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#### WHAT ABOUT THE FUTURE?

During the past couple of years an intensive study has been carried on to up-date the scope of our operations and to find new objectives that better meet the wishes of present members. A Scope and Objectives Committee has been set up for this analysis, From personal contact and correspondence with many members several suggestions have been received. These will be thoroughly analyzed and brought before the Board of Directors for action.

The Club is more than solvent, even though its dues structure has not been changed during its whole existence. Competition with other organizations, periodicals and technical meetings has taken its toll. Nevertheless the Directors believe that a way may be found so that the Club can take on new life, and be of service both to long-time members, (a great many of whom have retired) and to younger ones.

It is hoped that other members who have not been contacted yet will send in thier own ideas immediately. Our Club is small, compared with thousands of members to other contemporary organizations, However, it is able to undertake operations more personally oriented to its members, needs. This phase we hope to do better in the future. Some of the suggestions being looked into (or already under way) are:

(a) Preservation of the memorabilia of early years, the personal information from those who were there, the documents, notes about who did what, and examples of the equipment that played important roles in early develop-

(b) Encouraging efforts of members who have the know-ledge and maybe plenty of time of late to try out new fields of technical acitivity. The art now has dozens of interesting processes that have been uncovered by other developments. Many of these would make ideal hobbies if applied to uncommon applications. Some would require help from other club members to make things more interesting. Thus, publicizing contemplated and active efforts in any field to get like-minded experimenters together, is one task easily handled in our Proceedings. Some of these ideas are now being written up.

(c) We have established annual Honor Achievement Awards to the top two high school students who are active in the Science Honors Program handled by Columbia University School of Engineering, and who show the most promise in the opinions of the faculty members handling that Program.

(d) Another project being studied is how to include more information of personal interest about our members in the issues of the Proceedings.

There are other suggestions about possibilities, so if you want to get more in return for your dues expenditure, let us know how we can help.

Ralph R. Batcher President

#### CITATION ON THE OCCASION

OF THE

#### AWARD OF THE ARMSTRONG MEDAL

TO

#### HAROLD A. WHEELER

"in recognition of his outstanding contributions to the art and science of radio communications. Although his contributions have been recognized by his professional colleagues by numerous preeminent awards, it is particularly appropriate that this year, which marks the 25th anniversary of F. M. broadcasting, the Armstrong Medal is awarded to one who also pioneered in the field of frequency modulation. His theoretical analyses of frequency modulated signals helped outline the boundaries of this new discipline.

In forty years devoted to the radio art, Harold A. Theeler has made substantial contributions to the theory of television systems, wideband amplifiers, transmission lines, antennas, microwave elements, circuits and receivers. The awarding of this Medal is in recognition of his rare ability in reducing to practice, for the good of all, the results of individual research."

Awarded November 20th, 1964.

ABRAMS, STEPHEN J., (M) 1961 - Consulting Engineer, 632 West 125th St., New York 27, N.Y. Res. 1305 East 18th St., Brooklyn 30, N. Y.

ADAMS, ROBERTH. (M) 1956 - Field Engineer, Electronic Instrumentation Manufacturers Rep.; Education, B.S. Psychology, Rutgers University; Military Service USAF Auto Missile Tracting Officer; lst. Lt. USAF; amateur call letters K2BTC, 6 yrs; hobbies, amateur radio, flying, res. 2439 3rd St., Fort Lee, N. J.

ADELMAN, LEON L. (F) 1950 - Retired; formerly Sales Representative, Leon L. Adelman Co., 25 Chittenden Ave. N. Y. C. 33; b. Russia, August 19th, 1903; married; ed. Syracuse Central High School, Brooklyn Polytech I year, Cooper Union I year; Amateur since 1917; W2AFS since 1923; Charter Member - Syracuse Radio Amateur Club 1917; Syracuse Central High Radio Club, 1921; Bronx Radio Club 1921; F. A. D. Andrea 1922/1923; Radio Editor "Science and Invention" "The Experimenter"; Technical Editor "Radio News", Associate Editor "Amateur Radio", Radio World 1923/1926, Assistant Advertising Manager of Chas. Freshman Co. 1926/1927; Sales Manager for A. M. Flechtheim & Co. 1927/1932, Sales Manager Cornell-Dubilier Corp. 1934/1944; Manufactured "Supreme AF - 100" All-band AM-FM Transmitters 1946/1948; Member Planning Committee for "Hugo Gernsback Testimonial Trophy" at Chicago, May 17th, 1953.

AKIN, ROBERT M., JR.(F)1925 - President, Hudson Wire Co., Ossining, N. Y.; res. 28 Evergreen Way, North Tarrytown, N. Y.; ed. Morristown Preparatory; interested in radio since 1918; b. Ossining, N. Y., June 26, 1904; Professional Experience - Westchester Radio Laboratories 1923/1929, Director of Research, Hudson Wire Co. 1934; Radio Club of America Vice President 1948.

ALBERTSON, FRED (WOODWARD), (M) 1957 - Munsey Bldg., Washington 4, D.C.; American lawyer and engineer; radio and communications legal counsel for radio, television, telegraph, telephone and broadcasting companies and stations since 1935; partner in Dow, Lohnes & Albertson (specializing in communications, radio and air law), Washington, D.C., and N.Y.C., since 1944 engaged in research on Dualex communications systems and products since 1948; Licensed radio operator since 1924; b. 1908; educ. University of Michigan (A.B. 1931; LL.B. 19-34); m. 1942, Catherine Frances Dolan; s. Fred Woodward, Jr.; dau. Helen Dolan. Engineered construction and operation of several radio broadcast and radio telegraph stations 1925/27; radio equipped and handled communications with several remote meteorological expeditions and stations for University of Michigan 1927/ 34; Admitted to Michigan Bar 1934, District of Columbia Bar 1935, and Supreme Court of the United States 1940; member, Board of Trustees and Director of Delta Theta Phi Foundation 1945/46; Registered Professional Electrical-Communications Engineer in the District of Columbia; Senior Member, Institute of Radio Engineers (Chairman, Washington, D.C., Section 1946/47; Board of Editors of Proceedings of I.R.E. 1946/54; member, American Institute of Electrical Engineers and Broadcast Pioneers; President, American Federal Communications Bar Assn. 1953/54; Fellow, American Bar Assachtter 1956/54, St. 1953/54; sociation 1953/54; Chmn., Standing Cttee. on Communications of the American Bar Association 1957 --: member, District of Columbia Bar Association, The American Judicature Society, Delta Theta Phi Law Fraternity; Past Vice-President and Treasurer, Engineers Club of Washington; Past President, Washington Radio Club; cofounder and Past President, University of Michigan Radio Club; member, Congressional Country Club and The Capitol Hill Club (Washington, D.C.); Licensee amateur radio station W3RMC and W4FMC. Address: Munsey Building

Washington 4, D.C., and 3512 One Wall Street, New York City 5, and (home) 3753 Jenifer Street, N.W., Washington 15, D.C.

ALEXANDER, JAY R. (M) 1957 - res. 1655 Flatbush Ave., Brooklyn. N.Y.

ALEXANDER, LOUIS (F) 1924 - Field Engineer, Cornell Dubilier Elec. Corporation, South Plainfield, N.J.; res. 322 West 72nd St., New York 23, N.Y.; b. New York City, February 1, 1900; married; ed. High School of Commerce, evening courses at Cooper Union and CCNY; Purchasing Agent for DeForest Radio 1918/1921; Sales Engineer Dubilier Condenser Co. 1921/1926; Sales Engineer for Aerovox Corp. 1926/1946 and Sales Engineer for Cornell Dubilier Elec. Corp. 1946/1953; Sales Engineer, General instrument Corp. and Melco Products, Inc. 1954 to date.; Member IRE and Elmwood Country Club, Elmsford, N.Y.

AMERMAN, EDWARD ANDREW (F)1953 - Electronic Design Engineer, Kay Electric Company, 14 Maple Avenue, Pine Brook, N.J.; res. 59 Harrison Ave., Roseland, N. J.; b September 16, 1908 at Newark, N.J.; ed. Grammar School Miller Street, Newark; High School East Side Commercial and Manual Training, Newark; Two terms Newark College of Engineering; U.S. Army Signal School Fort Monmouth, N.J. Graduate U.S. Army Armor Officers communication School, Fort Know, Ky.; U.S. Army and New Jersey National Guard since 22nd December 19-26. Present status Chief Warrant Officer, Communications Advisor on the Staff of Combat Command "C", 50th Armored Division (Jersey Blues) at Paterson Armory; Married, two sons; Sports - Hiking, Hunting, Fishing and Base Ball; Hobbies - Rifle and Hand Gun Shooting, Radio and mechanics; Societies - Member of Radio Club of America since 1938, National Guard Association of the U. S., U.S. Army Armor Association, Military Amateur Radio Society, Armed Forces Communication and Electronic Association, National Rifle Association, Roseland Rifle and Pistol Club, Communication Officers Club, Army and Navy Union of the U.S., National Guard Radio Amateurs Association, Past Post Commander, Post #4 Legion of Guardsman.

AMY, ERNEST V. (CM, LM, F) 1910 - President, Amy, Aceves & King, Inc., Consulting Engineers, organized 1928, 11 West 42nd St., N. Y. C.; res. 61 Bay Blvd., Atlantic Beach, N.Y.; b. N.Y.C., February 11, 1892; married; ed. E.E. Degree Columbia University 1917; U.S. Army, 1st Lieut. Eng. Corps, 77th Div., Overseas Service 1917; Engineer, Test Dept., New York Edison Co. 1918/1920; Marconi Wireless Telegraph Co. 1920/1922; Radio Corporation of America, Engineer in Charge of Radio Relay Station, Belfast, Maine, 1923/1925, Antenna and Transmitter Design Section 1926/1928; Amy, Aceves & King, Inc. 1928 to date. Inventor and co-inventor of many radio and electronic devices; granted over 30 U. S. Patents, others pending. Member AIEE, Society of IEEE American Military Engineers, Armstrong Memorial Research Foundation - Charter Member 1955, Director to date. Treasurer Radio Club of America, Inc. 1911/1920, Director 1921, Vice President 1922, President 1926/1928, Director 1929 to date. Recipient Armstrong Medal 1950 for IBCG activities 1921.

ANDERSON, NORMAN J. (M) 1951 - Consulting Radio Engineer; res. 152 Fairview Ave., Boonton, N.J.; b. Brooklyn, N. Y. April 24, 1916; ed. RCA Institute, Stevens Institute Graduate School; member IRE, ARRL.

ANDREWS, RAYMOND W. (M) 1946 - Manager, Finished Goods Planning and Tube Industry Sales, Electronic Tube Division, Westinghouse Electric Corp., Elmira, N. Y. res. 110 Sickles Road, Rt. 2 Elmira, New York; b. September 15, 1907 at Buffalo, N. Y. married; ed. Nichols Prep. School, Buffalo - Lehigh University, University of Buffalo, George Washington University; 8CMF in 1925, W8OLB in 1935; W3OLB in 1946; K2KZJ currently. Em-

ployed since 1930 in various pnases of Retail Wholesale and Manufacturing as technician, supervisor and manager. Coordinated design, production, marketing. 1942, 1944 in charge allocating and distributing all Navy fire control radar. 1944/1945 in command of activity assembling and testing combat units and other electronic programs. Currently Captain USNR, member ARRL, IRE, Naval Reserve Assn., American Ordiance Assn.

ARNOLD, JOHN WILLIAM (F) 1929 - res. 37 Washington Square, New York 11; b. Paulding, Ohio on September 13, 1899; married; ed. AB 1921, AM 1923, University of Illinoise; radio since 1915; Engineer, Western Union Telegraph Company, 1923/1941, Artillery and Signal Corps Officer, Army of U.S. 1941/1946; Engineer, International Telephone and Telegraph Corporation 1946/1950, retired, 1951. Senior member Institute of Radio Engineers.

ATKINS, C. E. (M) 1962 - Director, Advanced Development at Tung-Sol Electric, Bloomfield, N. J. With Tung-Sol since 1940, including sales engineer, Director, R & D, Director, Engineering, Radio and Tube Div.; Director Engineering and Marketing, Semiconductor Div. Sparks-Withington Co., Jackson, Mich. 1928/1940. Author of 15 technical papers and holder of 43 U. S. Patents. Senior Member, IEEE; Member, SMPTE, SAE.

ATWOOD, HORACE, JR., (M) 1956 - President and Chief Engineer, Industrial Television, Inc., Clifton, New Jersey, 12 yrs., prior Chief TV Engineer, Allen B. DuMont Labs., Inc., res. RRI, Box 715, Montville, N. J.; b. Morgantown, W. Va., April 22, 1918; ed. B.S. and M.S. Physics, West Virginia University, Amateur Call Letters. Present WASXW, prior W8RFP, W8TNC, since 1937; hobbies, etc., active in Civil Defense Communications and Rad-Chem.

AULL, WILSON, JR., (F) 1920 - Hogan Laboratories, Inc. 155 Perry St., New York 14, N. Y.; Research and Development Engineer 1929 to present.

AVALLONE, ALFONSO (M) 1956 - res., 882 First Avenue, Franklin Square, New York.

BAILEY, ARNOLD BROWN, (M) (L)(F)1961 - M.I.T. Staff Lincoln Lab., Arnold B. Bailey Corp., Francestown, N.H. formerly Bell Telephone Lab., M.I.T. Dept. Engineering Adm., amateur call letters ImB 1919/1925, 2UQ1926-19-30, W2GYF 1931/1940, Patents, Books, First Basic Omni-Directional Range Patent, First Basic Coaxial Antenna Patent Book: TV & Other Receiving Antennas (1950), Hobbies, American Rocket Society, Photographic Circle of Confusion, N.Y.C., Music, violin, Consultant to U.S. Navy on Shipboard Antenna Coordination, Trustee, Francestown (N. H.) Library, Deacon, Unitarian Church, Francestown, N. H., School Board Chairman, Francestown, N. H.; b. July 12, 1903, Providence, R. I., res. Francestown, N. H.

BAILEY, GEORGE W. (F) 1948 - Consultant, Institute of Radio Engineers, res. 61 East 66 St., N. Y. C.; b. May 14, 1887 at Quincy, Mass.; ed. A.B. 1907 Harvard; SC D. 1958 Lawrence College (Hon radio since 1923, Director NE Div., ARRL 7 yrs, Vice President. ARRL 4 yrs, Pres. ARRL 12 yrs., Pres. Int'l. Am. Radio Un., 12 yrs., Amateur Stat. W2KH; Pres. Certificate of Merit, Honorary Member, Veteran Wireless Operators Assoc. Marconi Medal of VWOA, QCWA, AFCEA National Pres. 1954/56, AFCA N.Y.R.C., State Dept. 1957, Consultant on Telecommunications to Undersec'y. Dillon, Cosmos Club of Washington, D.C.

BAILEY, WILLIAM F. (F) 1960 - V. President, Key Color Studios Inc., Mineola, L. I., N. Y. res. 37 Chestnut St. Garden City, N. Y. b. May 4, 1911, Buffalo N.Y. M.E., 1933, M.S., 1941, Stevens Institute of Technology, Fellow IEEE. Of IEEE Committees: Television, 1946 - 49;

Television Systems, 1949, vice - chairman, 1955-58, chairman, 1958-69; Standards; Tellers, 1953-55, chairman, 1954. Sections: Long Island, Chairman, 1954-55.

BARA, STANLEY (M) 1964 - res. Blackwell Ave., Morristown, N.J.

BARBER, ALFRED W. (M) 1951 (F) 1958 - Chief Engineer, Alfred W. Barber Laboratories, 32-44 Francis Lewis Blvd., Flushing, N.Y.; b. Portsmouth, N. H., July 24, 1906; ed. B.S. in Communication Engineering, Harvard Engineering School 1928; interested in radio for 40 years Browning Drake Corp., Radio Frequency Laboratories, Hazeltine Corporation, Electrical Research Products, Inc. own business from 1936; married; registered Patent Attorney with over 15 U.S. Patents in communications field; about 20 magazine articles and Rider's "Vacuum Tube Voltmeters"; Hobbies - Photography and Golf.

BARONE, SALVATORE A. (F) 1926 - President Northern Radio Co., Inc., 134 West 20th St., New York. N.Y. res. F oot of Clocks Blvd., Amityville, Long Island, New York; Radio Club of America Director 1950.

BATCHER, RALPH R. (F) 1943 - Electronic Consultant, Product Design and Automatic processes. 240-02 42nd Ave., Douglaston (63) N. Y. b. Iowa 1897; ed. E. E. Iowa State College; sarted in radio 1909, amateur stations 9IT AND 9YI from 1911 to 1917. Inspector (radio) Dept. of Commerce, 1918; circuit engineer automatic switching 1920/ 24. Receiver Design Engineer, A. H. Grebe & Co., 1924/28; Director of Engineering A. D. Cardwell Corp., till 1944; Editorial Consultant, Electronic Industries, 1944/ Chief Engineer Electronic Industries Assn. (then RETMA) 1950/54; Professional Engineer N. Y. State; Fellow I. R. E.; Chairman of Board, National Electronics Conference 1955; Director Radio Club of America 1944 to date; Past Pres. Instrument Society, New York Sec., Several patents and author "Prepared Radio Measurements", "Cathode Ray Oscillography" "Electronic Engineering Handbook', "Electronic Control Handbook" and several hundred for technical publications. Tau Beta Pi. Editor IEEE Transactions Product engineering and production. Radio Club of America President 1963 -

BAUM, ELMER (M) 1950 - Electrical Engineer, ITT Labs. 500 Washington Ave., Nutley, N. J.; res. 375 Fifth Ave., River Edge, N. J.; b. Brooklyn, N. Y., Nov. 7, 1917; ed. B. E. E. Polytechnic Institute of Brooklyn, B. S. EM Fairleigh Dickerson Unit; interested in radio for 28 yrs.; professional experience RCA, Radio Wire Television Co., Signal Corps Labs. and ITT Labs; married.

BEHR, JOSEPH (F) 1948 - Vice President, Radio Engineering Lab's. Inc., 29-01 Borden Ave., Long Island City 1, N. Y.; res. 118-44 223 St., Cambria Heights, New York; b. N. Y.C., August 22, 1908; ed. Primary and High School graduate, Stuyvesant High School, 1925; radio ten years; Associate member Institute of Radio Engineers; Member Armed Forces Communications and Electronics Association.

BERNARD, HERBERT S. (F) 1941 - Engr. Ware Marine Products 6763 SW 81 St., Miami, Fla. res. 6321 SW 80 St. Miami, Fla. (Automatic Pilot for marine use) President of Ware Marine Prod. b. N. Y. C., July 26, 1900; radio since 1912; amateur 1929 to 1947; Air Force, World War I; Hobby - Flying; Patents 2,521,564 and 2,520,749; married.

BEIN, ALFRED A., (M) 1957, Buyer - Ladies Coats, Arnold Constable, 13 yrs., Amateur 6 yrs., Sports, hobbies, etc. weight lifting, music, dancing, ALFCE and SSBARA, ed., New York University, b. July 6, 1910, The Bronx, N. Y. C.; res. 4521 E. Washington St. Indianapolis Indiana.

BEVERAGE, HAROLD HENRY (F) 1920 - Consultant, Radio Research Laboratory, Radio Corporation of America, RCA Laboratories Division, 66 BroadSt., New York 4, N.Y.; 1942/1957 Chief Technical Advisor, Communications, 1957/1958. Retired 1958, retained as consultant RCA Lab., Rocky Point, New York Res., PO Box 312 Stoney Brook, Long Island, N. Y.; b. North Haven, Maine October 14, 1893; ed. B. S. E. E. University of Maine, 1915. Honorary Degree, Doctor of Engineering, University of Maine, 1938; interest in radio since 1908; Amateur license in First District 1911/1915, W2BML 1919/22: General Electric Company 1915/1920, Radio Corporation of America 1920 to date engaged in radio research and development; IEEE (President 1937,) American Institute of Electrical Engineers, American Association for the Advancement of Science, International Geophysical Union American Radio Relay League; Hobbies - Amateur photography, sound re-recording; Eight published papers Forty one U.S. Patents; married, Armstrong Medal

BIGGS, J. ALLEN (M)1949 - Sales Engineer, J. Alan Biggs Co., P.O. Box 450, Doylestown, Pa., b. Indianapolis, Ind., January 9, 1911; res. Gardenville, Pa.; ed. State State School of Mines, Rapid City, South Dakota; interested in radio thirty years; amateur 28 years; W8BXK, W9EH, W8LO, W2ZW, WIZX, W3ZP; RCA International Division, Lulu Shrine, Philadelphia; Private Pilot, Hunting Valley Hunt Club, QCWA, Farmer.

BOGHOLTZ, RICHARD, JR., (M) 1957 - res. MacGregor Drive, RFD #1, Austin Road, Mahopac, New York.

BOHMAN, ALBERT KASPER (F) 1926 - Retired formerly Staff Assn. to Manager Ground Operation, Pan American Airways, International Airport, Miami Fla.; res. RFD 1 PO Box 183-B Horse Shoe, N. C.; b. Long Island City, N. Y. on August 9, 1900; ed. Grade and High School N.Y.C., Brooklyn Polytechnic Institute, Brooklyn, New York; interested in radio forty years; Engineering Department, Radio Corporation at Marion, Mass., New Brunswick, New Jersey and 66 Board St., N.Y.C. from 1920 to February 1929, Communications Department of Pan American Airways from February, 1929 to September, 1957 Ground Operations September, 1957 to date; Served in U. S. Naval Reserve from September 1917 to 1921, Active Service during World War I, September 19-17 to August 1919; married.

BOLIN, RAY E. (M) 1959 - res. 26 Twin Springe La., St. Louis 17, Missouri.

BORST, JOHN M.(F)1934 - Radio Engineer, Haskins Laboratories, 765 United Nations Plaza, New York 17, New York; b. Lienden, Province of Gelderland, Netherlands; ed. Technical University at Delft, Netherlands; interested in radio since 1914; Ship's radio operator 1922/1927, Broadcast station engineer 1926/1927, Technical Editor Radio News 1931'1937, Engineer Aerovox Corporation 1937/1938, Recording Engineer 1941, Engineer and Writer John Rider 1941/1944, Engineer Halstead Traffic Communications Corporation 1944. Hammerlund Manufacturing Corporation 1944/1946, Haskins Laboratories 1946 to date; IEEE and Audio Engineering Society; single.

BOSE, JOHN H. (F) 1938 - Senior Lab. Supervisor, Electronics Research Lab., 632 W.125th St. N. Y. C., Columbia University; res. 549 W. 123rd St., N. Y. 27; b. New York, March 26, 1912; ed. B. S. 1934, E.E. 1935, Columbia School of Eng., Gano Dunn Fellowship, Columbia 1934/1935; interested in radio from boyhood hobby; Ass't. in Dept. of E.E. 1935/1937, 1937 to 1954; Engineer for E.H. Armstrong, Development in FM Transmitter, CW Radar FM Multiplex Transmitters and Receivers; U.S. and British patents in CW Radar and FM multiplexing; 1954 to date at Columbia University Electronics Research Labs - Development of Long Range Radar - appointed Associate Prof. of Engineering 1957. Tau Beta Pi, Sigma

Xi, Epsilon Chi, Senior Member IEEE; Member Audio Eng. Soc. Radio Club of America, Pres. 1952/1953; Corr. Sec'y. 1949; Rec. Sec'y. 1944'1948. Radio Club Armstrong Medallist 1959; married.

BOUCHERON, PIERRE (F) 1920 - Writer; editorial advisor to college newspapers; res. 2813 Bellaire Drive, Fort Wayne, Ind.; b. Paris, France on August 22, 1889; ed. Schools in France and U. S., Journalism, Radio, Naval Science plus residence and correspondence course during adult years in radio, literature; radio amateur in N.Y.C. 1908/1912, ship wireless operator Marconi Co. 1912/1916; U. S. Navy 1917/1919, then editor of the original Radio News magazine 1919/1920, then Public Relations Director for RCA 1920/1928, then Sales Manager, Promotion Manager for RCA 1928/1932, then Merchandising Manager for Remington Arms 1933/1938, then General Sales Manager for Farnsworth Television Corporation, U. S. Navy 1941/1946, then retired as Captain (Permanent Grade) 1950; Senior Member I.R.E.; Life Member Veterans Wireless Operators Association, Army and Navy Club, Washington; Explorers Club; Numerous U.S. and Foreign decorations including French Legion of Honor.

BRADLEY, WILLIAM D. (F) 1941 - Monmouth Radio Supply Co., 404 Shrewsbury Ave., Red Bank, N. J.; b. November 18, 1908 at Lyons, N. Y.; ed. High School; interested in radio for 32 years; married; P. P. Red Bank Lions Club, P. P. MCBC of the Methodist Church, P. P. Red Bank Community Chamber of Commerce, P.C. JOUAM, Mystic Lodge #21, Tall Cedars, BPOE #233, Radio Old Timers; Radio Club about 10 years; Member of Navy League of United States; Crescent Temple A.A.O.N.M.S. of Trenton, N.J.; Ancient Scottish Rite Valley of Trenton N.J.; President of Atlantic Township Fire Co., Colts Neck, N. J.

BRANDEAU, EDWARD P., (M) 1960 - Patent Attorney, Curtis, Morris & Safford, 530 Fifth Ave., New York 36, New York.

BRIDGELAND, CHARLES J. (M) 1951 - Canadian National Telegraphs, Radio Engineer, 347 Bay St., Toronto, Ontario; res. 191 Riverside Dr., Toronto3, Ontario, Canada; b. December 1908 at Barrie, Ontario; ed. M.A. Sc. in radio engineering University of Toronto; interested in radio for thirty years; National Research Council, Ottawa, Research Enterprises, Ltd., Toronto on Propagation and Antenna Design for Radar - Canadian National Telegraphs on application of point to point and mobile radio for systems operation; Senior Member of IRE, Associate Member of Institute of Electrical Engineers; married; Hobbies - High Fidelity Sound.

BROWN, HERBERT H. (M) 1960 - bus. Technical Appliance Corp., Sherburne, New York res. East Hill, Sherburne, New York.

BRUNET, MEADE (F) 1928 - Vice President, Radio Corporation of America, 30 Rockefeller Plaza, New York 20, N. Y., res. Millsdale Farm, Mendham, N. J.; b. Petersburgh, Va., June 21, 1894; ed. B. E. Union College 1916; Sigma Phi, Sigma Xi; interested in radio since 1919; G.E.Co. and R.C.A.; Served as 1st Lieut., Co. A, 56th Engrs. World War I, military combat service with French 8th Army and First Am. Army A.E.F.; member IRE, Acad. of Polit. Science, American Soc. of Naval Engineers, Director of Far-East American Council of Commerce & Industry, Vice Chairman of Bd. of Trustees of Union College, Chairman of Business Council for International Understanding; Clubs - University (N.Y.), Army & Navy (Wash., D.C.), Somerset Hills (Bernardsville, N.J.) Radio Pioneers; Author; History of the 56th Engineers in First World War; married; Director of R CA Victor Argentina, SAIC; RCA of Australia Proprietary Ltd; RCA Victor Company Ltd. (Canada); Photophone Equipments Private Ltd. (India); RCA Victor Mexicana, S.A. de C.V.; National Foreign Trade Council, Inc. Dir of American Electronic Enterprises, Ltd.

BUTTNER, HAROLD H. (F)1928 - Director Hewlett Packard Co., Palo Alto; res. Belmont Ave., Rye, New York; b. November 3, 1892 at Port Costa, Cal., ed. B. S. in Electrical Engineering, University of California; interested in radio 43 years; amateur 1910/1915; Bay Counties Radio Club; 1915/1917 U.S. Navy Radio Development and Installation Mare Island Navy Yard and American Samoa; 1918/1920 U.S. Navy Installation Lafayette, France; 1921/1924, member of the staff of Western Electric Company and Bell Laboratories; 1926/1946 International Telephone and Telegraph Corporation; 1946/1951 President Federal Telecommunication Laboratories; 1951 to 1957 Retired; Vice President in charge research and development International Telephone and Telegraph Corporation: Decoration - Commendatore dell fordine della Corona d' Italia; married; Westchester County Club Downtown Athletic Club, University Club, San Francisco.

CALLAHAN, JOHN L. (F) 1921 - Research Administrator, Radio Research Laboratory, RCA Laboratories, Radio Corporation of America, Rocky Point, New York; res. 67 Nassau Ave., Malverne, Long Island, N.Y.; b. Minneapolis, Minn. - December 9, 1898; married; ed. High School, Army Signal Training, Sorbonne University Paris, France, New York University,; interested in radio since 1912; amateur crystal receiver and straight gap transmitter experiments 1912/1917; Signal Corps Laboratories, Little Silver, N.J. 1919/1920; Radio Corporation 1920 to date; research and development on marine shore station receivers and antennas; long distant point to point radiotelegraph, telephone and radiophoto receivers and antennas; aircraft beacon receivers; terminal facilities radiophoto, time division multiplex, teleprinters, etc.; Research Administrator IRE and American Institute of Electrical Engineers; Three published papers; six U. S. Patents; Sports, tennis; Hobby - gardening; Radio Club of America President 1941; Vice President 1940; Director 1935/1948,

CANAVACIOL, FRANK E. (F) 1934 - Professor of Electrical Engineering Polytechnic Institute of Brooklyn, 99 Living ston Street, Brooklyn 2, N.Y.; res 7119 Juno St., Forest Hills 75, New York; b. January 16, 1896 in N.Y. C.; ed. Polytechnic Institute of Brooklyn, E.E. 1918; married; interested in radio about 40 years; Professional experience in consulting and teaching fields; co-author "Radiophone Receiving" and Swope's Lessons in Electricity," Fellow AIEE, SM-IRE, Member AAUP Member ASEE.

CANO, JOHN R., (M) 1956 - res. 58 Cocas Lane, Locust Valley, N.Y., b. November 12, 1925, Bronxville, New York ed. Clarkson College of Tech., Potsdam, New York; Research Eng., Photo Circuits Corp., 31 Sea Cliff Ave., Glen Cove, L. I., N.Y., Military Serv., U.S. Army, Amateur Call Letters EX K2 MAK; U.S. Power Squadron, U. S. Coast Guard Aux., IRE, Etched Ckt. Society.

CARINI, LOUIS F.B. (F) 1930 - Engineering Manager, Apparatus Development Co. Inc., Wethersfield, Conn.; res. 246 Wolcott Hill Rd., Wethersfield 9, Conn.; b. Salisbury, Conn. 246 Wolcott Hill Rd., Wethersfield, Conn. June 21, 1911; ed. Hillyer Junior College, Conn. Teachers College, Temple Bar College, Ph. D.; amateur station 1-BOC in 1928. Served as technical field rep. for E. H. Scott Radio Labs.; training supervisor Underwood Elliott Fisher Co.; plant supt. Hershey Products Co. etc. U. S. Coast Guard 1943,1946 as instructor, laboratory research, and engineering writer at Coast Guard Headquarters, Communications Engineering Section, Washington. Project engineer, LaPointe Plascomold Corp.; Ass't chief engineer and research director for LaPointe Electronics Inc., Since 1955 Engineering Manager of Apparatus Development Co.; Author of "Drafting For Electronics," "How To Do Your Own Electrical Servicing" "All About FM Antennae and Their Installation" and numerous technical articles published in electronic and hi-fi magazines. Hobby, sports car and collecting antique vacuum tubes.

CARLEBACH, WALTER M. (M) 1939 - Retired; res. 47 East 64 St., N.Y.C.; Electrical Engineer; Columbia University.

CASTRIGNANA, ROBERT A., (M) 1960 - Audio Engineer, CBS Laboratories, 227 High St., Stamford, Conn. Res. 157 Idlewood Dr., Stamford, Conn.

CERVANTES, HOWARD T.(F)1939 - President Electronicraft, Inc., Mt. Kisco, New York; res. 34 Johnson Road Binghamton, New York, ;b. December 15, 1902 in N.Y.C.; married; ed. N.Y.C. Grade and High Schools and N.Y.U.; Amateur 1920 to date with present call W2 DB: Lieutenant Commander U. S. Navy Communications Officer 6 1/2 years World War II.

CHALFIN, NORMAN LEONARD (M) 1948 - Sub. Group Hd. Member of Technical Staff, Hughes Aircraft Co. Ground Systems, Fullerton, Cal.; res. 460 San Juan Place Pasadena, Cal.; b. Philadelphia, Pa. October 15, 1942; ed. B. S. University of Georgia 1936; Graduate studies Columbia Univer. 1936/1941; presently studying law at Southwestern Univ. Law School; professional experience - instructor, electrical engineer, chief engineer; technical editor and writer; W. E. Co. 1942; Crystal RES Lab 1943; Recordograph Patents 2,477,160 and 2,632, 811; Registered Patent Agent. Many articles in Radio and TV News, Radio Electronics, Pop. Science, Pop. Mechanics, Electronics, Televisor, Radio and TV Maintenance, Radio Service Dealer and Tele-Tech., Hi-Fi column in local newspapers Southern Cal. area, 1957, Treas. Los Angeles Section, Audio Engineering Society; 1958, Vice Chairman Section, AES, 1959, Chairman, Section, AES, Member Los Angeles Patent Law Ass'n.; Papers before AES 1956, 1957, 1958, 1959; Member, International Ass'n. for the Protection of Industrial Property; Dir., Bd. of Dir. Los Angeles Science Center Founding Com.

CHAMBERS, ALBERT B. (M) 1949 - RD2 Box 227 A. Absecon, New Jersey; b. Jersey City, New Jersey August 18, 1896; ed. Pace Institute 1917/1919; member American Television Society. Empire State T. V. Guild; Sons of American Revolution; Institute of Radio Engineers; Licensed Real Estate Broker-New Jersey-New York.

CHITTICK, K. A. (F) 1941 - Eng. Manager, Consumer Prod. Div. RCA, Indianapolis, Ind., res. 8020 College Avenue, Indianapolis, Ind.; b. Old Bridge, New Jersey November 6, 1903; married; ed. B.S.E.E. Rutgers University; amateur pre World War I; General Electric Co. 1925/1930; RCA 1930 to date; Ten patents; several papers Fellow IEEE; Franklin Institute Electronics Club; Many Committees RETMA, EH, Hobbies - Golf, fishing and baseball.

CHRISTALDI, P. SAMUEL (F) 1940 - Executive, Celco, Mahwah, New Jersey; formerly Product Manager, Electronics Div., Curtiss-Wright Corp., Carlstadt, New Jersey, Prior, Div. Mgr. Technical Products, Div., Instrument Div. Allen B. DuMont Laboratories, Inc.; res. 132 Squire Hill Rd., Upper Montclair, New Jersey, b. November 26, 1914 in Philadelphia, Pa.; e. Rensselaer Polytechnic Institute; E.E. 1935 Ph. D (Physics) 1938; interested in radio since about 1931; amateur since 1931, W3BHT, W3AWZ, W2ZZBH, W2DMH, W2ZZDJ, W2ENY; presently active on 50 mc; Professional experience Dumont, engineer on cathode ray tubes and oscillographs from 1938, 1941/1947 Chief Engineer CRO, oscillographs TV receivers, transmitters; 1947/1952 Engineering Manager, Instrument Division; numerous U. S. and For-

eign Patents and applications; electronics; numerous lectures and papers in technical journals; hobbies, ham radio, scouting (committeeman); Montclair Society of Engineers (President 1953/1954).

CIMORELLI, JOSEPH T. (F) 1956 (M) 1950 - Manager, Manfacturing, Receiving Tube Operations, Electron Tube Division, Radio Corporation of America, Harrison, New Jersey; Res. 10 Cromwell Dr., Morristown, New Jersey; b. March 18, 1912 in Catskill, New York; ed. St. Patrick's Academy, Catskill, N. Y., Massachusetts Institute of Technology B. S. 1932, M. S. 1933; Professional Experience, Tube Department RCA Victor Division, Harrison, New Jersey Laboratory 4 years, Field Engineer 6 years, Manager Application Engineering Laboratory 8 years, Assistant to Vice President and Director of Engineering, Radio Corporation of America, Camden, New Jersey 3 yrs.; 2 years; IRE, Secretary-Treasurer of New York Section, Chairman, New York Section; Various IRE Section Committees; Charter member of Vatican Philatelic Society.

CLARK, LOUIS E. (M) 1939 - res. 298 Highwood Ave., Glen Rock, New Jersey; b. Jersey City, New Jersey, August 9, 1898; member IRE, Curtiss-Wright Corp., Prop. Division, Caldwell, New Jersey, since 1940 to date.

CLEMENT, LEWIS M. (F) 1919 - Consultant, RFD3 Doylestown, Penn. (18901); b. Oakland, Calif. January 25, 1892; married; University of California B.S. in E.E. 1914; Amateur 1905/1914 at Oakland, Calif.; Professional experience 1914/1959, radio operator summer 1911 and 1912. Marconi Wireless Tel. Co. of America, Kahuku, Oahu, T.H., and Bolinas, Calif., Western Electric Co. and Bell Telephone Laboratories; FADA RADIO; KOLSTER RAD-IO; Federal Telegraph and European I. T. T. Companies; RCA Mfg. Co., Camden, New Jersey and Crosley and Avco Mfg. Corp., Crosley Div. Many patents and Technical Articles; Chairman Advisory Group Reliability of Electronic Equipment Dept. of Defense; Fellow IRE Cosmos Club, Washington, D. C.; Member American Ordinance Assn.; member Armed Forces Communications and Electronic Assn.; Awards: Modern Pioneer Award, February 1940; National Assn. of Mfgrs.; Naval Ordinance Dev. Award; Bureau of Ordinance-U.S. Navy, December 10, 1945; Pioneer in the Field of Aircraft; Electronic Dev., May 4, 1950; Dayton Section I.R.E.; Contribution to Creation of Color Television Standards, June 17, 1954; RETMA-Placque Presented to Lewis M. Clement for Distinguished Service to Industry and Government in the field of Reliability, October 18, 1959; RETMA AND IRE, A Pioneer Award, presented by The Professional Group on Aeronautical and Navigational Electronics to Lewis Mason Clement by IRE 1951; Radio Club Director 1920 / 1930; Recording Secretary 1921; Vice President 1928 and President 1929.

COBB, HOWARD L. (F) 1934 - Engineer, Aircraft Radio Corporation, Boonton, New Jersey; res. 250 Rockaway Avenue, Boonton, New Jersey; b. July 17, 1896 at Salina, Colo.; married; ed. MIT 1923 S. B. Electrochemical Engineering; interested in radio since 1910; professional experience Radio Laboratory Philadelphia Navy Yard; RCA; Benjamin Elect.; Finsteel Products Co.; Ballantine Laboratories; Airciaft Radio Corporation; School Board; P.P. of A.E.S. Newark Branch; member A.S. M.; Mason.

COHN, HUGO (F) 1939 - Consulting Eng., 221 W. 57 St., New York, N. Y.; Formerly President Radio Receptor Co. Inc., 84 Noth 9 St., Brooklyn, N. Y.; res. 905 West End Ave., N. Y. C.; b. November 26, 1887 in N. Y. C.; married; ed. E.E. Columbia University, 1909; interested in radio 36 years; professional experience engineering and management with Radio Receptor Co., Inc. 1922 to date.

COLLISON, PERCE BRAWN (F) 1934, Retired (1958) res. 9 Lorraine Dr., Eastchester, N.Y.; b. Brooklyn, New York, June 15, 1891; married; e. High School followed by various special courses in Physics, Electrical Engineering, Television, interested in radio since 1905, 2KN with rotary spark gap until World War I; Vice President New York Radio Club, Amateur (K2DZ) 'Extra Grade' Lic. Charter Member 'Quarter Century Wireless Assn.' Member "Westchester Amateur Radio Ass.", President Hammond Organ Society of Westchester; Professional experience, United Wireless Co. installer, Marconi Co. shipboard inspector and superintendent of construction, Field engineer, Stromberg Carlson Co., Export manager; Hollicrafters Co., Lieutenant Commander U. S. Naval Reserve set up Radio Material School for Navy Radio, Radar, Sonar, and Visual Signalling. Charter Member IRE, Wireless Institute, Wireless Assn. of America; Antique Wireless Association; Member ARRL, Armed Forces Communications Assn., Military Order of World Wars, Naval Order of the U. S.; Radio Club Recording Secretary 1949, Membership Com. Chairman 1950/1953.

CONNOR, GEORGE C. (F) 1936 - Senior Vice-President, Sylvania Electric Products Inc., Batavia, N. Y. res. 135 Pearl St., Batavia, N. Y. b. Hoquiam, Washington, May 28, 1903; s. John Henry and Anna Mary (Brisel) C.; student, U. Wis. 1922/1924; m. Helen Loosbrock, 1933; children, George Carley, Terrance Curtis. Mfg. br. service Brunswick Radio Corp. Chgo., 1926/1930; gen. mgr. Electronic Radio Corp. N. Y. C., 1930/1933; sales engr. Sylvania Electric Products Inc., NYC, 1933/1950; gen sales mgr. photolamp div., 1950/1958; vp., marketing, eastern region, 1959/1960; senior vp of marketing, 1960/1962; sr. vp gen. mgr. home and comml electronics div., Batavia, N.Y., 1962-Fellow, Radio Club Am. mem. IEEE, Photog. Mfrs. and Distbrs. Assn., (dir) Photog. Soc. Am. (Corner Stone mem.) A. A. A. S., Electronic Industries Assn. Clubs: N. Y. Athletic, Sales Executives NY, Stafford Country, Batavia. Home, 123 Pearl St., Weisdale, Fla. Radio Club Vice President, 1949.

COOK, LAWRENCE (M) 1939 (F)1957 - Engineer, Boonton Radio Corporation, Boonton, New Jersey; res. 610 William St., Boonton, New Jersey; b. Bryan, Ohio October 4th, 1908; ed. Bliss Electrical School; member IEEE.

COULTAS, CHARLES (M) 1960 - bus. 4035 Lindell Blvd., St. Louis, Mo. res. 1610 Topping Rd., St. Louis 31, Mo.

COYNE, THOMAS F. (M) 1961 - bus. R. M. C. Associates, 236 East 75th St., New York, N. Y. res. 18 Sunnyside Blvd., Plainview, New York.

CRAMER, BRUCE G. (M) 1955 - Electronics Engineer, Research Division, Philco Corp., res. P. O. Box 273 Blue-Bell, Pa.; b. November 22, 1930 in Harrisburg, Pa.; ed. Pennsylvania State University, BSEE, 1952, current graduate study, University of Pennsylvania, previously with Bendix Aviation Corp. 1952/54; Military Service, Signal Corp. 1954/1956.

CRAWFORD, JOHN D. (F) 1939 - res. 16 Lodge Road, Great Neck, New York; b. Barberton, Ohio April 30, 1904; Senior Publication Engineer, Hazelton Corp. 59-27 Little Neck Parkway, Little Neck 62, New York.

CRAWFORD, ROBERT V. (F) 1940 - Electrical Engineer-General Electric Company, Schenectady, N. Y. 1928 to 1930; Bell Telephone Laboratories, Inc., Murray Hill, N.J. 1930 to date; Residence Il Crest Circle, Murray Hill N.J.; Education Rensselaer Polytechnic Institute; New York University, B. S. in E. E. - Senior Member IEEE; Member of Professional Group on Vehicular Communications; Member of various Special Committees of Radio Technical Commission for Marine Services (R. T. C. M.); Member of U. S. Study Group XIII of International

Radio Consultative, Committee (C. C. I. R.) member of U. S. Delegation to IXth Plenary Assembly, Los Angèles, 1959; patents in mobile radio and control fields; interested in radio since 1920; amateur license W2JLH since 1936; Telephone lst Class License; Member, Telephone Pioneers of America; former president, Westchester Amateur Radio Association; Member, Quarter Century Wireless Association and North Jersey DX Association. Hobbies, boating, photography.

CRONKHITE, MINTON (F) 1919 - Radio Club Corresponding Secretary 1920; Director 1921/1922; Armstrong Medal 1950; IBCG Group. P. O. Box 805, Rancho Sante Fe, Calif. President Liberty Electric Co. 1928 at Stanford, Conn.; Radio Club of America Armstrong Medal 1950 - IBCG.

CRONKHITE, WILLIAM GORDON FELLOWS, (M) 1955 - Industrial Management, res. P.O. Box 805, Pancho Santa Fe, California, e. Univ. of Southern California; Military Service U. S. Navy 1951/1955, Amateur Call Letters K6 QQN, 4 years.

CRONKHITE, M. B. (M)1955 - res. P.O. Box 805, Paucho Sante Fe, Calif.

CROSBY, MURRAY G. (F) 1939 - Pres. Mars Electronics. 135 Eileen Way, Syosset, N. Y. Formerly President and Research Director, Crosby Laboratories, Inc., 299 Robbins Lane, Syosset, N. Y.; res. 93 Muttontown Road, Syosset, New York; b. Elroy, Wis. September 1903; married; ed. University of Wisconsin 1927 B.S.E. E.; amateur W2CSY formerly 9AOX; professional experience RCA Laboratories 1927/1944; Press Wireless 1944/1945; Paul Godley Co. 1945/1948; Crosby Laboratories, Inc. 1948 to present; Approximately 180 U. S. Patents; 20 Technical Publications in Proceedings IRE, RCA Review, QST and others.

CUNNIFF, LEO C., (M)1958 - Vice Pres. (Eng.) for manufacture of electronic test equipment and analytical equipment for chemical industry, Industrial Instruments, Inc., 35 Hillcrest, Cedar Grove, N.J., (17 yrs.), Military Service U. S. Navy 1944/1946 Radar Maintenance on U. S. S. Princeton CV-37; Amateur Call Letters W2OEH, 1940 Patents, Books, etc. (Basics of Radio Control - Air Trails Model Annual 1953 - Street & Smith); (Plug-In 27 Mc. Radio Equipment - Air Trails June 1950) (Instruments - World War I to date, The Hudson Engineering Jr. October 1952) Sports and Hobbies, Skiing, Flying, Skin Diving, Photography, Music.

DARRELL, ROBERT D. (M) 1946 - Music Critic, freelance, res. Balmoral, the Vly, Stone Ridge, New York; b. December 13, 1903 Newton, Mass.; single (div.); ed. Newton Public Schs., New England Consevatory of Music; interested in radio; amateur audio amplifiers and testing since 1942; professional experience Instruction Book Editor (IFF) Hazeltine Electronics Corp. 1943/1946; Magazine articles (Electronics, Saturday Review, Audiocraft, etc. and lectures on audio subjects, Audio Engineering Society, IRE, Music Librarians Assoc., etc.) Books, Good Listening (Knopf 1953, Mentor reprint 1955; Schirmer's Guide to Books on Music and Musicians (1951, Supplement in prep. 1959); Gramophone Shop Encyclopedia of Recorded Music (1936); one time Editor of Phonograph Monthly Review, Review of Recorded Music, Music Lover's Guide; since 1956 Contributing Ed. High Fidelity Magazine; many articles and reviews (mostly on recorded music).; Guggenheim Fellowship 1939; Societies AES (CM); IRE (A); Acoustical Society of America (A).

DAVIS, E. STUART (M) 1961 - res. 1149 Heber St., Union, New Jersey.

DAY, HOWARD BLOODGOOD (F) 1912 - Retired, 1960; formerly Electrical Engineer Pennsylvania Power and Light Co., Allentown, Pa., res. 2131 Baker Drive, Allen-

town, Pa.; b. November 2, 1894 at N. Y. C.; married; ed. Westfield, New Jersey Public Schools and University of Illinois, B. S. E. E. 1922; interested in radio since 1908; Amateur station "HDF" Westfield in 1908/1918 and licensed as 2KK 1913/1917; Commercial First Grade Radio Operator License No. 2488 in 1913; Chief Operator U. S. Ambulance Ship "Surf" in 1917 with Atlantic Fleet Member IEEE; Registered Professional Engineer in Pa. Lehigh Valley Engineers' Club and The Pennsylvania German Folklore Society which is a hobby or side study as is photography and TV circuitry; founding member of the Armstrong Memorial Foundation.

DEAN, FRANK C., (M)1955 - Western Electric Co., Military Engineering Service, Winston-Salem, North Carolina. Permanent location: Bell Telephone Laboratories, Murray Hill, New Jersey (Dev. Engr.) res. Mountainside Ave, Brookside, New Jersey, ed. Morristown High school (rech), Morris County Junior College 1933/1936 (Engr.), Military Service U. S. Maritime Service, September 1944/September 1945 (Radio Officer), Amateur Call Letters W2CKN, September 1932 to present time, F. C. C. Radio Telegraph 2nd. 1944/1949; Sports, Hobbies, etc., Electronics, sports.

DELLENBAUGH, FREDERICK S., III, (M) 1961 - bus. De-Var Systems, Inc., 494 Glenbrook Road, Glenbrook, Conn. res. 4909 Congress St., Fairfield, Conn.

DEMARCO, MATHEW (M)1962 - bus. Boonton Electronics Corp., Morris Plains, New Jersey, res. 1 Rosemont Lane West Orange, New Jersey.

DiBLASI, JOHN (F) - Electronic Sales, Cooper-DiBlasi, 90 Main St., Port Washington, Long Island, New York; res. 155 Bayview Rd., Plandome, New York; b. New York City November 5, 1898; married; ed. New York City, Schools, Cooper Union, Electrical Engineering 1922; interested in radio since 1912; licensed as amateur 2AGD in 1915, re-licensed as 2FD in 1920, presently W2FX; electronic sales business since 1915; taught radio in YM CA Schools and Jamaica Vocational High School; Senior Member IRE, member ARRL, North Shore Radio Club; Past President North Shore Radio Club; President Quarter Century Wireless Association.

DICKEY, EDWARD T. (F) 1927 - Retired; formerly Engineer RCA Laboratories, Princeton, New Jersey; res. 104 Jefferson Rd., Princeton, New Jersey; b. November 16, 1896 Oxford, Pa.; Married; ed. B. S. College of the City of New York; interested in radio since 1909; held amateur license for station 2CN from about 1913/1928; professional experience RCA Research Department in New York 1919/1924; Technical and Test Department 19-24/1929; RCA Victor 1929/1941, RCA Laboratories 1942 to date. Present position, Coordinator, Technical Publications; several patents on radio; about ten technical articles on Radio; Hobby - Photography; Senior member IEEE.

DIEHL, WILLIAM FRANCIS (F) 1924 - Formerly Engineering Executive, Dumont-Airplane and Marine Instrument, Inc., Clearfield, Pa.; res. 2024 Columbia Pka. Arlington, Va.; b. December 18, 1896 at New York City; ed. Flushing High School, Columbia University, Alexander Hamilton Institute, LaSalle; married; interested in radio since 1907; amateur 1907/1917, professional experience, Chief Radio U. S. N. 1918/1919, Chief Engineer A. H. Grebe 1919/1928, Assistant Chief Engineer and Division Manager RCA Mfg. Co. Camden 1928/1938; Director of Engineering and Manufacturing, Product Manager Assistant Vice President Dumont, Airplance and Marine Instruments, Inc. 1938 to date; patents Cathode-Ray Oscillograph, Apparatus for Calibrating Piezo-Electric Elements, Crystal holder; Publications; Section (2) Properties of Materials, Pender - McIlwain, Electrical Eng-Hand Book, Colume (5) Electrical Communications and

Electronics; Papers in Radio Club, Electronics, Radio; Chairman, Philadelphia Section, Chairman IRE Ninth Annual IRE Convention; Fellow IRE; Certificate of Commendation U. S. N. World War Two; Sports: Tennis, Badminton and Crokinole; Hobby - Photography including medical. Registered Professional Engineer, Commonwealth of Pa. Standard Teaching Certificate (Photography), Commonwealth of Pennsylvania; Commercial Radio Operator's License-1913; Commercial Radio Operator-1919.

DOUCHA, ARTHUR FRANK (M) 1951 - Industrial Salesman Continental Sales Co., Inc., Newark, New Jersey; res. 41 Union Co. Pkway, Clark, New Jersey; b. New York City September 30, 1907; ed. Grammar and High School, New York Electrical School; married; interested in radio since 1924; built transmitters and receivers for amateur use in late 1920's; Radio Service business with a stress on sound installations; served in U. S. M. C.; member of A. E. S. and V. F. W.

DREHER, CARL (F) 1923 - Writer, Science Editor. The Nation, 333 Sixth Ave., New York, N. Y.; res. R. F. D. #3, Brewster, New York; b. Vienna, Austria, February 16, 1896; married; ed. B. S. City College of New York 1917; Assistant Research Engineer, Marconi Wireless Telegraph Co.; Receiving Engineer, Broadcasting Station Engineer, Radio Corporation of America; Staff Engineer, NBC, Chief Engineer RCA Photophone; Director of Recording, RKO Studios; Air Corp. AUS 1942/45; Fellow, IRE, Radio Club of America Director 1927/1928, Vice President 1929.

DROSTE, GEORGE THEODORE (M)1926 - res. 8536 Oso., Avenue, Canoga Park, Calif.; b. N.Y.C. November 23, 1886; ed. Public School, Night and Trade Schools; interested in radio since 1903; School under Kolster 1904/1905; amateur 1912 2EU, after World War I call changed to W2IN; Signal Corps WWI; Production Engineer WW2 Bell Labs. at West Street and Western Electric at Kearney on radio, Architect and builder since 1901; Infantry 1906/1911, Signal Corps 1911/1936, Grade Captain N.G.N. Y., 1940/1942 Lieutenant Colonel Infantry; Member Staten Island Amateur Radio Club, IRE.

DUBILIER, WILLIAM (F) 1920 - res. 72 Esplanade, New Rochelle, New York; b. N.Y.C. July 1888; married; ed. Technical Institute, Cooper Institute; interested in radio since 1903; professional experience; experimental and original development of high frequency generators 1906, Chief Electrician Continental Wireless and Telegraph Co. 1907, President and Technical Director Commercial Wireless and Telegraph Co. 1909, organized Dubilier Electric Co. London 1910, Dubilier Electric Co. 1912, Dubilier Condenser Corporation 1913, Radio Patents Corporation 1917, all leading up to many present companies in this country and abroad.

DUSKIS, EPHRAIM F. (M) 1963. Director, of public utilities, A. S. Beck Shoe Co., 25 West 43rd St., New York 36, N. Y., consultant on most economic use of power and lighting; formerly, purchasing agent and auditor. res. 2109 Broadway, New York. N. Y.; b. June 26, 1898, Leeds, Yorkshire, England. Ed., Public schools, Brooklyn Evening High School and Cooper Union in New York. Worked for patent attorney Bernam C. Stickney 1917/1918; Electro Experimental Publishing Co., Gernsback publication; 1918; to W. L. Cummings, facsimile experimenter, 1919/1920; Compensation Inspection Rating Bd. of New York 1920/1921; Safety Engineer, In, representing Amsco Products, Micamold Radio, Charles E. Chaping, DeForst Radio, etc., 1930. Amateur first grade license, 1916; member IRE and IEEE since 1916.

EGOLF, RICHARD S. (F) 1945 - Supervisor. International Program - Radiophoto Department, RCA Communications, Inc., 66 Broad St., N. Y. C.; res. 90 Eighth Ave. Brooklyn 15, N.Y.; b. Brooklyn, New York. December

30, 1895; ed. Public School 131, Manual Training High School, Pratt Institute, Brooklyn; married; interested in radio since 1909; Amateur station RS 1909, licensed 2LE in 1912, relicensed W2WX in 1919 and active ever since, hold Amateur Extra Class, First Class Radio-telephone and Radiotelegraph Licenses; Marine Radio Operator for Marconi Company 1914 SS Hamilton, SS North Land, SS Evangeline and for Nationl Electric Signalling Company SS Priscilla, SS Commonwealth and land station FNK Brooklyn; Radio Intelligence Division Signal Corp. U. S. Army World War L, Senior Member IRE, Member Veteran Wireless Operators Association, Quarter Century Wireless Association, Old Old Timers Club, DeForest Pioneers, Broadcast Pioneers.

ELDRIDGE, ALBERT B. (M) 1958 - Sales Engineer, "Measurements" A. McGraw Edison Div., Boonton, New Jersey; 23 Fern Road, 473, Sparta, New Jersey, e. attended, Rutgers University, Business Administration, RCA Institute s, Engineering; Military Service Signal Corps. Air Corps., 1942/1945.

ENGLE, KARL D. (M) 1929 - President, Karl D. Engle Co., sales representations, 4724 N. Sheridan, Chicago, 40, Ill.; res. 3621 W. Devon Ave., Chicago 45, Illinois; b. February 9, 1899 Shelbyville, Ky.; ed. High School. Ex. Courses in E. E. at Columbia University; interested in radio forty-five years; married; professional experience in radio parts manufacturing since 1917, mostly as Factory Superintendent and production Manager with large Eastern parts manufacturers; member Chicagoland Chapter of "Electronic Representatives Association," past President 1956.

ENGEL, FRANCIS H. (M) 1960 - Retired from R C A Washington, D. C.; res. RFD #1, Bennington, Vermont.

ESPENSCHIED, LLOYD (F) 1925 (H) 1963 - Research Consultant, retired from Bell Telephone Laboratories; res. 99-82nd Rd., Kew Gardens 15, N.Y.; b. April 27, 1889 St. Louis, Mo.; ed. Pratt Institute 1909, hon. D. Sc. 1957; married; interested in radio since 1904; amateur 1904/ 1909 Brooklyn, New York Station "XY"; summers 1907/ 1908 ship wireless telegraph operator United Wireless Teleg. Co.; 1909/1019 assistant engineer Telefunken Wireless Telegraph Co. of Amer., TWT at Ill Broadway, N.Y.C.; 1910 to 1954 with Bell Telephone System (AT&TCo and Bell Telephone Labs.) on research and development in radio and carrier systems; over hundreds U.S. patents dozens of technical papers, participated in national and international conferences on electric communications, received several honors; hobby - history, electrical and family (genealogical); Fellow AIEE, IRE; mem. Ocean Club of Forest Hills; Radio Club Director, 1931.

FAIRMAN, HARRY E. (M) 1946 - Chief Technical Editor, Polarad Electronics Corp., Long Island City, New York Business address: 34-02 Queens Blvd; home address: 41-41 Forty-First St., Long Island City, New York. Other memberships: Senior Member, I. E. E. E. and S. T. W. P., Resident Member, Museum of Modern Art, Member, Mensa. Graduate Pragmatist.

FARRAND, CLAIR L. (F) 1921 - President - Farrand Controls Inc., 4401 Bronx Blvd., N. Y. C.; President - Inductosyn Corp., 729 N. Carson St., Carson City, Nev.; res. 133 Pondfield Rd., Bronxville, New York; b. October 22, 1895 at Newark, New Jersey; ed. Central High School, Philadelphia, Pa. 1908/1911; married; interested in radio 45 years; amateur station WN 1908, Denver 1910; professional experience: 1912/1919 Design Engineer, Marconi Wireless Telegraph Co., 1919/1920 Assistant Chief Engineer Wireless Improvement Co., 1922/1924 Consulting Engineer Atwater Kent, 1924/1929 President Farrand Manufacturing Co., 1930/1936 President United

Research Corp. (subs. Warner Brothers Pictures, 1937/1940 President Independent Res. Service, 1940 to date President Farrand Optical Co., Inc.; about 30 U.S. Patents, about 10 Foreign Patents; Sports - Tennis, Fly Fishing, Yachting; Societies - Fellow IRE, Society Motion Picture and Television Engineers, Member American Physical Society, British Kinematograph Society Clubs - New York Yacht Club, West Side Tennis Club, Bronxville Field Club; Naval Ordinance Development Award, U.S. Navy December 10, 1945, Technical Mission to British Isles and Germany 1946, Honorary Degree of Mechanical Engineer, Stevens Institute of Technology, 1949.

FELCH, EDWIN PIERSON (F) 1939 - Director of Military Systems Development, Bell Telephone Laboratories, Inc., Whippany, New Jersey; res. 109 Fairmount Ave., Chatham, N. J.; b. January 10, 1909 at Madison, New Jersey; ed. A. B. Physics 1929 Dartmouth College; married; interested in radio about 35 years; amateur 1930/1937 W3AWT associate; professional experience Bell Telephone Labs. 1929 to date, electronic measuring apparatus development 1930/1953, Airborne Magnetometer Development World War Two, now in charge of Titan ICBM Guidance system development; several patents on automatic frequency control systems and Magnetometers; member AIEE, Fellow IRE: Hobby Sports cars.

FELIX, EDGAR H. (F) 1928 - Writer and editor, 400 East 85th St., New York 10028. Formerly, Manager, Planning-Co-ordination, Defense Electronic Products, Radio Corporation of America, Camden, New Jersey 1953/1962; Defense Marketing, DuMont Laboratories 1947/1953; Director, Radio Coverage Reports, 1928/1942, b. March 29, 1898; married; ed. Sheffield Scientific School, Columbia University School of Journalism and New York University. Amateur operator, 1915, 2ADQ. Professional writer, newspaper and magazine columnist, 1918/1932; public relations director, WEAF, A. T. & T. 1922/1925; allocation consultant, FRC and FCC, 1927/1942. Author "Using Radio in Sales Promotion," 1927, the first radio advertising text book; "Television, its Methods and Uses, 1931, presenting the cathode ray tube as replacement for the scanning disc. Military service: Signal Corps, U. S. A., 1918; 1942/1946; Lieut. Col., USAFR, 1946-1952. Senior Member, IRE, 1917/1962; Life member, 1963. Editor, Proceedings Radio Club of America, 1963, Director 1964.

FELT, MARCUS A. (M) 1964 - Teacher and author; res. 50 Prince Lane, Westbury, L. I., New York; ed. B. S. M. A. New York University; b. New York City March 8, 1919; married; interested in radio since 1932; holder of amateur advanced class license W2GYQ; licensed in teur radio operatons 1940-1945; First Class Radiotelephone license since 1948; teacher of history since 1949; writer on radio history subjects since 1964; member of Quarter Century Wireless Associaton, American Radio Relay League, Long Island DX Association; active on 20 meter single sideband as a member of the Rag Chewers Club; interested in radio, flying, history, education, writing, and walking.

FINCH, WILLIAM G. H. (F) 1927-Captain, USN. Retired consulting engineer. Res. "Elfin," Newtown, Conn.; b. Birmingham, Eng., June 28, 1895; s. William J. and Amelia (Skelding Finch ed. Woodward H. S. (Cicinnati); Amateur Stations 81E and 8MK in Cincinnati, O., 1912/1914. Elec. Engrg. course of Allis-Chalmers Co. at Norwood, O.; Radio Communications course at Marconi Inst., N. Y., 1917; Columbia Univ., radio engrg. & pat. law, 1922-23; profl. engrg lic., Univ. State N.Y., 1931; m. Cinn., O., Nov. 29, 1916, Elsie Grace George; ch.: Eloise Grace. With Cleveland Illum. Co., 1916-17; insp. engr., Natl. Dist. Telg. Co., N. Y. City, N.Y. Compen. Bd., 1917-19; elec. engr., Royal Indem. Co., 1919-21; radio engr., ed. Internatl. News Service, since 1921; radio ed., N. Y. Am; pat. adviser for Popular Radio and Wireless press circuit betw. N. Y. City and Chicago, 1932; first internatl. radiotypewriter circuit betw. N. Y. and Havana, 1933;

chief radio coms. engr., Hearst Newspapers; tech. dir., Hearst Newspapers Radio Service; chief engr., sec., Am. Radio News Corp., 1929-34; asst. chief engr., chief of tel. engr., div. Federal Communs. Comm., chief engr., Fed. investiga. tel. cos., 1934-35; estab. (1935) and pres., Finch Telecommunications, Inc., N. Y. City, since 1935; v.p., Sta. WCAE, Pbgh.; communications aid to Wilkins Ellsworth Transarctic Sub. Expedn., "Nautilus," 1931; mem. Internatl. Radio Conslt. Comm.; mem. tech. commn. on radio and cable communications Am. Publrs. Assn., since 1924; del. to Hon. Herbert Hoover's 3rd and 4th Natl. Radio Confs., 1924-25; apptd. mem. commn. on allocation of frequency, 4th Natl. Radio Conf.; del to Internati. Teleg. and Radio Teleg. Conf., Madrid, Spain, 1932; N. Am. Radio Conf., Mex. City, 1933. Member, Defense Communications Board, 1940/1941, holds 160 odd pats. on telepicture, faesimile communications; automatic high speed radio printing system; radio relay and recorder; high fidelity transmission system (both black and white and in natural colors); radio and wire facsimile communications; automatic high speed radio printing systems. comd., U. S. Navy, Dec. 1, 1941; Naval observer in British Isles, 1942; now capt. U. S. Navy; Spl. Asst., Electronics to Asst. Chief Bur. of Ship for Electronics, Asst. Chief.Office of Naval Research, U. S. Navy, Navy Dept., Wash., D.C., Legion of Merit. A-warded Am. Defense and European-African-Middle Eastern Area Campaign medals, Author; over 360 tech. articles on radio and gen. elec. subjs., Fellow: I. R. E.; A. I. E. E.; A. P. S.; A. A. A. S.; Franklin Inst.; Radio Club of Am.; N.Y. Academy of Sciences and Armed Forces Communication and Electronics Assoc., N.T. State soc. Profl. Engrs. Clubs; Lotos, Bankers, Army & Navy (Wash., D. C.), Columbia Yacht, N.Y. Athletic, Crown Pt. Country.

FINK, DONALD G. (F) 1934 - Manager, I.E.E. formerly Director of Research Philco Corporation, Tioga and "C" Streets, Philadelphia 24, Pa.; res. 845 Dale Rd., Meadowbrook, Pa.; b. Englewood, N. J. November 8, 1911; married; ed. Bachelor of Science, N.I.T. 1933, Master of Science Columbia University 1942; interested in radio since 1921; amateur W2AFX 1928 to date, W3TVI 1952 to date; professional experience editorial staff Electronics 1934/1952, Editor-in-Chief 1946/1952, Staff Member MIT Radiation Laboratory 1941/1943, Expert Consultant, Office of Secretary of War 1943/1945, Director of Research Philco Corporation 1952 to date; Books; Engineering Electronics 1935, Principles of Television Engineering 1940, Microwave Radar 1942, Television Standards and Practice 1943, Radar Engineering 1947, Television Engineering 1952. Television Engineering Handbook-1957; Editor, Proceedings of the IRE-1956/57; President-IRE-1958.

FINLAY, JOHN C. (M) 1959 - Electronic Sales Engineer, Finlay Sales Company, Manager Washington, D. C. Branch, P.O. Box 1777, Hyattsville, Md.; res. 5902 31st Avenue, Hyattsville, Md.; b. New York City September 19, 1937; Married; ed. New York University, United States Military Academy, West Point, N.Y., Class of 1961; Association of Graduates, U.S.M.A., American Radio Relay League, I.A.R.L., Amateur K3YFG, A.F.C.E.A., Elelay League, I.A.R.L., Amateur K3YFG, A.F.C.E.A., Electronic Representatives Association, Radio Club of America 1959.

FINLAY, ROBERT H. (M)1958 Manufacturers' Representative, 307 Lincoln Building, Ridgewood, N. J.; res. 50 Grand St., Hackensack, N. J.;

FINLAY, ROBERT (F)1936 - Manufacturers' Representative, 45 North Broad St., Ridgewood, New Jersey; res. 104 Brookside Ave., Ridgewood, New Jersey; b. N. Y.C. December 17, 1901; ed. U.S.M.A. West Point 1924; married; First interested in wireless in 1911; Author of articles on radio servicing, 1929, in Radio News and on electronic testing, measurement and computing developments, 1936, in Electronics; Eastern Field Engineer and Washington Representative, Hallicrafters Co., 1938 to

1948; 1948 to present, Mfr's Rep.; Member, West Point Society of New York, Association of Graduates, U.S.M.A., Armed Forces Communications Ass'n., Electronic Representatives Ass'n., Radio Club of America: Director 1959, Membership Chairman 1960-3, Corresponding Secretary 1964.

FOWLER, CHARLES J. (F) 1951 - Supervisor Bldgs. & Grounds, Armstrong Research Field Lab. for Columbia Univ. at Alpine, New Jersey res. 135 E. Madison Ave., Dumont, New Jersey; b. Sea Bright, New Jersey July 10 1899; married; professional experience, Construction of radio stations for 27 yrs., Belfast, Maine, Tuckerton. N. J., Riverhead and Rocky Point, L.I., New York WEAF Bellmore, Long Island, WJZ at Bound Brook, N.J. past 21 years at Alpine, New Jersey (17 yrs. with Maj. Armstrong).

FOWLER, HENRY L. (M) 1956 - MacSpar Drive, Mt. Fern New Jersey.

FRESEMAN. WILLIAM L. (F) 1957 - Executive, Radio Engineering Laboratories, 29-01 Borden Ave. L. I. City, prior, Communication Engineering & Mfg. Co., Inter Standard Electric Corporation (ITT); e. B. S. U. S. Naval Academy 1922, M. S. Harvard University 1929, Director Radio Club of America, 1960 to date, Certificate, U. S. Naval War College 1935; Military Service, 29 Years, U. S. Navy; Patents, Books, etc. Book (with H. W. Hiser) Radar Meteorology, 1955, Various Technical Papers; Sports, Hobbies, etc. Yachting, University Yacht Club, Miami, Fla., Army Navy Country Club, Arlington, Va.

GAW, NORMAN, W., JR. (M) 1958 - Measurements Corp. Boonton, New Jersey.

GAWLER, HARRY (F) 1921 - Engineer, Gawler-Knoop Company, 168 Eagle Rock Ave., Roseland, New Jersey; res. 102 North 22nd St., East Orange, New Jersey; b. Washington, D.C.; interested in radio 1904; professional experience, U.S. Radio Inspector, New England 1912/1920, Army and Navy Radio, Graduate of First Navy Wireless Class 1904 at Brooklyn Navy Yard; married; Senior Member IRE.

GERNSBACK. HUGO (F) 1919 Publisher - Gernsback Publications, Inc., 154 West 14th St., N.Y.C.; res. 263 West End Ave., N.Y.C.; b. August 16, 1884 at Luxembourg, Luxembourg; ed. Ecole Industrielle, Luxembourg; Founded Electro Importing Co. 1905 offering first spark transmitters and receivers to public; Modern Electrics 1908, Electrical Experimenter 1913, Radio News 1919, Radio Craft 1929 (now Radio Electronics) and a series of technical publications to date.

GHIRARDI, ALFRED A. (F) 1933 - Consulting Electronics Engineer, Technical Publications Consultant, Author Technical Books, self-employed; res. 94 Alpine Street, Stamford, Conn.; b. New York City August 16, 1904; ed. Cooper Union Institute of Technology B. S. and post Graduate E.E.; interested in radio since 1917; professional experience, Electrical Engineer, Livingston and Co. 19-23/1924, Engineer of Experimental L'aboratory and Associate Editor Radio Engineering Magazine 1924/1926, Head of Electrical and Radio Department Technical Institute N.Y.C. 1926/1934, Technical Consultant Pilot Radio and Tuve Corp. 1931/1934, President Radio and Technical Publishing Co. 1930/1943; author Radio Physics Course, Modern Radio Servicing, Radio and Television Receiver Troubleshotting and Repair, Pix-O-Fix TV Trouble Finder Guide, Radio Troubleshooter's Handbook; Co-author; Radio & TV Reciver Circuitry & Operation, TV Probes & Their Application; Senior Member IRE: Member Tau Beta Pi.

GILLETTE, EDWARD CLINTON, JR. (F) 1947 - Retired Colonel U. S. Army Formerly "Professor and Head of Dept. of Physics and Chemistry" U. S. Military Academy, West Point, N.Y.; res. Main Street, Box 131, Castine, Maine; b. Philadelphia, Pa. July 25, 1900; married; ed. B. S. West Point Military Academy 1920, M. S. E E. Purdue University 1931; attended Harvard University, Columbia Univ., Penn State Univ., Atomic Energy Com. Nuclear Institute, Purdue Univ. 1958; interested in radio since 1912; amateur 1929/1936; professional experience military only 1918 to present in Reg. Army, Artillery and Signal Corps, appointed permanent Prof. of Physics and Chemistry at U. S. Military Academy 1946; World War Two service in ETO 1943/1945, Signal Div. SHAEF, Chief Signal Officer First Allied Airborne Army and Chief Signal Officer Berlin District; Decorations include Legion of Merit, Bronze Star and ACM (US), Order of British Empire, Croix de Guerre (Belgium), Croix de Guerre (France); Sports - Tennis, Swimming, Handball, Squash, and Sailing; Hobbies - Radio and Electronics, metal and wood-working, collecting and refinishing antique furniture, collecting old clocks, repairing and restoring antique automobiles; Member IRE, Member Army and Navy Club, Washington, D.C. AFCEA, Member American Assn. of Physics Teachers, member Am. Soc. for Eng. Ed., Member Nat. Geographic Soc.

GIRDWOOD, JAMES, (M) 1952 (F) 1961 - P R Mallory Co. Indianapolis, Indiana, formerly Associate Publisher, Electronics Magazine, McGraw-Hill Publishing Co., 330 West 42nd St., New York 36, N.Y.; b. Maplewood, N.J. November 12, 1919; ed. Kent School 1938, M.I.T. 1942, Mechanical Engineering University of Main 1943; Business Administration, Harvard Graduate School of Engrg., 1944, M.I.T Graduate School 1945 electronics engineering; Military Service, U. S. Marine Corps. lst. Lieutenant Radar Counter-Measures Officer and Electronics Engineering; Patents, Paper, etc. Textbooks-Govt.prepared on Radar Theory and Maintenance, editorial work on marketing in the electronics field; Sports, Hobbies Clubs, etc., U. S. Amateur Roller Skating Ass., exec. Board and dance rom., U. S. Bronze & Silver Bar Medalist, National Skating Judge, member Phi Gamma Delta Club, N.Y.C., Loantaka Skeet Club, Florham Park, New Jersey, Ganangoate Gun Club, Gardner, N.Y.; 1948/1956, Advertising Salesman, New Jersey, Electronics and Nucleonics, 1957/1958 Sales Mgr., Electronics and Nucleonics, 1959 Association Publisher Electronics.

GLASER, EDWARD M. (F) 1946 - Chief Electrical Engineer, Kollsman Instrument Corporation, Elmhurst, L.I., N.Y.; res. 2733 Wallace Ave., Bellmore, L.I., N.Y.; b. Brooklyn, N.Y. September 19, 1905; ed. B.S. in E. E., assorted graduate courses; married; interested in radio since 1920; amateur W2BRB 1921 to date, 8AX during 1929, schedules Byrd Antarctic Expedition; professional experience 3 years in radio manufacturing, test, foreman, engineer, 5 years Pioneer Instrument Co., development engineering aviation instruments, 24 years Kollsman as Chief of Electrical Experimental Department in charge of laboratory; Senior Member IRE, Member AIEE Hobbies - piano, small orchestra, fishing, bowling, gardening, photography, piloting; Avocation - free servicing and consulting on electronic gear for friends, relative and neighbors, Organ; Coast Guard Auxiliary Training Officer.

GLASER, MARCUS (F) 1941 - Professional Engineer, N. Y. & N. J. DeWald Radio and TV Corp., 35-15 37 Ave., Long Island City, N.Y.; res. 226-07 137 Ave., Laurelton, N.Y.; b. Brooklyn, N.Y. February 5,1908; ed. Pratt Institute E.E.; married; interested in radio since 1918; amateur W8IE & K2GR; professional experience 29 yrs.

Chief Engineer and Vice President United Scientific Laboratories and Chief Engineer and Vice President De-Wald Radio and DeWald Radio and TV Corporation; Senior Member IRE, Member Filicity Lodge 1100 New York, AIEE.

GODLEY, PAUL F. (F) 1914 - Consulting Radio Engineer, Paul Godley Co., Great Notch, N. J.; res. Old Quarry Rd., Great Notch, N.J.; b. Garden City, Kans., 9/25/1889; ed. Defiance College & University Illinois; married professional experience United Wireless Tgh. Co. 1909; radio instructor 1909/11; Radio Engineer Brazillian Govt. Amazon River Radio Service 1912/13; Independent VT circuit research 1914/15; partner Adams Morgan Co. 19-15/24 also, design engineer Marconi's Wireless Tgh. Co. 1918/19; Technical Editor, Wireless Age 1918/19; design engineer Liberty Electric Co. 1920; Receiving Operator ARRL Trans-Atlantic Tests 1921; Radio Editor Newspaper Enterprise Assn. 1922/24; Organizer VP & GM Farrand Mfg. Co. 1924/25; VP Chalmers-Godley Corporation, 1926/27; Consulting Radio Engineer 1926 to date; Radio Club of America President 1939, VP 1923/25, Director 1915/17, 1919/22, 1926, 1931/33; Armstrong Medal 1950 for IBCG reception at Ardrossan, Scotland; Marconi Memorial Award, Veteran Wireless Operator's Association 1947; Life Member I. R. E.

GOLDSMITH, DR. ALFRED N. (HM) 192 - Consulting Engineer, 597 Fifth Ave., N.Y.C.; b. New York, New York September 15, 1888; ed. College of the City of New York, Columbia University; married; interested in radio since 1901; amateur 2XN, New York; professional experience Professor of Electrical Engineering, College of the City of New York, Vice President and General Engineer Radio Corporation of America, Director of Research, Marconi Wireless Telegraph Company of America, Consultant to General Electric Co.; about 200 patents; numerous technical papers; Fellow AIEE, Fellow American Physical Society, Fellow Acoustical Society of America, Fellow IRE: Medal of Honor IRE-Radio Pioneers Award; Progress Medal Award, Society of Motion Picture and Television Engineers; Director, RCA Communications, Inc.

GOLDSMITH, T.T.JR. (F) 1939 - Vice President, Allen B. DuMont Labs.; res. 519 Highland Ave., Upper Montclair, New Jersey; ed. Furman University B. S. 1931, Cornell Ph. D. 1936; member IRE and American Physical Society.

GRAHAM, CHARLES B., (M) 1960 - Associate Editor, Radio-Electronics Magazine, 56 Seventh Ave., New York N.Y. res. Box 262, New York 29, New York.

GRAHAM, VIRGIL N. (F) 1931 - Associate Director Engineering Department, Electronic Industries Association, Il West 42nd St. New York 36, New York, formerly Director of Technical Relations, Sylvania Electric Products, Inc., Bayside, N. Y.; res. 40 Brompton Road, Great Neck, New York; b. Rochester, New York January 22, 1902; ed. University of Rochester; married; interested in radio since 1916; professional experience 19-23/1935 Head of Radio Laboratory, Stromberg Carlson, 1935/1942 Director of Tube Application Department Sylvania Electric, Plant Manager 1942/1946 and 1946 to 19-54 as above; Fellow IRE, Standards Engineers Society IRE Australia, Member Engineers Club, AIEE, Acoustical Society of America and Societe' des Radioelectriciens.

GRAY, ALFRED RAYMOND, (F) 1960 - Consultant, Reliability & Production Processes, formerly, The Martin Company, Baltimore, Md. and Orlando, Fla. res. 1110 South Woods St., Orlando, Florida.

GREBE, ALFRED HENRY (M) 1952 - Engineer Veeco. Plainview, N.Y., formerly Dept. Hd., New Product Design and Development, Allied Control Company, Inc., Plantsville, Conn. (main offices, 2 East End Ave., N.Y. C., res. 60 Sherbrook Dr. Smithtown, N.Y.; b. Jamaica, Long Island, N.Y., April 3, 1926; ed. B.S. E.E. (electronics) Rensselaer Polytechnic Institute, 1950, 11 months U. S. Navy Aviation Electronics Technician Training, World War II; Professional Experience, Chief Eng., Filtors, Inc., Port Washington, N. Y., Owner Greble Radio & Television Co., sales and service, 1 1/2 years, Asst. Project Eng., Sperry Gyroscope Co., 1 1/2 yrs., Aviation Electronics Technicians Mate Second Class, U.S. Navy, 2 yrs., Professional Societies and memberships. Tau Beta Pi, Eta Kappa Nu, Institute of Radio Engineers, American Management Asson.

GROB. W. MANNING (F)1925 - Field Engineer, Lepel High Frequency Laboratories, Woodside, Long Island, New York; res. 136 Davis Ave., White Plains, New York; b. Brooklyn, New York September 14, 1890; ed. South Side High School, Ex. Courses Penn State College, Army Signal Corps School; married; interested in radio since 1913; W2AQJ 25 years; professional experience signal engineer, telephone fire alarm, traffic control, communication radio, metal heating by high frequencies, affiliated Signal Corps 1925/1935; Hobbies - old automobiles, models; Societies - ARRL, Army Ordinance Association, American Society for Metals, International Municipal Signal Assn.

GROGAN, WILLIAM F. (M) 1949 - Purchasing Director, Times Facsimile Corporation, 540 West 58th St., N.Y.C.; res. 243 East 39th St., N.Y.C.; b. Acworth, Georgia May 19, 1898; ed. High School; married; interested in radio since 1922; amateur licenses 4 QY 1922, J9NB and J9ANB 1946 Okinawa; Commerical Telegraph and Telephone Operator Licenses; Professional experience 3 years commercial operator (ships), 1 year Blimps, Goodyear Rubber Co.; Commander, Naval Reserve, (Retired), Two years instructor Navy Radio School, 3 years Commanding Officer, Naval Training School (pre-Radar) Grove City College, Pa.; secretary Greater New York Chapter Retired Officers Association.

GRUBER, PAUL, (M) 1957 - Electrical Engineer, Radio Engineering Laboratories, 29-01 Borden Avenue, Long Island City, 8 yrs.; res. 1357 Prospect Ave., East Meadow, New York; ed. Polytechnic Institute of Brooklyn, B.E.E. (Communication Engineering), Graduate School Adelphi College, Physics Major; RCA Institute, General Course Electrical Technology; Military Service, 1942/1945 U. S. Army; Patents, Papers, etc. "Electronics" April 11, 1958 Crystal Converter for Tropo-Scatter Receivers.

GUNTHER, FRANK A. (F) 1940 - President & General Manager. Radio Engineering Laboratories, Inc., 29-01 Borden Ave., Long Island City 1, N.Y.; res. 10 Highpoint Rd., Dongan Hills, Staten Island 4, N.Y.; b. New York February 3, 1908; ed. Grade Schools, N.Y.C., Stuyvesant High School, Columbia University Ex. N.Y.C. Wagner College, S. I., N.Y.C.; interested in radio since 1919; professional experience REL 34 years - First two way police radio; Fellow IEEE, member Armed Forces Communications and Electronics Association - Director New York Chapter, member ARRL, member Quarter Century Wireless Association, Director - Single Side Band Amateur Radio Association; Retired Major U.S.A. Air Force, Reserve Civil Air Patrol, Commercial Pilot; Radio Club of America - President 1956 and 1957, Vice President 1954 and 1956, Recording Secretary 1952 and 1953, Director 1951, 1958 and 1959.

GUY, RAYMOND F. (F) 1939 - Retired, formerly Engineering Executive, National Broadcasting Company, 30 Rockefeller Plaza, N.Y.C. Lighthouse Point, Florida; b.

Hartford, Conn. July 4, 1899; ed. E.E. Pratt Institute 1921; married; interested in radio since 1911; amateur station 1911 to present, W2AK; professional experience Marconi Co. 1916, WJZ 1921, RCA Research 1924/1929, National Broadcasting Company 1929 to present; U.S. Army 1918/1919 AEF, president IRE 1950, Director IRE 9 Yrs. Trea. IRE, Chairman TV Advisory Committee N.A.R.T.B., Life Member VWOA, Fellow IRE, Member Radio and TV Executive Club, Manager Radio and Allocations Engineering, NBC, Radio Club Director 1941, President, Broadcast Pioneers, 1956, Now Secretary, Chairman, Engineering Committee and Member, Industry Advisory Committee, Voice of America, Member, National Executive Reserve, Television Allocation Study Organization; First Vice President, Veteran Wireless Operators Ass'n. Recipient of Marconi Gold Medal of Achievement. Member Ass'n. of Federal Communications Consulting Engineers, Member, CCIR Study Group 10, Member American Institute of Electrical Engineers, Member, Broadcast and TV Systems Com., AIEE, Member, Executive Com., IRE Professional Group on Broadcasting, Member IRE Admissions Com., Member NAB Convention Program Committee (Former Chairman).

HACKBUSCH, RALPH ANTHONY (F) 1929 - President and Managing Director, Hackbusch Electronics, Ltd. 23 Primrose Ave., Toronto, Canada; res. 55 Arjay Cres Willowdale P.O. York Mills, Ontario, Canada; b. Hamilton, Ontario, Canada September 18, 1900; ed. Public Schools Hamilton, Hamilton Collegiate Institute, Hamilton Technical and Art College, Alexander Hamilton Institute; married interested in radio since 1912; amateur 1912/1914, VE9AE 1937/1954; professional experience 1914/1926 Canadian Westinghouse Co., 1926/1930 Associate Radio Engineer Kolster Radio Co., Toronto, 1930/19 39 Radio Engineer, Chief Engineer, Vice President and General Manager Stromberg-Carlson, Co., Ltd., 1940/ 1943 Vice President and Director Radar Division Research Enterprises, Ltd., 1944 to present as above; Fellow IRE, Member Acoustical Society of America, member Rochester Engineering Society, Member Royal Canadian Institute, Golden Fleece Lodge AF and AM, registered Professional Engineer, Past Vice President and Director IRE, Past President RTMA of Canada, Past President Canadian Radio Technical Planning Board 19-49/1953, Granite Club, Toronto General Technical Coordinator CRTPB 1955/59; Member IRE Gen. Standards Committee 1954/59; Member BIA Gen. Standards Committee 1930/59; Dir. of Engineering BIA of Canada 1932/ 39 & 1945/59; Chairman CSA Sectional Committee on

HALL, F. SUMNER, (F) 1949 - Audio Engineer, Audio Accessories, 279 Broadway, Amityville, N.Y.; b. Worchester, Mass. February 26, 1907; ed. High School; married; interested in radio since 1920; professional experience Control Room and Field Engineering (broadcasting), theatre sound service and inspection, disc and film recording, design and installation broadcast audio facilities and recording facilities, presently design production and sales; Past President & Fellow Audio Engineering Society.

HALLIGAN, WILLIAM J., SR., (F) 1964 - Chairman of the Board, The Hallicrafters' Co., 4401 West Fifth Avenue, Chicago, Illinois; res. 179 East Lake Shore Drive, Chicago, Illinois; born South Boston, Massachusetts, December 8, 1899; ed. Grade Schools, Charlestown High School, Boston, Mass., BSEE Extra Ordinem Tufts College, Medford, Mass. 1923, United States Military Academy, West Point, N.Y., married; interested in radio since 1913; amateur since 1916 IAEH, currently W9AC and W4AK; United States Navy Wireless Operator 1917-1919; professional experience: newspaper reporter, Boston 1922/1924, Tobe Deutschmann Co., Boston, Mass. Sales Manager 1924/1928; founder of the Hallicrafters' Co. 1933; memberships Fellow IEEE, permanent Direc-

tor and past President Armed Forces Communications and Electronics Assoc., Mayor's Committee for Economic and Cultural Development of Chicago, past Director Illinois Chamber of Commerce, past President West Point Society of Chicago, Quarter Century Wireless Association, North Sea Mine Force Association, Navy League of the United States, Radio Electronics-Television Manufacturers Assoc., Newcomen Society of the United States, American Radio Relay League, Single Sideband Amateur Radio Assoc., Chicago Athletic Assoc., Chicago Press Club, Executive Club.

HANNAH, MERLE R., 1960 - Senior Project Engineer, CBS Laboratories, 227 High Ridge Stamford, Conn. res. 56 Sherwood Road, Stamford, Conn.

HAMILTON, HUGH G. (M) 1950 - res. RFD #2 Dover, N. H.; b. July 21, 1905; ed. B. S. in Engineering (Communications) M. I. T.; amateur 2GK 1921/1926, W2AIF Schenectady; President Eastern Air Devices; Vice Pres. Norbute Corp.

HARA, BENJI (M) - res. 630 W. 135th St., New York, New York.

HARMATUK, SAMUEL N (F) Engineer, New York Fire Dept., 20 yrs., res 1575 Odell St., Bronx 62, New York, military service WW II 4. 1942/1946. Lt. Col.--A. F. Reserve Current, amateur call letters W2ELE (EX.) Patents, Books, Etc., New York Fire Dept.--Radio System; Sports, Swimming. Radio Club of America, Vice P.

HARNETT, DANIEL E. (F) 1926 - Engineer, General Electric Co., Syracuse, New York; res. 408 Brampton Drive DeWitt, N.Y.; b. Elmira, New York July 20, 1899; ed. Columbia University A. B. 1922, E. E. 1925; married; interested in radio since 1923; professional experience Pacent Electric Co. 1925/1929, Hazeltine 1929/1948, Emerson Radio-Phonograph 1949, General Electric Co. 19-49 to date.

HAYNES, N. M. (M) 1940 - res. 1115 Beach Street, Far Rockaway, 91, New York; b. Brooklyn, New York June 15, 1908; ed. Brooklyn Technical High School, CCNY, Long Island University Ph. G.; Amplifier Corp. of America 1944.

HAZARD, THOMAS T. (F) 1939 - Pensioner Public Service Corporation, Newark, New Jersey; res. Box 57 Cherry La., Brookside, New Jersey; b. August 5, 1875; single; interested in radio since 1922; member American Radio Relay League, The Universal Radio DX Club, Newark News Radio Club.

HEALEY, WILLIAM J. (M) 1952 - Sales Manger, Weston Electrical Instrument Co., 50 Church St., N. Y. C. res. 4 Cambridge Road, Glen Ridge, N. J.; b. Tacoma, Wash., March 5, 1895; ed. Electrical Engineering ICS interested in radio since 1924; professional expeience in engineering and sales; Boy Scouts, Scout Master 18 years, Church Trustee 12 years, Masonic Orders.

HEES, GEORGE C. (F) 1943 - Purchasing Agent, Sperry Gyroscope Co., Great Neck, N. Y.; res. 701 5th Ave., New Hyde Park, N. Y.; b. Brooklyn, New York May 10, 1899; ed. Pratt Institute, Brooklyn, New York; married, interested in radio since 1918.

HEISING, RAYMOND A. (F) 1921 - Consulting Engineer and Patent Agent, 232 Oak Ridge Ave., Summit, New Jersey; b. Albert Lea, Minn. August 10, 1888; ed. E. E. University of North Dakota 1912, M. S. (physics) University of Wisconsin 1914; married; interested in radio since 1907; professional experience Western Electric Co., and Bell Telephone Laboratories 1914 to 1953; research and development on all pioneer commercial and military radio telephone applications; retired from Bell Telephone Laboratories 1953; over 120 U. S. Patents,

dozen engineering papers, 1 book; American Physical Society, AIEE, Radio Club of America Director, Armstrong Medal 1952 for Heising Modulation, D. Sc. - University of North Dakota, 1947.

HENNEY, KEITH (F) 1927 - Retired, formerly Editor, McGraw-Hill Publishing Co., N.Y.C.; res. Snowville, N.H.; b. McComb, Ohio October 28, 1896; ed. A.B. Western Reserve University 1921, A.M.; Harvard University 1925; married; interested in radio since 1913; amateur 8ZD and 8ADP Marion, Ohio 1915, 2EJ-1925, WlQGU-1947, K2BH-1948; professional experience Engineer, Western Electric Co. 1923/1924, Radio Broadcast Magazine 1925/1930, McGraw-Hill 1930 to date; Radio Operator United Wireless, 1918 and Marconi 1922; Books - "Principles of Radio" 1930, "Color Photography for the Amateur" 1938, "Electron Tubes in Industry" 1934, "Handbook of Photography" 1939, "Radio Engineering Handbook" 1933; Fellow IRE, Member Harvard Club of N. Y. C.; Radio Club of America, President 1940, Vice President 1939, Recording Secretary 1934-1938.

HIRSCH, CHARLES JOACHIM (F) 1947 - RCA Laboratories, Princeton, N.J., Formerly Executive Vice-President, Hazeltine Research Corporation, 59-25 Little Neck Parkway, Little Neck 62, N.Y.; res #1 Fox Ridge Lane, Locust Valley, N.Y.; b. Pittsburgh, Pa. October 25, 1902; ed. Columbia College A. B. 1923, Columbia School of Engineering E. E. 1925; married; professional radio experience since 1925; several patents; papers in IRE, Radio Club, IEE, SMPTE, Onde Electrique, Acta Electronica; Contributing author; "Pender-McIlwain Electrical Engineering Handbook," "Principles of Color Television"; Fellow IRE and Radio Club of America, Member IEE (Great Britian), Societe des Radio-electriciens (France), SMPTE, SPSE. Past Chairman Long Island Section IRE, Past Chairman of U.S. Committee for CCIR Study Group XI and of several U.S. delegations abroad on TV standards, Chairman Broadcast Television Systems Committee of EIA; Panel 1 NSRC; Certificate of Commendation from U.S. Navy for contributions to Radar in World War II.

HLADKY, WALTER, (M) 1960 - Engineer, Shepard Laboratories, Broad and Park, Summit, New Jersey res. 7 Warwick Road, Chatham, New Jersey.

HORN, CHARLES W. (F) 1921 - Partner, Impulsora Mexicana S. A., Radio Manufacturers, Calle Rhin #33, Mexico City D.F., Mexico; res. Montes Auvernia 220, Mexico City, 10 D.F. Mexico; b. New York City July 9, 1894 ed. High School, 2 years college and special courses in electricity; married; Amateur station HN at Far Rockaway, N.Y. 1908 before licenses; United Wireless Ship operator 1909, United Fruit five years, World War One Lieutenant (JG) and World War Two as Captain as Asistant Chief of Naval Communications; Westinghouse 1920/ 1929 as Manager of Radio Operations; National Broadcasting Co. as Vice President and Director of Research and Development 1929/1941; number of patents including parabolic microphone, rectifier; Fellow IRE, VWOA, Princeton Engineering Association, Captain in U. S. Naval Reserve, Retired, in Mexico - Churubusco Country Club, Rotary Club, American Club, American Society, Club Vice President 1932, President 1933.

HOUCK, HARRY WILLIAM (F) 1920 - Vice President and Divisional Manager Measurements, a McGraw-Edison Division, Boonton, N.J.; Director Sag Harbor Industries; Pres. Measurements Corp. Canada; Vice President Armstrong Memorial Research Foundation, Res. Moutain Rd., Wallpack, New Jersey; b. New Cumberland, Pa., April 11, 1896, Married; Interested in radio since 1909; 1909/1917 operated amateur wireless station. Professional experience: 1917/1919 World War One U. S. Signal Corps Laboratory in Paris, France; original de-

velopment work of superheterodyne method of reception with the late Major Edwin H. Armstrong. Later designed the first second harmonic super-heterodyne broadcast receiver to be placed in commercial production; 1922/ 1923 Consulting Engineer; 1923/1931 Chief Engineer Dubilier Condenser and Radio Corp., where his research and development of capacitors made practicable the filter systems used in modern receivers; 1931/1933 Federal Telegraph Co., Special research and development. Consulting Engineer through 1937, and Measurements to the present. His pioneer work on alternating-current operated radio receivers resulted in many patents over 80 U. S. issued to date. Life Member AIEE, Engineers' Club, N.Y.C., former Manager IRE, Fellow IRE. President Radio Club 1934, Vice President 1933, Recording Secretary 1930/1932, Director 1928 to present.

HUGHES, MATTHEW J, (M) 1938 - res. P.O. 701 Bucher Drive Maitland Fla; b. Harrison, New Jersey March 17, 1902; radio serviceman.

HULL, LEWIS N. (F) 1951 - Consultant, Aircraft Radio Corporation, Boonton, N. J.; (ret. Chairman of the Bd) Director, Lab. for Electronics, Boston, Mass.; res. Boonton, N. J.; b. Great Bend, Kansas, February27, 18-98; ed. University of Kansas, Harvard University; married; interested in radio since 1911; active as amateur 1912/1917 - none since; professional experience World War One Signal Corps Laboratory at Bureau of Standards 1918/1920 Assistant and Associate Physicist Radio Section Bureau of Standards; Consulting Engineer and various engineering positions 1920 to date; various patents in radio field 1922/1930; contributor to technical journals; Clubs - Metropolitan, Anglers of New York, Cosmos (Washington), Tabusintac N.B. Canada; President IRE 1933.

HULTS, ELLSWORTH H. (F) 1956 - res. 1600 Grand Ave. Baldwin, N.Y.; b. Pa. February 23, 1904; ed. Germantown High School 1918/1922; United Nations Sound 1947.

HUMPHREY, GEORGE B. JR. (M) 1958; Ass't. Vice President, First National City Bank of New York, 55 Wall St., N.Y.C., 28 Yrs.; res. 10 Grove St. Dobbs Ferry, N. Y.; b. Cherubusco, N.Y.; ed. Columbia University, B.S. and M.S.; Amateur Call Letters W2REQ 1958; Sports, etc. Amateur Radio, Boating, Hiking, Columbia University Club.

IRELAND, FREDRICK (F) 1937 - Box 5282 Pasadena, Cal.; b. N.Y.C. May 19, 1911; ed. Harvard A.B. Physics 1933; married; interested in radio since 1921; amateur wIDK 1930/1939; professional experience General Radio Company Engineering Department 1934/1937, Field Engineer New York 1937/1940; Los Angeles 1940/1958; Senior member IRE, Chairman Los Angeles Section 1944, Registered Professional Engineer, State of Cal.

JACQUET, LLOYD (M) 1959 - Res. 233 Arleigh Road, Douglaston, New York.

JAFFE, D. LAWRENCE (M) 1953 - President and Chairman of the Board, Polarad Electronics Corp., 43-20 34th St., Long Islandl, N.Y., res. 33 Nassau Drive, Great Neck, N.Y.; b. Brooklyn, New York, July 6, 1913; ed. B.S. in E.E. City College 1935, M.S. in E.E. Columbia University 1936, Ph. D. in E.E. Columbia University 1940; married; interested in radio since 1940; professional experience College of the City of New York Instructor 1935/1937, Awarded Bridgham Fellow in E. E. at Columbia University, associated with Professor E. H. Armstrong on fundamental problems in frequency modulation 1937/1939; Columbia Broadcasting System television Studio equipment 1939/1942; Raytheon Manufacturing Company, Waltham, Mass. Radar 1942/1944 Templetone Radio Manufacturing Corp. Chief Research Engineer 1944/1945, Polarad Electronics Corp. 1945 to

date; eleven technical papers in various publications; Fellow, IEEE, past member Young Presidents' Organization, member Presidents' Professional Ass., director, Armstrong Memorial Foundation, member, Columbia University Club.

JAMES, WALLACE M. (F) 1930 - Engineering Manager, Radio Corporation of America, Harrison, New Jersey res. West Caldwell, New Jersey; b. Hutchinson, Kan. September 2, 1901; ed. University of Kan., 5 years, B. S. in E.E. and B.S. in Engineering, other miscellaneous courses; married; interested in radio since 1925; Member TB Pi, Sr. Member IRE; Am. Assn. for the Advancement of Sciences; Listed in "Who is Who" in Engineering. Director 1940.

JARVIS, KENNETH W. (F) 1935 - President Jarvis Electronics Corporation, 6058 West Fullerton Ave., Chicago 39, Ill.; res. 1140 Cherry St., Winnet ka, Ill.; b. Mansfield, Ohio, October 18, 1901; ed. Graduated E.E. Ohio State University 1923; married; interested in radio since 1912; amateur 1915/1916; professional experience Westinghouse Engineering School and Radio Laboratory, Crosley, Colonial, U. S. Radio, Director of Engineering Zenith, Consulting Engineer 18 years, Manager Electronics Department Automatic Electric; 20 Patents several pending; Chapter on Detection and Modulation Henney's Radio Engineering Handbook, many papers IRE; Fellow IRE, AIEE, Member ASM, AAAS, AFCA, Chicago Radio Engineers Club; Lecturer Graduate School Northwestern University; Reserve Officer Signal Corps, Princ. Staff Eng. Electronics & Electric Dept., The Martin Co., Boy Scout Leader; Hobbies - Camping, Travelling Flying own Plane.

JENNINGS, MALBON H. (F) 1948 - Sperry Gyroscope Div. Sperry Rand Corp., Great Neck, New York b. Haverill, Mass. April 3, 1917; ed. University of Maine - Collumbia University; married; interested in radio since 1930; professional experience E. H. Armstrong Junior Engineer 1938/1942, Radiation Laboratory MIT Staff Member 1942, BuShips U.S. Navy 1942/1943, Radio Engineering Laboratories 1943/1951 (Chief Engineer 1944/1951), Laboratory for Electronics 1951 to 1953. Director, GCA Division, 1953/1955. Independent Consultant, 1955/1956. Ramo-Wooldridge, 1956 to present. Patent on FM Recording on film or tape; Hobbies - private flying, restoration of early American houses and furniture.

JOHNSON, JOHN KELLY (F) 1927 - Consulting Engineer, Office & res. 184 South Ave., New Cannan, Conn.; b. Oskaloosa, Iowa, January 27, 1903; ed. A.B. and B.S. Penn. College, Oskaloosa, Iowa 1923; A.B. Columbia 1924, B. S. Columbia 1925, E.E. Columbia 1927; married; interested in radio since 1916; professional experience - Instructor in E.E. Columbia 1927/1929; Chief Engineer Silver Marshall 1930, Wells Gardner 1934/1937, Engineer Hazeltine Corporation 1930/1934 and 1937/1942, U. S. Navy Consultant 1943/1944, Hammerlund 1944/1945 and Consultant 1945 to present; Numerous patents all assigned to Hazeltine; Fellow IRE, Member AIEE; Columbia University Club, N.Y.C., The Engineers Club N.Y.C.

JOLLIFFE, CHARLES BYRON(F)1939 - Radio Executive, Radio Corporaton of America, Princeton, New Jersey & Camden, New Jersey; res. 1204 E. Cherry Hill Apt., Merchantville, N.J.; b. Mannington, W. Va. November 13, 1894; ed. W. Va. University B.S. 1915, M.S. 1920 Hon. LL. D. 1942, Cornell University Ph. D. 1922; widower; interested in radio since 1917; professional experience: Instructor in Physics W. Va. University 1917/1918 and 1919/1920, Physics Instructor Cornell University 1920/1922, Physicist Bureau of Standards Radio Section 1922/1930, Chief Engineer Federal Radio Commission and Federal Communications Commission 1930/1935, Radio Corporation of America Engineer-in-Charge RCA Fre-

quency Bureau, Chief Engineer of RCA Laboratories, Assistant to President, Vice President and Chief Engineer RCA Manufacturing Company 1935/1945, Vice President of RCA in charge of RCA Laboratories 1945, Executive Vice President in Charge of RCA Laboratories Division since 1945, 1951 Vice Pres. & Technical Advisor, RCA; World War Two Chairman of Communication Division of the National Defense Research Committee, Secretary of the Industry Advisory Committee, Board of War Communications, Member Engineers Defense Board, Certificates of Appreciation from Army and Navy; Fellow AAAS, AIEE, IRE, Member Radio Pioneers.

KAHN, LEONARD, R. (F) 1953 - Owner and Research Director, Kahn Research Laboratories, Elizabeth Building, 22 Pine St., Freeport, N.Y.; res. 46 West 95th St., N.Y.C.; b. N.Y.C. June 16, 1926; ed. B.E.E. Polytechnic Institute of Brooklyn; single; interested in radio since 1940; amateur W2NOW since 1940; professional experience Consultant in Communications and Electronics, Re-search Director of Communications Laboratory, Adjunct Professor of Electrical Engineering Department, Polytechnic Institute of Brooklyn; number of patents and patentpendings. Papers published in Proceedings of IRE and AIEE Electrical Engineering.

KARDAUSKAS, EDMUND (M)1950 - Shepard Laboratories 430 Morris Ave., Summit, N.J. res. 185 Priscilla Drive, Redbank, New Jersey; b. Elizabeth, N.J. October 26, 1924; ed. B.S. EE Newark College of Engineering 1949; married; interested in radio since 1938; Hobby - Audio.

KATZ, LOUIS L., (M) 1964 - Engineer, Electric Research Laboratories of Columbia University, New York, N.Y. b. Poland, May 15, 1938. U.S. Citizen. res. 1521 Sheridan Ave., Bronx, N.Y. Ed. College of the City of New York, B.E.E., Columbia University, M.S., 1964. Member, IEEE.

KELLERMAN, KARL F. (F) 1946 - Engineer, Asst. V-P.-Engineering, Bendix Aviation Corp., Washington, D. C.; res. 8711 Burring Trec Road, Bethesda, Md.; b. Washington, D.C. May 11, 1908; ed. E.E. Cornell University 1929, Graduate work in Law, Economics and Electronics; married; interested in radio since 1921; amateur work extensive but unlicensed; Registered Professional Engineer member IRE, Cornell Society of Engineers, AAAS, Tau Beta Pi, Cosmos Club, Columbia Country Club, ex-Commander USNR; Hobby - Golf.

KELLEY, BRUCE LEWIS, (M) 1964 - Senior Industrial Engineer, AOD Division, Eastman Kodak Co., Rochester New York; b. 1914, Bartlett, New York, Res., Holcomb, New York. Member, Antique Wireless Association, Old Timers Club, Bloomfield Scientific Club, Curator, Ancient Wireless Association Museum.

KELLEY, LEO A. (F) 1938 - res. 34-38 87 St., Jackson Heights, New York; b. July 7,1897 Arlington, Mass.; ed. M.I.T., Harvard B.S. in E.E. 1918; professional experience - U. S. Signal Corps 1918/1919; Engineering Department Western Electric Co. 1920/1925, AT and T 19/25/1929, International Communications Laboratories 1929/1932; Consulting Engineer to Date.

KENNEDY, ROBERT E. L. (F) 1942 - Consulting Engineer Kear and Kennedy, Washington, D.C.; res. Forest Hgts. Md.; b. Norfolk, Va. January 19, 1910; ed. High School, Engineering Courses University of Va. extension, George Washington University and Catholic University; married; interested in radio since 1921; Amateur station 3RT 1924/1928, W3CQK 1930/1935; professional experience 1945 to date Partner Kear and Kennedy, 1942/1945 Assistant Head Radio Section Bureau of Aeronautics, 1940/1942 Senior Engineer with John Barron 1938/1940 Engineer with Paul Godley; Lt. Cmdr. U.S.N.R. Senior Member IRE, Charter Member also Past President Association Federal Communications Consulting Engi-

neers, Hobby - Yachting, Capitol Yacht Club, Washington.

KING, FRANK (CM, F, LM) 1909 - Consulting Engineer, Amy Aceves and King, Inc., Il West 42 St., N.Y.C.; res. 85 Willow Ave., Larchmont, New York; b. N.Y.C. January 12, 1893; ed. New York University, Columbia University E.E. 1917; interested in radio since 1907; married; amateur station "FK" 1907, later 2MP 1925, W2 MP 1929, constructed and operated first amateur Telephone Broadcasting Station in U.S. in 1911; professional experience, Radio Operator S/S Montgomery 1912; President King Radio Corporation New York 1922/1926, 1926 to date Consulting Engineer New York City, Licensed Professional Engineer New York State 1941; military, organized and was officer in Charge of the First U.S. Naval Aircraft Radio Laboratory, Hampton Roads, Va. 1918, Officer in Charge of Aircraft Radio Telephones Headquarters Northern Bombing Group (U.S. Navy) France 1919, U. S. Naval Headquarters Washington, D. C., and Anacostia; Sports - Tennis, Golf, Horseback, Hunting; Societies - Senior Member IRE, Life Member Friendly Sons of St. Patrick, Phi Gamma Delta; Radio Club of America Charter Member and First President

KISHPAUGH, A. W. (F) 1921 - Retired; res. 10 Yale Terrace, West Orange, N. J.; b. Newberry, Mich. November 5, 1891; ed. E.E. University of North Dakota 1912; professional experience; General Electric Co. 1912/14; Utah Power and Light Co. 1914/16; Western Electric Co. and Bell Telephone Laboratories 1916/56. Member AIEE and IRE.

KNOOP, WALTER A., JR. (F) 1942 - Professional Engineer, Gawler-Knoop Co. 178 Eagle Rock Ave., Roseland, N. J.; res. 63 Grover La., W. Caldwell, New Jersey; b. Chicago, Ill. May 14, 1919; married; ed. B.E.E. Rensselaer Polytechnic Institute; amateur W9KHG 1932, W2 PXR and operated at W8XYR Whiteface Mountain Observatory; professional experience Manager Contract Division DuMont Laboratories until 1946; two patents on CR Tubes, articles for QST, Radio News, IRE Proceedings, Istruments Magazine; Member AIEE, IRE and Montclair Society of Engineers, Member-Sibma XI; Tau Beta Pi; National Pilots Assoc.

KOBI, JOHN THOMAS, (M) 1956 - Electronic Engineer, Radio Engineering Laboratories, 6 years; res. 2 Henrietta La., Massapequa Pk., L.I., N.Y.; b. November 10, 1924, Atlas, Pa., Military Service U.S.A.F. 1942/1945, Education, B.E.E., Brooklyn Polytechnic Institute, Brooklyn, New York.

KOIJANE, DONALD F. (M) 1959 - Sales Engineer, 29-01 Borden Ave., Long Island City 1, New York res. apt. 6D-2 Redfield Village, Metuchen, New Jersey.

KOHLER, GERHARD MAX, (M) 1964 - Senior Project Engineer, Measurements, Inc. PO Box 180, Boonton, N. J. res. Intervale Gardens, 3379 Route 46, Parsippany, New Jersey; b. Austria, December 17, 1917; ed. Dr. Schmidt College, E.E., 1949. Rhode & Schwarz; Telefunken Nord-Mende Laboratory, 1949/1963.

KOUSHOURIS, JOHN LOUIS, (M) 1960 - CBS Laboratories, High Ridge Road, Stamford, Conn. res. 27 Hannah's Road, Stamford, Conn.

KUNIK, I. JORDAN (M) 1952 (F) 1964 - Patent Lawyer, 521 Fifth Ave., New York, N.Y.; b. Hartford, Conn, November 10, 1912; ed. Wesleyan University, Harvard Law School; interested in radio since 1938; professional experience in Patent Law including all phases of electronics; IRE, AAAS (Fellow), American Bar Association, New York Patent Law Association, American Chemical Society, American Institute of Chemists (Fellow), American Society for Metals.

LAFFERTY, RAYMOND E. (M) 1947, (F) 1957 - Engineering Manager, Instruments, Boonton Electronics Corporation, Parsippany, New Jersey since 1960; res. 12-05 Sumner Pl., Fairlawn, N.J.; b. Brooklyn, N.Y. July 12, 1918; ed. High School, RCA Institutes, General Engineering Course; married; interest in radio since 1930; Amateur W8VTJ in Ogdensburg, N.Y. (expired), First Class Radio Telephone License since 1935. Professional experience: Engineer with Boonton Radio Corporation. Ferris Instrument Corporation, A. B. DuMont Laboratories; Chief Engineer WSLB; Instructor with N.Y. State Signal Corp Training School, Paterson Radio Institute. Development Engineer, 1948-1957, with NBC; Assistant Chief Engineer, Daven Company, 1957-1960; 4 patents and numerous papers dealing with audio and radio devices and radio frequency measurements, 1956 IRE National Convention paper on High Frequency Shields; Chairman of several IEEE Convention Committees, 1957 to date; Senior Member IEEE.

LAMB, FRANCIS XAVIER (F) 1945 - Vice Pres. and Chief Engineer, Weston Instruments, Div. of Daystrom, Inc., 614 Frelinghuysen Ave., Newark, N.J.; res. 12-05 Sumner Place, Fair Lawn, New Jersey; b. Newark, New Jersey, August 5, 1905; ed. Newark Technical School 1927-AE; Newark College of Engineering B.S. in E.E. 1930; married; interested in radio since 1920; amateur nonlicensed experiments; professional experience 1928/1936 Electrical Eng. with Weston; 1937/1939 Res. Eng. in Japan for Weston, 1940/1942 Project Eng. on Research and Development, 1942/1943 Liaison Eng. for Weston assigned to Sangamo-Weston Co., Springfield, Ill., 1944/1951 Asst. Chief Engineer, Weston, 1952/1953 Chief Eng., Weston, 1954 Vice Pres. and Chief Eng. Weston; Profession Eng. License #5573, 25 U.S. Patents; Fellow A IEE, Member IRE, ISA, RCA, SAMA, ASA, NAM, AFCEA Company Rep. ASA (C39), ASA (Indicating Instruments C39. I). Honorary Membership Eta Kappa Nu Assn.; Technical Publications 9.

LAMB, JAMES J., (F) 1958 - Chief Scientist, U.S. Army Electronics R & D Activity, Fort Huachuca, Ariz. res. 2600 Mockingbird Drive, Sierra Vista, Ariz. B. November 30, 1900 at Michigan City, North Dakota, November 30, 1900. Married Josephine Gleason May 5, 1930. Children: Ann Marie, Josephine (Lamb) Krossa, Helen (Lamb) Patterson, Maureen (Lamb) Buhrman, Patricia Glenn. Scientific Advisor and Director, Signal Communications Dept., USAEPG, Ft Huachuca, 1961/1962. Member, Tech. Staff, Ramo-Wooldridge, 1959-61. With Remington Rand, Inc., and Univac Div., Sperry Rand, successively as, Chief Engineer and Manager, Electronic Div., Director of Electronic Research and Senior Staff Consultant from Jan., 1941 to Nov., 1959. Previously on staff of ARRL, as Tech. Editor, QST, etc., from April 1928 to Dec. 19-41. Formerly WIAL, WICEI, 3CEI, 9CEI, BSEE Catholic Univ. of America, 1922. 6 patents on Tri-Tet Oscillator, Variable Selectivity Crystal Filters, Noise Silencer Circuit, Automatic Iris Control for TV Cameras, Semi-Conductor Devices - Pat. Pend. on Character Recognition System. Over 70 published technical papers and articles including Proc. of Radio Club (Apr., 1936). IARU representative 3rd CCIR, Lisbon, 1934; 4th CCIR, Bucharest, 1937. OSRD Certificate of Appreciation, 1945. ARRL Merit Award, 1959. Fellow; IREE; Fellow, Radio Club of America; Member, AAAS. Registered Prof. Engr., Conn. Hobbies, stereo, photography and radio communication experiments.

LANGER, PETER LAWRENCE (M) 1954 - Sylvania Electric Products Co., 700 Ellicoh St., Batavia, N.Y.; res. 43-55 168 St., Flushing, L.I., N.Y.; b.N.Y.C. February 17, 1915; ed. Lawrence High School 1928/1934, Navy Electronics School 1943/1944; professional experience - Philo Field Service Engineer 1946/1949; 1949 to date Field Service Engineer, Sylvania Elec. Products; M IRE.

LANGLEY, RALPH H. (F)1928 - Retired; res. 1601 Chestnut Ave., Winter Park, Fla.; b. N.Y.C., January 5, 1889; ed. Columbia University, E.E. 1913; married; interested in radio since 1906; built IKW Quenched Gap Transmitter in the Electro-Chemical Laboratory at Columbia; professional experience 1913/1916 with Colonel John Firth, 1916/1920 Marconi Wireless Telegraph Co. of America, 1920/1927 General Electric Co., Radio Department, Schenectady, 1927/1931 Director of Engineering Croley Radio Corporation, Cincinnati, Ohio, then as Consulting Engineer following 1931; Underwater Sound Laboratory, New London, Conn. 1941/1943, Asst. to Dir. Hazeltine Electronics Corp., Little Neck, L.I., N.Y. 1943/1946; in charge of Licensee Laboratory Olympic Radio & Television Corp. Long Island City, N.Y. 1946/1948, Vice Presidnt in charge of Engineering, Farrand Optical Co., Inc. Bronx N.Y. 1948/1957 Asst. to the President; Radio Club of America President 1935/1936, Vice President 1934, Corresponding Secretary 1933, Director 1932.

LaPENNA, FRANK (M) 1949 - Assistant Professor, Hudson Valley Tech. Inst., Troy, N.Y.; res. 167 Chestnut Ave. Staten Island 5, N.Y.; b. N.Y.C. December 18, 1898; ed. RCA Institutes; married' interested in radio since 1933.

LAYMAN, PAUL N., JR., (M) 1956 - Bus. 465 East 57th St., New York, N.Y. res. 50 Sutton Place South, New York, N.Y.

Lebel, Clarence J. (F) 1926 - Chief Engineer, Audio Instrument Co., Inc., 70 East 10th St., N.Y.3, N.Y.; Vice President, Audio Devices, Inc.; res. 370 Riverside Dr., New York 25, N.Y.; b. New York, N.Y. December 16, 1905; ed. S.B. and S.M. in E.E. MIT; single, interested in radio six years, audio 32 years; professional experience 32 years Raytheon, Inc. Research Engineer 1927/1929, 1929/1932 Research Eng., Hygrade Sylvania Co., Consulting Engineer, Audio Devices Inc., Maico Co., Audio Instrument Co., 9 Patents, many papers, one book "How to Make Good Tape Recordings;" member AIEE, Acoustical Society of America, SMPTE, Fellow AES, Past President and now Secretary; Radio Club of America Director.

LEMMON, WALTER S. (F) 1914 - President Radio Industries Corporation, 1 East 57 St., New York 22, New York; res. Old Greenwich, Conn.; b. N.Y.C. February 3, 1896; ed. E.E. degree Columbia University; married; Amateur Station "AX" New York 1908 and later licensed 21E until 1917; professional experience U.S. Navy Radio Officer De velopment Engineering Radio Receivers, general radio executive work, developed radiotype for International Business Machines Corp.; International Broadcasting stations, WRUL, Boston; Radio Club of America Recording Secretary 1917/1920, Director 1915/1916, 1921/1922.

LEMPERT, IRVING E. (M) 1941 - Engrg. Sector-Mgr., Westinghouse Electric Corp., Metuchen, New Jersey; res. 51 Linden Ave., Metuchen, N.J.; b. N.Y.C. April 11, 1917; ed. Lehigh University B.S. in E.E.

LEWIS, HAROLD MILLER (F) 1925 - Professional Engineer N.Y. State; res. 510 Blanchard Parkway, West Allenhurst, N.J.; b. Geneva, N.Y. January 12, 1893; married ed. B.E. Union College 1916, Radio Engineering Course, Sorbonne, Paris 1919; interested in radio since 1906; amateur: electrolytic receivers 1906/1910; professional experience General Electric Research 1916/1917, Signal Corps Division of Research Paris 1918/1919, Radio Engineer Signal Corps 1919/1921, President Radio Service Laboratories 1921/1925; President LeMor Radio 1925/1927, Signal Corps Fort Monmouth 1927/1930, Hazeltine Electronics Corp. Engineer in charge of Television 1930/19 37, Consulting Engineer 1939/1941, Hazeltine Corp. in charge of I.F.F. Training 1942/1944, Technical Adviser

Hazeltine Patent Department 1945/1946, Patent Adviser Signal Corps 1948 to 1955; about 60 U.S. Patents, papers in IRE and Electronics; original superheterodyne development with E. H. Armstrong 1918, Television Standards Committee 1931/1936, devised Whip Antenna for Army Tanks; member AIEE, IRE, Chairman, N.Y. section 1944; Director Radio Club 1934/37.

LIGORL JOSEPH (M); res. 64-10C - 186th Lane, Fresh Meadows, New York.

LONG, ESCO C. (M) - Senior Standards Engineer, Stavid Engineering, Inc., Plainfield, N.J.; res. 883 Springfield Ave., New Providence, N.J.; b. Twin Rocks, Pa. August 24, 1906; ed. Indiana State Teachers College B.S., Penn. State and University of Pittsburgh Graduate Work; married; five children; intersted in raio since 1918; amateur; built various types transmitters and audio amplifiers; professional experience: Radio Engineering Naval Research Laboratory, Washington, D.C.; three years Stavid Engineering, Inc., Supervisor of the Standards Section; eleven years Shepard Laboratories, Summit, N.J. as Project Engineer in Electronics; High School Instructor in Mathematics (12 years); Metropolitan Life Insurance Co. (2 years); U.S.N.R. (Electronics) during World War II. Boy Scout (Eagle Scout), Played Baseball, Football, Basketball and Tennis; Hobbies - Gardening, Hunting and Fishing; Lions Club (Secretary), PTA (President).

LOUGHLIN, BERNARD D. (F) 1940 - Electronic Research Consultant; res. Little Neck Rd., R. D. 5, Huntington, N.Y.; b. May 19, 1917; ed. Cooper Union B.E.E. 1939; Fellow IRE, member AIEE, IRE Zworglin TV Prize Award, 1952, SMPTE Sarnoff Gold Medal Award, 1955, IRE, 1957 award of PGBTR.

LOUGHREN, ARTHUR (F) 1960 - Consulting Engineer; formerly Vice Pres. Airborne Instruments Laboratory Division of Cutler-Hammer, Inc., Mineola, N.Y. Applied Research Division; res. 22 Broadlawn Ave., Great Neck, N.Y.; Radio Eng.; b. Rensselaer, N.Y., September 15, 1902; ed. Columbia University A.B. 1923, E.E. 1925; Phi Beta Kappa, Sigma Xi, Tau Beta Pi; married; Gen. Élec. Co., Schenectady 1925/30; RCA Mfg. Co., Camden, New Jersey 1930/34; Gen. Elec. Co., Bridgeport, Conn. 1934/ 36; Hazeltine Electronics Corp. 1936/1956 - Ch. Eng. 19-46/49, V.P. charge research 1951/1956 - also Exec. V. P. Hazeltine Research Corp. 1952/1956. Holder of 29 patents, and continuously in radio and TV since 1925. Fellow of IRE, SMPTE, AIEE, and Radio Club of America; President IRE 1956; member Joint Technical Advisory Committee; National Stereophonic Radio Committee: holder David Sarnoff Gold Metal, 1953; Morris Liebmann Memorial Prize 1955; U.S. Navy Certificate of Commendation, 1947.

LUNDAHL, TORE, (M) 1959 - Executive V.P., Technical Appliance Corp., 1 Taco St., Sherburne, N.Y. res. East Hill, Sherburne, New York.

LYNCH, ARTHUR H. (F) 1922 - Field Engineer, Arthur H. Lynch and Associates, 2878 Valencia Way, Fort Myers, Fla.; b. Brooklyn, New York July 2, 1894; ed. 3 yrs. High Schoolseveral correspondence courses electronics etc.; married; interested in radio since 1908; amateur station Brooklyn and Jamaica, Long Island 1908; presently W4DKJ all bands; professional experience Marconi Wireless Telegraph Co. 1912, Army Officers Training School, Tours France World War One, Radio Department New York Times 1920, Director of Publicity RCA 1920, Editor Radio Broadcast 1924/1928, Manufacturer Fixed Resistors 1929/1940 and Noise Reducing Atennas 1937/1942, Editor Radio News 1935/1936, now represents 30 manufacturers in Fla.; Senior Member, IRE, Life Member VWOA and Recipient VWOA Marconi Medal; Hobbies - amateur radio, flying yachting; Director Lee County Chamber of Commerce, Florida; Radio Club of America Recording Secretary 1924/1926.

LYONS, WALTER (M) 1951 (F) 1961 - Vice Pres., Tele-Signal Corp., 198 Miller Place, Hicksville, New York; res. 3326 160 Street Flushing 58, L.I., N.Y.; b. October 5, 1906 N.Y.C.; ed. Morris High School, McGill University B. Sc. in Electrical Engineering 1928, M. Sc. in Physics and Mathematics 1932; married; interested in radio since 1918; Professional experience Hazeltine Service Corp. 1929/1932, 1934/1937, Chief Engineer Wells-Gardner 1932/1933, Chief Engineer Emerson Radio TV corp. 1933, Chief Engineer Majestic Radio TV Corp., 1937/ 1938 RCA Victor, Design Engineer 1938/1945, RCA International Division Staff Engineer 1945/1946, RCA Communications Manger, Station Facilities (Equipment & Systems) 1946/1962, Tele-Signal Corp.; 1962 to present; 15 U.S. Patents, several papers in Electronics RCA Review, Proceedings I.R.E. and A.I.E.E. Transactions PT GCS. Articles on radio receivers and transmitters, First Edition-McGraw Hill Encyclopedia of Science and Technology. Member Sigma Xi, IEEE, Cold Iron Society, Societe Francaise des Electroniciens et des Radioelectriciens, Roslyn Rifle and Revolver Club, Chairman E.I.A. TR 6 Com. on Long Distance Pointe-to Point Radio Communications 1949/1962; member U.S. Study Groups II & III of CCIR, Chairman Paper Study and Procurement Committee, IRE-PGCS 1959/1960 and on the Administrative Committee 1962/1965, member Experts Advisory Committee (PEAC) - U.S. Dept. of State for IFRB; Professional Engineer, N.Y. State, Consulting Communications Engineer, Adjunct-Professor of Electrical Engineering Polytechnic Institute of Brooklyn.

MacLaren, FRED B. (M) 1951 - President, F. B. MacLaren Inc., 15 Bay Drive West, Huntington, L.I., N.Y.; Vice - President, Photomechanisms; res. same; b. Jersey City September 9, 1915; ed. B.E. Degree E.E. Yale University 1936; married; interested in radio since 19-28; amateur WIGYE; professional experience Engineering Consultant electronic and mechanical component design, development and production, Perkin - Elmer Corp. computer design 2 years, Glenn L. Martin Co. (airborne Fire Control System) 2 1/2 years, Officer in Charge A.A. Fire Control Development Army Ordnance Department 4 1/2 years, The Bristol Co. Electronic Development Engineer 4 1/2 years; six patents on various industrial electronic instruments; "Servo-mechanisms for Industry" Applied Hydraulics 1953; Hobbies - Tennis, swimming, golf, bridge.

MALLORY, HENRY ROGERS (M) 1957 - Technical Consultant, P. R. Mallory & Co., Inc., President Round Electric Products Co., Inc.; P. R. Mallory & Co., Inc., 41 East 42nd St., New York 11, N.Y.; b. May 9, 1912, Rye, N.Y.; ed. The Hill School; 2 yrs; Patents, Papers, etc., Several; Sports, Hobbies, etc., Electronics, boating, tennis, music, photography.

MANIELLO, JOHN BAPTISTE LOUIS - (M) 1961 - Vice President, CBS Laboratories, Stamford, Conn. b. New York City, October 31, 1923, res. 2723 Sylvia, North Bellmore, N.Y. Married, three children, ed. Polytechnic Institute of Brooklyn, B. M. E., Columbia University, M.B.M. Industrial College of the Armed Forces. Sales manager, Fairchild Camera & Instrument Corp. 1942/ 1960; CBS Laboratories, 1960/ to date. Instructor, Physics and Engineering Department, Hofstra University. Pilot, USAF, Purple Heart, 3 clusters, Air medal, 4 clusters. Member Tau Beta Pi, P. Tau Sigma, Sigma Alpha; Past President, Civil, North Bellmore, N.Y.; Cubmaster, North Bellmore, Honorary Member Cerebral Palsey; research in electronic graphics, radar and infra red reconnaissance, data recording, image transmission system, photo grammetry.

MANSON, WALTER B., JR., (F) 1957 - Asst. Division Manager, Measurements, Boonton, New Jersey; res. 115 Lake Dr., Moutain Lakes, N.J.; b. September 13, 1911; Elyria, Ohio; ed. Newark Academy, Cornell University.

E.E. 1936; previous emp. Thomas A. Edison Industries, 2 years; Sports, hobbies, sailing, skating, swimming, Hi-Fi, model railroad.

MARTIN, DEVEREAUX (F) 1959 - Assistant to Manager, Product Engineering Department, Hughes Aircraft Company, Communications Division, P.O. Box 90902, Airport Station, Los Angeles 45, Calif.; res. 802 Primrose Ave., Placentia, Cal.; ed. Electrical Engineering, Mass. Institute of Technology, Class of 1929; married; interested in radio since 1922; professional experience since 1929, in fields of aircraft equipment, navigational systems, high power transmitters, industrial controls and military airborne systems equipment, with Westinghouse Electric Corp., Federal Telephone & Radio Corp., J.H. Bunnel & Company, WilcoxGay Corp., Radio Receptor Company, Electronic Corp., of America, Viking Instrumnets Inc., member of AIEE and IRE, including many professional groups.

MARK, ERNEST A.(F) 1949 - General Manager, Fairchild International; 515 Madison Ave., Division of Fairchild Camera and Instrument Corp.; formerly Director International Division, Allen B. DuMont Laboratories; res. 333 East 53rd St., N.Y.C.; b. N.Y.C. March 9, 1896; ed. Columbia University B.S. E.E., U.S. Naval Research Laboratory, Bowdoin College, Electronics; interested in radio since 1910; Amateur 1910/1917; professinal experience: General Manager DuMont Television, Chief Radio Theory Instructor U. S. Navy World War One, Electronics Officer Third Naval District (radar) World War Two; Member, Electronic Industries Association International Department Executive Committee, Senior member, IEEE; Regional Group National Export Expansion Council, New York area, U.S. Dept. of Commerce; Hobbies - Sailing (Ocean), Painting.

MARX, FRANK LOUIS (F)1956 - Vice President in charge of Engineering American Broadcasting Co. empolyed there from 1944 to present; res. 35 E. Hartsdale Ave., Hartsdale, N.Y.; b. January 31, 1910, Birmingham, Ala.; ed. Shreveport College, University of Virginina, William & Mary College, Columbia University; Call letters W3OF - 15 yrs. given up about 1931; Patents, Papers etc., Papers published in numerous technical journals, holder of several patents.

MASIN, OLDRICH F. (F) 1946 - Field Engineering Representative, O. F. Masin Co., 1 Wolf's La., Pelham, New York; res. 92 North Ave., New Rochelle, N.Y.; b. N.Y.C. June 7, 1900; ed. B.S. in E.E. Cooper Union Day Technical School; married; interested in radio since 1921; professional experience: Radio Corporation of America Harrison, N.J. Development 200A and 201A, Ward Leonard Electric Co., Mt. Vernon, New York Design and Development of resistors and rheostats 9 years, past 25 years in O.F. Masin Co.

MAYHEW, BENJAMIN ALAN (M) 1922 - Consultant, National Sugar Refining Co., N.Y.C.; res. Harbourton Woosville Rd. P.O. Box 337-B, Pennington, N.J.; b. Englewood, N.J. March 12, 1897; ed. M.E. Stevens Institute of Technology, P.E. N.Y. State; married; interested in radio since 1911; amateur 1913 2HP. 1KB in 1916, W2BYW 1921, K2DD 1951, extra class 1953; member of Tenafly. Boro Council 1944/1951 (Police Commissioner); Hobbies-Amateur Radio, photography; Societies - ASME, Sugar Industry Technicians.

MAYO, HARRY L. (M) 1962 - Field Engineer, Hewlett-Pakard Co., RMC Sales Div., Englewood N.J.; res. 280 Prospect Ave., Hackensack, N.J.; b. October 12, 1926 at Hartford, Conn.; Ed. BS in EE, Northeastern Univ., Boston, Mass. 1953; married; Interested in radio since 1937, licensed as WIQPQ in 1947, presently WB2EDS. Radar technicians, Signal Corps, U.S. Army 1945-46;

electronic technician National Co., Inc., Malden, Mass. alternately with periods of school as part of Northeast-ern Univ. co-operative work plan, 1947-1953; Test Engineer, Hazeltine Corp.k Little Neck, N.Y., 1953-1956; Field Maintenance Engineer, Tektronix, Inc., 1956-1959; Hobbies, Amateur Photography, stamp collecting; Member -- IEEE, ISA, ARPL.

McCOY, DANIEL C. (F) 1921 - Consulting Engineering, Refrigeration, and Food Technology, Sales and Sales Management; 7546 Normandy La., Dayton 59, Ohio; res. same; b. N.Y.C. December 22, 1894; ed. Public Schools of Tarrytown and Yonkers, N.Y., Cornell University (Chemistry); married; interested in radio since 1900; active amateur since 1906 except for war periods and brief periods due to change in residence; professional experience: Marine operator 1911/1916 (summer vacations); Lecture Assistant Department of Chemistry Cornell University 1914/1917; Commissioned Officer Signal Corps and Air Service World War One; Sales and Sales Management in automobile business 1919/1925; Frigidaire Division of General Motors Corp. 1925-retired October, 1955, activities included sales, sales engineering, and sales management work in commercial and industrial refrigeration and air conditioning, directed field engineering organization, edited three commercial refrigeration engineering manuals, directed frozen food research, final assignment Technical Consultant staff of General Sales Manager; Fellow, American Society of Refrigerating Engineers; Charter Member and Emeritus Professional member; of the Institute of of Food Technologists, Member of Engineer's Club of Dayton, ARRL, Old Old Timers Club, Quarter Century Wireless Assn. Dyton Amateur Radio Association (past president), Delta Upsilon Fraternity, Scabbard and Blade, Alembic (Cornell); hobbies are amateur radio, fishing, and sailing. Amateur Radio Station, W8WG.

Mc GONIGLE, JOHN HUGH, (M) 1962 - New York Telephone Co., 89-63 163rd St., Jamaica 36, New York N.Y. res. 247-49 90th Ave., Bellerose 26, New York.

McKENZIE, ALEXANDER ANDERSON (F) 1948 - Editor, Engineering Books, McGraw-Hill Book Co., 330 West 42nd St., New York 36, N.Y.; res. 245 Poplar Ave., Hackensack, N.J.; b. Albany, N.Y. Ocotber 2, 1908; ed. Albany public Schools and Albany Academy 1928, Dartmouth College A.B. 1932; married; interested in radio since 1920; amateur WIBPI (1931) and W2SOU 1946 but continuously licensed; professional experience; radio operator or radio operating engineer at Mt. Washington, N.H. Observatory, Research Assistant Yankee Network, Inc., Research Assistant Carnegie Institution of Washington, Staff member Radiation Laboratory MIT; Member (SM) IRE, Institute of Navigation, ARRL, Appalachian Moutain Club, Mt. Washington Observatory Inc.; Active in Hackensack politics, PTA and similar school-centered work, Member, Board of Education 1955/1960, President 1959/60, local church work; Co-editor "Loran", author and publisher "Key and Answers to New Radiotelegraph Examination Questions," Radio Operating Questions and and Answers," pioneered in 5 meter and 2.5 meter communications between Mt. Washington and Blue Hill Observatory 1935/1937 and with Radiosonde at 60 mc and during 1937 on similar sounding at the Bartol Research Foundation, returned to Mt. Washington to install Yankee Network 41 mc FM station and heard first FM Signals from Alpine in 1938; transferred to Paxton 1939 on first 50 KW FM station, Radiation Laboratory MIT 1942 on Loran with field work in U. S., Canada, Labrador and Newfoundland; Electronics magazine 1945 to 1957; Mc-Graw-Hill Book Co. 1957 to present.

McMANN, RENVILLE H. (F) 1919 - Consultant; res. 60 East 96th St., New York City 28, N.Y.; b. N.Y.C. June 29, 1895; ed. Choate, U.S. Naval Radio School, Harvard University; married; interested in radio since 1912;

amateur 2 MC from 1919 to 1928; professional experience R. H. McMann, Inc. radio distributors, 12 Warren St., N.Y.C., Procurement Director Republic Aviation, December 1942 to 1945, Westinghouse Electric Corp. 1945/1957; Past President West Side Tennis Club, Past President United States Lawn Tennis Association; Radio Club of America Corresponding Secretary 1921/1924.

McMANN, RENVILLE H., JR. (F) 1944 - Vice President, CBS Laboratories, Stamford, Conn.; res. 60 East 96 St., N.Y.C., b. N.Y.C. August 20, 1927; ed. B.E. Yale University, 1950; single; Pioneer in amateur teletype activities; Professional Experience, 5 summers plus one and one -half years in Columbia University and Alpine, New Jersey Laboratories of Major E. H. Armstrong; TV Development Laboratory National Broadcasting Co., 52/55 Pilot Member Soaring Society of America, Patents in Color TV field.

MERRIAM, ROBERT WEIS (M) 1963 - Owner, Merriam Marine Radio, Electronics Editor, Fishing Gazette; b. July 18, 1923 at Providence, Rhode Island; res. Deep Peace Farm, Tillinghast Rd., East Greenwich, Rhode Island; ed. S. B., S. M., Harvard University, 1949, 1950; Amateur WINTE from 1941; Signal Corps 1942-1946, Pres-Harvard Wireless Club 1947 and 1948; Instructor in E. E., Swarthmore College 1950-1953; Automation Engineer, Metals and Controls Corp., 1953/1956; New England, Wireless Museum; Member IEEE, Reg. Prof. Eng., R. I., Secretary, National Marine Electronics Ass'n; Member, R.I. Historical Society; Hobbies, Sailing and Radio History; Married to librarian, New England Wireless Museum, Home address, Tillinghast Road, East Greenwich, Rhode Island.

MEYER, STUART F. (M) 1955 - Engineering Dept. Supervisor, Allen B. DuMont Labs., 5 1/2 yrs.; res. 1103 Kent Pl., Linden, New Jersey; b. N.Y.C. February 4, 1918; ed. High School and DeVry Institute Correspondence Course (Radio & TV) and 6 months Technical Course U. S. Navy; Military Service 5 yrs. U.S. Navy, Maintenance Radar and Communication Equipment 2 1/2 yrs. as Instructor; Amateur Letters, W2GHK since 1933; Patents, Papers, etc. IRE Papers, a Manually Operated Demand Repeater. Vehicular Noise Problems in Modern Land-mobile Systems, plus many technical talks before; Association of Police Communication Officers, International Municipal Signalmans Assn. Pennsylvania Elec. Assn. Forestry Conservation Service, etc., "Many Radio Clubs;" Sports Hobbies, etc., Bowling, Woodworking, Member IRE, ARRL, RSGB, Tri County Amateur Radio Assn., Former President Staten Island Amateur Radio Assn., Currently finishing up installation of San Francisco Police Radio System which is used in Filming of Current "Line-Up" series.

MEYERSON, ART H. (F) 1956 - Lieutenant, New York Fire Department, Bureau of Fire Communications, 22 yrs.; res. 60 Knolls Crescent, New York 63; b. August I, 1909, N.Y.C.; ed. Fordham University 1 yr., Pratt Institute, 2 yrs., New York University1-1/2 yrs.; Patents, Papers, etc., Various papers published in "Communications," on superregeneration VHF techniques, Coil Q, portable mobile XMTRS and RCVRS; Sports, Hobbies, etc., Member IRE, Member AES, Hobby High Fidelity.

MEZGER, G. ROBERT (M) 1956 - General Manger, Gawlor-Knoop Co., 178 Eagle Rock Ave., Roseland, New Jersey; formerly Electrical Engineer, Allen B. DuMont Labs., Inc., 20 yrs., Measurements Corp., 1 yr., Avion Div. ACF Industries, 2 yrs; res. 617 Beverly Road, Teaneck, New Jersey; b. November 11, 1914; ed. Elec. Engr. Rensselaer Polytechnic Institute, Troy, N.Y.; 1936; Amateur Radio, ARRL, AIEE.

MIESSNER, BENJAMIN F. (F) 1963 - President and owner, Miessner Inventions, Inc., 680 N.E. 105th St., Miami Shores, Fla. b. July 27, 1880, Huntingburg, Ind. ed. U.S. Naval Electrical School, 1908/1909, Purdue Univ. 1913/1916. Pioneered in development of radio controlled boats line power for radio receivers and holder of numerous patents. Fellow, IRE, 1937.

MILLER, ARTHUR G. (F) 1949 - Electrical Manufacturing, Delta Electronics, 259 Green St., Brooklyn, New York; res. 1560 5th Ave., BayShore, N.Y.; b. N.Y.C., January 3, 1916; ed. Cooper Union; married; interested in radio since 1925; First Class Radio Operator.

MILLER, DONALD H. (F) 1944 - New York District Manager, Electronics, Advertising Sales Dept., McGraw-Hill Publishing Company, Inc., 500 Fifth Ave., New York 36, N.Y.; res. 177 Clinton Ave., Dobbs Ferry, N.Y.; b. Cambridge, Mass. May 4, 1902; ed. B. S. in Engineering Tufts University; married; active in radio and electronics since 1921.

MILLER, JOHN HAROLD (F) 1933 - Retired, Consultant to Weston Instruments, Division of Daystrom Inc., Newark, N.J.; res. 205 Palmetto Ave., Harbor Bluffs, Largo Fla.; b. Oak Park, Ill. June 6, 1893; ed. B.S.E.E. University of Illinois 1915; married; interested in radio since 1907; amateur spark transmitter and receiver Oak Park, Ill. 1907/1911; professional experience in conjunction with engineering work on electrical measurements, application to radio in all its aspects has always played a prominent part; some 38 patents, miscellaneous papers on measurement before AIEE and IRE; Radio Club of America President 1937/1938, Vice President 1936, Director 1934, Fellow-AIEE; Fellow-IRE.

MINTER, JERRY B. (F) 1942 - President, Components Corporation, Denville, N.J.; res. Normandy Hts. Rd., Morristown, N.J.; b. Ft. Worth, Texas October 31, 1913; ed. B.S. MIT 1934; married; interested in radio since 1925; amateur ex-W1EQC and ex-W2RDH; professional experience: Boonton Radio Corporation 1935 development bandpass intermediate frequency transormers, Radio Frequency Laboratories 1936/1939 in charge of development of a signal generator, a radio noise and field strength meter, 1939 assisted in organizing Measurements Corporation and Vice President and Chief Engineer until 1953; member Aircraft Owners and Pilots Association, American Society for Metals, Past President & Fellow, Audio Engineering Society; assisted in organizing Northern New Jersey Sub-section IRE and acted as Chairman of the Sub-section 1947/1948; numerous RMA, IRE, SAE and ASA Standards Committees; several patents in his field of work and numerous papers ranging from Audio Distortion to Standard Signal Generators; Radio Club of America President 1948/1949, Director.

MITCHELL, LEN B., (M) 1962 - Automatic Electric Sales Corp., 730 Third Ave., New York, New York res. 731 Bonton Place, Arlington Heights, Ills.

MITCHELL, ROBERT JOHN, (M) 1962 - Decca Radar, Inc., 386 Central Park South, New York, N.Y.; res. Three Springs, Pound Ridge, New York.

MOORE, J. KENNETH, (M) 1960 - Dept. Mgr., CBS Laboratories, 227 High Ridge Road, Stamford Conn. Res. Woodbrook Rd. Member, IEEE, 1957.

MOREHOUSE, RAYMOND LYNUS (M) 1956 - Field Engr., Sales Rep. 1946 present prev. Adolph Schwartz, Sales Rep. Eitel McCullough, Inc., res. 2609 Ave. "R," Brooklyn 29, N.Y.; b. Topeka, Kans. October 4, 1898; ed. High School 3 yrs. Elec. Engrg., Night courses Columbia University; former emp. Sales Manager, 1935/1945 Allan D.

Cardwell Mfg. Corp., Brooklyn, New York, Lab. Tech. 1924/1934 Allan D. Cardwell Mfg. Corp.; Brooklyn, N.Y., Lab. Tech. 1924/1934 Allan D. Cardwell Mfg. Corp.; Wireless Operator 1919/1922, Telegrapher, A.T.SF to 1917; Military Serv. U. S. Naval Reserve 1917/1919; Amateur Call Letters W2QA, over 25 yrs.; Hobbies, Veteran Wireless Opr. Assoc., Radio Club of America, Quarter Century Wireless Assn., Inc.

MORELOCK, JAMES (F) 1937 - Consulting Engineer, The Morelock Company, Box 348, Millington, New Jersey; res. Millington, N.J.; b. Lockport, N.Y.; ed. Rensselaer and Brooklyn Polytechnic Institutes, E.E. 1932; married; interested in radio since 1925; professional experience: engineer, Weston Electrical Instrument Co. 1930/1939, Chief Engineer Electronics Div. 1940/1952; Consulting Engineer to date, private practice, electronics in the field of measurement, instrument and component design and manufacture, tubetesters, signal generators resistors, counters, infrared generators, computor amplifiers, air and ground navigation systems; 14 patents, National Product Design Award; avocation: country farm at Millington with horses and some cattle; Radio Club of America President 1950, (conducting the 1BCG Monumnet Dedication) and 1951, Vice President 1944 thru 1947, Corresponding Secretary 1942/1943, 1954 thru 1959, Director 1941, 1948/1949, 1952.

MOSS, JOEL FREDERICK, (M) 1960 - Motion Picture Engineer, California Studios, Melrose and Bronson Sts., Hollywood, Cal. res. 205 2nd Anita Drive, Los Angles 49, Cal.

MUNN, W. FAITOUTE (CM) - Analytical and research chemist, res. 75 Walker Rd., West Orange, N.J., b. January 20, 1891, East Orange, N.J., ed. Columbia University, interested in radio since 1905. Professional experience: Laboratory of Thomas A. Edison; 2-1/2 years Laboratory Assistant to Dr. S. A. Tucker, Electrochemical Laboratory, Columbia University; Chemist, West Virginia Pulp & Paper Co.; Ass't Director, Lederle Laboratory, New York; Electrical Engineer, Electrical Alloy Co.; Chief Chemist, General Chemist, General Chemical Co., Baker & Adamson Plant, Easton, Pa.; Chief Chemist, Brewster Film Corp., Chief Chemist, Colura Pictures Corp.; Chemist, Carroll Dunham Smith Pharmaceutical Co.; 10 years Certified Chemist, American Bureau of Shipping; Consulting Microscopist, Evans Research & Development Corp., 1948----. Private research laboratory (optical, chemical, microscopical, electric furnace, high frequency, photographic). Patents No. 2371405, "Gas Analysis Apparatus," and No. 2537-"Knife-Edge Device for Three-Dimensional Effect Images Through Microscope." Societies: Fellow, Royal Microscopical Society, New York Academy of Sciences, and Charter Member, Radio Club of America.

MUNROE, ROBERT KING (M)1959 - Consulting Engineer, res. 315 East 68th St., New York 21, N.Y.; b. August 3, 1894, Litchfield, Conn.; ed. Horace Mann Sch. N.Y.C.; Groton School, Groton, Mass., Columbia Univ. Engineering Sch., E.E. 1917; employed by Coverdale & Copitts, 15 yrs.; Military Service Capt.. Corps of Engrs. U.S. Army, 1917/1922; Grad. Army Sch. of the Line and Gen. Staff College A.E.F.; Hobbies, Clubs, St. Anthony Club, N.Y.C., Developing own sound systems, Citizens Union of N.Y., vice chairman (civic organization), Member ASCE.

MURPHY, GLYNN M (M) 1960 - Retired; formerly, Communications and controls engineer, Broadway Maintenance Corp., 22-09 Bridge Plaza North, Long Island City 1, N.Y. res. 7116 Hershey Way, Orlando, Fla.

NELSON, WAYNE M. (M) 1964 - res. 396 South Union St., Concord, N.C. (Mail: Box 72, Concord, N.C.); b. June 25, 1900, Kernersville, N.C. Married, one son, Philip

(Chief Engineer WHIP, Mooresville, N.C.) Graduate Kernersville, N. C. High School 1917. Leaned heavily on Hawkins Electrical Guide and extension study for early technical training. First business venture at age 15 as owner 10-mile toll circuit while working with local telephone company. Commissioned officer USNR 1932-38. Maintained U.S. Antarctic Service Message Center WL MC at W4AA for two years, 1939-1940, handling up to 1600 messages monthly from Byrd's East and West Bases, have built and owned individually several standard, broadcasting stations, 1925-34 WNRC Greensboro, N. C.; 1946-50 WWNF Fayetteville, N.C.; and 1954-56 WPET Greensboro, N.C. Currently professionally engaged as owner and manager WHIP, Mooresville, N.C., since 1950 and WAYN, Rockingham, N.C. since 1946. Original and continuous holder W4AA since November 24, 1919, the first license issued in Fourth Radio District after WW One. Extensive hobby time spent as collector and historian early wireless equipment and supporting library.

ODGERS, ARTHUR J. (F) 1950 - Vice President, Northern Radio Co.; res. 82 North Rd., Smoke Rise, Kinnebon, N. J.; b. Calument, Mich. August 6, 1912.

OFFENHAUSER, WILLIAM H. (F) 1936 - Engineer, selfemployed; res. Box 594 New Canaan, Conn.; b. Brooklyn, N.Y. May 8, 1904; ed. B.A. Columbia (with Engineering Option); married; interested in radio since 1915; always on fringe of amateur station, still have hopes of running ham set; made first recordings of mosquito sounds, confirming Hiram Maxim's findings after 75 yrs,; about 20 odd patents (such as noiseless recording for sound films, direction finder with response to the tangent of the field angle, a system for recording and utilizing low energy sound of insects to effect control of them); one book on 16 mm Sound Motion Pictures, A. Manual (Interscience 1949, reprinted 1953, 1958) another book on Microrecording (microfilming) with C. Lewis (Interscience 1956); also numerous technical papers. Fellow - Sc. Motion Picture Television Engrs., Ands Eng. Society. Member - Acoustical Society of America, Inst. Radio Engrs. Am. Ordnance Assn.; Awards - OSRD Certificate (VT Fuze Project); ASA War Standards Certificate (252 Project); Naval Ordnance Development Award Certificate (NDRC Tropic Deterioration Project).

OLSON, ALFRED ELLIOTT (M) 1956 - res. 31 Jervis Rd. Yonkers 5, New York.

OSBAHR, BERNARD F. (M) 1951 (F) 1956 - Editor, Electronic Industries, (Chilton Company) Chestnut & 56th Sts., Philadelphia 39, Pa.; res. 923 Longview Rd., King of Prussia, Pa.; b. Brooklyn, N. Y. December 17, 1918; ed. University of Pennsylvania, RCA Institutes Inc.; married; interested in radio since 1933; professional experience 1939/1942 Engineer RCA Mfg. Co. Camden, New Jersey; 1942 Chief Engineer New York School of Radio; 1943/46 U. S. Army 1946/1947 Chief Electrical & Mechanical Procurement USFET Corps. of Engineers (Germany); 1947/1948 Director Services Division U.S. Army Exchange Service (Germany) 1948 to present Editor Electronic Industries, Senior member IRE, Member AES, AFCA; Hobbies - fishing, boating.

OSBORN, PERRY H. (F) 1944 - Senior Engineer, Radio Engineering Laboratories, Inc., 29-01 Borden Ave., Long Island City 1, N.Y.; res. 546 Sunset Ave., Haworth, N. J.; b. Buskirk, N.Y. August 31, 1904; ed. E.E. Rensselaer, Polytechnic Institute, M. Sc. University of Pittsburgh; married; interested in radio since 1920; amateur W2FAA; Radio Engineer with Westinghouse, Signal Corps, RCA and E.H. Armstrong, Director Radio Club 57 Member IRE.

OSTERLAND, EDMUND (F) 1950 - Electronic Instrument Design and Manufacture, EO Electronics, Inc., Moutain Lakes, N.J.; b. Brooklyn, New York 1909; ed. B.S.E.E. New York University; married; professional experience Chief Engineer Ballantine Labs., Inc. until January 1952, own Business since that time.

OTIS, G. EDWIN (M) 1953 - Site Manager, General Electric Co. in Product Service, Buloxi, Miss.; res. 301 Pleasant Ave., North Syracuse, N.Y.; b. Plattsburg, N.Y. 1915; ed. graduated Union College 1938; interested in radio since 1930; professional experience - General Electric Co. 1941/1943, U.S. Army Signal Corps 1943/1946, instructor in radio and television at Veterans Vocational school, Troy, N.Y.; presently President of Otisonde, Inc., majoring in Hi-Fi Custom Sound Installations and Industrial Television; Technical article in "Radio" 1943 on volume expander, U.S. Army, developed special test equipment for carrier telephone and a noise suppressor for background line noise.

PACKARD, LUCIUS E. (F) 1940 - Engineer, President, Sales Manager, Technology Instrument Corporation, Action, Mass.; res. Framingham Centre, Mass.; b. Sommerville, Mass. January 21, 1914; ed. Graduate MIT1935; married; interested in radio since 1928; amateur WIDFL; patent, variable resistor, Patent Electric method and system for measuring Impedance and Phase Angle (conjunction with Hermon H. Scott).

PAGE, ESTERLY CHASE (F) 1945 - Consulting Engineer, Partner, Page, Creutz, Steel and Waldschmitt, President Page Communication Engineers, 710 14th St. N. W., Washington 5, D. C.; Vice Chairman Board of Director Edison-Page S.P.A. Rome, Italy; res. 10822 Alloway Drive, Potomac, Md.; b. Chicago, Ill. July 16, 1902; Senior Member IRE, member Engineers Club, New York, ex-Lieut. Colonel AUS Signal Corps.; Awards - Legion of Merit Order of British Empire.

PAINE ROBERT C. (F) 1935 - Test Engineer, Measurements Corporation, Boonton, N.J.; res. 436 Cornelia St., Boonton, N.J.; b. South Randolph, Vt., August 10, 1895; ed. Electrical Engineering at Worchester Polytechnic Institute and Marine Engineering at Webb Institute of Naval Architecture 1914/1917; married, four grandchildren; interested in radio since 1928; left college for Army 302nd Field Artillery 1917/1919, attended Royal Technical College, Glasgow, Scotland, Technical Staff Bell Telephone faboratories 1923/1932, Ferris Instrument Corporation 1934/1948; Senior member IRE, Morris County Engineers Club, Masonic Lodge, Author of many articles in radio magazines.

PALMER, CHARLES WALTER (F) 1935 - Formerly Engineer, Western Electric Co., Inc., Lexington Rd., Winston-Salem, N.C.; res. 8701 Marble Dr. El Paso Texas; b. Kingsbridge, N.Y. August 26, 1907; ed. E.E. Cooper Union and Cornell University, also studied at Columbia University, N.Y. University and Stanford University; married; interested in radio since 1919; amateur formerly W2BV, W2BOY until 1940, Present W4ASV; professional experience: Technical Assistant Bell Telephone Laboratories 1928, Engineer Dresser Mfg. Co. 1929, Engineer Western Electric Co. 1929, Technical Editor Radio News Magazine 1931, Technical Editor and Managing Editor Radio-Craft Magazine 1933, Engineer, Section Chief and Department Chief Western Electric Co., Inc., Radio Division 1936 to date, presently Chief of Training Department; numerous articles in technical publications AIEE, Radio Magazine, Radio News, Radio-Craft; associated with radar and sonar engineering since 1940; Senior Member IRE. Member of Executive Board Boy Scouts of America, Old Heckory Council.

PANTER, PHILIP F. (F) 1946 - Fellow 1958 Executive Engineer ITT Laboratories (formerly Federal Telecommunication Laboratories) Nutley, New Jersey; res. 6 Hooper Ave., West Orange, N.J.; b. Poland 1908; ed. McGill University 1929/1936, B.S. 1933, B. Eng. 1935 and Ph.D. 1936; married; professional experience: teaching one year in Palestine, teaching mathematics and physics

Sir George Williams College, Montreal and staff of Physics Department McGill University until 1945, 1941 Canadian Marconi Co. Montreal, 1945 Federal Telegraph and Radio Corporation, Senior Engineer in Charge of Development of FM Broadcast Equipments, 1946 Federal Telecommunication Laboratories, 1950 International Standards Electric Corporation technical adviser on telephone installations in Israel; Federal Telecommunications Laboratories since June 1952; Senior Member IRE and Member American Technion Society; author, various papers on FM and PCM; "Modulation, Noise and Spectral Analysis", McGraw-Hill Book Co., 1965.

PAPAMARCOS, GEORGE (F) 1940 - Sales Engineer, Radio Engineering Lab's, Inc., 29-01 Borden Ave., Long Island City 1, New York; res. 14 Grayley Pl., Huntington Station, N.Y.; b. N.Y. August 6, 1914; ed. Brooklyn Technical High School, RCA Institute; married; interested in radio since 1933; ex W2FZM advanced class; professional experience: five years with U.S. Navy as Chief Radio Technician and Electronics Officer, with REL since 1940 except for five years with Navy; Member IRE, AFCEA, ARRL.

PARKES, ALANSON WILLISTON JR.(F)1947 - President Ballantine Labs., Boonton, N.J. formerly Vice President, Aircraft Radio Corporation, Boonton, N. J.; res. 200 Overlook Ave., Boonton, N.J.; b. Sandwich, Mass. December 24, 1899; ed. Clark University A.B. 1922, Lafayette College A.M. 1926, Harvard University A.M. 1929; married; interested in radio since 1912; amateur intermittently 1912/1930; Physics Instructor at Lafayette College & Harvard 1922/1930, Radio Engineer & Executive Specializing in Airborne Electronics 1930 to present; Director Ballantine Lab., Boonton, N.J. 1953 to date; Trustee, Clark University Worcester, Mass., 1959/19-63; U.S. Navy World War One-Chief Electrician Radio, Aviation, currently Vice President in charge of Field Engineering and Sales Division of Aircraft Radio Corp. since 1948.

PECK, GORDON V., (F) 1961 - The Gordon V. Peck Company, 130 Casa Linda Plaza, Dallas 18, Texas.

PETTERS, DANIEL P., (M) 1964 - res. 105 Briarcliff Road, Mountain Lakes, N.J.

PERRETTO, ARMAND, (M) 1952 - Assocaite Member of Technical Staff, Bell Telephone Labs since 1954; res. 23 Waverly Place, Freehold, N.J.; b. Jan 31, 1927, Brooklyn, N.Y.; ed. High School 1944, RCA Institutes Advanced Technology T3 Course 1954; married; research assistant Edwin H. Armstrong Columbia University Laboratory 1945/1954.

PETRY, CHARLES B. (M) 1942 - Chief Engineer, Radiaphone Co. Inc., 600 Evergreen St., Monrovia, Cal.; res. 1458 Bonita Ave., LaVerne, Calif.; b. Paterson, N. J. May 13, 1904; ed. Paterson High School, Bell Laboratories Technical School, Columbia University Extension courses; married; interested in radio since 1918; amateur W6NIV; professional experience: in all, branches of engineering since 1923; several patents; Senior Member IRE; Hobbies - Gunsmithing and Gem and Lapidary Work, amateur radio.

PFEIFER, CLARENCE H. (M) 1957 - Pres. & Treas., Frederick Pfeifer Corp., Mfrs. Rep. & Distributors, 44 years; 53 Warren St., New York 7, N.Y.; b. November 15, 1894, Brooklyn, N.Y.; ed. High School; Military Service 1918/1919 U. S. Sign. Corp. Radio Intelligence; Amateur Call Letters 1908/1911 (RD); 1912/1918 (2FA); 1942-present (W2FG); Hobbies, Amateur Radio, Q.C.W.A., V.W.O.A.; Always enjoy meeting old and new friends in the club, personally and over the air.

PILLER, S. EDWIN (F) 1958 - Radio Engineer, Allocations Engineering Trnasmitting Station Design & Construction, National Broadcasting Company, 11 yrs.; 157-32 20th Ave., N.Y.C.; b. August 6, 1921, N.Y.C.; ed. B. E.E. City College N.Y., 1943; Military Service U. S. Army Signal Corps 1946/1947; Amateur Call Letters, W2KPQ, licensed in 1937; Patents, Books, etc. Editor of the Sidebander, Official Publication of SSB Amateur Radio Assn., Contributor to CQ and First Army Mars Newspaper QUA; Hobbies, etc., President SSB Amateur Radio Assn., Member I.R.E. and N.Y. Radio Club; Dir. of the First Army Mars SSB, Technical Net - "For the Dissemination of Technical Knowledge by Radio Communication," Wednesday Evenings at 9 P.M. on 4030KC upper sideband.

PLAMJACK, HAROLD J. (F) 1961 - Engineer, RMC Division, Hewlett-Packard Co., res. 34 Stauber Dr., Plainview, N.Y.; b. N.Y. July 4, 1926; ed. MIT, BX in EE 19-42; married Virginia Getty; military service, U.S. Navy 1942/1946; hobbies, boating. Director, Radio Club, 1964.

POPKIN - CLURMAN, J. R. (M) 1950 - Formerly President (Radio Engineer), Telechrome Mfg. Corp., Amityville, L. I., N.Y.; res. 134 Wheatley Dr., Brookville, Glen Head, L. I., N.Y.; b. Brockton, Mass., August 29, 1916; ed. M.I.T. S.B. 1938, Harvard Business Sch. M.B.A. 1940, also Brooklyn Polytechnic Institute and Columbia; married; interested in radio since 1922; amateur W1EPH W2LNP; professional experience Hazeltine Electronics Corp., Panoramic Radio Corporation, Servo Corp. of America, Signal Corps, Automatic Radio, 4 Patents pending; over 40 technical articles published; Senior Member IRE, Nassau Radio Club; Sr. Member, Fernseh Technische Gesel. (Germany), Sr. Mem. British Soc. of Television Engineers, Sr. Mem. Institution of Elect. Eng. (Brit), Sr. Mem. Institution of Elect. Eng. (India), Sr. Mem. Institute of Television Eng. (Japan) Sr. Mem SM PTE (Soc. of Mot. Pict. & Tel. Eng.) U. S. Delegate: C CIR (Com. Consultative International Radio Telecommunications), NTSC (Nat. Tel. Systems Com.), Member: NAB (Nat. Assoc. of Broadcasters), EIA (Electronic Industries Assoc.), AFA (Air Force Assoc.).

POPPELE, J. R. (F) 1940 - Voice of America, Washington, D.C.; Advisory-Committee; res. 9 Crest Circle, South Orange, N.J.; b. Newark, N.J. February 4, 1898; married; professional experience: radio operator on commercial vessels 1915/1920, Chief Engineer WOR Broadcasting Station 1922/1952, Vice President 1946/1952 Secretary 1936/1948, Director 1936/1952, Mutual Broadcasting System Board of Directors 1947/1952, Radio Consultant to New Jersey State Police; President of Television Broadcasters Association for seven years, Founder of original FM Broadcasters Association, President Radio Pioneers Club, Fellow IRE, Member Board of Directors Veteran Wireless Telegraph Operators Association, Trustee South Orange Presbyterian Trinity Church, member Advisory Council Upsala College, member American Physics Society, Society of Motion Picture Engineers, member Committee on Civil Defense ; Hobbies Golf, Photography. President, Green Moutain Enterprises, Vt.

PRATT, HARADEN (F) 1930 - Engineer, Retired, 2612 N.E. 7th St. Pompano Beach, Fla.; b. San Francisco, California, July 18, 1891; ed. University of California B.S. in Electrical Engineering 1914; married; interested in radio since 1905; amateur 1905/1915; President and Secretary Bay Counties Wireless Telegraph Association 1910/1914; professional experience: United Wireless Telegraph Co., and Marconi Wireless Telegraph Co., San Francisco ship and shore station operator and installer 1910/1914; Marconi high power 300 kw trans-Pacific stations at Bolinas and Marshall, Cal. 1914/19-

15; U. S. Navy Department Bureau of Steam Engineering Expert Radio Aide at Mare Island Navy Yard and then at Washington in charge of construction and maintenance of all high power naval radio stations during World War One; Federal Telegraph Co. engineer in charge of factory and design and construction of its Pacific Coast public service telegraph system 1920/1923; private business in Cal. 1923/1928; Western Air Express constructed and supervised high frequency radio telegraph system between Los Angeles and Salt Lake City 1925/1927; Bureau of Standards Washington development radio aids for air navigation 1927/1928; Mackay Radio and Telegraph Company Chief Engineer in 1928 and then Vice President unitl 1951; Telecommunications Adviser to the President of the United States 1951/1953, Vice President, Dualex Corp. 1953/1958; Fellow, Direcotr, Secretary and past President of IRE, Fellow AIEE, Associate Fellow Institute of Aeronautical Sciences, Honorary Life Member of the Institution of Radio Engineers Australia, Life Member VWOA.

PROUDFIT, ALEXANDER (M) 1958 (F) 1960 - res. 48 Thompson Park, Glen Cove, New York.

QUINBY, EDWIN JENNYSS (M) 1958 - Product Mgr., Shepard Laboratories, Inc., (Electronic); res. 30 Blackburn Rd., Summit, N.J.; b. January 13, 1894, N.Y.C.; ed. St. John's Cathedral (Military School) City College, New York, (B,S.E.E.); North Jersey Rapid Transit (Interurban Electric R.R.) when I first got out of school, 2 yrs. Marconi, DeForest, Sarnoff, RCA (Communications at Sea, Ashore and in RCA Labs.) 20 yrs.; Monroe Calculating Machine Co. (Monrobot Corp.) 5 years, Philco Corp., G. & I. Div. (Transac Computers) 2 yrs.; Military Service, U. S. Naval Reserve since 1932, active duty, World War II (Commander) 5 yrs. (Ashore and at sea) Officer in Charge, Naval Ordnance Unit, Key West, Fla. (Electronic Weapons); Amateur Call Letters 2 XK (N.Y.C.) 3 yrs.; Patents, Papers, etc., 12 U.S. Patents, 3 Foreign. Founded RCA's "Broadcast News" and edited, 4 yrs. - also various magazine articles; Sports, Hobbies, etc. Founder and Honorary President, Electric Railroders' Assn., Co-Founder, President, Branford Electric Railway, Chairman of the Board, Greene Line Steamers, Inc. (S.S. Delta Queen); Member, I.R.E., DeForest Pioneers, Steamship Historical Society, National Railway Historical Society, American Guild of Organists, Association of Theatre Organists; have a rather unusual Pipe organ in Summit residence that occupies entire main floor 30' x 72' with 10 h.p. electric power plant in basement. This 4420 year project\*\* now has over 1000 pipes controlled from a 4- manual console, and is still being expanded, - my wife plays organ, plano and harp.

QUIST, ANDREW HAROLD(F)1940 - Electronic Engineer, Signal Corps., Ft. Monmouth, N.J.; res. 1106 Aileen Rd., Brielle, N.J.; b. Brooklyn, N.Y. December 31, 1911; ed. Brooklyn Technical High School, Cooper Union; married; interested in radio since 1931; professional experience: radio servicing 5 years, production foreman and FM Test Engineer Radio Engineering Laboratores, Inc. 5 years, Signal Corps Maintenance Planning Engineer 15 years; Papers "FM Mobile Equipment" FM Magazine 1942, "Radio Control for your Model Railroad" The Model Railroader 1941; Hobbies - High Fidelity Audio, model railroad electronic control, Member AIEE, National Model Railroad Association, Armed Forces Communications Association.

RASER, EDWARD G. (F) 1956 - Technical Advisor and Radio Supervisor, N.J. State Police Radio System, P.O. Box 1420, Trenton, New Jersey from 1942/1959; previous employment, Marconi Wireless Telegraph Co.1917, Pioneer Broadcast Engineer established WMAL, 1922, designed and constructed Trenton's first 500 watt station WOAX, 1923/1929, Senior Partner Raser & Kale, 1930/1940; Engineer, Squire Signal Laboratory, Ft. Mon-

mouth, N.J., 1941/1942; res. 19 Blackwood Dr., Wilburtha Gardens, Trenton 8, N.J.; b. April 1, 1899, Bordentown, N.J.; ed. Grade Schools, School of Industrial Arts, Technical Schools in Electrical Engineering and Physics; Military Service, Radio Operator, U.S. Navy 1917/1921. On duty at Naval Air Station, Cape May, N.J. Installed and test hopped first 500 cycle spark sets aboard an aircraft. Duty at Naval Radio Stations NSD, NAH, NAI and various Naval vessels; Amateur Call Letters, licensed amateur radio operator since 1914 to date, continuous service. On the air since 1910, held calls as follows: 3NG (1914) 3CS (1919) 3ZI (1922) 2ZI (1946 to date); Historical collection of over 200 books, magazines, and early data and papers on subject of wireless history, dating back to 1895; Sports, Hobbies, Clubs, etc., Senior Member ARRL since 1915, Co-Founder Delaware Valley Radio Assn., Veteran Wireless Operators Assn., Historian; Antique Wireless Gear, Vacuum tubes, Morse and wireless keys, marine radio receivers in the country. Amateur historian and authority on wireless back to 1900. Wireless operator aboard ship from Marconi Co., United Fruit Co., Kilbourne & Clark, U.S. Shipping Bd. throughout the years, married, Licensed Radiotelegraph 1st. 1917 to date, amateur extra class license since 19-52. DVRA Silver Cup Award for Faithful Service 25 yrs, ARRL Public Service Award, cited 5 times.

REDINGTON, EDMUND B., (F) 1960 - Staff Engineer, Electronic Industries Association, 1721 DeSales St., Washington 21, D.C. res. 3912 North Upland St., Arlington 7, Va. Commander, (retired) U.S. Coast Guard, b. Troy, Penn. Oct. 24, 1899.

REDINGTON, JOHN H. (F) 1935 - Sales Manager, Measurements Corporation, Boonton, N.J.; res. 324 Cornelia St., Boonton, N.J.; b. Brooklyn, N.Y. October 5, 1904; ed. High School and supplementary engineering courses; married; interested in radio since 1923; amateur W3FN M 1936/1941; professional experience Bell Telephone Laboratories 10 years, past 20 years engaged in design development and manufacturing of radio test equipment and in the sales engineering field.

REINHARDT, NICHOLAS J. (F)1956 - res., 150 Bard Ave., Staten Island 10, New York.

RENWICK, ERLE B., JR. (M) 1955, Sales Engineer, Gawler-Knopp Co., 6 yrs., res. 29 Birchwood Rd., Denville, N. J.; b. July 13, 1921, Portland, Me.; ed. B. S. Electrical Engineering 1947 University of Me.; Military Service, U.S. Navy, 2 yrs. 1944/1946; Sports, Hobbies, Clubs, etc. HI - FI hobbyist, also automobile enthusiast:

REPLOGLE, DELBERT E. (F) 1928 - President, Electronic Mechanics, Inc., 101 Clifton Rd., Clifton, N. J.; res. 300 Godwin Ave., Ridgewood, N.J.; b. Douglas, Alaska July 31, 1896; ed. Pacific College A.B. and B. S. 1916, M. I.T. B.S. 1924, M. S. 1925; married; interested in radio since 1916; built and operated station NZO in Alaska, 60 miles north of Arctic Circle, W2XAE at Ridgewood; professional experience: Vice President and Chief Engineer DeForest Radio 1930/1934, President Electronic Mechanics 1936 to present, President of General Electronics 1942 to present; patents on cable protection devices, radio and television circuits; Member DeForest Pioneers; Radio Club Director 1932.

RETTENMEYER, F.X. (F) 1928 - Engineer, Philco Corporation, Tioga and "C" Sts., Philadelphia, Pa.; res. 740 Stanwick Rd., Moorestown, N.J.; b. Kendrick, Okla. July 27, 1900; ed. M.A. Columbia University 1925; married; professional experience: Bell Telephone Laboratories 1922/1935, RCA Mfg. Co. 1935/1940, Federal and Philco to date; Radio Club of America Vice President 1935, Recording Secretary 1933, Director, 1929, 1931/1932.

RICHARDSON, AVERY G. (F) 1941 - Manager Technical Service, ITT Lab. (formerly Federal Telecommunication Lab.), 500 Washington Ave., Nutley, N.J.; res. 115 Vreeland Ave., Boonton, N.J.; b. Brooklyn, Polytechnic Institute Brooklyn E.E. 1924; married; interested in radio since 1928; professional experience: radio receiver design for Brunswick, Bremer Tully and DeWald, Radio Compasses at Fairchild, FM Signal Generators at Boonton Laboratories, military Direction Finders at Federal; about 18 patents, IRE papers at Rochester and Dayton; member AIEE, Institute Aeronautical Sciences, Acoustical Society of America, Fellow IRE.

RICHARDT, JOHN W. JR (M) 1951 - Electronic Engineer, Last 6 years Proprietor of John W. Richardt Co., Pine Brook, N.J. Engineering Sales Representative; res. Box 267 Whippany, N. J.; b. May 29, 1922; ed. B.S. Physics B.S. Mathematics Ind. State, working on MS in EE at Stevens; widower; interested in radio since 1933; amateur W2WIY since 1947; professional experience Bell Telephone Laboratories six years, Chief Project Engineer at Tel-Instrument Corp., on Navy Subcontract, One Patent on electronic circuit assigned Bell Labs.; member Essex County Sherrifs Departments, PresidentNorth Jersey Mobile Amateur Radio Club.

RIDER, JOHN F. (F) 1931 - Author and Publisher, President, John F. Rider Publisher, Inc., N.Y.C.; b. N.Y.C. April 30, 1900; ed. High School of Commerce and Cooper Union. Radio Engineer, N. W. Jones Radio Mfg. Co. 19-21/1923; Chief Engineer, J. W. Jones Mfg. Co. 1924/1925; Radio Research and Consulting Work 1926/1954; radio feature writer 1921/1930 for New York Sun, New York Telegram, New York Herald Tribune, New York World. Associate Editor Radio Engineering; Managing Editor, Radio Listener Guide & Call Book; Technical Editor, Motion Picture News 1929/1931. Served for three and one-half years in U.S. Signal Corps, World War II. Retired in August 1945 with rank of Lt. Col. Awarded Legion of Merit. Publisher of Rider Radio Manuals; Rider Television Manuals; also technical school tests relating to electricity, electronics, radio, television and allied sciences; physics, since 1927. Author of Cathode-Ray Tube at Work; How To Use Meters, Interpreting Test Scope Traces, and numerous other texts; co-author of Encyclopedia of Cathode Ray Oscilloscopes and Their Uses.

ROBERTS, WILLIAM (M) 1952 - Sperry Gyroscope Co., Surface Armament Division (R201) Great Neck, New York.

ROBERTSON, JOHN F. (M) 1942 - 129 Soundview Avenue, Huntington, New York; ed. B.S. University of Wisconsin.

ROCKETT, FRANCIS H. (F) - Engineering Staff Editor, McGraw-Hill Book Co., Encyclopedia of Science and Technology, 908 Rosser Lane, Charlottesville, Va.; b. Philadelphia, Pa., September 9, 1919; ed. B.S. in E.E. Lehigh University 1942; married; interested in radio since 1932; professional experience; Junior Radio Engineer The Johns Hopkins University, Laboratory Assistant Lehigh University, Laboratory Instructor Columbia University, Associate Editor "Electronics"; Technical Report Consultant Airborne Instruments Laboratory, Director of Advertising, Airpax Products Co.; member IRE, AIEE, STWE.

RONALD, THOMAS T. (M) 1946 - res. 470 Piaget Ave., Clifton, N. J.; b. Vrdnik, Yugoslavia January 19, 1906; ed. Technical College Mittweida, Germany, Newark College of Engineering E.E. 1933.

ROUND, HENRY JOSEPH (HM)1952 - Physicist, self-employed; res. c/o Barclays Bank, 1 Station Facade, Maswall Hill, London N 10, England. (Address for Letters) Lab. A 105 John St. London E. C. I. (telephone) Terminas 9117; b. Worchestershire, England June 2, 1881; ed. Chel-

tenham Grammar School, Royal College of Science, London, City and Guild Technical College, London; widower, seven Children, thirteen grandchildren; interested in radio since 1902; professional experience Marconi Wireless Telegraph Co. of England, Marconi Wireless Telephone Co. of America (now Radio Corporation of America) and since 1932 own laboratory, pioneered in development of radio frequency amplifiers and their application to direction finders that spotted the departure of the German fleet leading to the famous Jutland engagement of World War One; very many patents on radio, gramaphones, microphones, loudspeaker, talking pictures, underwater signalling, magneto-stricture transducers; large number of technical papers and one book on Tetrodes (1927); Institute of Electrical Engineers (Britian) Duddell Premium (Twice); Radio Club of America Armstrong Medal 1952.

ROTH, RICHARD F., (M) 1960 - Radio Engineer, Hazeltine Corp., 59-25 Little Neck Parkway, Little Neck, N. Y.; res. 210-15 23rd Ave., Bayside, New York.

RUITER, JACOB H. (M) 1956 - Sales Manger, Electronic Equipment Dept. Curtiss-Wright Electronics Div., 1957-present, also, President J. H. Ruiter Advertising; pres. emp. Wm C. Copp Associates 1956/1957, Allen B. Du-Mont Laboratories 1943/1956, Signal Corps. Civilian Training School 1942/1943; res. 387 Highland Avenue, Upper Montclair, New Jersey; b. August 21, 1917, Montreal, Canada; Books, "Modern Oscilloscopes and Their Uses" published by Rhinehart & Co. 1949, revision 1955; Sports, Hobbies, etc. Montclair Society of Engineers, Senior Member IRE, Past Pres. N.J. Chapter of National Industrial Advertisers Ass. 1953/1954, Chairman of Exhibitors Com., IRE, 1954/1956, Chairman, Publications Com., Radio Club 1958/1959; Guest Lecturer, Newark College of Engineering on Industrial Advertising, 1952/present.

RUNYON, CARMAN R. JR. (F LM) 1912 - Chairman of Bd., Radio Engineering Laboratories, Inc., 29-01 Borden Ave., Long Island City 1, N.Y.; res. 130 East End Ave., New York 28, N.Y.; b. East Orange, N.J. August 9, 1893; ed. Cornell; married; interested in radio since 1908; professional experience: U.S. Naval Reserve Ensign World War One, U.S. Navy Commander World War Two; pioneered in the development and demonstration of frequency modulation broadcasting with Major E. H. Armstrong beginning in 1934; amateur station 2AG since 1908; Radio Club of America Vice President 1927, Treasurer 1926. Armstrong medal 1945.

RUNYON, C. R. III (F) 1948 - Purchasing Agent, Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N.Y.; res. 901 Lexington Ave., N.Y. 21, N.Y.; professional experience: Sales Manager, Sales Engineering and Purchasing.

RUNYON, JOHN B. (M) 1953 - Res. Box D. Eatontown, New York.

RUSSELL, WILLIAM GORDON (F) 1926 - Staff Technician, General Precision Lab., Inc., Pleasantville, New York; res. 24 Chestnut Ridgeway Dobbs Ferry, N. Y.; Hastings-on-Hudson, N.Y.; b. Yonkers, N. Y. October 14, 1906; ed. Golumbia University, United States Navy, Mechanics Institute, RCA Institutes; married; interested in radio since 1923; professional experience: E.H. Armstrong Laboratory, Columbia University, Norden Lab. Corp., White Plains, N.Y.; Radio Club of America Recording Secretary 1954.

RUTHERFORD, ROBERT E. JR., (M) 1961 - Research Engineer, CBS Laboratories, High Ridge Road, Stamford, Conn. res. 93 North Spring Garden Ave., Nutley 10, N. J. Radio Club of America Director

SANDS, LEO G., (M) 1960 - Communications Systems Consultant, also president Trans-World Public Relations, Inc. Office: 250 Park Avenue, New York, N.Y. 10017, telephone (212) YUkon 6-9100. Home: 43-32 Kissena Blvd., Flushing, N.Y. 11355, telephone (212) Flushing 8-0271. Born in Spokane, Washington March 20, 19-12. ed. University of California, Golden Gate College, U.S. Army Air Corps Radio Engineering School, Philico Training School, Bell Telephone Laboratories School. Radio amateur 1926-1930 (W7PH, W7ABV). Previously sales engineer, Remler Co., Ltd. 1939/1941.

SARNOFF, DAVID (HM) 1926 - Chairman of the Board, Radio Corporation of America, 30 Rockefeller Plaza, New York 20, N.Y.; res. 44 East 71 St., New York 21, N.Y.; b. Uzlian, Russia February 27, 1891; ed. Special Course E.E. Pratt Institute, Brooklyn, N.Y.; married; interested in radio since 1906; professional experience: Wireless Operator 1908/1912, Chief Radio Inspector and Assistant Chief Engineer Marconi Co. 1913, Contract Manager, Marconi, Co. 1914; Assistant Traffic Manager, Marconi Co. 1915; Commercial Manager Marconi Co., 1917, Commercial Manager Radio Corporation of America 1919, General Manager Radio Corporation of America 1921, Vice President and General Manager Radio Corporation of America 1922, Executive Vice President Radio Corporation of America 1947 to date; 2 patents, U.S. Army Signal Corps Reserve Lieutenant Colonel 1924, Colonel 1931, Brig. General 1944; appointed Member of Committee on Department of Defense Organization 1953; appointed by President Eisenhower (1953) to serve indefinite term as Brigadier General (res.), Army of the U.S.; Member of New York State Chamber of Commerce, A.I.E.E., Armed Forces of Communications Association, Economic Club of New York, IRE, Newcomen Society of England, Poor Richard Club, Royal Society of Arts, U.S. Naval Institute, VWOA; Member of Army and Navy Club of Washington, D.C., Metropolitan Club, Washington, D.C., India House, Century Country Club and Engineers' Club of Philadelphia; He has received twentyone honorary degrees from American Colleges and universities. Included among his many awards from scientific, industrial, military, civic and cultural groups are: Medal of Honor of the Radio-Television Manufacturers Association (1952); First Founders Award of the IRE (1953); First Keynoter Award from National Association of Radio and Television Broadcasters (1953); and the Gold Pin Award of the Radio Pioneers of America (1956). Included among the U.S. Government Decorations are the Legion of Merit (1944); Medal for Merit (1946); and the U.S. Army's Decoration for Exceptional Civilian Service (1956).

SCHMIDT, FRED W., JR. (M) 1950 - Engineer, Specialist, doing guidance and pulse automation on a missle test set for the Army; previous emp. project eng. Allen B. DuMont Lab., Inc. Los Angeles, Cal., Hoffman Laboratories Sr. Project Eng. receiver designs, Colonial Radio Corp., Buffalo, New York eight years test equipment design, Standard Coil Products, Project Eng. Front End design for TV receivers, res. 11468 Allerton St., Whittier, Cal.; b. November 25, 1908, Buffalo, New York, ed. B.S. Canusius College, Buffalo, N.Y.; Certificate Courses in UHF, Newark College of Engineering; married; interested in Radio since 1928; 10 patents.

SCHNABL, FRANK J. (M) 1956 - res. 144 Harrison St., Haworth, New Jersey.

SCHNEIDER, ROBERT E. (F) 1946 - Technical Writer, res. 10 Wagg Ave., Malverne, New York; ed. Pekin, Ill. Community High School, University of Illinois 1922, B.S. 1924; b. Iowa, U.S.A. June Il, 1902; Hazeltine Electronics Division, supervisor of airborne electronics engineering and maintenance, U.S. War Department 1942-1944; electronics engineer, Curtiss-Wright Corp., 1944-1945; marketing executive, The Bendix Corporation, 1945/1951;

marketing director, Bogue Electric Manufacturing Co., Inc., 1951/1953; marketing consultant, Radio Corporation of America, 1953/1954; president, Sands Associates, Inc., 1953-1960; manager-industrial products, Philco Corporation, 1960-1962; independent consultant, 1962-present; president, Trans-World Public Relations, Inc., 1964 to present. Author of more than 600 technical papers and 15 technical books. Contributing editor to several publications. Senior member, I.E.E.E. since 1950.

SARA, JOSEPH (M) 1930 - Owner, Sara Electronics and Mfg. Co., 15 Ward St., Bloomfield, N.J.; res. 836 Bloomfield Ave., Montclair, N.J.; b. Avola, Italy December 10, 1885; ed. Technical Schools, Italy.

SCHNOLL, NATHAN (F) 1928 - President & Chief Eng. Industrial Devices Inc., Edgewater, N.J.; Founder, Industrial Instruments Inc., Cedar Grove, N.J.; res. 1485 Jefferson St., West Englewood, N.J.; b. N.Y.C. March 20, 1904; ed. Stuyvesant High School, B.S. Columbia University 1947; married; interested in radio since 1917; amateur 2AGG 1919/1927; professional experience: Assistant Chief Engineer Polymet Mfg. Co. 1929/1932, Chief Engineer Solar Mfg. Co. 1932/1939, President and Chief Engineer Industrial Instruments Inc. 1939/1949, Chairman to date; Senior Member IRE; about 15 U.S. Patents in electronic and capacitor fields.

SCHOMBURG, RICHARD A., (M) 1956 - PO Box 11605, Station A. Palo Alto, California.

SCHUMACKER, ALLAN L. (M) 1937 - Senior Eng., Research & Development, Arma Division, American Bosch Arma Corp., Roosevelt Field, Garden City, L.I., N. Y.; res. 40 Maple Ave., Westbury, L.I., N.Y.; b. Brooklyn, N.Y. September 14, 1904; interested in radio since 1915; amateur 2AJ 1923/1925; held First Grade Radiotelephone operators license 1933; professional experience: Freshman Radio Co. Laboratory Assistant1923/1929, Colonial Radio Corp. Engineer 1921/1931, Wired Radio Inc. engineer 1931/1940, Research and Development Department Arma Division, 1942 to present, on design & development of precision components for Analog & Digital Computers Specializing in the design of Electromagnetic Components, Net-Works, Precision Electrical Measurements, Circuitry; Associate Member IRE 1942 to date; one paper "The Electromagnetic Resolver" AIEE 1951; Hobbies - Photography, music, Hi-Fi.

SCHWARTZ, ADOLPH (M) 1950 - Radio Manufacturers Sales Representatives, Eitel-McCullough, Inc. (Eimac), 23 years; res. 612 Sagamore Ave., Teaneck, New Jersey; b. December 25, 1898; ed. High School, Marconi Institute on Elm St., N.Y.C.; Military Service, U.S. Army, WW l, Hon. Discharge; Amateur Call Letters, W2CN, Licensed since 1916, old calls 2 AFT, 2 ASK; Golf, Aldecress C/C.

SEKLEMIAN, ROBERT S. (M)1942 - Manager, Real Estate Department, RCA Communications, Inc., 66 Broad St., New York 4, N.Y.; res. 135 Market St. San Francisco, California; b. Fresno, California, April 20, 1902; ed. LL. B. J. D., LL. D.; married; interested in radio since 1922; professional experience: Announcer, radio operator, in charge of terminal office installations of RCAC domestic radiotelegraph network; Former Ensign U.S. N.R.; member IRE Morse Telegraph Club, Real Estate Board of New York (Rental Conditions Committee).

SHACKELFORD, BENJAMIN E. (F) 1943 - Vice President, Ad. Auriema, Inc., 85 Broad St., New York 4, New York; res. 743 Mosswood Ave., Orange, N.J.; b. Richmond, Mo. August 12, 1891; ed. University of Mo. A.B. 1912, A. M. 1913, University of Chicago PH. D. 1916; married; "working" interest in radio since 1918; amateur experience, none, father of one; professional experience Westinghouse Physical Laboratory Tube Engineering 1916/1929, RCA Research, Patent and License activities 1930 to 1956.

SHARP, WATKIN WILLIAM, (M)1959 - Owner, Vocalaire, Inc., public address system rental and sales.; b. Far Rockaway, L.I., N.Y., March 12, 1898; res. 102 Roger Avenue, Inwood, N.Y. 11696; Amateur radio; 1910 through 1918. Call Letters 2NM (prior to 1918). Radio retail: 1918/1930.

SHEA, RICHARD F. (F) 1934 - Consultant, Solid State Circuits, 4 Coronet Court, Schenectady, New York, retired as Electronics Engineer, General Electric Co., Electronics, Pk., Syracuse, N.Y.; res. 225 Twin Hills Dr., Syracuse 4, N.Y.; b. Boston, Mass. September 13, 1903; ed. B.S. in E.E. M.I.T. 1924; married; interested in radio since 1917; amateur 1AZG, 1ADZ, WIBEC, W3 bai 1919/1931; professional experience 1925 to present American Bosch, Amrad, Kolster, Atwater Kent, Pilot (Chief EngineerI, Freed-Eiseman (Chief Engineer), Fada (Chief Engineer), General Electric; 10 patents on electronics circuits; numerous technical magazine articles over past 35 years; Editor of "Principles of Transistor Circuits" Wiley 1953; Chairman, Syracuse Section IRE, Senior Member IRE, member IRE Receivers, Standards and Papers Committees; currently Supervisor Semiconductors Applications G.E. Electronics Laboratory.

SHENIER, HENRY L. (M)1951 - Senior Partner, Shenier & O'Connor, patent lawyers, 230 Park Ave., N.Y.C.; res. 67 - 66 108th St., Forest Hills, N.Y.; b. New Jersey 1902; ed. U.S. Naval Academy B.S. 1922; Georgetown School of Law LLB 1931; married, Margaret Wilson, son, Richard, daughter, Patricia; communication officer, U.S. Navy 1925/1927.

SHEPARD, FRANCIS, H. JR. (F) 1936 - Consulting Engineer, and President of Shepard Laboratories, Inc., Summit, N.J.; res. 480 Morris Ave., Summit, N.J.; b. N.Y.C. May 6, 1906; ed. B.S. in M.E. Yale, Sheffield Scientific School 1929; married, interested in radio since 1930; professional experience: Laboratory Assistant to the late E.G. Sperry, Radio Corporation of America 1933/1940, Chief Eng. Revelation Patents Co. 1942/1945, Pres. of Shepard Labs. formed 1956, work in electro-mechanical fields, Computer input-output equipment, etc., about fifty patents mostly in electronics field on hearing aids, synthetic base response; Member IRE, member ASME, Director Kiwanis, member Chamber of Commerce, Summit, New Jersey; Radio Club of America, President 1954 and 1955. Director 1944 to present.

SHORTT, HUBERT, L. (M)1945 - President, Technograph Printed Electronics, Inc., 920 Northwest Blvd., Winston-Salem, N.C.; res. 3018 Cambridge, Winston-Salem, N.C.; Member IRE, & AIEE: Committee-PGPT-(IRE), 40C (EIA) Committee A(EIA).

SIEMENS, RUDOLPH H. (M) 1937 - Government Sales, rca electron Tube Division, 744 Broad St., Newark, N.J.; res. 31 Deer Trail Rd., No. Caldwell, New Jersey; b. N.Y.C. 1905.

SIEMINSKI, EDWARD (F) 1935 - Grumman Aircraft Engineering Corp., Avionics Engineering Dept. Bethpage, Long Island, N.Y.; res. 134-14 Franklin Ave., Flushing, 55, N.Y.; b. New Bedford, Mass. January 30, 1912; ed. M.I.T. B.S. in E.E. 1934, Polytechnic Institute of Brooklyn Master in E.E. 1953; married; interested in radio since 1927; amateur WIDFD in New Bedford 1929/1934; professional experience: Press Association, Inc. (Research) 1940/1941, Amy, Aceves and King (Research) 1935/1940 and 1941/1942, Fairchild Camera and Instrument Corp. Project Engineer 1942/1945, Aeronics, Inc. Chief Engineer 1945/1947, Sylvania 1947/1955 Section Head in Electronics and missile systems laboratories, American Machine & Foundry Company 1955/1958 Group Supervisor in military electronics development, Grumman since January 1959; member IRE, AIEE, ARRL, Society of Professional Engineers, Sigma Xi, RESA, articles and papers on television, etc.; Hobbies: ice skating, swimming, automobile mechanics.

SIMON, WILLIAM C. (F) 1946 - Retired; formerly Electronic Engineer United Fruit Co., General Manager, Tropical Radio Service Corp. New York; res. 1445 Boston Ave., Bay Shore, Long Island, N.Y.; b. Midway, Ky., June 16, 1899; ed. Grammar and some High School, U.S. Naval (Marine Corps) Radio School Parris Island 1917/1918; CREI; interested in radio since 1915; married; amateur 1913/1917; professional experience: U.S. Marine Corps 1917/1920, licensed commerical radio operator 1920/1924, United Fruit Co. 1924 to present; Senior Member Marine Corps League, American Legion, Masonic Lodge; Baptist Church; Served on numerous committees with RTCA, RTCM, SLS, ITU, American Merchant Marine Institute dealing with Marine Electronic and Radio Matters; Marconi Memorial Medal of Merit, VWOA 1947.

SINGER, CHARLES H. (F) 1947 - Vice President Page Communication Eng. Inc., 710 14 St., N. W. Washington 8, D.C.; res. 4201 Cathedral Ave., Washington, D.C.!

SINGLETON, HAROLD C. (F) 1935 - Consulting Radio Engineer, Amcomlib Apartado 13, Palafrugell Spain.; b. Golden, Colo., February 7, 1904; ed. B.S. (EE) and E.E. University of Colorado; married; interested in radio since 1918; professional experience General Electric Co., RCA Victor Division, United Air Lines, Chief Engineer KGW Broadcasting Station; Resident Associate Harvard University (during World War Two); several patents on photo-electric controls. Tech. Dir. KWJJ, Portland, Ore.; V. Pres. KITN, Olympia, Washington, Owner KUTY, Palmdale, California.

SKIPPER, LIONEL CARLYLE (M) 1946 - Sperry Gyroscope Co., Lake Success, Great Neck, N.Y.; res. 5 Warner Ave., Roslyn Heights, L.I., N.Y.; b. Clacton-on-Sea, Essex, England November 30, 1915; ed. Ascham College, Clacton, England, Brighton Technical College, Brighton England, British Institute of Engineering-Technology, London England; married; interested in radio since 1932; professional experience: 1932/1935 Assistant Engineer Brighton Radio Circuit, Ltd., 1935/1940 Engineer Manager Radio Distribution Trinidad, Ltd., Port of Spain, Trinidad, BWI, 1940/1941 Director of Field Service, Radio Coverage Reports, New York City, 1941 to present Technician, Sperry Gyroscope Co. (Radar Engineering); U.S. Citizen June 10, 1947; Senior Member IRE, Massapequa Lodge No. 822 F & A.M., Rosicrusian Order amurc, civil Defense Rescue Service, Green Mountain Club, Dale Carnegie Club International; fond of all outdoor activities including flying (Student Pilot Rating), 1941 to present Technician - Engineering Section for Systems, Surface Armament Division, Sperry Gyroscope Co. (Radar Engineering).

SMITH, ARTHUR V. (M) 1960 - Patent Lawyer, Curtis, Morris & Safford, 530 Fifth Avenue, New York, N. Y. 10036; RES. 276 Riverside Drive, New York N.Y. 10025; b. Westfield, New Jersey, December 27, 1909; ed. A.B. B.S. and E.E., Columbia University, L.L.B., New York University; radio amateur 1922/1933; AIEE, IRE, IEEE, AES, AAAS.

SMITH, JAMES ERNEST (F) 1930 — Chairman of the Bd., National Radio Institute, 1956 to present., 3939 Wisconsin Avenue, N.W., Washington, D.C. 20016; res. "Macamor" 4521 Crest Lane, McLean, Virginia; b. Rochester New Hampshire February 3, 1881; married; ed. B.S. in .E. Worcester Polytechnic Institute; Conferred Honorary Degree of Doctor of Laws by Southeastern University, Washington, D.C. Conferred the Honor of International Knight of Achievement by Loyal Knights of Round Table; interested in radio since 1909; amateur station McKinley Technical High School 1910/1914 and at National Radio School Washington 1915/1922; professional experi-

ence: introduced study of wireless in Washington, D.C. high schools 1912, organized and conducted National Radio School 1914/1920, President National Radio Institute 1920/1956; supervised instruction of 800 soldier-students in wireless during First World War 1918; co-inventor of the Natrometer, an instrument for teaching radio code. Chairman, Advisory Board of YMCA of City of Washington; Vice President Metropolitan Washington YMCA Foundation; Director George Everett Partridge Memorial Foundation. Life member Institute of Electrical and Electronics Engineers; member Adult Education Association of U.S.A., American Radio Relay League, Association of Oldest Inhabitants of District of Columbia Arlington Round Table, University Club, Washington Golf & Country Club, Humane Lodge No. 21, Almas Temple - Shriner.

SMITH, MYRON T. (F) 1934 - Sales Manager, General Radio Co., West Concord, Mass.; res. Lowell Road, Concord, Mass.; B. Meriden, Conn. July 11, 1908; ed. S. B. and S.M. M.I.T. Cambridge, Mass.; married.

SNITZER, MILTON S. (M) 1956 - Technical Editor, Radio and TV News, Ziff-Davis Publishing Co. since 1956; b. May 9, 1923, Pittsburgh, Pa.; res. 83-28257th St., Floral Park, N.Y.; military service, Electronics Instructor, U.S.M.S., 8 years; Amateur Call Letters, W2QYI since 1937; Books, Papers, etc., edited about 50 technical books wrote about 6 technical and semi-technical books including military manuals as well as many magazine articles.

SNYDER, CHRISTOPHER L. (M) Indiana General Corp. 20 N. Wachea Drive, Chicago, Illinois.

SPIES, DAVID (M)1942 - Sales Manager - Owner, International Distributing Co., 185 Central Ave., Newark, New Jersey; res. 166 Sanford St. East Orange, New Jersey; ed. Newark College of Engineering E.E.; married; Long interest in radio; Affiliate - International Sound Engineering Co.

STANLEY, JOSEPH J. (F) 1912 - President Continental Sales Co., Inc., 521 Bloomfield Ave., Newark 7, New Jersey; res. 213 Harvard Ave., Point Pleasant Beach, New Jersey; b. Brooklyn, N.Y. September 16, 1891; married; ed. High School 2, years; Mechanics Institute 3 years, Pratt Institute 3 years; interested in radio since 1906; amateur 1906/1913-W2SC; professional experience; Secretary and Treasurer, Continental Radio Corp., 1920/1930, Secretary and Treasurer and General Manager Continental Radio Corp., 1922/1930, President, Continental Sales Co. Inc., 1930 to present; President Rochelle Park Bank, 1928/1952; Chairman of the Board Rochelle Park Bank, 1928/1952; Chairman of the Board Rochelle Park Bank, 1952 to present. Bank now is known as Community Bank of Bergen County, New Jersey; Treasurer, Armstrong Memorial Research Foundation, Inc., 1957 to present; Director, Radio Club of America, Inc., 1926; Treasurer, 1927 to present.

STANTLEY, JOSEPH J. JR. (F) 1944-1961 - Secretary and Treasurer, Continental Sales Company, Inc. Presently, Cost Accountant, The Lummus Company, res: 252 Hillside Avenue, Cranford, New Jersey, B. Teaneck, N.J. May 10, 1926; ed. Rutgers University (Business Adminstration), married.

STANTON, SAMUEL WARD (F) 1940 - Patent Engineer, a.b. DuMont Laboratories, Inc., 2 Main Ave., Passaic, N.J.; res. 289 Halsey Rd., East Parsippany, N.J.; b. Tottenbille, Staten Island, N.Y. June 25, 1908; ed. B.S. in E.E. Rutgers University; married; interested in radio since 1918; amateur 2AHY-1923, W2QZ-1929, W2EEW and W2EHR 1932; professional experience: United Electric Light and Power Co. 1931/1935, RCA 1936, Western Electric 1937/1939, DuMont 1939 to date; Two U.S. Patents.

STEEN, JEROME REED (F) 1947 - Division Reliability Coordinator, Sylvania Electric Products, Inc., 40 Sylvan Rd., Waltham, Mass. 02154; res. 50 Tamarack Road, Reading, Mass. 01867; b. West Bloomfield, New York June 29, 1901; ed. University of Wisconsin, BS in EE 1923, married; interested in radio since 1923; professional experience: General Electric Co. 1923/1929, Bell Telephone Laboratories 1929/1931, Sylvania 1931 to date; Registered Professional Engineer, Mass., Fellow IEEE, Fellow ASQC.

STEVENS, ARCHIE MCDONALD (F) 1928 - Radio Engineer, International Standard Electric Corporation, 67 Broad St., N.Y.C.; res. 539 Prospect Ave., Mamaroneck, N.Y.'; b. Gidden, Iowa September 22, 1887; ed. Glidden High School 1904, LeLand Stanford Jr. University 1909 A.B. in Engineering, post graduate courses in Columbia University; married; interested in radio since 1910; professional experience 1910/1913 Poulsen Wireless Tel. and Tel. Co. San Francisco, 1913/1914 Universal Radio Syndicate, London, Poulsen System, 1915/1921 Lt. Commander U.S.N.R.F., U.S. Navy Lafayette Station, Bordeaux, France, 1922/1928 American Radio News Co., N.Y., 1928/1950 International Tel. and Tel. Corp. 1950/1952 Federal Tel. and Radio Corporation, 1952 to present International Standard Electric Corporation, Fellow (life member) IRE, Senior Member AIEE (Life Member), member Telephone Pioneers of America, member Armed Forces Communication Association.

STEVENS, HERBERT V. (M) 1959 - Radio Engineer; res. 63 Edson St., Buffalo 10, New York; b. Buffalo, N.Y. 1904; ed. South Park High School, Buffalo Normal (2 yrs.), night school, Univ. of Michigan (2 summers & 2 falls), Adult Education 2 yrs. Cornell University Ext., Buffalo Museum, La Salle Ext. University, Cleveland Institute of Radio Electronics, Buffalo Radio Institute, Eng. Soc. of Buffalo P.E. Refresher Course; approximately 50,000 hours of formal and non-formal study; Range, Physics, Chemistry, atomic phsics, mathematics, economics, dietics, music, art, literature, poetry, philosophy, psychology, astronomy, astrology, criminology, law, jurisprudence, political science, accounting, auditing, business, industrial arts; Hobby, answering correspondence courses and Regents High School Question and Answer Texts. Have 50 scrap-books; Amateur Call Letters, W-2 GAF (ex. 8 AYT & W8 GAF); Correspondence Courses, CIRE, CREI, NRI, DeForest, Sprayberry, LaSalle Ext. Un., Alexander Hamilton Institute, etc. Have over 5,000 questions with their answers; Sports, swimming, golf, tennis, walking, cards, checkers, chess, discussion groups, weight lifting, etc.

STODOLA, E. KING (F) - Assistant to the President, Reeves Instrument Corp. East Gate Blvd., Roosevelt Field, Garden City, L.I., N.Y.; res. 118 Stanton Street, Northport, L.I., N.Y.; married; B.S. in Electrical Engineering & Electrical Engineering degrees, Cooper Union Inst. of Technology.

STOKES, WILLIAM EARL DODGE JR. (CM, F)1909 - Economist, self-employed, Lenox, Mass.; res. Thistlewood Farm, Lenox, Mass.; b. N.Y.C. January 6, 1896; ed. Browning School, N.Y.C., Andover, Sheffield Scientific School, Annapolis, University of Chicago (Law School); married; interested in radio since 1909; early amateur stations in N.Y.C. and Monmouth Beach, New Jersey; First President Junior Wireless Club and Senate Committee witness 1910; Assistant Communications Officer USS Delaware Grand Fleet World War One; Four early U.S. Patents in radio; American Institute of Mining and Metallurgical Engineers, Chicago Bar Association, Econometric Soceity, Berzelious (Yale), Alpha Setta Phi, American Mining Congress, Union Club (NY), University (Wash.) Stock Exchange Lunch (NY), Lenox Club, Country Club of Pittsfield, Mid-Ocean Club, Royal Bermuda Yacht Club, Military: Naval Reserve Surface Division 1-14 LCDR USNR-R (Administration Officer); Publications: "Government Assistance to Small Gold Mines,"
"Free Power," "Report of the Aviation Committee AIME," "Planetary Configurations and Stock Market
Sentiment," "Origin of the Pennyweight" and numerous
technical publications for the Navy on Torpedo manufacture, "Survey of the U.S. Army Catalog System" for
the Navy, "Plan for a U.S. Navy Catalog System" (for
the Navy), "Electrostatic Origin of Ore Deposits,"
Sports and Hobbies - Golf & Squash, Racquets family,
stamps, sailing, education (Trustee etc.) Navy anti-Communist Activities (various); Radio Club of America President 1909/1911.

STONE, CLARENCE GEORGE (F)1925 - Consulting Engineer, Self-employed, Good Hill Rd., Weston, Conn.; res. same; b. Detroit, Mich. December 10, 1888; ed. E.E. and A.M. Columbia University, Professional Engineer since 1922; married; interested in radio since 1898; professional experience: taught physics at Columbia up to September 1952, also courses in Electronics and consulting work in this field; AIEE, IRF, American Physical Society.

STYLES, THOMAS J. (F)1915 - Secretary-Director, Armstrong Memorial Research Foundation, Inc., Philosophy Hall, Columbia University, New York 27, N. Y.; res. 160 -01 84th Dr., Jamaica 32, N.Y.; b. Ansonia, Conn., July 25, 1887; married; ed. Walworth Institute, Pace Institute, Columbia University, Sorbonne; radio amateur 1908-16 at Yonkers, N.Y.; operated station N.J. National Guard, Sea Girt, 1911; licensed commercial radio operator 1912; seaplane radio operator, Naval Aviation Detachment, Palm Beach, Fla., 1917; Ensign, USNRF, Bureau of Engineering, Navy Department, 1918-19; Bankers Trust Company, Paris, France, 1920/1923; laboratory of Edwin H. Armstrong, Columbia University, 1924/1954; Recording Secretary, Radio Club of America, Inc., 1916, Corresponding Secretary 1917/1920, 1925/1927, Director 19-28/29.

SUYDAM, CLINTON H. (F) 1932 - International Tel. & Tel. Corp. N.Y.C.; res. 451 Heywood Ave., Orange, N. J.; ed. Standord University A.B. 1918, E.E. 1925; b. Los Gatos, Cal. October 25, 1896.

SWINYARD, WILLIAM O. (F) 1941 - Radio/TV Engineer, Hazeltine Research Inc. 325 W. Huron St., Chicago, Ill. res. 5445 West Diversey, Chicago 39, Illinois; b. Logan, Utah July 17, 1904; ed. B. S. Utah State University, graduate studies Columbia and Northwestern; married; interested in radio 1924; professional experience: Hazeltine since 1930, Chief Engineer 1942 to 1957; V. P. & Director 1958; Technical papers: Measurement of AM and FM radio receivers in Pender-McIlwain Handbook, Measurement of Loop Antenna Receivers IRE 1941; Member Chicago Radio Engineers Club, National Society of Professional Engineers, Lake Shore Club, Fellow IRE, Fellow AAAS; Eta Kappa NU, Registered Professional Engineer, Ill.

TALLEY, DAVID (F) 1949 - Radio Engineer, GT & E Service Corp., 730 Third Ave., NewYork 17, N.Y., General Telephone System operating staff, 1959 to date; res. 40 East 9th St., New York, N.Y. b. NYC. October 20, 1903; ed. E.E. Brooklyn Polytechnic Institute 1935; married. son, Edward S. Talley and granddaughter, Audrey R. Talley: interested in radio since 1915; amateur since 1915; W2PF in 1919, extra first grade amateur license; professional experience: Telephone engineer N. Y. Telephone Co. 1923 to 1946 except World War Two 1940/ 1945 as Lt. Colonel in Signal Corps, Telephone and Radio Engineer with International Tel, and Tel. Co. 1946/1951. Federal Tel. and Radio Corporation Govt. Contract Section 1951 to 1957, Telecommunications Operating Group of International Tel. & Tel. Corp., May 1957/1959; one patent on Signalling Systems; Senior Member IRE, member AIEE, ARRL, Radio Society of Great Britian, Reserve Officers Association of U. S. Military Order of World Wars, Vice President of N.Y. Chapter of Armed Forces Communications Ass., member Radio Club of Brooklyn, and Quarter Century Wireless Assn., Reserve Officer as Lt. Colonel in Signal Corps. to 1958, USAR, engineered and installed mobile radio telephone systems in Buenos Aires 1948, Mexico City 1948, Havana 1949 and Cairo, Egypt in 1948. Author "Basic Carrier Telephony" John F. Rider Publ. Co. 1960.

TAYLOR, WILLIS H. JR. (F) 1925 - Patent Lawyer, res. 330 Madison Ave. New York, N.Y. 10017; Chairman, Bd., of Trustees, Stevens Institute of Technology, Hoboken, New Jersey.

TENNIS, JOSEPH E. (M)1955 - Engineer, Radio Engineering Labs., res. 273 Mill Spring Rd., Manhasset, New York; b. July 15, 1920, Brooklyn, N.Y.; ed. Brooklyn Technical High School, Pratt Institute; clubs, IRE Member, Tau Beta Pi, Member.

THOMAS, LESLIE G. (M) 1928 - Management consultant, business address 610 E. Palisade Ave., Englewood, N. J.; res. 44 Marcotte La., Tenafly, N.J.; b. London, England; ed. M.E.; married; interested in radio since 1921; Professional experience: president Sheffco Mfg. Co., Palisades Park, N.J. and manufacturing executive, Vice President International Resistance Co., Philadelphia, General Manager Dejur-Amsco Corp., N.Y.C., Works Manager Fada Radio Co., Bronx 1926/1931; various patents on variable condensers.

THORP, WILBUR E. (F) 1948 - Electronic Engineer, NOT-tronics, Hawthorne, Cal.; res. 2213 Chelsea Rd., Palos Verdes Estates, Cal.; b. Santa Cruz, Cal. July 6, 1910 ed. B.S. in Engineering University of Cal.; married; interested in radio since 1923; professional experience 10 years Don Lee Television, Los Angeles, 3 years U.S. Navy Electronics Officer, Bureau of Aeronautics, 4 yrs. Radio Engineering Laboratories as Development Laboratory Supervisor, 9 years Northrop Aircraft and Nortronics, present assignment, Supervisor of Radiative Systems Group; senior member IRE, Lt. Cmdr. United States Naval Reserve; hobby - Gardening.

TUCKERMAN, LUCIEN P (F) 1928 - Eadio Engineer - Technical Aide, Diamond Ordnance Fuze Laboratories, Washington 25, D.C.; res. 2500 Q St., N.W., Washington 7, D.C.; b. Wallingford, Conn. May 15, 1905; ed. Bell Telephone Labs. Electrical Communication Course; married; active in radio since 1923; professional experience: DeForest Radio Co., Kolster Radio Corp., Federal Telegraph Co., U.S. Navy Bureau of Ordnance, National Bureau of Standards; Commander U.S. Naval Reserve, Senior Member IRE, Member AIEE, SMPTE, Engineers Club of Washington, National Rifle Ass.; one patent "Peak Limiting Amplifier." Registered Professional Engineer, District of Columbia.

TUXEN, NILS (M) 1952 - Manager, Communications and Electronics Division, North American Philips Co., 100 East 42nd St., N.Y.C.; res. 24 Nordieal Drive, Crotonon-Hudson, N.Y.; b. Copenhagen, Denmark, 1915; U.S. Citizen 1943; ed. Soroe Academy, Denmark graduated 1939 from Aarhus Electrotechnicum, Aarhus, Denmark (B.S.E.E.); married; amateur OZ9T; ship's radio operator Danish and British merchant marine World War Two; Four years 9th Airforce in Europe; member Danish Engineers Club, N.Y.C.

ULM, ERNEST H. (F) 1950 - General Sales Manager, Semi-conductor Divison, Woburn, Mass.; res. Winchester, Mass.; b. Ft. Dodge, Iowa January 8, 1916; ed. Carleton College A.B., Graduate work at University of Iowa and Northwestern Technological Institute; married; interested in radio since 1928; amateur license 1930; professional experience: Instructor in Radio and Electronics in High School and Vocational School and Army Signal Corps and Navy (Western Electric); member FEEE

VAN BEUREN, JOHN M. (F) 1942 - President and Director of Research, Quan-Tech Laboratories, Morristown, N. J.; res. Van Beuren Road, Morristown, N. J.; b. N.Y.C. March 4, 1915; ed. Princeton University 1933/1936; married; interested in radio since 1931, amateur license (1933/1941); professional experience: Staff Advisory Engineer for Electronics, Thos. A. Edison Laboratory 1956/1957; Chief Research Engineer, Measurements Corp., 1939/1956; several patents on electronic devices; Hobby-Music and Hi-Fi; member IRE, Engineers Club, N.Y.C.

VAN DEN MEERSCHE, A.J. (M)1930 - res. 22 St. Pieters AAlst Straat, Ghent, Belgium; b. Ghent, Belguim November 29, 1903; ed. E.E. University of Ghent; instructor University of Ghent; Associate IRE.

VAN RENSSELAER, HENRY C. (M) 1949 - Investment Counselor, The Bank of N.Y., 48 Wall St., N.Y.C.; res. Round Hill Road, Greenwich, Conn.; b. Sao Paulo, Brazil May 17, 1920; ed. Kent School, Kent Conn., Princeton University; married; interested in radio since 1933; amateur WHSY, 1933; professional experience: Major U.S. Air Force, Communications and Radar, 1942/1946 and 1951/1952, Sales Manager Electronic Parts Division Allen B. DuMont Laboratories 1947/1950; member Colonial Club, Princeton, N.J.; Hobbies - tennis, golf, skiing.

VAUGHAN, CARROL B. (M)1964 - C.B. Vaughan Associates, Electronic Consultants, Box 441, Union City, New Jersey; res. 271 Williams Ave., Hasbrouck Heights, N. J.; b. 1910 Cattletsburg, Ky. ed. Fitchburg Mass High School; Milwaukee School of Engineering, Lowell Institute, N.Y. University. Experience: Principal, Delahanty Institute, 1945/1950; Curiss Wright, Sperry, IBM, Norden Ketay, Bendix, Sylvania, 1950/1958. Senior Engineer, new products, Bendix Corp., 1958/1963. Interested in automation and digital modules.

VOGEL, WILLIAM H., JR. (M) 1940 - Senior Project Engineer, Measurements, Div of McGraw-Edison Co., Boonton, N.J.; res. 24 Tudor Place Hartsdale, New York; b. Brooklyn, N.Y. October 23, 1909; ed. Graduate Cornell University E.E. 1931; interested in radio since 1926; amateur W2BXM since 1931; member M.A.R.S. AF2BXM; professional experience: television and FM transmitters, communication and test equipment 1945 to date; active service Air Force 1941/1945 Radar Officer; Member I.R.E.

VOORHIS, HAROLD VAN BUREN (M) 1964 - Consultant (Secretary & Treasurer 1947-59) Bull & Roberts, Inc., N.Y.C. Marine Chemists; Certified Gas Chemist, American Gureau of Shipping; V.P. Macoy P. & M. Supply Co., N.Y.C. (1946 to date); b. January 3,1894, Red Bank, New Jersey; Married; ed. Red Bank, N.J. public and high, schools (graduated 1912). Attended Cooper Union (1912) and Columbia Univ. Teaches Ext. (1913-16). Editor (9 years) Christmas Seal & Charity Stamp Society. Author of ten research books of Freemasonry. Fifty year life member in 1962 of American Canoe Association; Charter Fellow (1932) American Friends of Lafayette. Commission (1939) American Indian Association. Ass't. Coordinator Civil Aeronautics Administration Ground School in N.J. (1940-41); V.P. (1931-32-44-45) Holland Society of New York; International Brotherhood of Magicians card No. 3000; Monmouth Boat Club, N.J.; Hon. Member Monmouth County Philatelic Society; Life Member Monmouth County Historical Society; Steamship Historical Society of America; Veterans of Foreign Wars; A.R.R.L. 22; Antique Wireless Asso; Garden State Amateur Radio Association; International Short Wave League (London, Eng.); Radio League of America 1915; Wireless Association of America 1911 (call NDM from 1908); First President Monmouth Councty Radio Association 1912; Yacht Captain 1930; U.S. Navy-Transport Service

VORPERIAN, HARRY (M) 1941 - Foreman in charge of Electronic Wiring Department, Aeroflex Laboratories, Inc., 34-06 Skillman Ave., Long Island City I, N.Y.; res. 210 Clinton Ave., Brooklyn 5, N.Y.; b. N.Y.C. January 19, 1909; interested in radio since 1923, ed. Graduate Washington Irving High School, RCA Institutes and extra-curricula courses at Pa. University, Temple University and N.Y. University; professional experience: Electronic Technician with Federal Telecommunication Laboratories and Aeroflex Research Laboratories; married.

WALSH, DR. A. LAFAYETTE (M) 1952 - Dentist, self-employed, 509 Madison Ave., N.Y.C.; res. 14 North Ave. Elizabeth, New Jersey; b. N.Y.C. December 17, 1896; ed. College Dental and Oral Surgery of Columbia University; married; interested in radio since 1912; amateur since 1912, 2SP, 2BW since 1920; Past Director ARL, Past President Radio Club, Past President N.Y. Radio Club, member IRE, member Armed Forces Com. and Elet. Soc., member U.S. Naval Institute, member ARRL, member Quarter Century Wireless Association.

WALSH, LINCOLN (F) 1934 - Consulting Engineer, Walsh Engineering Company and Caldeonia Electronics and Transformer Corp., 34 DeHart Pl., Elizabeth, New Jersey; res. 3 Old Farms House Road, Miflington, New Jersey; b. R.I. November 3, 1903; ed. Stevens Institute of Technology, M.E. 1926, Post-Graduate Columbia, Brooklyn Polytechnic and Stevens; married; interested in radio since 1916; professional experience: Designer of transformers, high quality audio systems and radio receivers, Colonial (now Sylvania) Bell Telephone Laboratories and Hazeltine, RCA - Director - 1936; C.S. 1941.

WARE, PAUL (F) 1921 - Pres., Ware Marine Products, Inc., Miami, Fla; res. 3948 Little Ave. Coconut Grove Miami 33, Fla.; b. East Orange, N.J. June 26, 1893; ed. M.E. Stevens Institute of Technology 1917; wife, Josephine Varney; interested in radio since 1906; starting with amateur station at East Orange, N.J.; professional experience: Marine Wireless operator 1907/1912; second Lieut. Signal Corps during World Warl; manufactured Ware Neutrodyne receivers; invented INDUCTUNER and INPUTUNER for Mallory and DuMont respectively; sailed Atlantic Ocean in 17 days on Yacht ALOHA in 1912 averaging 8.06 knots; invented and presently manufacturing the Ware Automatic Pilot used on boats; hobbies yachting and treasure hunting; Radio Club of America Director 1939/1940; 44/50 - V.P. 1941 Pres. - 1942/43.

WASHINGTON, GEORGE JR. (F) 1951 - Retired, res. 10 Harter Rd., Morristown, N.J.; b. N.Y.C. August 6,1899; ed. High School; married; interested in radio since 1921; Inventor of Photo-Electric Engraver known as the Fairchild Scan-o-graver; Director RCA 1957/1958; Chairman 50th Anniversary Year Book Committee.

WATSON, PAUL GRISTOCK (F) 1922 - Commander USNR Retired, res. 10 Harter Rd., Morristown, N.J.; b. West Chester, Pa. January 6, 1900; ed. High School and 1923 Pratt Institute E.E.; widower; interested in radio since 1912; amateur 3VB spark and 2CJU in Brooklyn while attending Pratt, station 4ZD-4XX at Savannah working Dr. A. Hoyt Taylor at NKF; professional experience: commercial radio operator 1918/1923, Radio Inspector U. S. Shipping Board, N.Y., U.S. Radio Inspector Savannah, Ga. 1924/1926, Direction Finder Engineer RCA 1927/1928, Plant Engineer, Eastern Malleable Iron Co. Wilmington, Del. 1928/1940, Shop Superintendent U. S. Navy Yard Philadelphia with Bank of Commander USNR 1940/1946; about 30 articles in Radio News, Pacific Radio, QST during 1919/1925 period, dropped out of radio in 1928 and entered ship construction (engineer) and participated in building over 100 ships in Philadelphia Navy Yard dur-

ing World War Two; Life member The American Legion, Military Order of the World Wars, The Society of American Military Engineer, member DeForest Pioneers, Society of Naval Architects and Marine Engineers, The U.S. Naval Institute; Hobby - collecting early vacuum tubes and old apparatus and parts; Awarded Navy Commendation Ribbon for "outstanding performance of duty" during World War Two.

WATTS, W. WALTER (M) 1960 (F) 1964 - Fellow 1964; b. Chicago 1902; res. 12 E 88th St., New York City; group Ex. Vice President Radio Corp. of America, and member Radio Corp. of America Board of Directors. Associated with radio sales and distribution for past thirty years, joining Radio Corp. in 1945 as Gen. Sales Manager of Engineering Products, becoming Group Executive Vice President in 1958. Colonel and Commanding Officer, Signal Corps Distribution Agency during WW II. Prior to this he was Manager Mail Order Sales, Montgomery Ward (radio and electronic equipment.) and was Vice President Windcharger Corp. with Defense Production Adm. in Washington during Korean emergency, with leave of absence from RCA, as Deputy Director Administration Production and Procurement. Attended Lane Technical School and Chicago Telegraph Institute in Chicago, and operated 9BP in Evanston. Present call W4VI. In 1958 was confirmed by U.S. Senate with rank of Brigadier General USA Reserve. Past President AFCEA. Member IEE, ARRL, Am. Soc. Naval Engineers, Am. Ordnance Assn., Broadcast Pioneers, and VWOA,

WATTSON, HARRY B. (M) 1946 - res. 157 Prospect Pl., Rutherford, N.J.; ed. Columbia University A.B. 1925, M.S. Harvard 1928; Sperry Gyroscope Co. Garden City, 1945.

WEEKS, JOHN THAYER, (M) 1960 - Engineer, CBS Laboratories, High Ridge Road, Stamford, Conn. res. 57 Valley Road, New Canaan, Conn.

WEHNER, JOHN H. (M) 1964 - Engineer, DuMont-Fair-child, Clifton, N.J.; b. Paterson, N.J. July 24, 1918. Married, one child. Amateur operation 32OHJ. ed. Paterson Central, DeForest Radio, Cleveland Inst. of Radio Electronics, color television, Paterson Vocational, Hobbies, ham radio, fishing, stamp collection.

WHEELER, HAROLD A. (F) 1935 - Radio Engineer, Wheeler Laboratories, Inc., 122 Cutter Mill Rd., Great Neck, N.Y.; res. 18 Melbourne Rd., Great Neck, N.Y.; b. St. Paul, Minn. May 10, 1903; married; ed. George Washington University B.S. in Physics (with distinction), John Hopkins University, Physics Department (3 years); interested in radio since 1913; amateur station 3QK 1918/1922; professional experience: Hazeltine Corp. 1924/1945 Vice President and Chief Consulting Engineer Bayside and Little Neck Laboratories, Inc. 1947 to date; more than 150 U.S. patents and many foreign patents; Book "Wheeler Monographs Vol.1" 1953; many technical papers in Proceedings IRE etc.; Fellow of IRE and AIEE Director IRE 1940/1945; Morris Liebman Prize IRE 1940 for "Theory of Wideband Amplifiers and Paired Echos in Television." Armstrong Medall 1964

WITT, FREDERICK E., (M) 1961 - Research Engineer, Columbia University Electronic Research Laboratory, Sylvan Blvd., Alpine, N.J.; res. 117 Lohs Place, Harrington Park, New Jersey.

WINTERS, ARTHUR, (M) 1964 - Mailing address, ll Warren Street, New York, New York.

YELLEN, ANTHONY F. (M) 1957 - Technical Writer, Radio Engineering Labs. 3-1/2 yrs.; res. 84-46 ll7th St., Richmond Hill 18, L.I., N.Y.; b. February 10, 1930, New York, N.Y.; ed. St. Johns Preparatory, St. Johns College Brooklyn Polytechnic Institute, U.S. Navy Class "A" Electronics School; Military Service, U.S. Navy, 4 yrs., seved on U.S.S. Charles R. Ware (DD865), 3 years, Electronics Maintenance; Amateur Call Letters W2EDA; Clubs, etc. ARRL, I.R.E.

YOKUM, CHARLES H. (F) 1937 - Sales Engineer, Eastern Sales Manager for San Fernando Electric Manufacturing Co., 1509 First St., San Fernando, Calif.; res. 463 Adamsville Rd., Central Village, Mass.; b. Deposit, New York July 13, 1906; ed. East Orange Grammar School and High School and B.S. 1927 Princeton University; married; in terested in radio since 1937; Major Signal Corps Sig. O 23 HQ.

ZARET, MATTHEW E. (M) Professor, Electrical Engineering, The Cooper Union, Cooper Square, N. Y. C.; res. 67 Hollywood Ave., Huntington, New York; b. September 1988 tember 13, 1909; ed. B.S. College of the City of New York 1931, Sc. M. New York University 1936; married; interested in radio since 1922; professional experience: Fada Radio Co. 1928, Sonotone Corp. (Electroacoustic Research Engineer) 1942/1946, Polytechnic Research and Development Co. (Project Engineer) 1947, Teaching of Electronics and related fields Newark College of Engineering, Columbia, Cooper Union 1947 to date; publications "Development of Midget Earphones for Military Use" Journal of the Acoustical Society of America October 1946, "Electroacoustics," Newark College of Engineering Press 1949, "Electron Tube Circuits Laboratory Manual" NCE Press 1949; Senior Member IRE, Charter Member Audio Engineering Society, Fellow American Association for the Advancement of Science, Member Acoustical Society of America, Member American Association of University Professors, Member, American Society for Engineering Education; Hobby -Music, President of Nutley Symphony Society (1953/1954), Chaiman, Nutley Council of Music, Drama & the Arts 1958/59.

ZAYAC, FRANK R. (M) 1948 - Vice President, Ballantine Laboratories, Inc., Boonton, N.J.; res. Boonton Lakes Road, Boonton, N.J.; b. Boonton, N.J. March 28, 1911; ed. Boonton, High School; married; interested in radio since 1929; amateur W3FYY 1938, now W2FYY; member IRE and ARRL; Director, Radio Club 1955.

ZBODULA, JOHN W., (M) 1957 - Radio Engineering Laboratories, 36-40 37th St., Long Island City, New York; res. 303 Bay 10th St., Brooklyn 28, New York.

#### HONORARY MEMBERS

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GODLEY, PAUL F.

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## THE HERITAGE OF THE RADIO CLUB OF AMERICA

By LLOYD JACQUET

While the Radio Club has its distinctive personality, it is and has stayed the *individ-hal's* Radio Club: the pioneer, the lone researcher, the staunch amateur, the independent inventor. It is the place—in a conformist-ridden industry overshadowed by "big business" aspects—for the independent amateur, the theoretical physicist, the practical engineer, the famed inventor, the beginning experimenter, the business man and marketer, the independent scientist, to mingle and to fraternize on the one, common level of good fellowship.

There seems to be a shrinking of places where the essential pioneer spirit can survive: the spirit of independent investigation and scientific research so essential to the progress of the whole electronic art. The value of the *individual* person, his character and his achievements, can best flourish in the proper environment. There are few oases as inviting today as the forum and fellowship of the Radio Club.

Though a half century old, it is a strange thing that it is so young in spirit. The continued policy of recognizing primarily the value of the individual and his personal worth; the giving of full recognition to individual achievement in fields of pioneer investigation; the encouragement to individuals to expand the opportunities for individual achievement in the fields of electronics...these are all powerful factors at work at the Radio Club, all lineal descendants of the pioneer qualities built into it by those who went before, the unique heritage that insures continuity of existence, into the second half of the century mark, and beyond...

But as for our ideals, and our thinking, and our philosophies—those, we like to believe, were lofty, and noble, worthy of permanence. We can look at ourselves face to face, and be not ashamed. Even though our scientific iconoclasm caused some to raise eyebrows among the uninitiated, the secret something that drew us together originally and kept us together ever since has proved to be real and substantial. As ethereal as this substance is, it was the base upon which we erected this clan of kindred minds that we call the Radio Club of America.

Proudly do we proclaim to the world that we belong together in a tight fellowship defending the last one of us if challenged; or to back fully the single individual bold enough to challenge the world building up all about the Universe with new concepts and ideas.

Our fellows loved radio—they had to. They knew its fill of mystery, its compelling challenge. They knew too that the future was filled with an awe and a wonder which they were determined to investigate, and pass on to all the members of the Radio Club, and to the outer world in a modest reverent way, carrying the inspiration of 1909 ever forward, ever bright. That is the wonderful heritage of the Radio Club of America. We all partake of it, as we continue to contribute to it—and the next half century is bright with promise.

#### MEMBERSHIP—

The entrance fee is \$1.00; the annual Membership dues are \$3.00 per year, except that for members elected after July first of any year the dues are \$1.50 for that year. Additionally, it is required that the application for membership shall include the names of three Fellows or Members to whom the applicant is personally known.

Want to learn more? Write . . .

THE RADIO CLUB OF AMERICA 11 West 42nd Street New York City

## DECEASED MEMBERS THE RADIO CLUB OF AMERICA, INC.

Aceves, Julius G.

Allen, George Y.

Armstrong, Edwin H.

Ayer, Oliver G.

Baker, Thomas S.

Baker, W. R. G.

Ballantine, Stuart

Barclay, R. H.

Baunach, Edward L.

Bingham, Wilbur Fisk

Binns, Jack

Brett, Harold M.

Brown, David Seymour

Browne, Walram

Burghard, George E.

Burlingame, Bruce 0.

Capen, William H.

Clark, Herbert A., Jr.

Clark, LeRoy

Cooney, J. K.

Cooper, C. B.

Day, James R.

DeVine, Alexander A.

Dietrich, Fred

Dunn, Gano

Eastham, Melville

Ehrmann, Gustav J.

Eltz, George J.

Ferris, Malcolm

Forbes, Henry C.

Glavin, Edward F.

Godfrey, Dr. Charles C.

Goudy, C. F.

Goulden, Stantley W.

Grebe, Alfred H.

Grinan, John F.

Guggenheim, Dr. Sigmund

Guilfoyle, Thomas James

Hanley, John F.

Hass, John G.

Hazeltine, Alan

Hebert, Arthur A.

Hinners, Frank A.

Hogan, John V. L.

Hold, Henry Walter

Hoppenberg, Joseph A.

Horle, Lawrence C. F.

Hubley, Warren F.

Huffman, Charles E.

Hutchens, Ray

Inman, Walker P.

Jackson, Samuel Jr.,

Jacobs, Charles

Jenkins, Victor F.

Kent, Roscoe

Klingenschmitt, Fred A.

Knapp, Joseph F.

Kraus, Michael B.

Lacault, Robert E.

Lescarboura, Austin C.

Lidbury, F. A.

Logwood, Charles V.

Loughlin, William D.

Lovejoy, D. Ross

MacDonald, William A.

MacKay, John R.

Manson, Ray H.

Marriott Robert H.

Mayer, William G.

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Moulton, Albert B.

Murdock, Daniel R. W.

Nicholas, Edwin A.

Pacent, Louis G.

Pickard, Greenleaf W.

Porter, H. F.

Potts, John H.

Ranger, R. H.

Roger, William

Roos, Oscar A.

Rosenthal, Leon W.

Russell, William T.

Sadenwater, Harry

Sampson, Harvey

Seeley, S. Ward

Seibt, Dr. George

Shonhale, Charles L.

Silver, McMurdo

Simmons, M. Theodore

Singer, Benjamin

Slater, I. M.

Sleeper, Milton

Smith, Luther C., Jr.

Snyder, Harvey C.

Starrett, J. S.

Stewart, Charles H.

Stone, John Stone

Taussig, Charles W.

Thompson, Sylvester T.

Toegel, Burt J.

Trube, Carl E.

Tunick, Harry

Tsubouchi, Akira

Vansize, William B.

Vanghan, Wilbur Southwood

Weare, John

Weber, Victor J.

Whiting, Donald F.

Winterbottom, William A.

Wise, Roger M.

Yokachi, Shin-ichi

Zenneck, Jonathan A. W.

#### ARMSTRONG MEDALISTS

1937—Professor Alan Hazeltine

1938—Dr. Harold H. Beverage

1940—Greenleaf Whittier Pickard

1941—Harry W. Houck

1945—Carman Randolph Runyon Jr.

1946—Charles Stuart Ballantine

1947—John V. L. Hogan

1950—Ernest V. Amy

Edwin H. Armstrong

George E. Burghard

Minton Cronkhite

Paul F. Godlev

John F. Grinan

Walker P. Inman

1952—Captain Henry J. Round

1953—Raymond A. Heising

1956—Melville Eastham

1959— John H. Bose

1962-Paul Ware

1964 Harold Wheeler

The Armstrong Medal is not awarded every year.

This is because it is given in accordance with the conditions and requirements formulated in the establishment of this honor by the Board of Directors of the Club. Quoting from the Scroll: "The Radio Club this day hereby establishes an award to be known as the "Armstrong Medal," to be bestowed by the Board of Directors of The Radio Club of America upon any person within its membership who shall have made, in the opinion of the Board of Directors, and within the spirit of the Club, an important contribution to Radio Art and Science."

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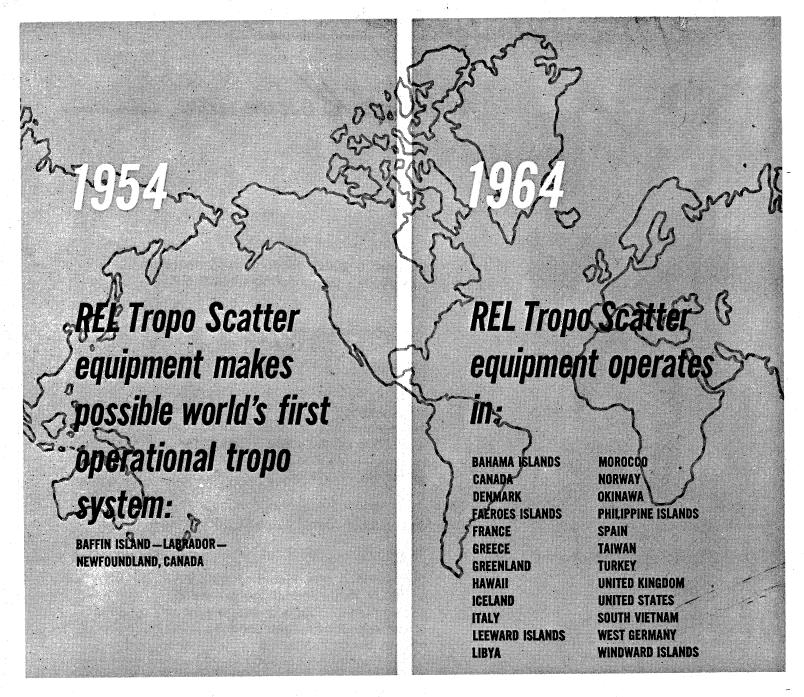
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- Operating frequencies in the 400, 900, 2000, 5000, and 8000 mc bands.
- Voice channel capacities from 1 to 300.
- Power outputs from 10 watts to 100,000 watts.
- Noise figures as low as 2 db.

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- Advanced solid-state equipment—new REL 2600 Series.
- Fully-developed FM feedback threshold extension techniques.

Today, as for more than 40 years, REL continues to provide engineering and performance leadership for worldwide telecommunications requirements.

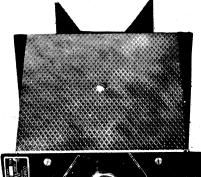
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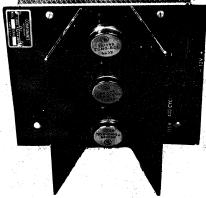


RADIO ENGINEERING LABORATORIES
Division of Dynamics Corporation of America
Long Island City 1, New York



## New Transistorized \_





MODEL 458

SPECIFICATIONS:

INPUT:

12 Volts 30 Amps

OUTPUT:

115 Volts 250 VA 400 cps Square Wave

Dimensions:

6"x 10 1/2"x 6"

Weight:

7 pounds

Price:

\$149.50 F.O.B. Denville

Accessory heavy duty starting relay

for Model 458 with reverse polarity protection \$15.00 f.o.b. Denville

Marine Convertor

Converts 12 volts dc to 115 volts ac 400 cycles per second at 250 VA.

Now you can operate the inexpensive surplus APN-4 LORAN or your TV from your 12 volt marine battery.

No electrolysis ---- both input and output circuits are insulated from the metal case - operates from either positive or negative grounded system.

Automatic short circuit protection!

Conservatively rated at 250 VA - actually delivers more power if necessary. The six large power transistors are operated well within their ratings.

Guaranteed by the manufacturer of spacecraft dc convertors

100% American made - no surplus parts - anodized aluminum case for rust free marine use.

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Shepard Laboratories has for many years been a pioneer in the manufacture of high speed impact printers designed for use in conjunction with computers and data handling systems. The Company originates and builds to its own design many component parts of data systems including printers, electronic decoders and control circuits for printers, tape transports and data transmission equipment.

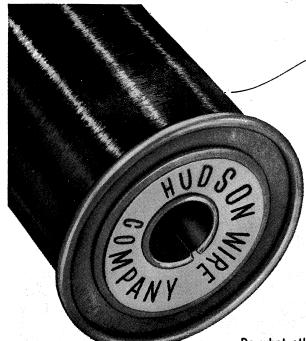
The Company manufactures a line of standard components of proven performance and reliability. Using these components as building blocks it can supply systems meeting a wide range of requirements and satisfying the most exacting performance and reliability specifications. Where necessary, it also custom designs equipment to meet user's particular needs. Many of the products made have been first-of-a-kind and have solved unique requirements.

Let Shepard adapt its output building blocks to your specific needs.



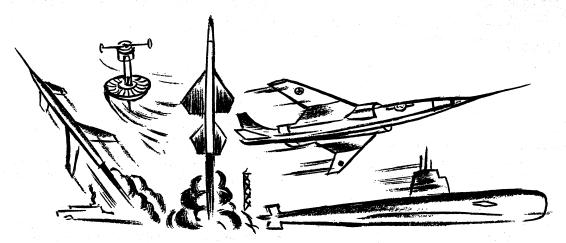
#### Shepard Laboratories, Inc.

Electro-Mechanical, Electronic Applications
480 Morris Avenue
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# FINE MIDE

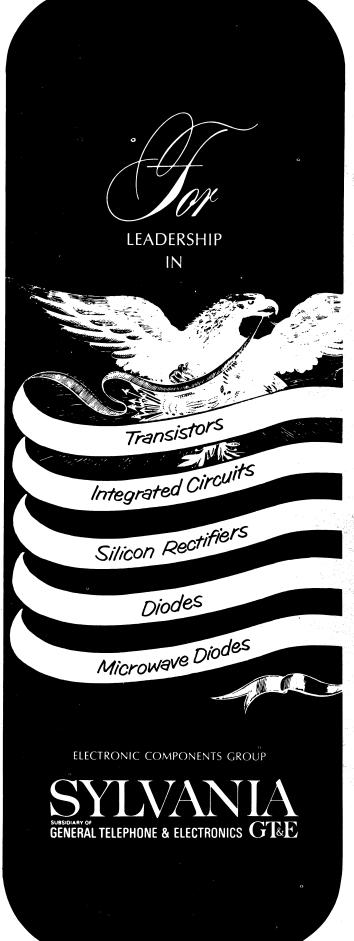
Do what other electronic and electrical manufacturers have done for years: Turn your fine-wire problems and requirements over to Hudson Wire. You will be served promptly, satisfactorily, economically, by craftsmen backed by over 50 years of fine-wire specialization.



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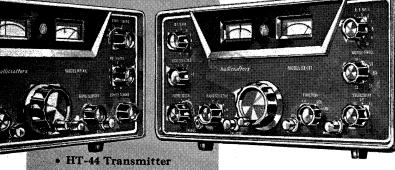
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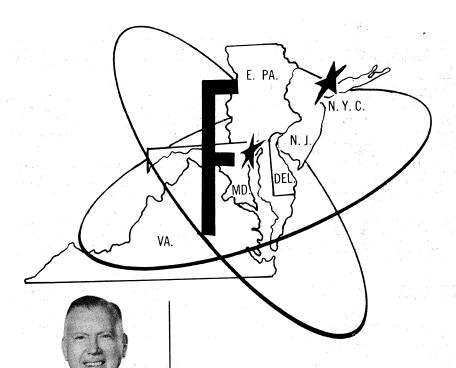
P.S. We'll send you complete specifications twice as fast, too!

Prepared by HENRY B. KREER & CO., INC.

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MODEL 54 STANDARD SIGNAL GENERATOR — Frequency range of 100 Kc. to 20 Mc. The first commercial signal generator with built-in tuning motor.

MODEL 65-B STANDARD SIGNAL GENERATOR
— This instrument replaced the Model 54 and incorporated many new features including an extended frequency range of 75 Kc. to 30 Mc.

#### 1940

MODEL 58 UHF RADIO NOISE AND FIELD STRENGTH METER — With a frequency coverage from 15 Mc. to 150 Mc. This instrument filled a long wanted need for a field strength meter usable above 20 Mc.

MODEL 79-B PULSE GENERATOR — The first commercially-built pulse generator.

#### 1941

MODEL 75 STANDARD SIGNAL GENERATOR — The first generator to meet the need for an instrument covering the I.F. and carrier ranges of high frequency receivers. Frequency range, 50 Mc. to 400 Mc.

#### 1942

SPECIALIZED TEST EQUIPMENT FOR THE ARMED FORCES. WORLD WAR II.

#### 1943

MODEL 84 STANDARD SIGNAL GENERATOR — A precision instrument in the frequency range from 300 Mc. to 1000 Mc. The first UHF signal generator to include a self-contained pulse modulator.

#### 1944

MODEL 80 STANDARD SIGNAL GENERATOR — With an output metering system that was an innovation in the field of measuring equipment. This signal generator, with a frequency range of 2 Mc. to 400 Mc. replaced the Model 75 and has become a standard test instrument for many manufacturers of electronic equipment.

#### 1945

MODEL 78-FM STANDARD SIGNAL GENERATOR — The first instrument to meet the demand for a moderately priced frequency modulated signal generator to cover the range of 86 Mc. to 108 Mc.

#### 1946

MODEL 67 PEAK VOLTMETER — The first electronic peak voltmeter to be produced commercially. This new voltmeter overcame the limitations of copper oxide meters and electronic voltmeters of the r.m.s. type.

#### 10/-7

MODEL 90 TELEVISION SIGNAL GENERATOR

— The first commercial wide-band, wide-range standard signal generator ever-developed to meet the most exacting standards required for high definition television use.

#### 1948

MODEL 59 MEGACYCLE METER — The familiar grid-dip meter, but its new design, wide frequency coverage of 2.2 Mc. to 420 Mc. and many other important features make it the first commercial instrument of its type to be suitable for laboratory use.

#### 1949

MODEL 82 STANDARD SIGNAL GENERATOR — Providing the extremely wide frequency coverage of 20 cycles to 50 megacycles. An improved mutual inductance type attenuator used in conjunction with the 80 Kc. to 50 Mc. oscillator is one of the many new features.

#### 1950

MODEL 111 CRYSTAL CALIBATOR — A calibrator that not only provides a test signal of crystal-controlled frequency but also has a self-contained receiver of 2 microwatts sensitivity.

#### 1951

MODEL 31 INTERMODULATION METER — With completely self-contained test signal generator, analyzer, voltmeter and power supply. Model 31 aids in obtaining peak performance from audio systems, AM and FM receivers and transmitters.

#### 1952

MODEL 84 TV STANDARD SIGNAL GENERATOR — With a frequency range of 300-1000 Mc., this versatile new instrument is the first of its kind designed for the UHF television field.

#### 1953

MODEL 59-UHF MEGACYCLE METER — With a frequency range of 420 to 940 megacycles, the first grid-dip meter to cover this range in a single band and to provide laboratory instrument performance.

#### 1954

FM STANDARD SIGNAL GENERATOR. Designed originally for Military service, the commercial Model 95 is engineered to meet the rigid test requirements imposed on modern, high quality electronic instruments. It provides frequency coverage between 50 Mc. and 400 Mc.

#### 1955

RADIO INTERFERENCE MEASURING SET. An aperiodic noise meter useful to 1000 Mc.

#### 1956

MODEL 505 STANDARD TEST SET FOR TRAN-SISTORS. A versatile transistor test set which facilitates the measurement of static and dynamic transistor parameters.

#### 1957

RADIO FIELD STRENGTH AND INTERFERENCE MEASURING SET. A tuned radio interference and field strength set covering the frequency range of 150 Mc. to 1000 Mc.

#### 1958

MODEL 560 STANDARD FM SIGNAL GENERATOR — First successful FM Signal Generator using solid state modulator.

#### 1959

MODEL 700 FREQUENCY METER — A completely new concept of frequency measurement. An instrument capable of direct and continuous reading to one cycle in 25-1000 Mc. range.

#### 1960

MODEL 139 TEST OSCILLATOR — A compact, versatile, and portable instrument for rapid and accurate alignment of I.F. circuits in all types of radio receivers.

#### 1961

MODEL 760 STANDARD FREQUENCY METER — An accurate, simple to operate, direct read-out, portable instrument designed for servicing two-way mobile radio equipment.

#### 1962

MODEL 140 STANDARD DEVIATION METER — A portable, self-contained instrument designed to accurately measure the peak deviation of F.M. transmitters. Frequency coverage from 25 to 1000 Mcs.



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