

THE IRE

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THE INSTITUTE OF RADIO ENGINEERS, founded through the efforts of three far-seeing engineers, Dr. A. N. Goldsmith, J. V. L. Hogan, and R. H. Marriott, has grown from its original roster of less than fifty members gained by the merger of two small professional societies in 1912, to an international membership of 90,000. It is an incorporated, nonprofit organization established for the advancement of the theory and practice of electronics and radio, including allied branches of engineering and the related arts and sciences.

The IRE publishes technical papers, reports, and general information of interest to electronics engineers. It holds meetings and discussions throughout the United States, Canada, and several countries abroad, and maintains committees for collating and standardizing the results of technical research and development. Among the fields covered are radio communication, sound broadcasting, television, marine and aerial guidance, electron devices, radio-frequency measurements, engineering education, electron optics, sound and picture electrical recording and reproduction, power and manufacturing applications of radio and electronic technique, industrial electronic control and processes, medical electrical research and applications, and space electronics.

The management of the Institute of Radio Engineers resides in a Board of Directors selected from the body of Fellows and Senior Members, acting through an Executive Committee and the officers of the IRE. The President and Vice-Presidents are elected annually from the body of Fellows and Senior Members.

Membership in the IRE is contingent upon experience and achievement in radio engineering and allied fields. The grade of Fellow is one of distinction, and appointment thereto by the Board of Director's is made on the basis of eminence and distinguished service. Other grades—Senior Member, Member, Associate, and Student—are filled from applicants whose age, experience, and attainments conform to the respective requirements set forth in Bylaw 203 on page 9. An application blank appears on pages 21-24.

COMMITTEES*

The IRE has established over twenty-five technical committees covering specialized fields of radio engineering. Through the IRE, these committees (sometimes in collaboration with technical committees of other engineering societies) publish standards of accepted definitions of terms, and methods of measurements of physical quantities used in radio engineering practices.

CONVENTIONS AND MEETINGS

Each year the IRE holds an international convention for its entire membership, during which technical papers

* A list of Committees appears in the June and October issues of PROCEEDINGS OF THE IRE.

are presented and the latest electronic equipment is displayed. Numerous additional meetings, many with exhibits, are held throughout the year by IRE Regions, Sections, and Professional Groups.

SECTIONS†

Sections have been established through the United States, Canada, Egypt, Israel, Japan, Argentina, Brazil, Chile, Colombia, Italy, India, Switzerland, and the Benelux countries, to hold meetings under the aegis of the IRE. The Sections of the IRE are grouped into eight Regions, and each Region is represented on the Board of Directors by a Regional Director elected bi-annually from, and by, the membership of the respective Region.

PROFESSIONAL GROUPS†

To serve many special fields of interest, Professional Groups have been formed on an Institute-wide basis in each of twenty-eight technical fields. These Groups organize meetings and conferences on subjects of special interest to their members. They issue technical publications called TRANSACTIONS to provide a means for ensuring their membership proper coverage of their fields in the publications of the IRE, and for promoting recognition of their leaders among the IRE membership at large.

PUBLICATIONS OF THE IRE

PROCEEDINGS OF THE IRE

Perhaps the most important single activity of the Institute is the publication of a technical journal. The first issue of the PROCEEDINGS OF THE INSTITUTE OF RADIO ENGINEERS appeared in 1913. Established first as a quarterly, since 1927 the PROCEEDINGS has been published in twelve numbers annually. In 1939, the name of the journal was shortened to PROCEEDINGS OF THE IRE.

The PROCEEDINGS OF THE IRE is the official publication of the Institute of Radio Engineers. In it appear technical papers, discussions, and communications approved by the Editorial Reviewers and Managing Editor, as well as IRE Standards prepared by the technical committees.

To date, over 7500 papers on advanced research topics have been published in PROCEEDINGS, including mathematico-physical analyses of engineering problems, current engineering developments of equipment and methods, and commercial applications of engineering methods and products, historical papers, and tutorial papers covering specific aspects of radio and electronic engineering. In addition, space is devoted to news, book reviews, new products, and abstracts of papers published in technical publications the world over. The PROCEEDINGS OF THE

† A list of Sections and Professional Groups and their officers appears every odd-numbered month in PROCEEDINGS OF THE IRE.

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IRE is mailed gratis to all members; subscription price to nonmembers is \$18.00 per year, \$19.00 to foreign destinations.

IRE TRANSACTIONS

Each of the twenty-eight IRE Professional Groups publishes its own technical publication, called TRANSACTIONS, covering developments of particular interest within its own specialized field. The TRANSACTIONS is sent free to all paid members of the Professional Group. Frequency of issue varies from Group to Group, and ranges from one to six issues per year.

IRE CONVENTION RECORD

The IRE annually publishes the papers presented at the IRE International Convention in New York in the IRE INTERNATIONAL CONVENTION RECORD.

YEARBOOKS AND DIRECTORIES

The first Yearbook was published in 1914, the second in 1916, and then annually between 1926 and 1932. Yearbooks were then published in 1937, 1942, and 1946. With the 1948 Yearbook, annual publication was resumed. In 1950 its name was changed to "Directory."

STANDARDS

Standardization reports have been issued since 1913. Early reports were confined to the definition of technical terms and standard graphical symbols. Current reports include methods of testing equipment and measuring electronics quantities, and letter symbols and mathematical notation. Starting in 1949, IRE Standards have been published in the PROCEEDINGS, rather than as separate reports, to make them available to all members at no extra charge. Also, they are available in reprint form. All IRE standard definitions and symbols, as of December 1959, appear in the "IRE Dictionary of Electronics Terms and Symbols," which is available to members at \$5.20, and to others at \$10.40 per copy.

AWARDS

The IRE bestows seven awards, six annual and one nonannual, in recognition of outstanding technical and administrative achievements in the field of radio communication.

MEDAL OF HONOR

The Medal of Honor is given annually in recognition of outstanding scientific or engineering achievements in the fields of activity of the IRE. The recipient is named by the Board of Directors upon the recommendation of the Awards Committee.

Recipients of the Medal of Honor

E. H. Armstrong . . .	1917	Lloyd Espenschied . . .	1940
E. F. W. Alexanderson . . .	1919	A. N. Goldsmith . . .	1941
Guglielmo Marconi . . .	1920	A. H. Taylor . . .	1942
R. A. Fessenden . . .	1921	William Wilson . . .	1943
Lee De Forest . . .	1922	Haradan Pratt . . .	1944
John Stone-Stone . . .	1923	H. H. Beverage . . .	1945
M. I. Pupin . . .	1924	R. V. L. Hartley . . .	1946
G. W. Pickard . . .	1926	L. C. F. Horle . . .	1948
L. W. Austin . . .	1927	Ralph Bown . . .	1949
Jonathan Zenneck . . .	1928	F. E. Terman . . .	1950
G. W. Pierce . . .	1929	V. K. Zworykin . . .	1951
P. O. Pedersen . . .	1930	W. R. G. Baker . . .	1952
G. A. Ferré . . .	1931	John M. Miller . . .	1953
A. E. Kennelly . . .	1932	William L. Everitt . . .	1954
J. A. Fleming . . .	1933	Harald T. Friis . . .	1955
S. C. Hooper . . .	1934	John V. L. Hogan . . .	1956
Balth. van der Pol . . .	1935	Julius A. Stratton . . .	1957
G. A. Campbell . . .	1936	Albert W. Hull . . .	1958
Melville Fastham . . .	1937	E. Leon Chaffee . . .	1959
J. H. Dellinger . . .	1938	Harry Nyquist . . .	1960
A. G. Lee . . .	1939	Ernst A. Guillemin . . .	1961

FOUNDERS AWARD

The Founders Award is bestowed on special occasions only, for outstanding leadership in planning and administration of important technical developments. Recipient is named by the Board of Directors upon the recommendation of the Awards Committee.

Recipients of the Founders Award

David Sarnoff . . .	1953
Alfred N. Goldsmith . . .	1954
Raymond A. Heising . . .	1957
W. R. G. Baker . . .	1958
Haraden Pratt . . .	1960
Ralph Bown . . .	1961

MEMORIAL PRIZE AWARD IN MEMORY OF MORRIS LIEBMANN

The Memorial Prize Award in Memory of Morris Liebmann was originally based on an endowment by E. J. Simon to preserve the memory of Colonel Morris N. Liebmann, who gave his life in the first World War. The award consists of a certificate and a monetary award. It is given annually to a member of the Institute who, in the opinion of the Board of Directors, upon the recommendation of the Awards Committee, shall have made an important contribution to the radio art.

Recipients of the Memorial Prize Award in Memory of Morris Liebmann

L. F. Fuller . . .	1919	A. W. Hull . . .	1930
R. A. Weagant . . .	1920	Stuart Ballantine . . .	1931
R. A. Heising . . .	1921	Edmond Bruce . . .	1932
C. S. Franklin . . .	1922	Heinrich Barkhausen . . .	1933
H. H. Beverage . . .	1923	V. K. Zworykin . . .	1934
J. R. Carson . . .	1924	F. B. Llewellyn . . .	1935
Frank Conrad . . .	1925	B. J. Thompson . . .	1936
Ralph Bown . . .	1926	W. H. Doherty . . .	1937
A. H. Taylor . . .	1927	G. C. Southworth . . .	1938
W. G. Cady . . .	1928	H. T. Friis . . .	1939
E. V. Appleton . . .	1929	H. A. Wheeler . . .	1940

P. T. Farnsworth . . .	1941	William Shockley . . .	1952
S. A. Schelkunoff . . .	1942	John A. Pierce . . .	1953
W. L. Barrow . . .	1943	Robert R. Warnecke . . .	1954
W. H. Hansen . . .	1944	Arthur V. Loughren . . .	1955
P. C. Goldmark . . .	1945	Kenneth Bullington . . .	1956
Albert Rose . . .	1946	Oswald G. Villard, Jr. . .	1957
J. R. Pierce . . .	1947	Edward L. Ginzton . . .	1958
S. W. Seely . . .	1948	Nicolaas Bloembergen . . .	1959
C. E. Shannon . . .	1949	Charles H. Townes . . .	1959
O. H. Schade . . .	1950	J. A. Rajchman . . .	1960
R. B. Dome . . .	1951	Leo Esaki . . .	1961

MEMORIAL PRIZE AWARD IN MEMORY OF BROWDER J. THOMPSON

The Memorial Prize Award in memory of Browder J. Thompson, established in 1945, is given annually to the author or joint authors under thirty years of age at date of submission of original manuscript for that paper of sound merit recently published in the technical publications of The Institute of Radio Engineers, and which, in the opinion of the Board of Directors, upon the recommendation of the Awards Committee, constitutes the best combination of technical contribution to radio and electronics and presentation of the subject.

The award comprises the income from a fund established by voluntary contributions to preserve the memory of Browder J. Thompson, a Director of the Institute killed in action in World War II while on a special mission for the Secretary of War.

Recipients of the Memorial Prize Award in Memory of Browder J. Thompson

G. M. Lee . . .	1946	Richard C. Boonton, Jr. . .	1953
C. L. Dolph . . .	1947	R. L. Petritz . . .	1954
W. H. Huggins . . .	1948	Blanchard D. Smith, Jr. . .	1955
R. V. Pound . . .	1949	Jack E. Bridges . . .	1956
J. F. Hull . . .	1950	Dudley A. Buck . . .	1957
A. W. Randalls . . .	1950	Arthur Karp . . .	1958
A. B. Macnee . . .	1951	Franklin H. Blecher . . .	1959
H. W. Welch, Jr. . .	1952	J. W. Gewartowski . . .	1960
Eiichi Goto . . .	1961		

MEMORIAL PRIZE AWARD IN MEMORY OF HARRY DIAMOND

The Memorial Prize Award in Memory of Harry Diamond, established in 1949, is given annually to a person or persons in Government service for outstanding contributions in the field of radio or electronics, as evidenced by publication in professional society journals such as the PROCEEDINGS OF THE IRE, or journals of similar standing. The award consists of a certificate provided for from proceeds of a fund established by friends who felt

that the professional life of Harry Diamond, a Fellow of the Institute, exemplified the highest type of scientific effort in government service. Recipient of the award is named by the Board of Directors upon the recommendation of the Awards Committee.

Recipients of the Memorial Prize Award in Memory of Harry Diamond

A. W. Haeff . . .	1950	Wilbur S. Hinman . . .	1956
M. J. E. Golay . . .	1951	Georg Goubau . . .	1957
Newbern Smith . . .	1952	Edward W. Allen, Jr. . .	1958
Robert M. Page . . .	1953	Jack W. Herbstreit . . .	1959
Harold A. Zahl . . .	1954	K. A. Norton . . .	1960
Barnard Salzberg . . .	1955	Helmut L. Brueckmann . . .	1961

PRIZE AWARD BY W. R. G. BAKER

The Prize Award by W. R. G. Baker is given annually to the author or authors of the most outstanding paper published in the IRE TRANSACTIONS of the Professional Groups. The award consists of a certificate and a monetary award derived from the income of a fund donated to the IRE by the late W. R. G. Baker, former Chairman of the IRE Professional Groups Committee. The recipient of the award is named by the Board of Directors upon the recommendation of the Awards Committee.

Recipients of the Prize Award by W. R. G. Baker

Réymond J. Kircher . . .	1957	H. F. Webster . . .	1958
Robert L. Trent . . .	1957	Richard D. Thornton . . .	1959
D. Raymond Fewer . . .	1957	E. J. Nalos . . .	1960
R. L. Kyhl . . .	1958	Manfred Clynes . . .	1961

PRIZE AWARD BY VLADIMIR K. ZWORYKIN

The Prize Award by Vladimir K. Zworykin will be awarded annually for twenty (20) times beginning in 1952 to that member who makes the most important technical contribution to electronic television during the preceding three calendar years, or the importance of whose contribution to electronic television shall have been realized during this period.

The award consists of a citation and a check for \$500 drawn from a fund of \$10,000 donated to the Institute by Vladimir K. Zworykin to encourage outstanding technical developments in fully electronic television. Recipient is named by the Board of Directors upon recommendation of the Awards Committee.

Recipients of the Prize Award by Vladimir K. Zworykin

B. D. Loughlin . . .	1952	Frank J. Bingley . . .	1956
Frank Gray . . .	1953	Donald Richman . . .	1957
Alda V. Bedford . . .	1954	Charles P. Ginsburg . . .	1958
Harold B. Law . . .	1955	Paul Weiner . . .	1959
Peter C. Goldmark . . .	1961		

THE INSTITUTE OF RADIO ENGINEERS

(Incorporated)

CONSTITUTION

(Effective April 20, 1959)

ARTICLE I

NAME AND OBJECT

SEC. 1—The name of this organization shall be The Institute of Radio Engineers, Incorporated, hereinafter called the IRE.

SEC. 2—Its objects shall be scientific, literary, and educational. Its aims shall include the advancement of the theory and practice of electronics, radio, allied branches of engineering, and of the related arts and sciences, their application to human needs, and the maintenance of high professional standards among its members. Among the means to this end shall be the holding of meetings for the reading and discussion of professional papers and the publication of papers, discussions, communications, and such other matters as may be appropriate for the fulfillment of its objects.

SEC. 3—The territory in which its operations are to be conducted is the United States of America and other countries.

ARTICLE II

MEMBERSHIP

SEC. 1—The membership of the IRE shall consist of members qualified to hold professional membership grades, who shall be designated as voting members, and members admitted to non-professional grades, who shall be designated as non-voting members.

SEC. 2—The grades of membership and the member qualifications for each and the requirements for admission, transfer, and severance of members shall be specified in the Bylaws.

ARTICLE III

DEFINITIONS

SEC. 1—The term "member" when printed without an initial capital, where used in this Constitution and the Bylaws, includes all grades of membership. The term "voting member" where used in this Constitution and the Bylaws means a member entitled to vote on IRE matters.

SEC. 2—The term "allied" as used in this Constitution and the Bylaws refers to electronics, electrical communication, radio, and such other technical fields as are directly contributory to, or derived from, electrical science.

SEC. 3—The term "Bylaw" as used in this Constitution refers to any Bylaws adopted by the Board of Directors as herein set forth and amended as hereinafter provided.

ARTICLE IV

DUES AND FEES

SEC. 1—Dues and fees shall be specified in the Bylaws.

SEC. 2—Under exceptional circumstances, the payment of dues and fees may be deferred or waived in whole or in part by the Board of Directors.

ARTICLE V

ANNUAL ASSEMBLY, BOARD OF DIRECTORS, AND PRESIDENT

SEC. 1—There shall be an annual Assembly composed of Delegates elected by the voting members. The annual Assem-

bly shall receive reports and perform such other functions as required by law or specified in the Bylaws.

SEC. 2—There shall be a Board of Directors which shall be the governing body of the IRE, shall manage its affairs, and shall consist of Directors elected by the voting members and Directors elected by the annual Assembly. These Directors shall include the President and the two most recent Past Presidents.

SEC. 3—The election by the voting members of each Delegate shall signify the election of the same individual as a Director.

SEC. 4—The President shall be elected by the voting members, by virtue of which election he shall also be a Delegate-at-large and a Director-at-large.

ARTICLE VI

DELEGATES, DIRECTORS, AND OFFICERS

SEC. 1—The number of Directors elected by the voting members together with the number of Directors elected by the annual Assembly shall be not less than nine nor more than fifty, but in no case below the minimum prescribed by law. The number of Directors elected by the voting members shall not be less than two-thirds of the total number.

SEC. 2—All of the Directors shall be of full age and at least one shall be a citizen of the United States and a resident of the State of New York.

SEC. 3—The term of each Delegate elected by the voting members shall run concurrently with the term of his office as Director and shall be not less than two nor more than five years, except that the term of office of the President as a Delegate-at-large and Director-at-large shall be three years, and such terms of office of such Delegates and Directors shall begin with the first annual Assembly after their election and acceptance.

The terms of office of Directors elected by the annual Assembly shall be one year.

SEC. 4—The United States and Canada and other areas, at the discretion of the Board of Directors, shall be divided into geographical districts known as Regions, which shall be specified in the Bylaws. The voting members of each Region shall elect a Delegate to the annual Assembly designated as its Regional Delegate who shall also by virtue of such election be a Director designated as its Regional Director. The election of Regional Delegates and Regional Directors under this paragraph shall be conducted as specified in the Bylaws.

The voting members of the IRE shall elect Delegates to the annual Assembly designated as Delegates-at-large who shall also by virtue of such election be Directors-at-large. The number of Directors-at-large elected by the voting members shall not be less than the number of Regional Directors.

The number and method of election of Delegates-at-large and Directors-at-large shall be specified in the Bylaws.

SEC. 5—If the Directors shall not be elected on the day designated by law or fixed in the Bylaws, the corporation shall not for that reason be dissolved; but every Director shall continue to hold his office and discharge his duties until his successor has been elected.

SEC. 6—The Corporate Officers of the IRE shall be the President, one or more Vice Presidents as specified in the Bylaws, the Secretary, the Treasurer, and the Editor.

SEC. 7—The terms of office for all Corporate Officers shall begin with the annual meeting of the Board of Directors and shall terminate at the beginning of the following annual meeting of the Board of Directors or at such time as their successors are elected and accept.

SEC. 8—The terms of office of the Vice Presidents, Secretary, Treasurer, and Editor, as Directors shall be one year.

SEC. 9—No Corporate Officer or Director shall receive, directly or indirectly, any salary, traveling expenses, compensation, or emolument from the IRE either as such Officer or Director or any other capacity, unless authorized by the Bylaws or by the concurring vote of two-thirds of all the Directors at a regularly constituted meeting.

No Director or other Officer shall be interested, directly or indirectly, in any contract relating to the operations of the IRE, nor in any contract for furnishing supplies thereto, unless authorized by the Bylaws or by the concurring vote of two-thirds of the Directors at a regularly constituted meeting.

ARTICLE VII MANAGEMENT

SEC. 1—The President shall be the regular presiding officer at meetings of the Board of Directors and the annual Assembly. He shall be an ex-officio member of each committee.

A Vice President shall assume the duties of the President in the absence or incapacity of the President, as specified in the Bylaws. Duties of Vice Presidents and the order of priority regarding assumption of presidential duties shall be specified in the Bylaws.

In the event of the absence or incapacity of both the President and all of the Vice Presidents, the Board of Directors shall elect a chairman from its membership who shall perform the presidential duties during such absence or incapacity of the President and all of the Vice Presidents. The tenure of such temporary chairman shall be at the discretion of the Board of Directors provided, however, that said temporary chairman shall not serve longer than the unexpired term of the incumbent President.

SEC. 2—The Secretary shall be responsible for the preparation of all meetings of the Board of Directors, the annual Assembly, and all principal meetings of the IRE. He shall be responsible for the keeping of full records of all the meetings and activities of the IRE, the records of the membership, such other records as are required by law, and shall be responsible for the provision of such information from them as is requested by the Board of Directors.

SEC. 3—The Treasurer, under the control of the Board of Directors, shall have general supervision of the fiscal affairs of the IRE and shall be responsible for the keeping of records thereof.

SEC. 4—All funds received by the IRE shall be deposited in an account requiring the signatures of at least two of the Corporate Officers for withdrawal. The Board of Directors shall designate those Corporate Officers authorized to execute such withdrawals.

SEC. 5—The number of Directors required to constitute a quorum shall be stated in the Bylaws but shall not be less than one-third of the total number of Directors.

SEC. 6—The number of Delegates required to constitute a quorum at the annual Assembly shall be stated in the Bylaws but shall not be less than one-third of the total number of Delegates or if one-third be nine or more, not less than nine.

SEC. 7—The chairman of the Board of Directors shall have no vote on the Board unless the votes of the other Directors present are equally divided.

SEC. 8—The chairman of the annual Assembly shall have no vote on the Assembly unless the votes of the other Delegates present are equally divided.

SEC. 9—The Board of Directors may make, amend, or

revoke the Bylaws made by the IRE. Proposed Bylaws changes and reasons therefore shall be mailed to all IRE Directors at least twenty days before the stipulated meeting of the Board of Directors at which the vote shall be taken. Two-thirds of all votes cast at that meeting shall be required to approve any new Bylaw, amendment, or revocation.

SEC. 10—All committees unless otherwise provided for in the Bylaws, shall be appointed by the Board of Directors in such manner as the Board of Directors may designate.

SEC. 11—The fiscal year of the IRE shall be defined in the Bylaws.

ARTICLE VIII

NOMINATION AND ELECTION OF OFFICERS, DIRECTORS AND DELEGATES

SEC. 1—On or before July first of each year, the Board of Directors shall submit to all voting members a list of nominees for Delegates, Directors, the President, and such Officers as may be specified in the Bylaws to be elected by the voting members for the coming term, in accordance with the Bylaws. Submission may be by publication.

SEC. 2—Nomination by petition may be made by letter to the Board of Directors setting forth the name of the proposed candidate and the office for which the candidate is desired to be nominated, provided such letter is received at the general offices of the IRE no later than 12 o'clock noon on the Friday prior to August fifteenth. Such a petition shall be signed by at least one per cent of the total number of voting members as listed in the official membership records of the IRE at the end of the previous year, but in no case shall the number be less than one hundred.

SEC. 3—On or before September first, the Board of Directors shall submit to all voting members as of August fifteenth, a ballot listing all nominees to be voted upon by the voting members, in accordance with the Bylaws.

SEC. 4—The annual Assembly of the IRE shall elect additional Directors and such of the Corporate Officers as shall also serve as Directors, as provided by the Bylaws. Other Corporate Officers as specified in the Bylaws shall be elected by the Board of Directors.

SEC. 5—The Board of Directors is authorized to fill a vacancy occurring in the Board of Directors or among the Corporate Officers for a period not to exceed the unexpired term of the office becoming vacant, provided, that if a vacancy shall occur in the office of a Regional Director, then the geographical Region which elected such Director shall have the right to elect a Director to serve the remainder of such term. If such geographical Region shall fail to elect a Director within sixty days after notice of such vacancy, as provided in the Bylaws, then the same may be filled by the Board of Directors.

SEC. 6—The existence of vacancies in the Board of Directors or among the Corporate Officers shall be determined by the Board of Directors in accordance with the Bylaws.

ARTICLE IX MEETINGS

SEC. 1—There shall be an annual Assembly of Delegates-at-large and Regional Delegates of the IRE during January of each year. The President of the IRE shall preside. The annual Assembly may be held elsewhere than in the State of New York.

SEC. 2—There shall be an annual meeting of the Board of Directors during January of each year following the annual Assembly. This annual meeting may be held elsewhere than in the State of New York.

SEC. 3—Additional meetings and special meetings of the Board of Directors shall be held in accordance with the Bylaws.

SEC. 4—The Board of Directors may authorize the establishment of groups of members for promoting the objectives and interests of the IRE in accordance with the Bylaws. The Board of Directors may, at its discretion, terminate the existence of any such group.

ARTICLE X

AMENDMENTS

SEC. 1—Amendments to this Constitution shall be made by ballot of the voting members. Amendments may be proposed by a resolution adopted by vote of at least two-thirds of those present at a regularly constituted meeting of the Board of Directors or by a petition signed by at least one per cent of the total number of voting members as listed in the official membership records of the IRE at the end of the

previous year, but in no case shall the number be less than one hundred. A copy of such proposed amendment or amendments, if lawful, shall be mailed with a ballot to each voting member at least sixty days before the date designated for counting the ballots. Balloting shall be in accordance with the Bylaws.

SEC. 2—If the total ballot vote be at least twenty per cent of the total voting membership and if at least sixty-seven per cent of all ballot votes cast shall be favorable, the proposed amendment or amendments shall be adopted. Voting members shall be notified as soon as practicable after the adoption by publication.

SEC. 3—Amendments to this Constitution shall take effect thirty days after adoption, but if by amendment Officers and Officers-Elect are changed in status or the number of Directors is reduced, each Officer and each Director shall continue to serve until his term expires.

BYLAWS

(Effective April 28, 1961)

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100. DEFINITIONS

1. The term "all the rights and privileges" refers to right to participate fully in the activities of the IRE in furtherance of its objects as defined in the Constitution.
2. The term "group of members" refers to any classification of members whether on a geographical territorial basis or on a particular technical or professional interest basis, that has been authorized by the IRE.
3. The terms "meetings of the IRE" or "meetings of IRE members" refers to meetings authorized by the IRE, with or without geographical or other limitation, held to further the objects of the IRE.
4. The term "IRE Headquarters" refers to the principal office of the IRE at which the Executive Secretary and his staff are located.

5. The term "Constitution" refers to the IRE Constitution.
6. The term "Executive Committee" refers to the Executive Committee of the IRE.
7. The term "school of recognized standings" refers only to schools which award degrees for not less than four years of full-time academic study in electronics, radio, allied branches of engineering or the related arts and sciences, and are designated as such by the Executive Committee.
8. The word "junior" when used in the terms "junior past President," "junior past Regional Director," "junior past Chairman" or other titles of IRE official positions refers to the immediate past holder of the office referred to.
9. The word "senior" when used in term "senior past President" or other titles of IRE official positions refers to the holder of the office referred to next preceding the immediate past holder of the office.

200. MEMBERSHIP

201. *Grades*

1. The grades of IRE membership are:
 - a. Fellows
 - b. Senior Members
 - c. Members
 - d. Associates
 - e. Students
 - f. The designation "Life Member" is applicable to all members who have attained the age of 65 years and who have been members of the IRE for at least 35 years.
2. The designation "Group Affiliate" refers to persons entitled to participate in IRE Professional Group activities under provisions established by the Executive Committee under the Bylaws.

202. *Rights and Privileges*

1. Fellows shall be entitled to all rights and privileges of the IRE.
2. Senior Members shall be entitled to all rights and privileges of the IRE except the right to serve on the Awards and Fellow Committees.
3. Members shall be entitled to all rights and privileges of the IRE except the right to hold any corporate office and the office of Director, and to serve on the Admissions, Awards and Fellow Committees.
4. Associates shall be entitled to attend meetings of IRE members, to vote only on matters presented to groups of members, to be appointed on committees when specifically approved by the Board of Directors or the Executive Committee, but shall not have the right to hold any office.
5. All voting members shall have the right to use the IRE emblem (dark background) on letter heads and business cards to indicate their professional membership status in the IRE, provided that a sample of each letterhead or business card is first submitted for approval to the IRE Executive Secretary, who shall have the discretion to refuse such permission if the intended use of the emblem does not meet ethical and professional standards.
6. The emblem of the IRE is protected by trademark registrations and shall be reproduced only in connection with official business of the IRE or to indicate professional membership status in the IRE.
7. Emblems purchasable from IRE Headquarters may be worn by members.
8. Assertion of IRE membership by members is authorized, including the right to use the following abbreviations:
 - Fellow IRE
 - Sen. Mem. IRE
 - Mem. IRE
 - Assoc. IRE
9. Every member of the IRE shall receive the PROCEEDINGS OF THE IRE.
10. Every Student member shall receive the IRE STUDENT QUARTERLY.

203. *Qualifications*

1. Fellow: The grade of Fellow is one of unusual professional distinction and shall be conferred only by invitation of the Board of Directors upon a person of outstanding and extraordinary qualifications and experience in the fields of electronics, radio, allied branches of engineering or the related arts and sciences, who meets the requirements for Senior Member as stated in these Bylaws and who has been a member in any grade for a period of five years preceding the year of nomination, except that the

five-year provision in any individual case may be waived for cause by the Board of Directors.

2. Senior Member is the highest professional grade for which application may be made and shall require experience or attainment reflecting professional maturity. For admission or transfer to the grade of Senior Member, a candidate shall be an engineer, scientist, technical executive, or teacher, in the fields of electronics, radio, allied branches of engineering or the related arts and sciences; as such, he shall have been in the active practice of his profession for at least ten years and shall have attained distinction as measured by performance over a period of at least five of these years, such performance including one or more of the following:
 - a. Publication of important original engineering or scientific papers, books or inventions, or
 - b. Technical direction with evidence of accomplishment of important scientific or engineering work, or
 - c. Creative contributions to the welfare of the scientific or engineering profession, or
 - d. Establishment or furtherance of important scientific or engineering courses in a school of recognized standing, or
 - e. Contributions equivalent to those of "a" to "d" above in such areas as technical editing, patent prosecution or patent law, provided these contributions serve to advance progress substantially in the fields of electronics, radio, allied branches of engineering or the related arts and sciences.
3. Member is a professional grade limited to those who have demonstrated professional competence in the fields of electronics, radio, allied branches of engineering or the related arts and sciences. For admission or transfer to the grade of Member, a candidate shall be either:
 - a. An engineer or scientist in the fields of electronics, radio, allied branches of engineering or the related arts and sciences, who shall have had at least three years of professional experience.
 - b. A teacher of electronics, radio, allied branches of engineering or the related arts and sciences, for at least three years, who shall have held the rank of instructor or higher, and shall have participated in planning and conducting courses.
 - c. A person regularly employed in the fields of electronics, radio, allied branches of engineering or the related arts and sciences, for at least six years who, by experience, has demonstrated competence in work of a professional character.
 - d. An executive who, for at least six years, has had under his direction important technical, engineering or research work in the fields of electronics, radio, allied branches of engineering or the related arts and sciences.
4. Associate: For admission or transfer to the grade of Associate, a candidate shall be interested in the theory or practice of electronics, radio, allied branches of engineering or the related arts and sciences.
5. Under the membership grade of Student there shall be two classifications: Student, and Student Associate.
 - a. For classification as a Student, a candidate shall be devoting a major portion of his time as a resident and registered student in a regular course of study in engineering or science in a school of recognized standing.
 - b. For classification as a Student Associate, a candidate shall be devoting a major portion of his time as a resident and registered student in a regular course of study in electronics, radio, allied branches of engineering or the related arts and

sciences, in a school, other than a school of recognized standing, approved by the Executive Committee.

6. Membership in the Student grade shall not extend more than six months beyond the termination of his student status as described in these Bylaws.
7. Graduation from a course of study of at least four years duration in electronics, radio, allied branches of engineering or the related arts and sciences, in a school of recognized standing, may be accepted as equivalent to three years' professional experience in those fields.
8. Graduation from a course of study of at least two years' duration in electronics, radio, allied branches of engineering or the related arts and sciences, in a school, other than a school of recognized standing, approved by the Executive Committee, may be accepted as equivalent to one year's professional experience in those fields.
9. Full-time graduate work, or part-time graduate work with teaching or research, in the fields of electronics, radio, allied branches of engineering or the related arts and sciences, in a school of recognized standing, may be accepted as equivalent to professional experience.
10. The time requirements for admission or transfer to any grade of membership may be satisfied by applying *pro rata* the experience of the candidate under the various alternative requirements for the grade.

204. Applications

1. Applicants for membership shall furnish names of references as follows:
 For Senior Member—Five Fellows or Senior Members.
 For Member—Four Fellows, Senior Members or Members.
 For Associate—Three Fellows, Senior Members, Members, Associates or other responsible individuals.
 For Student—The IRE Representative at his school, if such a Representative exists; otherwise, a member of the faculty of his school.
2. When an applicant for Senior Member or Member shows that his work or location is such as to make impracticable compliance with the reference requirements of these Bylaws, the names of persons who are familiar with his professional work may be substituted. The Admissions Committee shall exercise discretion in determining suitability of substitute references.
3. Applications for admission or transfer to any grade of membership, except Fellow, shall be addressed to the Board of Directors and submitted to IRE Headquarters. Recommendation of election or transfer of an applicant to any grade, except Fellow, shall be by two-thirds affirmative vote of the Admissions Committee.
4. A re-application for admission or transfer to a particular grade may be made after the expiration of one year from the date of a rejection.
5. The Executive Committee is authorized to act for the Board of Directors in electing members, re-admitting members or transferring their membership grades, except where involving Fellow grade, and may waive application and reference requirements in the transfer of members from Student to Associate or Member grade. The Board of Directors may, under special circumstances, waive reference requirements.

205. Proposals

1. Each year, the Fellow Committee shall recommend

to the Board of Directors, nominees for Fellow grade not more than seventy-five in number. A citation summarizing the accomplishments of the nominee shall be a part of each recommendation.

2. Admission or transfer to any grade except Fellow may be proposed by any member acting as sponsor by supplying to the Admissions Committee sufficient information and testimonials from the required number of references to satisfy the Admissions Committee as to qualifications. Such proposals shall be acted upon by the Admissions Committee and, if approved, transmitted to the Executive Committee. If approved by the Executive Committee, an invitation blank shall be sent to the proposed member inviting him to accept the grade of membership proposed, which membership shall become effective automatically and immediately upon his supplying the biographical and professional information required and paying the necessary dues and fees. The name of an invitee shall be placed on the mailing list for the PROCEEDINGS OF THE IRE immediately upon receipt of dues and fees.

206. Admissions and Transfers

1. The entrance fee for all grades shall be three dollars (\$3) except that there shall be no entrance fee for the Student grade. The Board of Directors may, under special circumstances, waive the entrance fee.
2. No entrance fee shall be charged any non-IRE member of a Joint Student Branch or Joint Student Associate Branch, who is a student member of another national engineering society which is a sponsor with IRE of the Joint Student Branch or Joint Student Associate Branch, and who applies for admission to membership in the IRE within six months after the termination of his student status.
3. There shall be no transfer fees. A notice of approval of a transfer shall be sent to the member. A member whose grade of membership is changed during his annual dues period shall be billed *pro rata* for the remainder of that period.
4. The name of every person newly-admitted or transferred to the grade of Senior Member, Member or Associate shall be published in the PROCEEDINGS OF THE IRE.
5. When an applicant for membership is elected, the membership period shall be dated as of the first day of the first month following receipt of application, if received on or before the nineteenth day of the month, or as of the first day of the second month following receipt of application, if received after the nineteenth day of the month.
6. The entrance fee and dues are payable on notification of election and if not received within six months from notification, the election shall be considered void.
7. A notice that he has been elected shall be sent to every newly-admitted member together with a bill for entrance fee and dues, if not previously paid, dues being computed for the annual period concurrent with the membership period. Entrance fee or dues remaining unpaid, additional bills shall be sent the newly-elected member two months and four months after notification of election, in the last instance accompanied by a warning that the election will be considered void if the entrance fee and dues are not received within six months of notification of election.

207. Dues

1. Every member's annual dues period and the period during which he shall receive at least one IRE publi-

cation shall run concurrently with his membership period. The annual dues shall be payable in advance at the beginning of the annual dues period.

3. The annual dues shall be ten dollars (\$10) for the first three years of IRE membership in any grade other than Student, and fifteen dollars (\$15) for each succeeding year. The annual dues for Student grade shall be five dollars (\$5).
4. Dues shall be waived for all IRE members who have both attained the age of sixty-five (65) years and who have been IRE members for at least thirty-five (35) years.
5. Under exceptional circumstances, such as inability of a member to remit dues due to wartime conditions, the Board of Directors may, if it waives dues, also declare that during the period of such waiver, the member has maintained continuous membership.

208. *Billing, Termination, and Reinstatement*

1. A bill covering his dues for the following year shall be mailed to every member not later than one month prior to the beginning of his annual dues period. A second bill shall be mailed after a lapse of two months to every member whose dues remain unpaid. There shall be mailed with the second bill a notice that, if the member's dues remain unpaid for four months, it shall be the duty of the Executive Secretary, in accordance with the Bylaws of the IRE, to notify the member that his membership has terminated.
2. After a member has been in arrears four months, his membership shall terminate and his name shall be removed from the roll of membership. Every such person shall be mailed a notice to the effect that, according to the Bylaws of the IRE, his membership in the IRE has in fact terminated. Accompanying the notice of termination shall be a final bill, with the suggestion that the former member pay the bill and resume his membership.
3. Membership so terminated may be resumed on payment of all dues in arrears, or on payment of a new entrance fee and current dues.
4. On resuming membership and paying dues in arrears, a member may receive available copies of the PROCEEDINGS OF THE IRE during the period covered by the back dues. A rebate of 25 cents per copy shall be made in lieu of copies not available.
5. The mailing of bills or statements to the last known address of a member shall be considered a valid notice of indebtedness.

209. *Resignations*

1. A member in good standing may resign by submitting a written resignation to the Secretary.
2. Subject to the approval of the Executive Committee, a resigned member may resume his membership upon payment of current dues.

210. *Severances*

1. To initiate action toward expulsion of a member, a written complaint must be submitted to the Board of Directors which, if it deems the reason sufficient, shall notify the accused by letter of the charges against him and of the place and date of a hearing to consider such charges which shall be held not less than thirty days after mailing of the notice. The accused may present his defense in person, in writing, or by an authorized representative. There shall be a majority of the members of the Board present at the hearing and the votes cast must be unanimous in order to expel. The action of the Board of Directors shall be final and conclusive.

300. GROUPS OF MEMBERS

301. *Regions*

1. The United States shall be divided into seven geographical Regions which shall be given consecutive numbers for identification. There shall be an additional Region which shall consist of all of Canada.
2. When new Regions are established, or when changes are made in Regional boundaries, the changes shall be made effective so that no Regional Delegate-Regional Director shall have his term shortened by such changes.
3. Each Region shall have a Regional Committee which shall consist of at least the Regional Director, the junior past Regional Director, the Chairman of the Regional Education Committee and two representatives of each Section in the Region, one of these to be the Chairman of the Section and the other to be appointed by the Section's Executive Committee from among a group comprised of the junior past Chairman and the present elected officers of the Section. Each member of the Regional Committee shall be, ex-officio, a member of the Executive Committee of his own Section. In case of necessity, a Section may be represented at a Regional Committee meeting by alternates appointed by the Section Executive Committee.
4. Each Region shall establish a Regional Education Committee to be responsible to the Regional Committee. It shall be concerned with the handling of all educational problems of the Region including Student Member and Student Branch operations, general supervision of student papers, contests and similar activities when held on a Regional basis, and the fostering and coordination of the educational activities of the Sections. The Regional Education Committee shall be composed of all IRE Representatives in colleges and technical institutes in the Region and all Education Committee members residing in the Region, ex-officio. The Chairman of this Committee is to be appointed from the Region membership by the Regional Director; his term of office shall correspond with that of the Regional Director; he shall be a member of the Education Committee, ex-officio, and a member of the Regional Committee, ex-officio.
5. Pending installation of the first Regional Director of a Region, the Chairman of the largest Section, numerically, in the Region shall act as Chairman pro-tem of the Regional Committee, and the Chairman pro-tem shall appoint a Secretary-Treasurer pro-tem.
6. The Regional Committee may include additional voting members not exceeding in number one-fourth of the above mandatory number of members representing the Sections in the Region. The purpose for such additional members shall be determined by the Regional Committee based upon each Region's individual requirements. Such additional members shall be appointed on a year-to-year basis by the Regional Director, subject to approval of the Regional Committee.
7. Each member of the Regional Committee shall be of Member, Senior Member or Fellow grade in the IRE. The term of office of each member other than the Regional Director and the junior past Regional Director shall be one year concurrent with the term of office of the Section officers. Vacancies, except for Regional Director, shall be filled by appointment of the Section Executive Committee in which the vacancy exists.

8. The Regional Director shall be Chairman of the Regional Committee and shall appoint one or more Vice Chairmen from among the membership of the Committee. The Chairman of the Regional Committee shall appoint a Secretary-Treasurer from among the membership of the Region for a two-year term concurrent with that of the Chairman. The duties of the Secretary-Treasurer shall include correspondence, the keeping of the minutes of the Committee meetings, mailing notices, handling of funds, the keeping of financial records, the submission of a report at the end of each year and such other duties as are assigned to him by the Chairman. The Secretary-Treasurer shall not be a voting member of the Committee unless he shall be appointed a voting member for a term of one year by the Regional Director, subject to the approval of the Regional Committee.
 9. The Regional Committee shall hold at least one meeting each year, within or without the Region. A quorum for a Regional Committee meeting shall consist of at least one-third of the members of the committee or their alternates and shall include representatives from at least half of the Sections in the Region. The Regional Director or, in the event of his unavailability, a Regional Committee Vice Chairman, shall be responsible for calling the necessary number of Regional Committee meetings.
 10. The duties of the Regional Committee shall include the making of at least one nomination for Regional Delegate-Regional Director from its Region during election years, participation in the development of the IRE by means of suggestions on national and international matters to the Board of Directors and on Regional and Sectional matters to the Sections comprising the Region.
 11. Regions failing to maintain reasonable activity may be dissolved and the Sections therein may be absorbed into other Regions the boundaries of which are to be correspondingly altered.
302. *Sections*
1. There shall be established throughout the territory in which IRE conducts operations groups of members residing in specified geographical districts designated as Sections.
 2. A petition for the formation of a Section within the IRE Regional organization shall be signed by not fewer than twenty-five members other than Students, having mailing addresses within the territorial limits proposed in the petition. The territorial limits shall be specifically delineated.
 3. A petition for the formation of a Section outside of the IRE Regional organization shall be signed by not fewer than ten members, other than Students, having mailing addresses within the territorial limits proposed in the petition. The territorial limits shall be specifically delineated.
 4. The Executive Committee, upon receipt of a petition for the creation of a Section, may authorize its formation. Each Section so authorized shall within not more than six months thereafter adopt and conform to a Section Constitution approved by the Executive Committee, which Section Constitution shall provide for a Chairman, Secretary-Treasurer and a Section Executive Committee. After the Section is organized and a Section Constitution has been adopted, the Executive Committee may give final approval to its establishment.
 5. Each Section shall conduct its activities within the Constitution and Bylaws of the IRE and other rules which by law affect the membership and activities of the IRE.
 6. Sections outside the IRE Regional organization shall be represented on the Board of Directors by the senior past President in his capacity as a Director.
 7. No Section or any officer or representative thereof shall have any authority to contract debts for, pledge the credit of, or in any way bind, the IRE.
 8. All Sections shall be exclusively those of the IRE. No Section joint with any other organization, society, or group shall be recognized. However, IRE Sections may cooperate with other organizations in the holding of joint meetings and may invite members of such organizations and the public to their meetings.
 9. Section Secretaries shall forward to the Executive Secretary a report of each meeting held by the Section and its Subsections, if any, for the presentation or discussion of papers and at the end of each fiscal year, a financial statement for that fiscal year.
 10. Failure of a Section to maintain the required activities, which shall include the holding of at least five meetings each year and also the maintenance of a minimum membership of twenty-five members, other than Students in a Section within the IRE Regional organization, and a minimum membership of ten members, other than Students, in a Section outside of the IRE Regional organization, shall place the Section on probation. All members of the Section shall be informed of the probation by the Executive Secretary who shall also call their attention to the requirements for maintaining the Section. If the delinquency continues for a second year, a second notification to the Section membership shall be made by the Executive Secretary, and the Board of Directors shall be informed of the probationary status of the Section. If the delinquency continues for a third year, the Section shall, thereupon, automatically be dissolved. The Executive Secretary shall so report to the Board of Directors and so inform the members previously constituting that Section. The Board of Directors may waive the provisions herein regarding dissolution of a Section in case such Section becomes affected by war or any other force majeure, for the period of the duration thereof and for at least six months thereafter.
 11. For the maintenance of a Section the IRE shall pay to the Section for each calendar year:
 - a. One dollar and ten cents (\$1.10) for each member, except Students, up to a total of seven hundred members plus one dollar and twenty-five cents (\$1.25) for each member, except Students, in excess of a total of seven hundred; and
 - b. Fifty cents (\$.50) for each Affiliate of each and every Professional Group having a mailing address within the territory of the Section as of December 31 of the calendar year for which payment is made; and
 - c. Ten dollars (\$10) per meeting for not more than ten meetings of the Section within the calendar year.
 12. Local noncompulsory financial contributions may be accepted by Sections.
 13. The Board of Directors may dissolve any Section for any reason deemed sufficient by the Board of Directors.
 14. Any Section that publishes a periodical shall inform the Executive Committee of the establishment thereof and shall provide IRE Headquarters with copies thereof, as published.

303. *Subsections*

1. In conformance with the Constitution for Sections, a Section may establish Subsections which shall be geographical subdivisions of the Section, subject to the same limitations and control as the Section itself, pursuant to the following conditions:
 - a. In the case of Subsections to be formed in Sections within the IRE Regional organization, a petition shall be submitted to the parent Section Executive Committee signed by twenty or more members, except Students, with mailing addresses within the proposed territory of the Subsection;
 - b. In the case of Subsections to be formed in Sections outside the IRE Regional organization, a petition shall be submitted to the parent Section Executive Committee signed by eight or more members, except Students, with mailing addresses within the proposed territory of the Subsection;
 - c. Approval of the petition by the parent Section Executive Committee;
 - d. Notification of the Executive Secretary of actions by a Section regarding Subsections with a copy of petition or petitions;
 - e. Approval by the Executive Committee.
2. For each authorized Subsection, the IRE shall pay to the Section a meeting allowance of ten dollars (\$10) per meeting up to a maximum of ten meetings per year, during the time the Subsection remains in good standing according to the Section Constitution.

304. *Professional Groups*

1. There shall be established within the scope and objectives of the IRE, groups of members interested in specific technical fields or related subjects, designated as Professional Groups.
2. A petition for the formation of a Professional Group shall be signed by not fewer than one hundred members, other than Students, shall state the proposed field of interest and shall be forwarded to the Executive Committee after review thereof by the Professional Groups Committee.
3. The Executive Committee, upon receipt of a petition to form a Professional Group, may authorize its formation. After the Group is organized and a Constitution for it is approved by the Executive Committee, the Executive Committee may give final approval to its establishment.
4. Each Professional Group authorized by the Executive Committee shall within not more than six months thereafter adopt and conform to a Professional Group Constitution which shall have been submitted to and approved by the Executive Committee. A Group Constitution may be amended by the Group subject to the approval of the Executive Committee. Such Group Constitution shall provide for a Group Chairman and a Secretary-Treasurer.
5. All Professional Groups shall consist exclusively of IRE members and such affiliates as may be recognized by the Executive Committee. No Professional Group joint with any other organization, society or group outside of the IRE shall be recognized. However, Professional Groups may co-operate with other organizations in the holding of joint meetings and may invite members of such organizations and the public to their meetings.
6. A Professional Group may not charge dues. A Professional Group may raise revenues by fees or other means approved by the Executive Committee.
7. For the maintenance of a Professional Group, the IRE shall pay a subsidy equal to one-third of the cost to the Group of printing and mailing all TRANS-

ACTIONS, Newsletters and any other publications which are distributed to all paid members of a Group free-of-charge; and in addition, there shall be provided for each new Professional Group, matching funds of one dollar (\$1) for each dollar of income derived by the Group from membership fees during the first two years.

8. All IRE members may become members of Professional Groups in conformance with the respective Group Constitutions.
9. All Professional Group meetings shall be open to all members of the IRE on an equal basis with Group members. Any IRE member or any Group Affiliate, upon payment of charges judged to be equitable by the Executive Committee, shall receive any notices of meetings of any Group.
10. A Professional Group may hold or join in holding conferences or conventions and may charge for registration; but a Group may not charge for registration at a meeting, conference or convention when it operates as part of an IRE Sectional, Regional, national, or international meeting, conference or convention.
11. All publications of Professional Groups, other than programs, notices, and the like, shall be subject to prior authorization of the Executive Committee and shall be made available to all IRE members and Group Affiliates on equitable bases approved by the Executive Committee.
12. Each Professional Group shall forward to the Executive Secretary a copy of each meeting notice of the Group, an annual report and a financial statement for each fiscal year prepared immediately following the end thereof.
13. No Professional Group or any officer or representative thereof shall have any authority to contract debts for, pledge the credit of, or in any way bind, the IRE.
14. Each Professional Group shall conduct its activities within the Constitution, Bylaws and other rules which by law affect the membership and activities of the IRE.
15. The Board of Directors may dissolve any Professional Group for any reason deemed sufficient by the Board of Directors.
16. Group Affiliates are non-IRE members who have been admitted by a Professional Group to some of the rights and privileges of Group membership. In general, a Group Affiliate must be a person whose professional life does not justify full membership in the IRE, but which may be helped by participation in Group activities or who may contribute benefits to Group members by his participation in their activities. The qualifications for Group Affiliation and the limits in rights and privileges shall be established by the Executive Committee.

305. *Professional Group Chapters*

1. A Professional Group Chapter may be established in a Section to function in the manner of a committee of a Section.
2. A petition to establish a Chapter must contain the following:
 - a. Name of the Section.
 - b. Name of the Professional Group.
 - c. Name of the organizer (who becomes interim Chairman pending election of a regular Chairman at a later organization meeting).
 - d. Signatures of at least ten IRE members, other than Students, who must indicate they are either members of the Professional Group involved, or

- are prepared to become members if the petition is granted.
3. The petition for a Chapter shall be submitted to the Section Executive Committee for written approval and forwarded with this written approval to the Executive Secretary. The Executive Secretary shall endeavor to obtain written approval from the Executive Committee. Upon receiving approval, the existence of the new Chapter will be recorded at IRE Headquarters and the Section Executive Committee will be informed thereof.
 4. For each Chapter, the IRE shall pay ten dollars (\$10) to a Section for each meeting of the Section promoted by a Chapter up to five meetings per Chapter per year, provided such meeting is attended by ten or more Section members and a report of such meeting, including a statement of the number of members attending, signed by a Chapter officer, is forwarded to IRE Headquarters through the Section Secretary-Treasurer. A meeting of the Section promoted by a Chapter may be counted among the above five, or may be counted among the ten meetings of the Section as provided in these Bylaws, but not among both as such would result in duplicate payments for the same meeting.
 5. A Chapter will be required to maintain the following activities:
 1. Hold not less than five meetings each year.
 2. Maintain a minimum membership of ten members.
 6. Failure of a Chapter to maintain the required activities shall place the Chapter on probation. The Section Executive Committee and all members of the Chapter shall be informed of a condition of probation by the Executive Secretary who shall also call their attention to the requirements for maintaining the Chapter. If the delinquency continues throughout a second year, a second notification shall be issued by the Executive Secretary. If the delinquency continues throughout a third year, the Chapter shall, thereupon, automatically be dissolved. The Executive Secretary shall so report to the Executive Committee and inform the Section Executive Committee and the members previously constituting that Chapter, of the dissolution. The Executive Committee may waive the provisions herein regarding dissolution of a Chapter in case such Chapter becomes affected by war or any other force majeure, for the period of the duration thereof and for at least six months thereafter.
306. *Student Branches*
1. There shall be established throughout the territory in which IRE conducts operations, groups of Student members residing in specified geographical localities, designated as Student Branches.
 2. There shall be established IRE Representatives who shall be IRE members and teachers of electronics, radio, allied branches of engineering or the related arts and sciences, at schools or technical institutes eligible for IRE Student members, and who shall be appointed and released by the Executive Committee. Each such IRE Representative is charged with promoting the welfare of the IRE at his school, particularly in matters relating to the Student membership.
 3. Upon receipt of a petition signed by the IRE Representative, or in the event one has not been appointed, by a representative of the faculty of the school involved, and by fifteen or more IRE members who are students in a school of recognized standing, the Executive Committee may authorize the establishment of an IRE Student Branch in that school.
 4. Upon receipt of a petition signed by the IRE Representative, or in the event one has not been appointed, by a representative of the faculty of the school involved, and by fifteen or more IRE members who are students in a school, other than a school of recognized standing, approved by the Executive Committee, the Executive Committee may authorize the establishment of an IRE Student Associate Branch in that school.
 5. Each IRE Student Branch and each IRE Student Associate Branch shall adopt and conform to a Student Branch Constitution which shall have been submitted to and approved by the Executive Committee and which shall provide for a Chairman and a Corresponding Secretary.
 6. The IRE, by action of the Executive Committee, may join with another national engineering or technical society to co-sponsor a Joint Student Branch in a school of recognized standing or a Joint Student Associate Branch in a school, other than a school of recognized standing, approved by the Executive Committee. The petition for the establishment of the Branch must be signed by the IRE Representative, or in the event one has not been appointed by a representative of the faculty of the school involved, and by ten or more members of either society, at least twenty-five per cent of which petitioners must be IRE members.
 7. Each Joint Student Branch and each Joint Student Associate Branch shall adopt and conform to a Joint Student Branch Constitution which shall have been submitted to and approved by, both the Executive Committee and the other co-sponsoring society and which shall provide for a Chairman and a Corresponding Secretary.
 8. No IRE Student Branch, IRE Student Associate Branch, Joint Student Branch or Joint Student Associate Branch, or any officer or representative thereof shall have any authority to contract debts for, pledge the credit of, or in any way bind the IRE.
 9. Each IRE Student Branch, IRE Student Associate Branch, Joint Student Branch and Joint Student Associate Branch Corresponding Secretary shall forward to the Executive Secretary a report of each meeting held by the Branch for the presentation or discussion of papers, and, during June of each year, a financial statement for the preceding year.
 10. An IRE Student Branch, IRE Student Associate Branch, Joint Student Branch or Joint Student Associate Branch may collect dues from its members as provided in its constitution and, in addition, may accept local non-compulsory financial contributions.
 11. Failure of an IRE Student Branch or IRE Student Associate Branch to maintain a minimum of ten IRE Student members and to hold at least three meetings each year shall place the Branch on probation. All officers of the Branch and the IRE Representative, or in the event one has not been appointed, a representative of the faculty of the school or institute involved, shall be informed of the probation by the Executive Secretary who shall also call to their attention the requirements for maintaining the Branch. If the delinquency continues for a second year, the IRE sponsorship shall be withdrawn automatically. The Executive Secretary shall so report to the Executive Committee and the Board of Directors and so inform the former officers of the dissolved Branch and the IRE Representative.

12. Failure of a Joint Student Branch or Joint Student Associate Branch to maintain a minimum of ten Student members, of which at least twenty-five per cent must be IRE Student members, and to hold at least three meetings each year shall be reported by the Executive Secretary to the Executive Committee.
13. For maintenance of an IRE or Joint Student Branch upon certification by the IRE Representative or, in the event one has not been appointed, by a representative of the faculty of the school where the Branch is located, the IRE shall pay to each such Branch upon request the sum of twenty-five dollars (\$25) for any one school year; and shall also pay to each such Branch the sum of one dollar (\$1) for each IRE Student member of the Branch as of November fifteenth of each year and the sum of fifty cents (\$.50) for each additional IRE Student member of the Branch as of the following February first.
14. For maintenance of an IRE or Joint Student Associate Branch, upon certification by the IRE Representative or, in the event one has not been appointed, by a representative of the faculty of the school where the Branch is located, the IRE shall pay to each such Branch upon request the sum of fifteen dollars (\$15) for any one school year; and shall also pay to each such Branch the sum of fifty cents (\$.50) for each IRE Student member of the Branch as of November fifteenth of each year and the sum of twenty-five cents (\$.25) for each additional IRE Student member of the Branch as of the following February first.
15. The Executive Committee may dissolve an IRE Student Branch or IRE Student Associate Branch, or withdraw its sponsorship and support of a Joint Student Branch or Joint Student Associate Branch for any reason deemed sufficient by the Executive Committee.

400. ANNUAL ASSEMBLY

401. *How Constituted*

1. The annual Assembly shall consist of nine Delegates-at-large elected by the membership-at-large and eight Regional Delegates elected respectively by the members residing in the eight Regions of the IRE, making a total of seventeen.
2. The nine Delegates-at-large shall comprise the President, the senior past President, the junior past President, and six additional Delegates-at-large. The six additional Delegates-at-large shall serve three-year terms. Two of the six shall be elected each year so that the terms of two of the six additional Delegates-at-large shall expire each year.
3. The Delegates elected by Regions shall be members of and reside in the Regions electing them and shall have terms of office of two years, the Delegates from even-numbered Regions being chosen and elected in even-numbered and those from odd-numbered Regions in odd-numbered years. A vacancy shall occur in the office of Regional Delegate at such time as the incumbent ceases to reside in the Region that elected him.
4. All Delegates, both Regional Delegates and Delegates-at-large, shall be elected Directors by virtue of their election as Delegates and shall serve terms as Directors concurrent with their terms as Delegates.
5. The presiding officer of the annual Assembly, as provided by the Constitution, shall be the newly-elected President.

6. Prior to the election of the Secretary or in the event of his absence, the Executive Secretary shall perform the secretarial functions.

402. *Meetings*

1. The annual Assembly of the IRE, required to be held during January of each year, shall be held as early in that month as feasible, at IRE Headquarters. Notice of time and place shall be mailed not less than thirty days in advance. In the case of extraordinary circumstances, a special meeting of the Assembly or the designation of a place of meeting for the annual Assembly other than IRE Headquarters may be authorized by a two-thirds vote of those present at a regularly constituted meeting of the Board of Directors held at least thirty days in advance of the date of such specially designated meeting.
2. A meeting of the Assembly may be held without notice if waivers of notice signed by all of the Delegates are filed with the Secretary with notation thereof entered in the minutes of the meeting.
3. Ten Delegates shall constitute a quorum at meetings of the Assembly.
4. Any notices of meetings or other official business required by the Constitution or these Bylaws to be mailed to Delegates shall be sent by airmail if the addresses are located at places beyond the continental United States or Canada, or at any place where ordinary mail might be unusually slow and airmail more expeditious.
5. Reimbursement of necessary travel expenses incurred by Delegates for the purpose of attending any special or extraordinary meeting of the Assembly not associated with a meeting of the Board of Directors held contiguously with it, is authorized.

403. *Functions*

1. The annual Assembly shall elect six additional Directors for the required term of office of one year. Three of these Directors shall also be elected Corporate Officers, respectively designated as the Secretary, the Treasurer and the Editor. The annual Assembly shall also elect such alternate Directors as may be necessary to insure the attaining of a total number of six Directors including the three Corporate Officers, in the event that consent to serve by any of the electees cannot be secured prior to the conclusion of that Assembly meeting.
2. The annual Assembly shall receive reports, verified by the President and Treasurer, or by the Board of Directors, showing the amount and status of real and personal property owned by the IRE, its fiscal condition, changes in membership, changes in groups of members and other vital statistics, all of which are to be as of the most recent date available from the records kept by the Officers. These reports shall be filed with the records of the IRE and abstracts thereof entered in the minutes of the proceedings of the Assembly.

500. MANAGEMENT

501. *Board of Directors*

1. The Board of Directors shall consist of eleven Directors-at-large elected by the membership-at-large, eight Regional Directors elected respectively by the members residing in the eight Regions of the IRE and six Directors elected by the annual Assembly, making a total of twenty-five.
2. The Directors-at-large shall comprise the President,

the senior past President, the junior past President, the two Vice Presidents and six Directors elected for three year terms. Two of the six shall be elected each year so that the terms of two of the six Directors shall expire each year.

3. The Directors elected by Regions shall be members of and reside in the Regions electing them and shall have terms of office of two years, the Directors from even-numbered Regions being chosen and elected in even-numbered, and those from odd-numbered Regions in odd-numbered years. A vacancy shall occur in the office of Regional Director at such time as the incumbent ceases to reside in the Region that elected him.
4. The annual meeting of the Board of Directors, required to be held during January of each year, shall be held immediately after the adjournment of the annual Assembly and at the same place. Notices thereof shall be mailed at the same time that notices are mailed for the annual Assembly.
5. At the annual meeting, the Board shall determine the time and place of other meetings to be held throughout the year, which normally shall be scheduled for the first Wednesday of May, the first Wednesday after the second Monday of September and the first Wednesday after the second Monday of November.
6. The time and place of any scheduled Board meeting may be altered or the meeting cancelled only by consent of a majority of all Directors secured by or transmitted to the Secretary, not less than twenty days before the original date or the new date set for the meeting, whichever is the earlier. Notice of such approved change shall be mailed to all Directors not less than ten days before the original or the new date, whichever is the earlier.
7. Special meetings of the Board of Directors may be called by any five Directors on notice to all other Directors. Notice of such special meetings giving the time and place of meeting, the purpose of the meeting and the names of the Directors calling the meeting shall be mailed to all Directors not less than twenty days before the date set for the special meeting. The place of such special meetings may be only at IRE Headquarters unless otherwise authorized by a majority vote of all Directors, such vote to be secured by or transmitted to the Secretary.
8. In the absence or incapacity of the Secretary, the Executive Secretary shall perform the secretarial functions.
9. A meeting of the Board of Directors may be held without notice if waivers of notice signed by all of the Directors are filed with the Secretary with notation thereof entered in the minutes of the meeting.
10. Notices of meetings and any other documents required to be sent to Directors pursuant to provisions of the Constitution and these Bylaws shall be sent by airmail if the destination is beyond the continental United States or Canada, or at any place where ordinary mail might be unusually slow and airmail more expeditious.
11. Twelve Directors shall constitute a quorum at meetings of the Board of Directors.
12. Reimbursement of necessary travel expenses incurred by Directors for the purpose of attending meetings of the Board of Directors, the Executive Committee and meetings taking place during the IRE International Convention and Radio Engineering Show is authorized.
13. The Board of Directors may appoint or direct the

appointment of representatives of the IRE on joint committees, boards and other local, national and international bodies.

502. *Executive Committee*

1. The Board of Directors at its annual meeting shall appoint an Executive Committee composed of Officers and Directors, to exercise powers and assume duties of management as directed by the Board of Directors and as may be outlined in the Bylaws, subject to the following limitations:
 - a. That the Board of Directors may at any meeting overrule any act or decision of the Executive Committee except insofar as any act has in fact been carried out, or
 - b. Suspend at any meeting any power conferred upon the Executive Committee, such suspension to remain in effect pending repeal of any Bylaw conferring such power, or
 - c. Direct any action or plan of the Executive Committee.
2. The Executive Committee shall consist of eight members and shall comprise the President, the Vice President residing in North America, the junior past President, the Treasurer, the Secretary, the Editor and two other Directors. The President shall be Chairman, the Vice President shall be Vice Chairman and the Secretary shall be Secretary thereof.
3. At the first meeting of a newly-appointed Executive Committee, it shall schedule other meetings throughout the year. Minutes of the meetings of the Executive Committee shall be mailed to all Directors.
4. The terms of office of members of the Executive Committee shall begin with the annual meeting of the Board of Directors and shall continue until the succeeding annual Assembly.
5. The Executive Committee may divide its duties and responsibilities among its members as it sees fit and conduct its business as it finds necessary. Such activities as the Executive Committee shall direct shall be administered by the Executive Secretary.
6. The Executive Committee shall be responsible for the management of IRE Headquarters. The Executive Committee shall prepare and present an annual budget to the Board of Directors for approval.
7. The Executive Committee shall be charged with broadly considering IRE policies and making appropriate recommendations to the Board of Directors on its own initiative.
8. The Executive Committee shall appoint, direct and coordinate the work of all Standing Administrative Committees except those appointed directly by the Board of Directors.
9. The Executive Committee shall appoint, direct and coordinate the work of all Standing Technical Committees.
10. The Executive Committee shall approve or disapprove the formation, dissolution and operation of groups of members.
11. The Executive Committee may authorize conventions, conferences and meetings of the IRE and approve their dates and locations.
12. The Executive Committee shall direct and manage IRE standardization activities, relations with other organizations, special activities, technical activities, advertising and publications.
13. The Executive Committee shall establish an office account, limited in size, the funds for which shall be made available from the funds received by the IRE by authorization of at least two Corporate Offi-

cers, as provided in the Constitution. Funds shall be withdrawn from the office account only by authorized bonded employees of the IRE.

503. Officers

1. As provided in the Constitution, the Corporate Officers of the IRE shall be a President, two Vice Presidents, a Secretary, Treasurer and an Editor.
2. As provided in the Constitution, the President shall be elected by the voting members by virtue of which election he shall also be a Delegate-at-large and a Director-at-large. His term as President shall be one year but his term as Delegate-Director shall be three years.
3. There shall be two Vice Presidents of the IRE who shall be elected by the voting membership for terms of office of one year, by virtue of which election they shall also be Directors-at-large. One of these shall be a member residing in North America who, by reason of availability and qualifications, is able effectively to assist the President in the performance of his presidential duties, and the other shall be a member residing elsewhere than in North America. Both Vice Presidents shall serve terms as Directors concurrent with their terms as officers.
4. The Vice President residing in North America shall take precedence as regards assumption of presidential duties as provided in the Constitution.
5. The Secretary, Treasurer and Editor shall be elected by the annual Assembly by virtue of which election they shall also be Directors. The terms of the Secretary, Treasurer and Editor shall be one year and their terms as Director shall also be one year.
6. Reimbursement of necessary travel expenses of the President, incurred for the performance of his IRE duties other than his duties as Delegate or Director, is authorized. Reimbursement of necessary travel expenses of the Vice President residing in North America, incurred for the performance of his IRE duties other than his duties as Director, is authorized.
7. Incapacity of the President to perform his duties and the length of time such incapacity may continue shall be determined by the Board of Directors, or by the Executive Committee, if the incapacity occurs at a time when it is not feasible to convene a meeting of the Board and there is need for action. The President, however, may declare a condition of incapacity and the duration thereof by written communication to the Secretary, in which event the Secretary shall notify the Vice President residing in North America, to assume the presidential duties and the Secretary shall take such other action as provided in the Constitution if that Vice President is unavailable or incapacitated.
8. A vacancy among the Corporate Officers and the duration thereof shall be determined by the Board of Directors which may fill such vacancy as provided by the Constitution. If a vacancy occurs among the Corporate Officers at a time when it is not feasible to convene a meeting of the Board of Directors and there is need for action, the Executive Committee shall make such determination and fill such vacancy if the approval of a majority of all the Directors is secured by mail or telephone, such approval to be recorded by the Secretary with the names of the approving Directors.
9. The President shall determine the extent of the assistance to be rendered him by the Vice President charged with the duty of assisting the President.

10. The Secretary shall prepare an Annual Report on membership, meetings and IRE activities, to be submitted to the Board of Directors.
11. The Treasurer shall cause to be prepared an annual audit of the affairs of the IRE by certified public accountants and a report thereof submitted to the Board of Directors. The Treasurer shall also make a report to the Executive Committee semi-annually concerning the status of the IRE investments. The Treasurer, before making changes in the IRE portfolios, shall report the proposed changes to the Executive Committee and obtain its approval.

504. Committees

1. The IRE shall have Standing Committees each of which shall normally consist of five or more persons. These shall be classified as Standing Administrative Committees and Standing Technical Committees. Each Standing Committee shall have the right to create subcommittees of its own selection.
2. The Standing Administrative Committees shall be:

Admissions	History
Awards	Nominations and
Editorial Board	Appointments
Education	Policy Study
Fellow	Professional Groups
Finance	Tellers

The Awards, Fellow, Nominations and Appointments, Policy Study and Tellers Committees and the Editorial Board shall be appointed by and be advisory to the Board of Directors. The others shall be appointed by and be advisory to the Executive Committee. The appointments to these committees, except the Nominations and Appointments Committee, shall start with the first day following appointment and shall continue until the date of the succeeding terms of appointments take effect.
3. The Standing Technical Committees shall be:

Antennas and Waveguides
Audio and Electroacoustics
Circuits
Electron Tubes
Electronic Computers
Facsimile
Feedback Control Systems
Industrial Electronics
Information Theory and Modulation Systems
Measurements and Instrumentation
Medical Electronics
Mobile Communication Systems
Navigation Aids
Nuclear Techniques
Piezoelectric and Ferroelectric Crystals
Radio Frequency Interference
Radio Receivers
Radio Transmitters
Recording and Reproducing
Reliability
Solid State Devices
Standards
Symbols
Television Systems
Video Techniques
Wave Propagation

They shall be appointed by and be advisory to the Executive Committee; the appointments to them shall be made between January first and May first, and the terms of appointment shall be from May first of the year when the appointments are made through April thirtieth of the following year.

4. Additional appointments may be made to any standing committee to fill vacancies or to care for special cases as the need arises, but such appointments shall expire with the expiration of the term of the committee.
5. The functions and responsibilities of each Committee, together with rules for operation and guidance, shall be compiled by the Executive Secretary under the direction of the Executive Committee and contained in a document titled "... Committee Manual." Following appointment, each new member of a Committee shall be provided with a copy of the applicable Manual.
6. The Admissions Committee shall be responsible for advising the Executive Committee as to the admission and transfer of applicants to the professional grades of Senior Member and Member. It shall be concerned with determining whether the applicants meet the requirements of the Constitution and the Bylaws, functioning primarily as a jury and acting as a guardian of the membership standards of the IRE. As far as possible, its meetings shall be held just prior to the scheduled meetings of the Executive Committee in the interest of expediting the processing of applications. Members of the Admissions Committee shall be of Fellow or Senior Member grade.
Applications for the grades of Associate and Student shall be handled by IRE Headquarters and periodic reports shall be made to the Executive Committee by the Executive Secretary.
7. The Awards Committee shall be responsible for making recommendations to the Board of Directors for the following IRE Awards:
 - a. Medal of Honor
 - b. Founders Award
 - c. Memorial Prize Award in Memory of Morris Liebmann
 - d. Memorial Prize Award in Memory of Browder J. Thompson
 - e. Memorial Prize Award in Memory of Harry Diamond
 - f. Prize Award by W. R. G. Baker
 - g. Prize Award by Vladimir K. Zworykin
 The specifications for all of these awards shall be set forth in the Awards Committee Manual.
The Awards Committee shall also be responsible, in odd-numbered years, for making a recommendation to the Board of Directors on the Norman W. V. Hayes Memorial Award of The Institution of Radio Engineers, Australia.
The Board of Directors may assign other matters concerning IRE awards to the Committee.
The Awards Committee shall consist of twelve members chosen from among those of Fellow grade, eight being selected so that each of the eight Regions will have representation. The twelve members shall be appointed for a term of one year, as well as the Chairman, who shall be appointed from among the twelve members.
8. The Editorial Board shall be advisory to the Board of Directors concerning all matters of editorial policy, the publication of the PROCEEDINGS OF THE IRE, including policy determination of its editorial and technical content, the general publication policies for IRE publications, including the IRE DIRECTORY, the TRANSACTIONS of the Professional Groups, the IRE STUDENT QUARTERLY and the IRE INTERNATIONAL CONVENTION RECORD.

The Editorial Board shall consist of the Editor as Chairman, a Vice Chairman, the Managing Editor

if such position exists, and not less than three nor more than five other members.

10. The Education Committee shall be a policy advisory group for the IRE in the field of education and shall report to the Executive Committee at periodic intervals concerning the status of and proposals affecting that field. These reports shall be simultaneously circulated to the members of the Board of Directors.

The Committee shall study the needs of electronic engineering education in all areas, including the high schools, the universities and the technical institutes, determine whether the general area of electronics and basic electrical engineering is adequately covered in the colleges of the nation and consider a possible policy for accreditation if deficiencies are found.

The Committee shall consider the needs of the profession in graduate education, and shall guide IRE policy in recognizing and promoting graduate work in electronics. Means whereby the IRE may improve the educational status of its members in general shall also be suggested.

The Committee shall closely follow the use of electronics in education and shall make recommendations concerning means of promoting electronics as a teaching and learning medium in the schools and universities. The Committee shall consider and make recommendations concerning IRE policies and activities for the Student members and Student Branches.

The Committee shall establish appropriate standing subcommittees, such as Student Branch, Graduate Education, Accreditation and for other areas where appropriate to carry out its responsibilities more adequately.

The Committee shall seek contributions to the formulation of policy recommendations from the Professional Group on Education, encouraging that Group to provide for exchange of information through seminars and publications and for discussion of educational philosophy, problems and methods.

The membership of the Education Committee shall include, ex-officio, the Chairmen of the Regional Education Committees and members-at-large not to exceed the number of ex-officio members.

11. The Fellow Committee shall be responsible for making recommendations to the Board of Directors for nominees to be conferred the grade of Fellow. The Committee shall also provide a citation for each such nominee. The recommendations may not exceed a total of seventy-five in any one year, approximately five thereof to be allocated for nominees residing elsewhere than in North America. Sources from which nominations of candidates and other useful information shall be obtained shall be set forth in the Fellow Committee Manual.

The Fellow Committee shall consist of twelve members chosen from among those of Fellow grade, eight being selected so that each of the eight Regions will have representation. Six of the twelve members shall be appointed each year for terms of two years each. A Chairman shall be appointed from among the twelve members to serve for a term of one year.

12. The Finance Committee shall consist of not more than five members of the Board of Directors and shall include the Treasurer, ex-officio. The Chairman of the Finance Committee shall be chosen from among the members of the Executive Committee.

The Committee shall be responsible for periodically reviewing the fiscal affairs of the IRE concern-

ing which it is to take the initiative for making recommendations to the Executive Committee when warranted. It shall review the annual budget in advance of its submission to the Executive Committee and the Board of Directors.

13. The History Committee shall be responsible for considering questions concerning historical matters in the fields covered by IRE activities, including assistance to the Editorial Board, assisting institutions of a public nature such as the Smithsonian Institution where helpful information is requested and can be secured, and for providing information and recommendations to the Executive Committee when pertinent.
14. The Nominations and Appointments Committee shall be appointed at the last meeting of the Board of Directors held prior to December tenth. Its membership shall be chosen from among those members of the Board of Directors whose terms continue through the following year and shall include two Directors who are currently serving the first year of their terms. Its membership may additionally include not more than two junior past Regional Directors.

At least fourteen days before the next annual Assembly, the Nominations and Appointments Committee shall mail to the Delegates whose terms continue through the following year and to the new Delegates-elect, a list of candidates for the offices of Secretary, Treasurer, Editor and Directors to be elected by the annual Assembly.

A list of candidates to fill vacancies that will exist among the chairmen and members of the Awards, Constitution and Laws, Executive, Fellow, Policy Study and Tellers Committees and the Editorial Board shall be sent to all of the Directors whose terms continue through the following year, to the new Directors-elect and to those candidates recommended by the Nominations and Appointments Committee for election as Directors by the annual Assembly.

The Nominations and Appointments Committee shall also, subsequent to the termination of the fiscal year in which it was appointed, carry out the other provisions of these Bylaws. In addition, the Nominations and Appointments Committee shall recommend to the Board of Directors nominees for the Nominations and Appointments Committee to be appointed later in that year.

15. The Policy Study Committee shall be responsible for making studies and recommendations as the basis for the possible establishment of policies by the Board of Directors or for the taking of action by the Board of Directors for the good of the IRE. Such problems for study shall be referred to the Committee by the Board of Directors.

The Policy Study Committee shall consist of the most recent past President, two Regional Directors serving the second year of their two-year terms and two Directors-at-large serving the second or third years of their three-year terms. In the event a Director is unable to serve out a term, the Board of Directors may appoint another Director who is serving the second or third year of his term. The Chairman of the Committee shall be the junior past President. Should the junior past President be unable to serve as Chairman, the Board of Directors shall appoint another member of the Committee as Chairman.

16. The Professional Groups Committee shall administer the formation and discontinuance of Groups. It shall also recommend to the Executive Committee the

establishment or dissolution of a Group, provide a uniform Constitution, approve Bylaws for Groups involving specialized matters, provide a Manual of Instructions and develop the Group system to its fullest capacity consistent with a healthy growth, all within the limits of whatever framework the Executive Committee shall establish for the conduct of Groups.

The Professional Groups Committee shall consist of the Chairman of each Professional Group, the President of the IRE, the Vice-President residing in North America, the Professional Groups Coordinator of the Executive Committee, the Technical Secretary and the Executive Secretary. The Professional Groups Committee shall additionally include a Chairman and a Vice-Chairman, neither of whom shall be an officer of any Professional Group.

17. The Tellers Committee shall be responsible to the Board of Directors for the supervision of the counting of ballots required to be obtained by the Constitution on questions submitted to the membership of IRE or to groups of members. The staff at IRE Headquarters will assist the Committee in the performance of its work. Reports by the Committee to the Board of Directors shall be signed by the Chairman of the Committee.
18. The Standards Committee shall be responsible for the coordination of the standardization activities of the Standing Technical Committees, the initiation of Standards activities, the establishment of the scope of activity of each Technical Committee and the rendering of final approval of all Standards evolved by the IRE prior to publication.
19. Scopes of Technical Committee activities, organization and membership, procedures and methods of coordination between them, and with other standardization bodies shall be compiled in a Manual for Technical Committees (including the Standards Committee).
20. The Chairman of each Standing Technical Committee shall be a member of the Standards Committee, ex-officio.

505. *Executive Secretary*

1. The Executive Committee shall appoint an Executive Secretary and shall fix his tenure of office and determine his salary.
2. The Executive Secretary shall be in charge of IRE Headquarters, its staff and operations, for which he shall be responsible to the Executive Committee.

506. *Nominations and Elections*

1. The Secretary shall circularize all Section Chairmen and Secretaries before March first of each year requesting the submission of suitable names to be considered by the Nominations and Appointments Committee for the various elective offices.
2. The Nominations and Appointments Committee shall submit the name or names of one or more candidates for the office of President and for the office of the Vice President residing elsewhere than in North America and the names of more than one candidate for each of the other elective offices.
3. The Nominations and Appointments Committee shall transmit its list of proposed nominees to all Directors at least one week before the date at which the Board of Directors is expected to act upon them. Under normal conditions, this date is the first Wednesday of May.
4. Each Regional Committee shall submit to the Board

of Directors, the name of at least one qualified nominee for the office of Regional Delegate-Regional Director at least one week before the date at which the Board of Directors is expected to act upon them. Under normal conditions, this date is the first Wednesday of May. To qualify, each candidate shall indicate to the Regional Committee his acceptance of the nomination.

5. Nominations by petition for the office of Regional Delegate-Regional Director may be made by the submission, by the date stated and according to the procedure outlined in the Constitution, of a petition signed by at least one per cent of the total number of voting members residing within the Region, as listed in the official membership records of the IRE at the end of the previous year, but in no case shall the number be less than one hundred.
6. During the period between August fourteenth and September first of each year, the Executive Committee is authorized to take any necessary actions on any petitions and to approve the ballot.
7. Each proposed nominee named by the Board of Directors shall be consulted, and, if he so requests, his name shall be withdrawn.
8. The list of nominees required to be submitted to all voting members by the Constitution shall contain at least one name for the office of President, at least one name for each of the two offices of Vice President, and at least four names for the two offices of Delegate-at-large-Director-at-large. The ballot going to each of the Regions where an election of a Regional Delegate-Regional Director is to take place shall also contain the names of all nominees for the office of Regional Delegate-Regional Director for that particular Region.
9. The ballot required by the Constitution shall contain the number of names for each office to be voted upon, and the names of the nominees for Regional Delegate-Regional Director shall be suitably identified by Region since these will be voted on only by the voting members of each Region involved. The names of the nominees for each office shall be arranged in alphabetical order. The ballots shall carry a statement to the effect that the order of the names is alphabetical for convenience only and indicates no preference.
10. Voting members shall vote for the candidates whose names appear on the list of nominees, by written ballots in plain sealed envelopes, enclosed within mailing envelopes marked "Ballot" and bearing the member's written signature. No ballots within unsigned outer envelopes shall be counted. No votes by proxy shall be counted. Only ballots arriving at IRE Headquarters before twelve o'clock noon on the last working weekday prior to October twenty-fifth shall be counted. Ballots shall be checked, opened and counted under the supervision of the Tellers Committee between October twenty-fifth and the first

Wednesday in November. The result of the count shall be reported to the Board of Directors at its next succeeding meeting and the nominee for each office for which the election is being held, receiving the greatest number of qualified votes shall be declared elected. In the event of a tie vote, the Board of Directors shall choose between the nominees involved.

507. Amendments

1. Before an amendment to the Constitution is submitted to the voting members, it shall be reviewed by legal counsel designated by the Executive Committee and a written opinion secured that such amendment is in accordance with the laws under which the IRE is incorporated and operated.
2. Ballots for Constitutional amendments shall carry a statement of the time limit for return to IRE Headquarters. The ballots after marking shall be placed in plain sealed envelopes, enclosed within mailing envelopes marked "Ballot" and bearing the member's written signature. Only ballots with signed outer envelopes shall be counted. No votes by proxy shall be counted. Only ballots arriving at IRE Headquarters prior to the stated time limit shall be counted. The votes will be counted under the supervision of the Tellers Committee and the results reported to the Board of Directors at its next meeting.
3. A complete history of amendments shall be kept in the files of the IRE.

508. Fiscal Year

The fiscal year of the IRE shall be the calendar year.

600. PUBLICATIONS

601. Periodicals

1. The IRE shall publish a periodical named PROCEEDINGS OF THE IRE.
2. The IRE shall publish periodicals of the various Professional Groups named IRE TRANSACTIONS.
3. The IRE shall publish a periodical named IRE STUDENT QUARTERLY.

602. Standards

1. The IRE shall publish from time to time, in the PROCEEDINGS OF THE IRE, Standards concerning technologies encompassed within the scope of the objects of the IRE, which have been issued by its Standards Committee.

700. CONVENTIONS

701. Annual Convention

1. There shall be held annually in New York City in the month of March or as near thereto as possible, a convention named the IRE International Convention and Radio Engineering Show. The IRE shall be the sole sponsor.



Fill out this application in complete detail and mail with remittance to IRE Headquarters

THE INSTITUTE OF RADIO ENGINEERS, INC., 1 EAST 79 STREET, NEW YORK 21, N. Y.

Membership dues include \$9.00 per year for the subscription to PROCEEDINGS, which amount is included in, but is non-deductible from dues.

APPLICATION FOR ASSOCIATE, MEMBER OR SENIOR MEMBER GRADES

Made under Sec. Clause

TO THE BOARD OF DIRECTORS

Gentlemen: I hereby make application for **Transfer** to ☐ Associate ☐ Member ☐ Senior Member grade in The Institute of Radio Engineers on the basis of my training and professional experience given herewith and refer to the references named, WHO ARE PERSONALLY FAMILIAR WITH MY WORK.

I certify that the statements made in the record of my training and professional experience are correct and agree, if elected, that I will be governed by the Constitution of the IRE as long as I continue a member. Furthermore, I agree to promote the objects of the IRE so far as shall be in my power.

DATE

SIGN FULL NAME WITH PEN

Names of References

For Associate grade, the names of at least three Fellows, Senior Members, Members, Associates, or other responsible individuals are required.
For Member grade, the names of at least four Fellow, Senior Member or Member references are required.
For Senior Member grade, the names of at least five Fellow or Senior Member references are required.
In exceptional circumstances, the Admissions Committee may accept other references than those stipulated, provided they are thoroughly familiar with the ability and experience of the applicant.

SIGNATURES ARE NOT NECESSARY. PRINT OR USE TYPEWRITER
(Be sure reference qualifications are met.)

Name of Reference	Mail Address
Name of Reference	Mail Address
Name of Reference	Mail Address
Name of Reference	Mail Address
Name of Reference	Mail Address
Name of Reference	Mail Address

Entrance fee \$ 3.00
Annual dues \$
Total remittance enclosed..... \$

DO NOT
USE THIS
SPACE

Receipt Acknowledged
Elected
No. (For office use).....
Notified

ADDRESS FOR PROCEEDINGS AND OTHER MAIL

Print or Use Typewriter

First Name	Middle Initial	Last Name
Street Address		
City	Postal Zone	State (Country)

BIRTHPLACE (S

EDUCATION

PRESENT OCCUPATION

Title or Position	Firm or Organization Name	Address
Nature of Work Done by Firm or Organization		
Nature of Your Work		

PROFESSIONAL EXPERIENCE
Present occupation first, followed by previous experience. Indicate nature of your own work and clearly indicate degree of your responsibility for the particular work on which application is based. Please be *complete*. The Admissions Committee, which must review your application, can judge your qualifications *only* from the information you supply here.

[illegible]

Continue on separate sheet, if necessary

INSTRUCTIONS

- (3) Use extra sheets wherever necessary.

[illegible]

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the paper.

c. Creative contributions to the welfare of the scientific or engineering profession _____

7

(1) Applications for Associate and Fellow (A.F.) Sections B, C, D, & E should be submitted to the Secretary of the Association for the appropriate section.

(2) Applications for Section A should be submitted to the Secretary of the Association for the appropriate section.

(3) Use extra sheets wherever necessary.

(4) Give dates where applicable.

d. Establishment or furtherance of important scientific or engineering courses in a school of recognized standing

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the paper. A small portion of a yellow circular object is visible on the right edge.

e. Contributions equivalent to those of 'a' to 'd' above in such areas as technical editing, patent prosecution, or patent law, provided these contributions serve to advance progress substantially in the fields of electronics, radio, allied branches of engineering or the related arts and sciences.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.