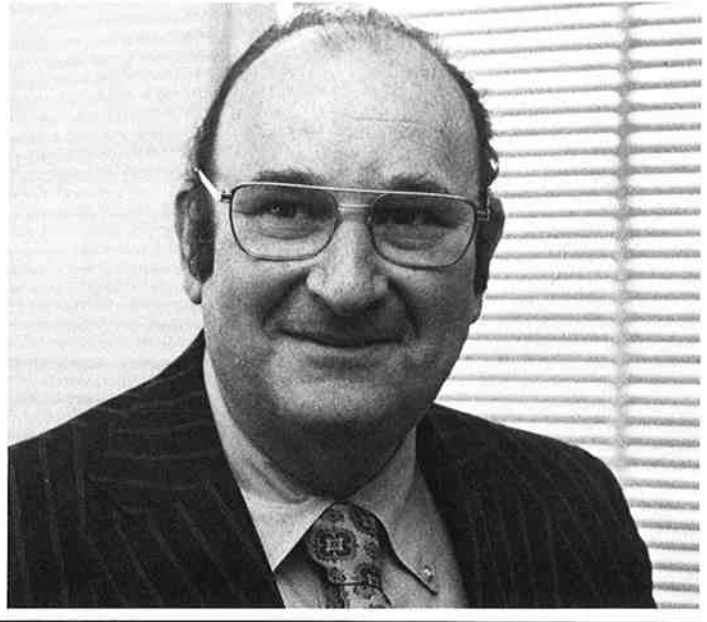
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Electronics Publishers since 1908

GEORGE JACOBS GAINS NEW POST

George Jacobs (M 1976), Chief of the Voice of America's Frequency Division for the past 23 years, has been promoted to the newly created staff position of Director of Research and Engineering at the Board for International Broadcasting.

This Washington-based five-man Presidentially appointed Board and its staff are responsible for granting Congressionally appropriated funds to Radio Free Europe and Radio Liberty, and for overseeing their operations. These comprise one of the world's largest international broadcasting systems and beam broadcasts to Eastern Europe and the Soviet Union. Board Chairman is David M. Abshire; Walter R. Roberts is Executive Director.

Jacobs, 52, has been with the Voice of America since 1949, where he played a leading role in the development of VOA's present worldwide broadcasting system. He is a distinguished and professionally recognized authority in international broadcasting and telecommunications, and has demonstrated ability over the years both as an able, talented engineer and as a skilled international negotiator. Jacobs was a major figure in discussions which eventually led to cessation of Soviet jamming against VOA, and is a veteran of more than a dozen major conferences of the International Telecommunication Union, where he has been instrumental in drafting international policy in telecommunications.



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EXPANDING RADIO CLUB MEETS FOR

by Ero Erickson, Fellow

The Grand Ballroom of the New York Sheraton Hotel was the scene of the celebration at the 67th Annual Awards Banquet of the Radio Club of America on the evening of Friday, November 19, 1976. The ballroom was packed to overflowing, with over 300 members and distinguished guests attending, attesting to the recent spirited growth of the Club, which now has two new sections: California and

Washington, D.C.

Captain William G. H. Finch, USN Ret., Fellow of the Club since 1933 and pioneer in facsimile and press teleprinter systems, was awarded the Club's top award, the Armstrong Medal, for his numerous contributions to the art and science of graphic communications embodied in over 180 patents in this important electronic field.

The Sarnoff Citation this year was awarded to Club President Fred M. Link, founder of the Link Radio Corporation in 1931, who in a few years later developed, constructed and installed the first successful statewide

FM 2-way radio system for the Connecticut State Police, the forerunner of what we now describe as land mobile radio. The award also recognizes his leadership and ability "to be everywhere" in fostering the Radio Club's growth.

The twentyfive members who had been elected Fellows in 1976 received Fellowship Certificates in recognition of their active involvement in improving the art of electronic communication through their personal dedication.

The President's Pioneer Citation was received by Harold H. Beverage (Fellow 1920) for his early experiments which



E 67th TIME.

resulted in the world renowned Beverage antenna system and his development of the dual-diversity reception system for short-wave radio.

The Ralph Batcher Memorial Award went to Morgan McMahon, in recognition of his efforts, "To preserve the history of radio before it evaporates," through the publication of several books dealing with "Vintage Radio." The award was made through the California Section. A Special Recognition Award was given to David Talley, a Fellow, life member and treasurer for his many years of distinguished service to the Club, at the

advent of his move to Florida.

The awards were presented by Club President Fred M. Link, Club VP Sam Harmatuk and Banquet Chairman Jack Poppele. Perennial Stuart (Stu) F. Meyer, Exec. V.P. again acted as Master of Ceremonies. President Fred Link (Fellow 1968) introduced the featured speaker of the evening, William J. Weisz (Fellow 1976), President, Motorola Inc. who delivered an address entitled "Is Business a Dirty Word," which received a standing ovation.

Many fine door prizes were distributed, which were donated by friends of the Club. Ralph Villers and

Milton Schwartz were official photographers at the meeting.

Managing the movement of members and guests as they checked in at the attitude adjustment hour with cocktails, skippered by Chairman Jack Poppele, were June Poppele, Lorraine Poppele Flower, Pauline Poppele, Vivian Carr, Ming Ashton and Sheila Shand. We thank our friends who helped make the cocktail session tops: ITT, E.F. Johnson Co. and Motorola.

Thus ended the Bicentennial Year 1976, while the Radio Club passed yet another very live milestone in pace with electronic progress.

BUSIGNIES RECEIVES EDISON MEDAL



Dr. Henri Busignies, a Director and Fellow of the Radio Club, has been awarded the Edison Medal of the Institute of Electrical and Electronic Engineers (IEEE) with the citation:

“for technical contributions and leadership in the fields of radar, radio communication and radio navigation.”

The Award is given for a career of meritorious achievements in electrical science, electrical engineering or electrical arts. It consists of a gold medal, a small gold replica, a certificate and \$10,000. The medal is to be presented to Dr. Busignies at the Institute’s Annual Banquet April 18, 1977, during the Institute’s convention and exhibition, ELECTRO, held in New York City at the time.

Dr. Busignies is possibly more than any other man responsible for our present development of radio navigation. In 1926, while still a student, he took out his first patent on

an automatic direction finder. During World War II his most dramatic invention, the instant automatic direction finder, called “Huff-Duff...,” was a dominant factor in wiping out the German submarine “wolf packs” that were preying on Allied merchant shipping.

For necessary communication with their bases, the subs used a “squirting” system in which messages were taped, then transmitted in a single very brief burst, too short for conventional direction finders to home in on. “Huff-Duff” pointed them out in the first few microseconds of transmission.

After the war, Dr. Busignies worked on instrument landing systems and navigational aids, doing important work on the systems known as ILS, VOR-DME, Tacan and Vortac, which are now used by military and civil aircraft the world over.



ORIENTAL APPROACH TO TRANSPACIFIC TRANSMISSION

By Don de Neuf

Formerly President, Press Wireless

Fellow, Radio Club of America

The use of a unique-facsimile telegraph system to transmit to the United States by HF radio, Japanese and Chinese news dispatches in their original characters from 1956 to about 1970 has not received the attention it deserves.

Transmitting these language in written (phonetic) form does not lend itself to the use of conventional “morse-like” forms. An adequate Chinese vocabulary, for example, requires some 6,000 ideographic characters. A simple character that looks like an inverted English “Y” stands for “man.” Another square box-like character stands for “mouth.” Small strokes above the box indicate “word” (presumably something by word). To compile a practical telegraphic character code that could be handled by manual telegraph operators to transmit and receive these 6,000-odd

characters was virtually impossible.

In the early 1900’s, when a few Morse telegraph circuits were established in China, a simple “telegraph dictionary” was devised by Chinese businessmen. Regular Arabic 4-digit number groups were assigned to represent thousands of Chinese characters. The operators and the circuits themselves had no difficulty transmitting, for example, a group like “6537,” which might mean “transfer money.” The problem was the delay in coding and decoding the message by the originator and the recipient.

Attempts to translate these languages, particularly Japanese, into Roman letters (Romanji) enjoyed some success. [Chinese is almost impossible to transmit in phonetic symbols. A language of no long words, each one has multiple

(continued on page 18)

payouts, or patent awards, the source is always profits. Without the earning of profit we could have none of these.

But equally important, out of that profit, we must invest continuously in new plants, tools, materials and receivables in order to maintain our share of the business, and grow. If a company starts losing its share of the business and doesn't make these investments, it starts losing position *ever* more rapidly. The companies who do increase their share, at the losing company's expense, can now make lower-cost products because of their volume. They can invest more in engineering or improved services to make their company step out in front. It is a snowballing situation where soon the company that does not make a profit and re-invest much of it in the business in order to serve the customer, will have to shut its doors and put *all* its people out of work.

Obviously, a company that sustains a loss substantially hastens this final result. Business history is filled with these situations. And so, Samuel Gompers knew, that in our competitive society, to *protect the jobs* of the working people, companies must operate efficiently and be profitable. Thus, simply said — and worth repeating — for people to share in a company's profits and thus achieve a better personal life, the company must make a profit. To make a profit, it must be successful in competition with other companies that are in similar businesses.

Let me tell you, the success of a company *is* in the hands of the customers. Despite the horror stories of many who believe, and continually spout, that businesses dominate and exploit the customer, the customer *must* be served with a good product or service at a fair value or he will take his business elsewhere or stop buying.

We can have successful businesses only by assuring that they are concerned about people and that people throughout the organization are concerned about other people. Such a business will operate with integrity and honesty — will develop good and high-quality products — will be properly quality products — will be properly concerned about its role in contributing to every phase of the public welfare. Business leadership has a major responsibility to set the proper example and to insist that its employees act

appropriately.

The free enterprise system in America has created our excellent standard of living. Technical innovation and achievement were made practical and delivered to the public as products and services in an affordable manner because of the ability of business to operate in an environment conducive to its growth.

At the present time, there are a variety of major efforts going on throughout the world, supposedly to correct all the alleged business abuses. Certainly where abuses exist, they must be corrected, but my concern is that the pendulum will swing from one end through the middle to the other. I'm afraid of overcorrection. Will we as a nation act rashly — and in the name of high ideals, destroy or severely hamper those things that brought us to where we are today? Will we throw out the baby with the bath water?

Bigness is not bad just because of its bigness — don't you believe the horror stories that the customer is at the mercy of business — it's not true — just look at what the customers did in the 1974-1975 recession. Actually, business in its broadest sense, rather than being castigated, should be established as one of our most respected occupations because it has, in fact, provided all the things that we enjoy today, not just money, but stimulus, challenge, free time, and the proper atmosphere that has allowed progress in social and cultural areas.

What we need is a balanced view of business. No question that there must be an absolute insistence by all of us — in and out of business — that we operate honorably and serve the public with high quality products at a fair price — but not a straight-jacket that forces us to operate in a manner that means we will end up being second rate to our foreign competitors — we can *all* only lose in the end that way.

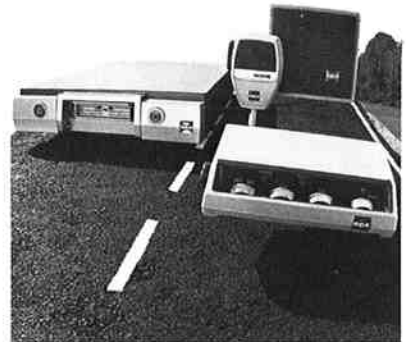
This is a serious matter — I kid you not.

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(continued)

meanings. The words pronounced "chang," for example, take up several pages in Mathew's Chinese-English Dictionary.]

The Japanese word for "goodbye" was in Roman letters spelled "sayonara" (which is about the way it would sound to a Western ear). But the system was hampered by its inability to transmit many words exactly with only Roman letter combinations. Translation into English, then back into the original, has been tried, often with weird results, as in one case of the Anglo-American idiom "Out of sight, out of mind." The third time around it came out in English as "invisible idiot!"

Newsmen considered it vital to be able to reproduce, information accurately and completely in the Chinese language newspaper published in San Francisco, and finally adopted the facsimile approach.

The basic tape-facsimile system was based on the so-called "Hell Schreiber" invented in the early 1930's by Dr. Rudolph Hell, for ordinary code transmission. This tape printing system was especially useful on HF radio circuits. The characters were formed through a cylindrical rotating segment commutator type of drum, over which rode a number of contact fingers. Each revolution of the drum was accompanied by finger contacts pressing against the commutator in an arrangement set up by an operators keyboard. This formed long and short pulses to produce alphanumeric characters over one revolution. At the receiving terminal the long and short pulses were impressed on paper tape through a hammer-like solenoid arm forcing the moving tape up against an inked rotating spiral wheel.

The rotation of the sending terminal cylinder and the receiving wheel ran roughly in synchronization through simple mechanical speed governors. If they did go out of sync there was no problem, because the recording was composed of two identical lines of intelligence, one above the other. When the scan speeds varies, the recording merely drifted up or down. When one line of copy began to disappear off the tape, the second one began to appear. Loss of copy was practically impossible. Because of this redundancy factor, a static crash or sharp fade on HF radio circuits often destroyed only part of a letter or figure, which could usually be reconstructed by a reader without much difficulty.

Copy was usually transferred from the "Hell" tape to some other medium. Otherwise the recipient had to pull the tape through his fingers to read it—just like a stock market ticker tape. Press Wireless used this system from New York to its station in Montevideo, Uruguay. An operator, reading the tape pulled automatically in front of him, punched a teletype keyboard directly into the addressee's office.

A Japanese company, Toho Denki (Eastern Electric) developed system that used the same general approach as the Hell for the recording end, but substituted a photoelectric scanner for the fixed-character cylinder commutator used by Hell at the transmitting terminal. The photocell scanning permitted the use of any ideographic language, alphabet or symbols, printed or written by hand. Both the Japanese and the Chinese press used the system extensively to deliver to the HF radio point of reception the ideographs in their original precise form, permitting the Oriental-language newspapers in the United States to reproduce the dispatches exactly.

OBITUARY

Two members and a long-time former member of the Club died recently: Pierre Boucheron (F 1920), Stanley L. Hawkins (M1969) and Wayne Nelson (M 1963, F 1973, L 1975).

Of Pierre Boucheron, E.J. Quinby says:

Capt. Pierre H. Boucheron, USN (Ret.) died at his home in Fort Wayne, Indiana on Sept. 28, 1976 after a protracted illness. Born in Paris, France, "Pete" came to the United States in his youth. He started his rise to fame as a Marconi wireless operator aboard Ward Line passenger ships in 1913 and began writing for technical publications. Upon the birth of the Radio Corporation of America, he became manager of its Public Relations department, reporting directly to David Sarnoff, former fellow operator. Upon the acquisition of the Victor Talking Machine Company at Camden, N.J. as the RCA-Victor manufacturing division, he became Manager of Sales Promotion.

His duty at sea during World War I as Ensign in the Naval Reserve aboard the Yacht ALOHA was a preview to his duties in Europe and Africa during World War II with the rank of Captain. In his retirement, he authored the book entitled *How To Enjoy Life After 60*. Those of us whose privilege it was to know him personally realize what an authority he was on the subject.

About Stanley Hawkins, Fred Link says:

The shock of Stan's death had its impact on several affairs of the Fall. Stan had planned participating in the APCO National Conference scheduled for August but health prevented his carrying out this plan. Later, he not only hoped to be at our 67th Annual Banquet in November but had sent for tickets and definitely hoped to be on hand November 19. Fate changed all that as Stan died just prior to the Banquet—and many of us were not even aware of this tragedy at banquet time.

Hawkins, in addition to being a loyal Radio Club member, was a staunch APCO supporter, and in the past few years had been the cornerstone that helped hold together the rather strange organization known as the CCC. ("Confederate Communications Commission") The CCC held its first meeting without Stan January 21 in Ft. Lauderdale and Stan was greatly missed.

Another of the more distinguished of the old-time members of the Club who passed on last year was Wayne M. Nelson, W4AA, of Concord, NC. Holder of the first license issued in the Fourth District since November 1919, he also held a commercial/broadcast First Class operator license, and during his career professionally planned, constructed, managed and owned seven standard broadcast stations in North Carolina. His collection of early wireless equipment and especially radio periodicals, is unsurpassed, and includes one of the very few complete files of *QST*.



Dave Talley receives plaque from Vice President Sam Harmatuk. Stu Meyer at left.

TALLEY RECEIVES SPECIAL AWARD

David Talley, our Treasurer since 1970, to whose indefatigable and conscientious efforts may be ascribed no small part in the building up of both the membership and the excellent economic situation of the Club, received a special award at the Annual Meeting November 19, 1976. The citation reads:

"David Talley, recognized by the

Board of Directors and its members for his efforts in fostering the growth of the Radio Club of America."

Mr. Talley has recently married, and in early January moved to Bel Harbour, Florida, where he will reside. While remaining Treasurer, he is delegating some of the details of his work to members in the New York area.

CLUB MEMBERSHIP UP

The Radio Club had 694 members January 1, 1977. This compares with 633 at this time last year and 598 in January 1975. The membership includes seven Honorary Members: Lloyd Espenschied, Ernest Amy, Joseph Stanley, Frank King, W.E.D. Stokes,

Richard Konter and Wally Watts, and 105 Life Members. Of the 694 members, 254, or 37 per cent, are Fellows.

Seventy-five new members were admitted into the Club in 1976.

MORE ON "POWER SUPPLY"

The short item "An Early Power Supply Problem (page 20, *Proceedings*, October 1976), brought out an unexpected reaction from a couple of readers. What happened, they asked, to that trolley car and its passengers, dashing out of control down a steep hill? As Bronx readers know, that hill has a sharp turn at the bottom.

The omission was simply due to the lack of space on the page, not the fault of the author, Jay Quinby. He told the whole story:

"But meanwhile, what of the Skipper of the Bailey Avenue Special? As he had done on previous occasions, he stuck bravely to his post, reassuring his handful of passengers that there was no cause for alarm—and to keep their seats. 'I've done this before,' he explained. 'we'll just land right-side-up on the roof of that yellow house at the curve.'

Where the street level had been raised to eliminate a deep hollow, it had left that residence with its roof at street level—stairs leading down from the sidewalk provided access to the original ground-floor entrance. As predicted by the Skipper, the little car jumped the track at the curve, crashed through the fence, and made a nice pancake landing on the roof of the yellow house. The owner of that residence had a veritable gold-mine on his property, for as usual, the trolley company promptly sent him a check to cover cost of repairs and compensating for his inconvenience. Then they would retrieve their latest truant trolley from his premises."

LIFEMEMBER CONTRIBUTIONS

More members contributing

Since the last list of contributors to the fund for new activities was published in the October issue of the *Proceedings*, a number of other members have made donations:

R.M. Akin, Jr.
Lawrence Cook
John D. Crawford
Edwin P. Felch
Thomas T. Goldsmith, Jr.
Arthur V. Smith
H. A. Wheeler

These contributions have been allotted to our Scholarship and Research funds, story on which appears on page 8.

The Pro Is Back!



Yes, Milt Friedberg is back again, building the best land mobile antennas for commercial 2-way communication systems.



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Andrew F. Inglis

Now President of RCA Americom

Andrew F. Inglis (Fellow, 1970) has been elected as President of RCA American Communications, Inc. This was announced today by Howard R. Hawkins, Executive Vice President of RCA Corporation.

Mr. Inglis previously was Division Vice President and General Manager, RCA Commercial Communications Systems Division. He succeeds Philip Schneider who assumes the new position of Executive Vice President, Operations and Engineering, for RCA Americom.

In September 1976, RCA Americom commenced operation of the RCA domestic satellite communications

systems (Satcom), which consists of two satellites in orbit and a growing network of ground stations in major U.S. cities.

Mr. Inglis joined RCA in 1953 as Manager of Studio Equipment Product Planning and later became Manager, TV Systems Engineering. During his RCA career, he has been closely identified with broadcast equipment activities. He was graduated from Haverford College in 1941 with a B.S. degree in physics. After a year of graduate study at the University of Chicago, he served as an instructor in electronics there before joining the U.S. Naval Reserve in 1943 as a Lieutenant.

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BILL EITEL IS BACK

William Eitel, of Dayton, Nevada, the Radio Club's recipient of the 5 Star Award in 1975, is well and active after a short illness, according to a letter from his Eimac office dated Jan. 21. The 5-Star Award winner was recognized for his ability to transmit and copy 80 words a minute via CW using an electronic keyboard. Due to his absence, he reports, "I have slipped more than 10 WPM." The small group of elite QRQ (send faster) operators on the ham airwaves is further troubled by a lack of agreement on space bar techniques and double memory buffers, according to a lengthy analysis by 70-year-old Bob White, W6PY, now attempting 100 WPM. After frequent CW contact with Eitel at WA7LRU-W6UF since New Year's day, White describes in writing the requirement that the mind stays in synchronism while operating on the "edge" of the memory buffer circuit. Once out of "synch" the monitor echo becomes a problem. The purists of the group claim that no true keyboard CW operator would use memory storing buffered boards and that sending without the break-in feature, merely becomes typing, says Bob White.

Ero Erickson

HAM CALLS IN DIRECTORY?

Member Erling R. Jacobsen, W9KBE (ex-K4JY and DL4QR) suggests that:

"Since a number of us cannot attend Club meetings and since quite a few of us are amateur radio operators, I might suggest that the roster contain the call signs of members so licensed. The Club might even select calling frequencies on 80, 40, 20 and 15 meters and perhaps OSCAR and a definite time each day when one could see if anyone is around. We might, in this manner, be able to propagate active interest in the Club and matters of communications interest."

The idea seems to be a good one. Only trouble: though many members have active calls, only a few of them appear on material (applications, etc.) that get to Club headquarters. If any members would like to have their calls listed with their names, please send them in. If they appear in any number, the next Directory will carry calls as well as names of the members listed.

ARE YOU MOVING?

If for any reason you are changing your address, be sure to let the Club know about it. First class mail is likely to be forwarded to you, but the *Proceedings*, newsletters and other third class mail will be lost. Get a change of address card from the post office and send it to the Club.

The best-kept secret in two-way radio isn't a secret anymore.

When Aerotron quietly introduced AeroCom three years ago, it was without fanfare.

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Son of Secret. This is Mpac. Sophisticated design for the buyer who's sophisticated about money, too. Contact us for prices and specifications that'll stand up under any comparison.



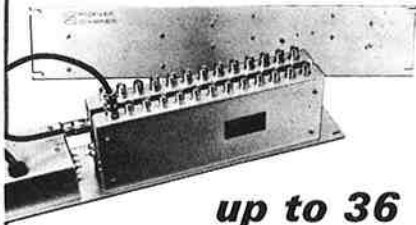
Secret. This is AeroCom. Introduced three years ago with a whisper, it's made quite a bang in the business. The dash-mounted AeroCom line includes UHF (450-512 MHz) as well as VHF high and low band radios with up to 60 watts of power and 4 channel capability.

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NEW MEMBERS

Nineteen new members have joined the Club since the last list of new members was published on page 26 of the October 1976 issue of the *Proceedings*. They are:

Demas, Elias. Land Mobile Radio Maintenance Technician, Commonwealth of Massachusetts. 3 Beach St. Wellesley, MA 02181.

Eggert, Jack. Consultant, global communications. 203 Golf Road, Deal, NJ 07723.

Frey, Ivan J. Frey Communications, Akron, OH. 1091 Jefferson Ave., Akron, OH 44313.

Friedman, Robert M. Attorney. FCC Regional Office, Park Ridge, IL. 1170 Robin Walk, Hoffman Estates, IL 60194.

Howes, Arthur W.H. Director, Wells Music Stores, Romford, Essex, England. The Mount, Lamberhurst, Kent, England.

Koczon, William J., W2HWQ. Retired, U.S., Army Signal Corps. 85 Lakeland Drive, Bricktown, NJ 08723.

Krossa, Kenneth D. Scientific Micro Systems, Mountain View, CA. 23405 Montclair Way, Los Altos, CA 94022.

Landau, Eric A., WA2KER. Motorola Communications and Electronics, Jericho, NY. 26 Periwinkle Road, Levittown, NY 11756.

Lazlo, John J., Jr. Security Analyst,

Electronics and Communications Equipment, Citibank, N.A. New York, NY. 8 Christie Hill Road, Darien, CN 06820.

Mascuch, Joseph J. President, Breeze Corporations, Inc., Union, N.J. 63 Sagamore Road, Milburn, NJ 07041.

Pierce, Cameron G., K6RU. Cam Pierce Associates, 570 LaMesa Drive, Ladera, Menlo Park, CA 94205.

Popkin, Samuel, Radio/RF/ISM coordinator, IBM SPD, Hopewell Junction, NY. Route 1, Box 43, Augusta Drive, Hopewell Junction, NY 12533.

Powell, Richard A. W6DML. Plant Manager, Teaberry Electronics Corp., Oceanside, CA. 13764 Recuerdo Drive, Del Mar, CA 92014.

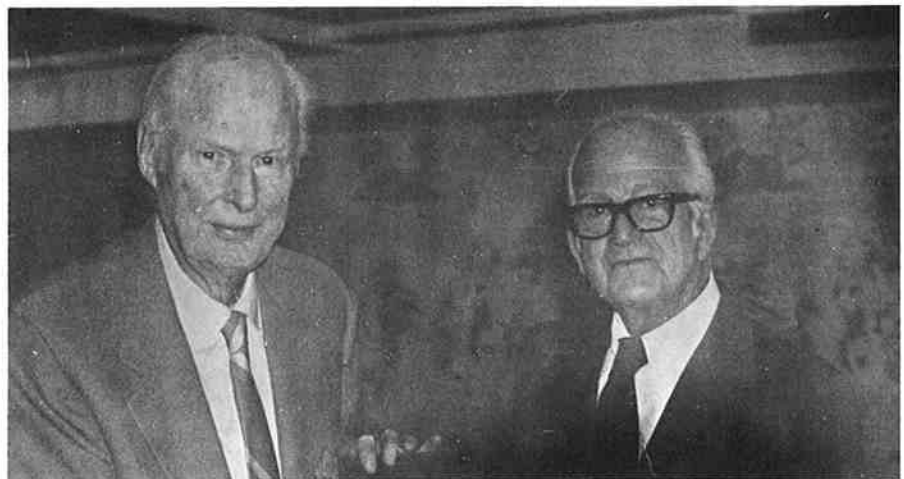
Robinson, Russell V. Police Department Communications, Detroit, MI. 8832 Steel, Detroit, MI 48228.

Roselle, William F. Motorola Communications and Electronics, Foster City, CA. 660 Draco Lane, Foster City, CA 94404

Spence, Raymond E. Chief Engineer, Federal Communications Commission. FCC, OCE, Washington, DC 20554.

Steckler, Lawrence. Editor, Gernsback Publications, Inc., New York, NY. 24 Straw Lane, Hicksville, NY 11801.

Stromberg, Roy T., W6GQD. Moltronics, Santa Clara, CA. 2286 Villanova Road, San Jose, CA 95130.



An informal shot of Jack Poppele presenting the Pioneer Award to our distinguished member Harold H. Beverage. Dr. Beverage, a Fellow of the Club since 1930, was awarded the Amrstrong Medal in 1938.

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AWARD RECIPIENTS OF FORMER YEARS

The Armstrong Medal

Alan Hazeltine	1937
Harold H. Beverage	1938
Greenleaf Whittier Pickard	1940
Harry W. Houck	1941
Carmen R. Runyon, Jr.	1945
Charles Stuart Ballantine	1946
John V. L. Hogan	
Captain Henry J. Pound	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	1969
Frank Gunther	1970
Renville McMann, Jr.	1972
Lewis M. Hull	1974
Henri Busignies	1975
Wm. G. H. Finch	1976

Sarnoff Citation

Barry Goldwater	1973
Jack R. Poppele	1974
Edgar F. Johnson	1975
Fred M. Link	1976

Ralph Batcher Memorial

Wm. H. Offenhauser, Jr.	1975
Morgan McMahan	1976

Pioneer Award

Richard W. Konter	1975
Morgan McMahan	1976

(continued)

department had applied for a clear channel for police use for the purpose of broadcasting instructional and educational material direct to the squad cars. The sole function would be for the training of new police officers. Federal funding would be available, provided the FCC would issue a license for the channel, Mr. Higginbotham said. During the discussion, one participant suggested that issuance of tape cassettes would do as well, without the loss of a radio channel needed for dispatching.

During the discussion of deregulating the radio operator license, Higginbotham suggested that we "should not be emotional about it". He realized that possession of a radio operators license is a "good first screen" when applying for a job. He was careful to add that he himself had a license and also an amateur call, WB3DLT. (Mr. Spence has W4QAW.) In his view, most of the CB radios are now serviced by TV shops with personnel who do not understand low-pass filters. Many sets investigated had maladjusted tuning slugs, were self-adjusted by unqualified owners or made wrong originally, he

said. All of which causes interference to television and public safety services, he added. Mr. Higginbotham stated that there are over 240,000 small boaters licensed and that "there weren't enough service people to make required adjustments"—and measurements.

Ray Spence revealed on going co-operation with the makers of electronic devices, one of which is the new electronic light bulb. This new and highly efficient bulb, which gives greater light with less power, is equipped with a 14-MHz oscillator which originates destructive radiations to TV sets and other communications systems. He was pleased that early knowledge of the device will help to avoid serious problems later.

The FCC is moving into the control of incidental radiating devices, Spence said, but the problem of the fancy \$700 stereo console receiving interference is beyond the realm of the Commission. Most units are imports, not covered by our manufacturing rules. He also said that Cable TV systems often cause serious interference to the safety services and should be designed

"fail-safe" with respect to accidental radiation.

Responding to questions (during Q & A), Ray said that further channel splitting would not be as productive as "off set" assignments geographically considered.

Charles Higginbotham claimed that there were 7 million CB-ers now, with 5 million 23-channel sets on inventory, worldwide. He said that Class-E Citizens band proposals are "still going" with a study underway for the need for additional space. The completion date is set at June 1, 1976. The 4-pm closing remark was that, "In a couple of weeks", the FCC will "go after the CB linear manufacturers."

Of interest in this high operational level meeting was the urge by the principals to be identified by their amateur call letters, for example note the moderator W5AE (American Eagle) Jerry Stover and Club President W2ALU Fred Link, who was roasted for not being on the air since he got the call. After all, it was a RADIO club meeting.

National Business Radio Dealers Conference April 27, 28, 29

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- Martin Cooper, general manager, Communications Systems Division, Motorola
- Robert Mattingly, Head Mobile Systems Development Dept., Bell Laboratories
- Bill Detwiler, senior staff engineer, Regency Electronics, and former dealer
- Gene Martin, vice president, Parts and Service, Motorola
- Charles Higginbotham, chief, Safety and Special Radio Services Bureau, FCC
- Claude McDoulett, President, Land Mobile Communications Council

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OLD-TIME HAMS GET TOGETHER



Frank Gunther, W2ALS, Amory ("Bud") Waite, W2ZK, and Victor Colaguori, W20MS, in an eyeball QSO during the "attitude adjustment hour" before the November 19 Banquet. Gunther is a Past President of the Radio Club and a Fellow since 1940. Waite and Colaguori came from south Jersey to receive the grade of Fellow at the Banquet. Old-time friends and associates, Victor Colaguori was one end of the communications link from Normandy Beach to the Isle of Wight on D-Day (see details in the *Proceedings*, November 1974, page 22.). With a temporary antenna and a Link 75-to-100 MHz FM AN/TRC 1 transmitter, he was heard by Waite on the Isle of Wight "the first time he pushed the key down." Bud Waite attended the Banquet on crutches, the result of a broken hip suffered recently in a fall while erecting an antenna.

COMMITTEE HEADS, 1977

<i>Affiliations</i>	Jack Poppele
<i>Awards</i>	Jerry Minter
<i>Banquet</i>	Jack Poppele
<i>Constitution</i>	David Talley
<i>Finance</i>	W.G.H. Finch
<i>Meetings</i>	Mal Gurian
<i>Membership</i>	Vivian Carr
<i>Nominations</i>	Charles Summers
<i>Papers</i>	Wm. Fingerle
<i>Publications</i>	James Morelock
<i>Research and</i>	
<i>Scholarships</i>	John Rider
<i>Publicity</i>	Leo Sands
<i>Proceedings</i>	Fred Shunaman,
<i>Advertising Director</i>	Stuart Meyer,

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