

Index of Table Numbers

Table I Total Membership Distribution by Grades, 1959 Page 2  
 Table II Total Membership Distribution by Grade by Percentage, 1959 Page 3  
 Table III Total Membership Distribution by Grades, 1957-1959 Page 3  
 Table IV Analysis of Total Membership by Grades, 1959 Page 3  
 Table V Five-Year Analysis of U.S. and Foreign Membership, 1954-1959 Page 4  
 Table VI Membership by Annual Dues Rate, 1959 Page 4  
 Table VII Membership by Section, by Grade, by Dues, 1959 Page 5  
 Table VIII Distribution of Foreign Members, 1958, 1959 Page 11  
 Table IX Foreign Membership by Grade and Country, by Dues, 1959 Page 12  
 Table X Membership by Section, by Grade, by Dues, 1959 Page 14  
 Table XI Membership by Section, by Grade, by Dues, 1959 Page 15  
 Table XII Membership by Section, by Grade, by Dues, 1959 Page 16  
 Table XIII Membership by Section, by Grade, by Dues, 1959 Page 17  
 Table XIV Membership by Section, by Grade, by Dues, 1959 Page 18  
 Table XV Membership by Section, by Grade, by Dues, 1959 Page 19  
 Table XVI Membership by Section, by Grade, by Dues, 1959 Page 20  
 Table XVII Membership by Section, by Grade, by Dues, 1959 Page 21  
 Table XVIII Membership by Section, by Grade, by Dues, 1959 Page 22  
 Table XIX Membership by Section, by Grade, by Dues, 1959 Page 23  
 Table XX Membership by Section, by Grade, by Dues, 1959 Page 24  
 Table XXI Membership by Section, by Grade, by Dues, 1959 Page 25  
 Table XXII Membership by Section, by Grade, by Dues, 1959 Page 26  
 Table XXIII Membership by Section, by Grade, by Dues, 1959 Page 27  
 Table XXIV Membership by Section, by Grade, by Dues, 1959 Page 28  
 Table XXV Membership by Section, by Grade, by Dues, 1959 Page 29  
 Table XXVI Membership by Section, by Grade, by Dues, 1959 Page 30  
 Table XXVII Membership by Section, by Grade, by Dues, 1959 Page 31  
 Table XXVIII Section and Subsection Meetings and Membership, 1958, 1959 Page 47  
 Table XXIX Professional Group Chapter Membership, by Section, by Group, 1958, 1959 Page 51  
 Table XXX Section and Subsection Meetings and Membership, 1959 Page 52  
 Table XXXI Student Branch Activities, 1958, 1959 Page 58

REPORT OF THE SECRETARY - 1959

To the Board of Directors  
The Institute of Radio Engineers, Inc.

Gentlemen:

The Secretary's Report for the year 1959 is transmitted herewith and indicates, again, continued expansion of the IRE in all of its activities.

Net membership increased 11% to a total of 79,166. Professional Group membership increased 20% to a total of 87,027. Publications pages increased 18% and of these, TRANSACTIONS pages went up 44%. Four special issues of the PROCEEDINGS appeared during the year, making possible the publication of additional valuable papers on timely subjects. Sight must not be lost of the important accomplishments of the twenty-five Technical Committees which, assisted by 119 subcommittees and task groups, held 233 meetings and issued four new Standards, in addition to which representation of IRE on 34 committees of the American Standards Association was provided for. IRE also sponsored three committees of this body.

It should be noted that your Headquarters' facilities have been foresightedly expanded suitably to care for this growth and additional steps have been taken for meeting the expected additional activities yet to come.

Respectfully submitted,

Haraden Pratt  
Secretary

1959 - REPORT OF THE SECRETARY

Index of Table Numbers

Table I	Total Membership Distribution by Grades, 1959	Page 2
Table II	Total Membership Distribution by Grade by Percentage, 1959	Page 2
Table III	Comparison of Total Membership by Grades, 1957-1959	Page 3
Table IV	Analysis of Total Membership by Grades, 1959	Page 3
Table V	Five-Year Analysis of U. S. and Foreign Membership, 1955-1959	Page 4
Table VI	Membership, by Grade, by Annual Dues Rate, 1959	Page 4
Table VII	Membership by Region, by Section, by Grade, by Dues, 1959	Page 5
Table VIII	Distribution of Foreign Members, 1958, 1959	Page 11
Table IX	Foreign Membership by Grade and Country, by Dues 1959	Page 12
Table X	Geographical and Grade Breakdown, U. S. Possessions and Overseas Military Membership, 1959	Page 16
Table XI	Membership Changes, by Grades, 1959	Page 17
Table XII	Analysis of Transfers, by Grades, 1959	Page 17
Table XIII	Analysis of Higher Grade Applications, 1959	Page 18
Table XIV	Life Members, by Grades, 1959	Page 18
Table XV	Yearly Membership, 1912 - 1959	Page 19
Table XVI	Membership Grade Breakdown, 1931 - 1959	Page 20
Table XVII	Professional Group Membership, by Groups, 1958, 1959	Page 21
Table XVIII	Five-Year Analysis of Professional Group Membership, 1955 - 1959	Page 22
Table XIX	Professional Groups, Percentage Increases, 1958, 1959	Page 23
Table XX	Affiliates, by Group, 1958, 1959	Page 24
Table XXI	Deceased Members, 1959	Page 25
Table XXII	IRE International Conventions, 1926 - 1959	Page 28
Table XXIII	Summary of Income and Expenses, 1959	Page 29
Table XXIV	Balance Sheet, December 31, 1959	Page 30
Table XXV	Editorial Department Activities, 1959	Page 31
Table XXVI	Technical Department Activities, 1959	Page 35
Table XXVII	Section Activities, 1959	Page 46
Table XXVIII	Section and Subsection Meetings and Membership, 1958, 1959	Page 47
Table XXIX	Professional Group Chapter Meetings, by Section, by Group, 1958, 1959	Page 51
Table XXX	Section and Subsection Publications, 1959	Page 58
Table XXXI	Student Branch Activities, 1959	Page 60

Table I - Total Membership Distribution by Grades as of December 31, 1959

Grade	As of Dec. 31, 1958		As of Dec. 31, 1958		As of Dec. 31, 1957	
	Number	% of Total	Number	% of Total	Number	% of Total
Fellow	823	1.1	770	1.1	700	1.1
Senior Member	9,463	12.0	8,536	12.0	7,685	11.9
Member	38,977	49.4	52,373	45.4	26,115	40.3
Associate	13,165	17	14,721	20.9	16,827	25.9
Totals	79,166		71,361		64,773	
Student	16,738					

Table IV - Analysis of Total Membership by Grades, 1959

Grand Total	S	SM(\$15)	SM(\$10)	M(\$15)	M(\$10)	A(\$10)	B(\$5)	Total
79,166	740	7,600	1,098	23,017	13,036	6,353	5,250	15,379
								72,473

Table II - Total Membership Distribution by Grade by Percentage as of December 31, 1959

Grade	Grade Percentage	Total Percentage
Fellow	1	1
Senior Member	12	12
Member	49	49
Associate	17	17
Totals		79
Student	21	100

Table III - Comparison of Total Membership by Grades, 1957-1959

Grade	As of Dec. 31, 1959		As of Dec. 31, 1958		As of Dec. 31, 1957	
	Number	% of Total	Number	% of Total	Number	% of Total
Fellow	823	1	770	1.1	700	1.1
Senior Member	9,463	12	8,536	12.0	7,685	11.9
Member	38,977	49	32,373	45.4	26,115	40.3
Associate	13,165	17	14,721	20.6	16,827	25.9
Student	<u>16,738</u>	21	<u>14,961</u>	20.9	<u>13,446</u>	20.8
Totals	79,166		71,361		64,773	

Table IV - Analysis of Total Membership by Grades, 1959

	<u>F(\$15)</u>	<u>SM(\$15)</u>	<u>SM(\$10)</u>	<u>M(\$15)</u>	<u>M(\$10)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S(\$5)</u>	<u>Total</u>
U.S.	740	7,600	1,098	23,017	13,036	6,353	5,250	15,379	72,473
U.S. Posses- sions	-	5	1	10	9	12	5	36	78
U.S. Overseas Military	2	32	5	162	167	53	60	12	493
	<u>742</u>	<u>7,637</u>	<u>1,104</u>	<u>23,189</u>	<u>13,212</u>	<u>6,418</u>	<u>5,315</u>	<u>15,427</u>	<u>73,044</u>
Canada	29	204	33	793	544	320	402	1,052	3,377
Foreign	52	364	121	749	490	384	326	259	2,745
Totals	<u>823</u>	<u>8,205</u>	<u>1,258</u>	<u>24,731</u>	<u>14,246</u>	<u>7,122</u>	<u>6,043</u>	<u>16,738</u>	<u>79,166</u>

Table V - Five-Year Analysis of U.S. and Foreign Membership

	<u>1959</u>	<u>1958</u>	<u>1957</u>	<u>1956</u>	<u>1955</u>
Total	79,166	71,361	64,773	55,494	47,388
U.S. and Possessions	73,044	65,786	59,961	51,551	43,977
Foreign (incl. Canada)	6,122	5,575	4,812	3,943	3,411
Per Cent Foreign	7.7	7.8	7.4	7.1	7.2

Table VI - Membership by Grade, by Annual Dues Rate, 12/31/1959

	<u>\$15.00</u>	<u>\$10.00</u>	<u>\$5.00</u>
Fellow	823		
Senior Member	8,205	1,258	
Member	24,731	14,246	
Associate	7,122	6,043	
Student			16,738
Totals	40,881	21,547	16,738

Table VII - Membership by Region, by Section, by Grade, by Dues, as of 12/31/59

Reg.	Section	F	SM		M		A		S	Total
		\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
	Binghamton	-	22	6	151	136	38	39	103	495
	Boston	66	408	63	1,474	773	332	315	1,103	5,297
	Merrimack Valley S.	2	49	7	130	81	33	47	154	
	New Hampshire S.	-	19	1	66	40	14	16	37	
	No. Vermont S.	-	5	1	14	6	1	4	36	
	Buffalo-Niagara	-	48	4	163	83	39	31	50	418
	Connecticut	9	50	9	217	87	55	46	178	1,060
	Fairfield County S.	9	57	5	172	51	49	21	45	
	Elmira-Corning	1	18	3	55	38	11	10	13	149
	Erie	1	6	-	18	4	8	11	12	60
	Ithaca	2	16	1	48	28	7	6	60	168
	Rochester	3	57	11	177	105	39	42	62	496
	Rome-Utica	2	57	11	188	130	51	45	40	524
	Schenectady	13	67	9	129	50	16	20	107	411
	Syracuse	16	135	19	396	157	64	51	125	963
	Western Mass.	2	16	1	81	43	23	15	81	262
	<b>Totals</b>	<b>126</b>	<b>1,030</b>	<b>151</b>	<b>3,479</b>	<b>1,812</b>	<b>780</b>	<b>719</b>	<b>2,206</b>	<b>10,303</b>
2	Long Island	45	474	61	1,509	575	415	380	523	3,982
	New York	46	257	26	775	443	291	304	820	5,002
	Mid-Hudson S.	-	45	6	296	204	77	71	64	
	Monmouth S.	13	104	14	211	100	68	32	22	
	Westchester S.	9	95	10	279	92	86	49	93	
	Northern New Jersey	87	548	66	1,305	515	390	237	548	3,696
	Princeton	42	111	4	194	93	53	50	130	677
	<b>Totals</b>	<b>242</b>	<b>1,634</b>	<b>187</b>	<b>4,569</b>	<b>2,022</b>	<b>1,380</b>	<b>1,123</b>	<b>2,200</b>	<b>13,357</b>

Table VII - Membership by Region, by Section, by Grade, by Dues, as of 12/31/59  
(Continued)

Reg.	Section	F	SM		M		A		S	Total
		\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
3	Atlanta	1	37	7	154	87	35	40	327	688
	Baltimore	11	185	22	523	311	111	84	120	1,367
	Central Florida	3	41	10	150	144	39	44	17	448
	Florida West Coast	9	47	8	90	85	35	67	16	357
	Gainesville	1	18	2	36	27	12	10	123	229
	Huntsville	-	15	5	88	77	34	18	147	551
	Memphis S.	-	1	-	11	9	9	3	22	
	Nashville S.	1	6	-	20	11	-	4	70	
	Miami	3	25	3	94	33	33	18	73	282
	North Carolina	-	29	8	113	116	30	33	32	594
	East.No. Carolina	-	9	2	25	11	15	5	100	
	West.No. Carolina	-	4	1	19	11	8	7	16	
	Northwest Florida	-	4	-	44	37	20	13	8	171
	Panama City S.	-	3	1	22	16	1	1	1	
	Orlando	1	49	11	101	92	35	40	18	347
	Philadelphia	44	458	59	1,374	704	334	235	606	4,318
	Lancaster S.	2	31	4	87	31	26	13	27	
	Lehigh Valley S.	1	15	1	41	29	5	5	119	
	Reading S.	-	2	2	17	16	9	14	7	
	South Carolina	1	13	1	38	33	14	21	189	310
	Virginia	4	29	4	162	117	36	44	79	475
	Washington	61	509	87	1,161	603	295	219	433	3,368
	Totals	143	1,530	238	4,370	2,600	1,136	938	2,550	13,505

Table VII - Membership by Region, by Section, by Grade, by Dues, as of 12/31/59  
(Continued)

Reg.	Section	F	SM		M		A		S	Total
		\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
4	Akron	3	31	6	94	58	38	25	61	316
	Central Penn.	1	27	5	55	43	4	6	100	241
	Cincinnati	5	45	9	173	77	41	28	88	466
	Cleveland	4	51	7	181	56	55	35	144	533
	Columbus	2	27	3	106	65	33	19	134	389
	Dayton	5	136	20	248	152	84	60	130	835
	Detroit	11	82	8	352	204	135	74	322	1,188
	Emporium	1	49	2	38	18	18	9	8	143
	Pittsburgh	11	63	9	200	114	74	48	239	758
	Toledo	-	9	2	52	21	21	10	46	161
	Western Michigan	-	8	-	33	23	8	24	24	120
	Williamsport	-	3	2	17	4	7	4	26	63
	Totals	43	531	73	1,549	835	518	342	1,322	5,213
5	Cedar Rapids	5	62	4	167	122	37	36	233	701
	Burlington S.	-	3	1	12	12	-	3	4	
	Chicago	19	299	33	867	403	354	235	722	2,932
	Evansville-Owensboro	1	31	2	39	17	14	9	21	134
	Fort Wayne	2	25	2	111	29	33	15	18	235
	Indianapolis	2	42	6	110	96	36	28	188	508
	Louisville	1	3	1	34	20	14	8	82	163
	Milwaukee	4	25	4	166	120	56	77	463	915
	Omaha-Lincoln	-	15	2	50	46	11	33	116	273
	So. Bend-Mishawaka	1	22	2	85	44	22	20	39	235
	Twin Cities	4	44	7	280	153	56	64	367	975
	Totals	39	571	64	1,921	1,062	633	528	2,253	7,071

Table VII - Membership by Region, by Section, by Grade, by Dues, as of 12/31/1959  
(Continued)

Reg.	Section	F	SM		M		A		S	Total
		\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
6	Beaumont-Pt. Arthur	-	4	-	32	13	17	12	59	137
	Dallas	8	114	21	302	267	73	59	135	979
	Denver	5	68	14	195	121	61	71	191	726
	El Paso	-	8	-	41	44	17	27	3	229
	Las Cruces - White Sands S.	-	3	3	20	32	7	6	18	
	Fort Worth	-	31	11	132	107	27	43	31	382
	Houston	2	69	3	145	66	52	50	226	613
	Kansas City	2	40	2	132	75	60	66	241	618
	Little Rock	2	8	2	20	16	9	6	76	139
	Lubbock	-	2	-	19	11	9	9	38	88
	New Orleans	1	12	3	43	60	26	21	107	273
	Oklahoma City	-	13	3	85	72	17	17	86	293
	St. Louis	3	39	6	164	120	57	49	309	747
	San Antonio-Austin	2	36	2	79	47	25	19	167	377
	Shreveport	-	7	-	17	11	7	10	21	73
	Tulsa	2	18	-	74	21	38	10	117	280
	Wichita	-	2	-	46	34	18	10	43	153
	Totals	27	474	70	1,546	1,117	520	485	1,868	6,107

Table VII - Membership by Region, by Section, by Grade, by Dues, as of 12/31/59  
(Continued)

Reg.	Section	F	SM		M		A		S	Total
		\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
7	Alamogordo-Holloman	-	13	2	31	26	13	19	1	105
	Albuquerque-Los Alamos	-	79	13	196	142	37	59	147	673
	Anchorage	-	3	2	25	30	17	19	11	107
	China Lake	-	3	3	38	36	12	9	7	108
	Fort Huachuca	1	19	6	22	41	2	8	5	104
	Hawaii	-	8	1	48	19	32	16	7	131
	Los Angeles	24	451	98	1,273	854	319	256	456	8,033
	Buenaventura S.	-	14	4	64	36	17	9	11	
	Orange Belt S.	6	75	5	200	131	48	33	73	
	Pasadena S.	5	81	12	226	109	56	36	111	
	San Fernando S.	9	196	33	578	288	141	97	100	
	Santa Ana S.	5	125	28	393	262	96	70	125	
	Santa Barbara S.	5	46	6	85	71	15	22	144	
	Phoenix	5	54	11	212	111	52	30	117	592
	Portland	3	24	1	93	27	31	25	172	376
	Sacramento	1	11	2	61	54	17	31	50	227
	Salt Lake City	1	11	3	64	73	22	14	222	410
	San Diego	1	84	13	335	188	82	57	74	834
	San Francisco	38	396	57	1,105	679	224	185	506	3,773
	East Bay S.	10	55	7	125	110	59	34	183	
	Seattle	5	49	4	316	231	75	13	331	1,173
	Richland S.	-	4	-	30	13	7	7	38	
	Tucson	1	29	4	63	57	12	16	89	271
	Totals	120	1,830	315	5,583	3,588	1,386	1,115	2,980	16,917

Table VII - Membership by Region, by Section, by Grade, by Dues, as of 12/31/59 (Cont'd)

Reg.	Section	F	SM		M		A		S	Total
		\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
	Bay of Quinte	2	12	3	27	22	5	18	56	145
	Hamilton	-	10	1	31	14	19	16	52	220
	Kitchener-Waterloo S.	-	10	1	18	23	9	7	9	
	London	-	7	-	22	4	5	13	36	119
	South West.Ontario S.	-	-	-	5	4	10	9	4	
	Montreal	8	48	7	190	162	67	69	95	646
	Newfoundland	-	-	-	14	11	5	13	2	45
	Northern Alberta	-	3	-	21	16	15	19	109	183
	Ottawa	10	47	11	120	91	42	42	68	431
	Quebec	-	4	1	31	27	2	18	62	145
	Regina	-	-	-	15	6	10	6	67	104
	Southern Alberta	-	1	-	24	10	7	32	111	185
	Toronto	6	44	7	194	91	74	99	226	741
	Vancouver	1	12	1	47	39	38	24	93	255
	Winnipeg	2	6	1	34	24	12	17	62	158
	Totals	29	204	33	793	544	320	402	1,052	3,377
	Benelux	2	18	10	18	24	7	9	-	88
	Buenos Aires	2	19	-	20	11	18	11	29	110
	Colombia	-	2	-	9	8	4	3	-	26
	Egypt	-	3	-	9	7	2	2	-	23
	India	1	31	1	66	25	25	23	2	174
	Israel	-	6	2	21	23	13	13	2	80
	Italy	-	9	2	14	35	28	41	23	152
	Rio de Janeiro	-	4	1	14	9	9	8	4	49
	Tokyo	4	40	24	42	55	51	40	52	308
	Totals	9	132	40	213	197	157	150	112	1,010
	GRAND TOTALS	778	7,936	1,171	24,023	13,777	6,830	5,802	16,543	76,860

Table VIII - Distribution of Foreign Members, 1958 and 1959

<u>1959</u>	<u>1958</u>		<u>1959</u>	<u>1958</u>	
0	1	Aden Colony	11	11	Ireland
1	0	Algeria	80	64	Israel
0	6	Arabia	152	91	Italy
110	117	Argentina	308	274	Japan
4	2	Austria	1	1	Jordan
97	80	Australia	6	6	Korea
0	2	Bahama Islands	2	2	Kuwait
1	0	Belgian Congo	13	10	Lebanon
24	27	Belgium	7	3	Libya
4	6	Bermuda	8	8	Malaya
1	1	Bolivia	1	1	Malta
155	152	Brazil	58	66	Mexico
2	0	British Guiana	4	3	Morocco
12	16	British West Indies	64	52	Netherlands
11	9	Burma	5	6	New Zealand
3,377	3,057	Canada	2	0	Nicaragua
4	3	Ceylon	0	1	Nigeria
12	8	Chile	23	26	Norway
2	0	China	2	1	Okinawa
26	30	Colombia	15	21	Pakistan
2	2	Costa Rica	2	2	Panama, Republic of
26	26	Cuba	9	8	Peru
0	1	Curacao	17	15	Philippine Islands
0	1	Cyprus	10	9	Poland
11	9	Czechoslovakia	8	6	Portugal
85	84	Denmark	1	2	Romania
1	2	Dominican Republic	1	0	Saigon (Viet-Nam)
0	1	Dutch Guiana	4	0	Saudi Arabia
6	6	Ecuador	17	17	Scotland
23	26	Egypt	7	4	Singapore
3	1	El Salvador	39	38	South Africa
438	419	England	16	15	Spain
3	4	Ethiopia	1	0	Sudan
1	1	Fiji Islands	118	102	Sweden
3	1	Finland	97	79	Switzerland
5	5	Formosa	1	0	Syria
152	136	France	1	1	Tahiti
71	75	Germany	0	1	Tanganyika
18	27	Greece	1	1	Tasmania
3	2	Guatemala	7	6	Thailand
1	0	Haiti	10	9	Turkey
19	14	Hong Kong	4	4	Uruguay
2	1	Hungary	26	10	U. S. S. R.
4	5	Iceland	52	48	Venezuela
174	174	India	3	1	Wales
4	3	Indonesia	2	0	West Indies
5	3	Iran	1	1	Yugoslavia
2	3	Iraq			

	<u>1959</u>	<u>1958</u>	<u>Net Gain</u>
Grand Total	6,122	5,575	547

Table IX - Foreign Membership by Grade, by Country, by Dues as of 12/31/59

Country	F	SM		M		A		S	Total
	\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
Algeria	-	-	1	-	-	-	-	-	1
Argentina	2	19	-	20	11	18	11	29	110
Austria	-	1	-	1	-	1	1	-	4
Australia	1	20	1	38	9	11	10	7	97
Belgian Congo	-	-	-	-	1	-	-	-	1
Belgium	-	2	-	10	6	4	2	-	24
Bermuda	-	-	1	2	-	-	1	-	4
Bolivia	-	-	-	1	-	-	-	-	1
Brazil	-	9	2	30	22	23	12	57	155
British Guiana	-	-	-	1	-	-	1	-	2
British West Indies	-	-	-	5	2	2	2	1	12
Burma	-	-	-	4	2	2	3	-	11
Canada	29	204	33	793	544	320	402	1,052	3,377
Ceylon	-	-	-	1	2	-	1	-	4
Chile	-	1	-	2	-	2	7	-	12
China	-	-	-	2	-	-	-	-	2
Colombia	-	2	-	9	8	4	3	-	26
Costa Rica	-	-	-	-	-	2	-	-	2
Cuba	1	3	-	7	2	6	5	2	26
Czechoslovakia	-	-	-	2	3	-	6	-	11
Denmark	1	3	2	14	19	9	6	31	85
Dominican Republic	-	-	-	1	-	-	-	-	1
Ecuador	-	1	-	3	1	1	-	-	6
Egypt	-	3	-	9	7	2	2	-	23

(Continued)

Table IX - Foreign Membership by Grade, by Country, by Dues as of 12/31/59

Country	F	SM		M		A		S	Total
	\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
El Salvador	-	-	-	1	2	-	-	-	3
England	21	86	22	157	77	40	24	11	438
Ethiopia	-	-	-	-	3	-	-	-	3
Fiji Islands	-	-	-	1	-	-	-	-	1
Finland	-	-	-	1	1	-	1	-	3
Formosa	-	-	-	4	1	-	-	-	5
France	4	27	13	50	13	23	20	2	152
Germany	6	26	6	7	11	6	7	2	71
Greece	-	-	1	7	3	4	2	1	18
Guatemala	-	-	-	1	2	-	-	-	3
Haiti	-	-	-	-	-	-	1	-	1
Hong Kong	-	-	-	6	8	4	1	-	19
Hungary	-	-	-	-	-	1	1	-	2
Iceland	-	-	-	1	-	1	2	-	4
India	1	31	1	66	25	25	23	2	174
Indonesia	-	-	-	2	1	-	-	1	4
Iran	-	-	-	2	2	-	-	1	5
Iraq	-	-	-	1	1	-	-	-	2
Ireland	-	1	1	3	2	3	-	1	11
Israel	-	6	2	21	23	13	13	2	80
Italy	-	9	2	14	35	28	41	23	152
Japan	4	40	24	42	55	51	40	52	308
Jordan	-	-	-	-	1	-	-	-	1

(Continued)

Table IX - Foreign Membership by Grade, by Country, by Dues as of 12/31/59

Country	F	SM		M		A		S	Total
	\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
Korea	-	-	-	-	3	1	2	-	6
Kuwait	-	-	-	-	-	2	-	-	2
Lebanon	-	-	-	5	4	-	4	-	13
Libya	-	1	-	2	2	-	1	1	7
Malaya	-	1	-	5	2	-	-	-	8
Malta	-	-	-	1	-	-	-	-	1
Mexico	1	7	2	16	11	8	8	5	58
Morocco	-	-	-	2	1	1	-	-	4
Netherlands	2	10	16	8	19	3	6	-	64
New Zealand	-	1	-	1	-	3	-	-	5
Nicaragua	-	-	-	1	1	-	-	-	2
Norway	-	3	1	12	3	1	3	-	23
Okinawa	-	-	-	-	1	-	-	1	2
Pakistan	-	3	-	8	3	-	1	-	15
Panama, Republic of	-	-	-	1	-	-	1	-	2
Peru	-	1	-	2	3	1	2	-	9
Philippine Islands	-	1	-	5	5	4	1	1	17
Poland	-	-	2	1	1	1	5	-	10
Portugal	-	2	-	3	1	1	1	-	8
Romania	-	1	-	-	-	-	-	-	1
Saigon (Viet-Nam)	-	1	-	-	-	-	-	-	1
Saudi Arabia	-	1	-	3	-	-	-	-	4
Scotland	1	1	1	9	-	3	2	-	17

(Continued)

Table IX - Foreign Membership by Grade, by Country, by Dues as of 12/31/59

Country	F	SM		M		A		S	Total
	\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
Singapore	-	-	-	3	4	-	-	-	7
South Africa	-	5	-	18	6	8	1	1	39
Spain	-	3	1	4	3	2	1	2	16
Sudan	-	-	-	-	1	-	-	-	1
Sweden	3	9	-	29	19	28	14	16	118
Switzerland	4	15	2	36	15	18	4	3	97
Syria	-	-	-	-	-	-	-	1	1
Tahiti	-	-	-	1	-	-	-	-	1
Tasmania	-	-	-	1	-	-	-	-	1
Thailand	-	-	-	3	3	-	-	1	7
Turkey	-	1	-	4	-	3	1	1	10
Uruguay	-	-	-	2	-	1	1	-	4
U. S. S. R.	-	1	16	-	-	2	7	-	26
Venezuela	-	6	1	11	16	7	10	1	52
Wales	-	-	-	1	2	-	-	-	3
West Indies	-	1	-	-	-	-	1	-	2
Yugoslavia	-	-	-	1	-	-	-	-	1
Totals	81	568	154	1,542	1,034	704	728	1,311	6,122

P. O. San Francisco 171  
P. O. New York, N. Y. 276  
447  
Net Gain - 44

Table X - U.S. Possessions and Overseas Military Membership as of 12/31/59  
 Geographical and Grade Breakdown, 1959, and Comparison 1958-1959

U.S. Possessions	F	SM		M		A		S	Totals
	\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
Canal Zone	-	-	1	-	-	2	2	-	5
Caroline Islands	-	-	-	-	-	1	-	-	1
Mariana Islands	-	-	-	-	-	2	-	-	2
Puerto Rico	-	5	-	9	8	7	3	36	68
Virgin Islands	-	-	-	1	1	-	-	-	2
<b>Totals</b>	<b>-</b>	<b>5</b>	<b>1</b>	<b>10</b>	<b>9</b>	<b>12</b>	<b>5</b>	<b>36</b>	<b>78</b>

	1958		1959	
Canal Zone	5	5		
Caroline Islands	1	1		
Mariana Islands	2	2		
Puerto Rico	31	68		
Virgin Islands	0	2		
	<u>39</u>	<u>78</u>		
<b>Net Gain - 39</b>				

Overseas Military	F	SM		M		A		S	Totals
	\$15	\$15	\$10	\$15	\$10	\$15	\$10	\$5	
P.O. San Francisco	-	10	-	58	74	22	19	6	189
P.O. New York, N.Y.	2	22	5	104	93	31	41	6	304
<b>Totals</b>	<b>2</b>	<b>32</b>	<b>5</b>	<b>162</b>	<b>167</b>	<b>53</b>	<b>60</b>	<b>12</b>	<b>493</b>

	1958		1959	
P.O. San Francisco	171	189		
P.O. New York, N.Y.	276	304		
	<u>449</u>	<u>493</u>		
<b>Net Gain - 44</b>				

Table XI - Membership Changes, by Grades, in 1959

<u>GAINS</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>A</u>	<u>S</u>	<u>Total</u>
Elections on Applications	-	615	3,135	902	8,491	13,143
Reinstatements	-	60	470	315	192	1,037
Transfers to	76	608	4,996	592	-	6,272
<b>TOTAL GAIN</b>	<b>76</b>	<b>1,283</b>	<b>8,601</b>	<b>1,809</b>	<b>8,683</b>	<b>20,452</b>
<u>LOSSES</u>						
New Elections (Unpaid)	-	13	77	43	9	142
Transfers from	-	70	481	1,945	3,776	6,272
Voided Elections	-	2	9	18	-	29
Deaths	9	34	55	24	8	130
Resignations	1	29	246	218	184	678
Delinquents	13	208	1,129	1,117	2,929	5,396
<b>TOTAL LOSS</b>	<b>23</b>	<b>356</b>	<b>1,997</b>	<b>3,365</b>	<b>6,906</b>	<b>12,647</b>
<u>NET GAIN</u>	<b>53</b>	<b>927</b>	<b>6,604</b>	<b>-1,556</b>	<b>1,777</b>	<b>7,805</b>

The net gain of 7,805 shown above compares with 6,503 for 1958.

Table XII - Analysis of Transfers, by Grades, 1959

<u>Transfers from</u>	<u>SM</u>	<u>M</u>	<u>A</u>	<u>S</u>	<u>Total</u>
Transfers to F	70	6	-	-	76
Transfers to SM	-	475	132	1	608
Transfers to M	-	-	1,813	3,183	4,996
Transfers to A	-	-	-	592	592
<b>TOTAL</b>	<b>70</b>	<b>481</b>	<b>1,945</b>	<b>3,776</b>	<b>6,272</b>

Table XIII - Analysis of Higher Grade Applications for 1959

Year	Higher Grade	Student	Increase (Decrease)	Approved	Increase (Decrease)	Rejected	Total	
<b>Admission Applications</b>								
1912							109	
1913	Senior Member		122	615	112.0	85	231	
1914			402		174.0		63	
1915	Member		351	3,135	35.4	211	79	
1916			206		21.2		1,193	
1917			134		11.2		1,327	
1918	<b>Transfer Applications</b>							
1919			(-505)		(-38.1)		82	
1920	Senior Member		264	608	32.2	104	1,085	
1921			199		18.3		285	
1922	Member		(-140)	4,996	(-10.0)	49	1,382	
1923			176		16.2		613	
1924			635		31.0		2,501	
1925			195		9.3		2,288	

Table XIV - Life Members, by Grades, as of December 31, 1959

	U.S.	Canadian	Other	Total
1932	Fellow 84	1	6	91
1933	Senior Member 54	1	6	61
1934	Member 43	1	4	48
1935	Associate 1	-	2	3
1939	<u>182</u>	<u>3</u>	<u>18</u>	<u>203</u>
1940				
1941				
1942				
1943				
1944				
1945				
1946				
1947				
1948				
1949				
1950				
1951				
1952				
1953				
1954				
1955				
1956				
1957				
1958				
1959				

Table XV - Yearly Membership, 1912-1959

Year	Higher Grade	Student	Yearly Increase (Decrease)	% Increase (Decrease)	Total
1912			-	-	109
1913			122	112.0	231
1914			402	174.0	633
1915			351	55.4	984
1916			208	21.2	1,193
1917			134	11.2	1,327
1918			(-505)	(-38.1)	822
1919			264	32.2	1,086
1920			199	18.3	1,285
1921			197	15.3	1,382
1922			(-140)	(-10.0)	1,242
1923			176	14.2	1,418
1924			635	31.0	2,053
1925			195	9.5	2,248
1926			482	21.4	2,730
1927			1,480	54.3	4,210
1928			613	14.6	4,823
1929			872	17.6	5,695
1930			840	14.8	6,535
1931			199	2.9	6,734
1932	6,288	115	(-331)	(-4.9)	6,403
1933	5,074	125	(-1,204)	(-18.8)	5,199
1934	4,011	229	(-959)	(-18.4)	4,240
1935	4,180	239	179	4.2	4,419
1936	4,896	299	776	17.6	5,195
1937	5,099	360	264	5.1	5,459
1938	5,089	314	(-56)	(-1.0)	5,403
1939	5,213	399	209	3.9	5,612
1940	5,209	496	93	1.7	5,705
1941	6,112	909	1,316	23.1	7,021
1942	7,261	1,533	1,773	25.3	8,794
1943	8,793	2,286	2,285	26.0	11,079
1944	11,054	2,083	2,058	18.6	13,137
1945	13,881	1,898	2,642	20.1	15,779
1946	15,902	2,252	2,375	15.1	18,154
1947	17,403	3,634	2,883	15.9	21,037
1948	17,498	5,939	2,400	11.4	23,437
1949	18,573	8,196	3,332	14.2	26,769
1950	21,442	7,560	2,233	8.3	29,002
1951	24,981	4,427	406	1.4	29,408
1952	28,591	4,283	3,466	11.8	32,874
1953	32,604	4,530	4,260	12.9	37,134
1954	36,222	5,556	4,644	12.5	41,778
1955	40,060	7,328	5,610	13.4	47,388
1956	45,110	10,384	8,106	17.1	55,494
1957	51,327	13,446	9,279	16.7	64,773
1958	56,400	14,961	6,588	10.1	71,361
1959	62,428	16,738	7,805	10.9	79,166

Table XVI - Membership Grade Breakdown, 1931 - 1959

<u>Year</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>A</u>	<u>J</u>	<u>S</u>	<u>Total</u>
1959	823	9,463	38,977	13,165		16,738	79,166
1958	770	8,536	32,373	14,721		14,961	71,361
1957	700	7,685	26,115	16,827		13,446	64,773
1956	635	6,486	19,110	18,879		10,384	55,494
1955	565	5,643	13,360	20,492		7,328	47,388
1954	489	4,780	6,107	24,846		5,556	41,778
1953	425	4,170	5,307	22,702		4,530	37,134
1952	379	3,566	4,617	20,029		4,283	32,874
1951	345	3,070	4,043	17,523		4,427	29,408
1950	323	2,726	3,803	14,590		7,560	29,002
1949	284	2,421	3,559	12,309		8,196	26,769
1948	259	2,192	3,334	11,713		5,939	23,437
1947	239	2,068	3,017	12,079		3,634	21,037
1946	218	1,763	2,330	11,591		2,252	18,154
1945	210	1,288	1,238	11,145		1,898	15,779
1944	184	1,025	337	9,508		2,083	13,137
1943	185	886	17	7,705		2,286	11,079
1942	168	-	833	6,205	55	1,533	8,794
1941	166	-	761	5,135	50	909	7,021
1940	175	-	700	4,314	20	496	5,705
1939	159	-	660	4,362	32	399	5,612
1938	156	-	645	4,250	38	314	5,403
1937	136	-	624	4,291	48	360	5,459
1936	133	-	637	4,092	34	299	5,195
1935	128	-	601	3,425	26	239	4,419
1934	115	-	551	3,320	25	229	4,240
1933	125	-	613	4,268	68	125	5,199
1932	147	-	711	5,231	199	115	6,403
1931	135	-	720	5,670	209	-	6,734

Totals 5,667 81,360 87,027 72,881 21,669

Table XVII - Professional Group Membership, by Groups, 1958, 1959  
(Paid Membership Only)

<u>Code</u>	<u>Group</u>	1959			1958	<u>Net Gain</u>
		<u>Student Discount</u>	<u>Other Paid</u>	<u>Total Paid</u>		
G-1	Audio	557	4,846	5,403	4,348	1,055
G-2	Broadcasting	57	1,541	1,598	1,275	323
G-3	Antennas & Propagation	454	3,318	3,772	3,117	655
G-4	Circuit Theory	1,035	6,897	7,932	6,690	1,242
G-5	Nuclear Science	299	1,570	1,869	1,587	282
G-6	Vehicular Communications	26	1,416	1,442	1,229	213
G-7	Reliability & Quality Control	32	1,758	1,790	1,455	335
G-8	Broadcast & Television Receivers	196	1,678	1,874	1,915	- 41
G-9	Instrumentation	26	4,297	4,323	3,710	613
G-10	Space Electronics & Telemetry	241	3,384	3,625	2,766	859
G-11	Aeronautical & Navigational Electronics	200	3,552	3,752	3,124	628
G-12	Information Theory	133	3,209	3,342	2,796	546
G-13	Industrial Electronics	144	1,984	2,128	1,894	234
G-14	Engineering Management	195	4,314	4,509	4,024	485
G-15	Electron Devices	271	4,772	5,043	4,221	822
G-16	Electronic Computers	679	8,129	8,808	7,505	1,303
G-17	Microwave Theory & Techniques	371	4,789	5,160	4,034	1,126
G-18	Medical Electronics	145	1,989	2,134	1,711	423
G-19	Communications Systems	188	3,077	3,265	2,591	674
G-20	Ultrasonics Engineering	26	929	955	782	173
G-21	Component Parts	29	1,853	1,882	1,648	234
G-22	Production Techniques	20	1,095	1,115	889	226
G-23	Automatic Control	197	3,766	3,963	3,233	730
G-24	Military Electronics	40	3,867	3,907	3,395	512
G-25	Education	43	706	749	461	288
G-26	Engineering Writing & Speech	49	1,521	1,570	1,044	526
G-27	Radio Frequency Interference	8	682	690	387	303
G-28	Human Factors in Electronics	6	421	427	210	217
<b>Totals</b>		<b>5,667</b>	<b>81,360</b>	<b>87,027</b>	<b>72,041</b>	<b>14,986</b>

Table XVIII - Five-Year Analysis of Professional Group Membership, 1955 - 1959  
(Paid Membership Only)

Code	Group	1955	1956	1957	1958	1959
G-1	Audio	2,996	3,809	4,324	4,348	5,403
G-2	Broadcasting	838	1,119	1,252	1,275	1,598
G-3	Antennas & Propagation	1,700	2,362	2,814	3,117	3,772
G-4	Circuit Theory	3,258	4,510	5,956	6,690	7,932
G-5	Nuclear Science	1,008	1,381	1,624	1,587	1,869
G-6	Vehicular Communications	741	966	1,161	1,229	1,442
G-7	Reliability & Quality Control	659	1,021	1,369	1,455	1,790
G-8	Broadcast & Television Receivers	1,532	1,925	1,905	1,915	1,874
G-9	Instrumentation	2,429	2,986	3,422	3,710	4,323
G-10	Space Electronics & Telemetry	1,450	1,978	2,499	2,766	3,625
G-11	Aeronautical & Navigational Electronics	1,922	2,488	2,893	3,124	3,752
G-12	Information Theory	1,707	2,345	2,721	2,796	3,342
G-13	Industrial Electronics	1,361	1,624	1,785	1,894	2,128
G-14	Engineering Management	2,302	3,327	4,202	4,024	4,509
G-15	Electron Devices	1,871	2,843	3,758	4,221	5,043
G-16	Electronic Computers	3,916	5,461	6,881	7,505	8,808
G-17	Microwave Theory & Techniques	2,148	3,091	3,607	4,034	5,160
G-18	Medical Electronics	1,101	1,435	1,661	1,711	2,134
G-19	Communications Systems	1,340	1,944	2,304	2,591	3,265
G-20	Ultrasonics Engineering	456	632	741	782	955
G-21	Component Parts	800	1,284	1,559	1,648	1,882
G-22	Production Techniques	318	640	821	889	1,115
G-23	Automatic Control	709	1,856	2,736	3,233	3,963
G-24	Military Electronics	*	1,988	3,221	3,395	3,907
G-25	Education	*	*	170	461	749
G-26	Engineering Writing & Speech	*	*	370	1,044	1,570
G-27	Radio Frequency Interference	*	*	10	387	690
G-28	Human Factors in Electronics	*	*	*	210	427
Totals		36,562	53,015	65,766	72,041	87,027

\* No fees levied.

Table XIX - Professional Groups Percentage Increases, 1958, 1959  
(excluding Groups established after 1956)

<u>Code</u>	<u>Group</u>	<u>1959</u> <u>Percentage Increase Over 1958</u>
G-10	Space Electronics & Telemetry	31.0
G-17	Microwave Theory & Techniques	27.9
G-19	Communications Systems	26.0
G-22	Production Techniques	25.4
G-2	Broadcasting	25.4
G-18	Medical Electronics	24.7
G-1	Audio	24.3
G-7	Reliability & Quality Control	23.3
G-23	Automatic Control	22.6
G-20	Ultrasonics Engineering	22.0
G-3	Antennas & Propagation	21.0
G-11	Aeronautical & Navigational Electronics	20.1
G-12	Information Theory	19.5
G-15	Electron Devices	19.4
G-4	Circuit Theory	18.5
G-5	Nuclear Science	17.7
G-6	Vehicular Communications	17.3
G-16	Electronic Computers	17.3
G-9	Instrumentation	16.6
G-24	Military Electronics	15.4
G-21	Component Parts	14.2
G-13	Industrial Electronics	12.4
G-14	Engineering Management	12.0
G-8	Broadcast & Television Receivers	minus 2.1

<u>Code</u>	<u>Group</u>	<u>1958</u> <u>Percentage Increase Over 1957</u>
G-23	Automatic Control	18.2
G-19	Communications Systems	12.4
G-15	Electron Devices	12.3
G-4	Circuit Theory	12.3
G-17	Microwave Theory & Techniques	11.8
G-3	Antennas & Propagation	10.8
G-10	Space Electronics & Telemetry	10.7
G-16	Electronic Computers	9.1
G-9	Instrumentation	8.4
G-22	Production Techniques	8.3
G-11	Aeronautical & Navigational Electronics	8.0
G-7	Reliability & Quality Control	6.3
G-13	Industrial Electronics	6.1
G-6	Vehicular Communications	5.8
G-21	Component Parts	5.7
G-20	Ultrasonics Engineering	5.5
G-24	Military Electronics	5.4
G-18	Medical Electronics	3.0
G-12	Information Theory	2.8
G-2	Broadcasting	1.8
G-1	Audio	.6
G-8	Broadcast & Television Receivers	.5
G-5	Nuclear Science	minus 2.3
G-14	Engineering Management	minus 4.2

Table XX - Affiliates by Group, 1957 - 1958 - 1959

<u>Code</u>	<u>Group</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
G-1	Audio	2	5	6
G-2	Broadcasting	-	-	-
G-3	Antennas and Propagation	-	1	2
G-4	Circuit Theory	2	2	4
G-5	Nuclear Science	5	9	10
G-6	Vehicular Communications	-	1	1
G-7	Reliability & Quality Control	1	21	42
G-8	Broadcast & Television Receivers	-	-	-
G-9	Instrumentation	2	2	5
G-10	Space Electronics & Telemetry	-	1	1
G-11	Aeronautical & Navigational Electronics	-	-	2
G-12	Information Theory	7	16	29
G-13	Industrial Electronics	-	-	-
G-14	Engineering Management	2	3	1
G-15	Electron Devices	7	8	8
G-16	Electronic Computers	15	55	66
G-17	Microwave Theory & Techniques	1	2	2
G-18	Medical Electronics	47	104	167
G-19	Communications Systems	-	-	1
G-20	Ultrasonics Engineering	1	7	4
G-21	Component Parts	-	-	1
G-22	Production Techniques	2	2	7
G-23	Automatic Control	5	9	12
G-24	Military Electronics	8	9	5
G-25	Education	-	4	12
G-26	Engineering Writing & Speech	-	18	28
G-27	Radio Frequency Interference	4	-	3
G-28	Human Factors in Electronics	-	-	2
Totals		111	279	421

It is with deep regret that this office records the death of the following members of the IRE during the year 1959.

FELLOWS

Goldup, Thomas E. - SM'52, F'52  
Morlock, William J. - A'43, SM'46, F'57  
Parker, Henry W. - SM'48, F'52  
Ridenour, Louis N., Jr. - SM'52, F'55  
Van Der Pol, Balthasar - M'20, F'29, L'55  
Varian, Russell H. - A'40, SM'51, F'52  
Wheeler, Lynde P. - F'28  
Zenneck, Jonathan - F'48, L'56  
Quarles, Donald A. - M'41, SM'43, F'54

SENIOR MEMBERS

Allen, Donald H. - M'53, SM'54  
Beasley, William A. - A'44, SM'49  
Binns, John R. - A'26, SM'54  
Brady, John B. - A'20, M'29, SM'43  
Brown, James F. - SM'50  
Cater, John R. - S'41, A'44, M'52, SM'57  
Crossley, Alfred - A'19, M'26, SM'43, L'57  
Doane, John E. - A'41, M'44, SM'54  
Ebers, J. James - S'46, A'48, SM'53  
Friend, Halton H. - A'28, M'38, SM'43  
Given, Frederick J. - SM'49  
Guthrie, Frederick P. - A'16, M'28, SM'43, L'56  
Heiser, Edwin S. - A'28, SM'44  
Hoyler, C. N. - A'35, SM'45  
Jenssen, Matz - SM'55  
Kaulback, Harold D. - A'58, SM'59  
Kent, Roscoe - A'48, M'50, SM'50  
Kesgen, Edward W. - A'49, M'51, SM'58  
Lee, Emery H. I. - J'15, A'18, M'23, SM'43  
Lovejoy, Edwin W. - A'14, M'26, SM'43  
Maggio, John B. - M'42, SM'43  
Morse, Elwood K. - SM'58  
Nathan, Reuben - SM'54  
Peay, Lawrence W., Jr. - A'41, M'47, SM'55  
Ruth, Edward A., III - SM'52  
Sands, William F. - A'41, SM'46  
Stuckert, E. Morris - A'30, SM'47  
Tarboux, Joseph G. - SM'54  
Waldorf, S. K. - A'41, SM'45  
Waller, Bennie F. - SM'56  
Watson, Edward F. - M'45, SM'45  
Webb, James S. - A'17, SM'46, L'59  
Weedfall, W. W. - A'44, SM'58  
Wesser, C. H. - A'41, M'42, SM'43

MEMBERS

Anders, Russell D. - A'43, M'55  
Atwood, William M. - S'58, M'59  
Barr, Ely E. - S'57, M'58  
Baruch, Sydney N. - A'44, M'55  
Baumbach, Earl J. - M'57  
Berman, Arnold D. - M'58  
Buck, Dudley A. - M'56  
Burns, John A. N. - M'58  
Canfield, Herbert H. - S'52, A'54, M'58  
Carlson, Harry A. - A'56, M'57  
Clanton, James D. Jr., - S'52, A'53, M'58  
Cox, Lemuel H. - M'47  
Croson, H. Lee - M'58  
Durham, Leland G. - S'45, A'50, M'55  
Ellsworth, John L. - S'52, M'56  
Frear, George C. - A'45, M'55  
Goldstein, William - A'52, M'58  
Gontermann, Adolf - M'56  
Green, Darrell B. - A'29, M'55  
Grimmett, Leonard J. - S'50, A'51, M'56  
Gyllstrom, Nylan D. - S'56, M'59  
Hamilton, Edwin E. - S'47, A'51, M'56  
Henderson, J. Alvin - A'50, M'58  
Hilson, Edward A. - M'57  
Hylkema, Chester G. - S'41, A'41, M'55  
Johnson, Marian S. - A'46, M'55  
Johnston, Edward L. - A'36, M'55  
Kleinberger, Robert - A'52, M'56  
Maring, Keith T. - M'54  
Marriner, Alfred W. - A'29, M'55  
Marsal, Paul A. - A'46, M'46  
Mathery, Lowell E. - S'49, A'51, M'58  
Meeker, Robert H. - M'57  
Morganstern, Richard I. - S'53, M'56  
Myers, Joseph R. - M'57  
Olson, Arthur J. - M'55  
Ossmann, Edward A. - A'45, M'55  
Poarch, M. F. - A'43, S'46, A'49, M'55  
Powers, Stephen J. - M'51  
Rappaport, Maurice B. - A'32, M'55  
Reber, John H. - S'47, A'49, M'55  
Robinson, Gordon D. - A'19, M'55, L'57  
Rothe, Mervyn E., Jr. - S'52, A'54, M'59  
Ruggi, Anthony G. - A'50, M'55  
Shortley, W. M. - A'42, M'55  
Sinclair, George W. - M'57  
Stein, Sidney - S'56, M'57

MEMBERS cont:

Sutherlin, Robert F. - A'51, M'56  
 Tweet, Ben O., Jr. - S'54, M'56  
 Van Every, Bliss - A'46, M'58  
 Walsh, Dorothy - S'51, A'52, M'57  
 Welker, John J. - A'44, M'55  
 Whiston, Raleigh W. - M'50  
 Whittier, R. J. E. - M'54  
 Wright, Robert A. - S'54, M'56

VOTING ASSOCIATES

Coates, Archie L - A'35, VA'39  
 Packman, M. E. - A'13, VA'39, L'51  
 Ross, Kenneth B. - A'28, VA'39

ASSOCIATES

Allen, Harold A. - A'58  
 Bolman, John G. - A'57  
 Brown, Stanley F. - S'56, A'57  
 Field, Charles - A'57  
 Fitzgerald, Maurice W. - A'50  
 Fogarty, Leonard L. - S'52, A'54  
 Frankel, Samuel K. - A'56  
 Hinrichs, Clair A - A'54  
 Kimes, Richard E. - S'49, A'51  
 Nelson, Donald A. - A'44  
 Phelps, Boyd - A'21  
 Pierson, George R. - A'55  
 Powers, Meredith L. - A'57  
 Sheets, George - A'55  
 Silvia, Everett R. - S'53, A'55  
 Sonnenfield, Sigmund - A'57  
 Spaeth, Charles A. - A'56  
 Stewart, Edward A. - A'53  
 Sussman, Albert B. - A'56  
 Stinson, Lawrence W. - A'29  
 Wetling, Thomas C., Jr. - A'58

STUDENTS

Curti, Dino L - S'56  
 Frederickson, Albert L. - S'58  
 Gardner, Jerry D. - S'58  
 Morgan, Edgar W., Jr. - S'58  
 Rosenbaum, Stanley H. - S'58  
 Simmonds, Paul R. - S'57  
 Tew, Loma O. - S'57  
 Wakefield, Robert P. - S'58

Table XXII - IRE International Convention

The IRE Board of Directors, when discussing the IRE international activities in 1959, approved a change in name of the annual IRE Convention to "IRE International Convention and Radio Engineering Show". This Convention continues to increase in importance each year and is internationally recognized as one of the largest conventions of its kind in the world. An exhibition of radio-electronic equipment became a part of the annual convention activities in 1930. The growth in Convention activities, from the first convention held in 1926 through 1959, is indicated in the comparison figures itemized below:

<u>Date</u>	<u>Year</u>	<u>Attend- ance</u>	<u>Firms Repre- sented</u>	<u>Exhibits</u>	<u>Net Space Occupied</u>	<u>Papers Presented</u>	<u>Location</u>
Jan. 18-19	1926	*	0	0	0	6	New York, N. Y.
Jan. 10-12	1927	425**	0	0	0	5	New York, N. Y.
Jan. 9-11	1928	800	0	0	0	9	New York, N. Y.
May 13-15	1929	555	0	0	0	37	Washington, D. C.
Aug. 18-21	1930	575	*	20**	*	23	Toronto, Canada
June 4-6	1931	400	*	50	*	19	Chicago, Ill.
April 7-9	1932	461	*	25**	*	23	Pittsburgh, Pa.
June 26-28	1933	487	*	35	*	24	Chicago, Ill.
May 28-30	1934	940	*	56	*	32	Philadelphia, Pa.
July 1-3	1935	586	*	34	*	21	Detroit, Mich.
May 11-13	1936	360	*	40	*	19	Cleveland, Ohio
May 10-12	1937	1,189	*	37	*	30	New York, N. Y.
May 15-17	1938	1,866	*	29	*	49	New York, N. Y.
Sept. 20-23	1939	1,668	*	34	*	26	New York, N. Y.
June 27-29	1940	1,071	*	35**	*	44	Boston, Mass.
Jan. 9-11	1941	1,310	*	30**	*	28	New York, N. Y.
(Winter)							
June 23-25	1941	353	0	0	0	33	Detroit, Mich.
(Summer)							
Jan. 12-14	1942	1,790	*	30**	*	25	New York, N. Y.
(Winter)							
June 29-30	1942	256	0	0	0	23	Cleveland, Ohio
& July 1							
(Summer)							
Jan. 28	1943	1,750	0	0	0	11	New York, N. Y.
Jan. 28-29	1944	1,704	0	0	0	22	New York, N. Y.
Jan. 24-27	1945	3,000	*	39	*	43	New York, N. Y.
Jan. 23-26	1946	7,200	1,571	135	13,200'***	88	New York, N. Y.
Mar. 3-6	1947	12,013	2,845	177	20,830'	118	New York, N. Y.
Mar. 22-25	1948	14,459	3,059	180	25,900'	130	New York, N. Y.
Mar. 7-10	1949	15,710	3,427	225	30,700'	144	New York, N. Y.
Mar. 6-9	1950	17,689	4,088	253	33,600'	163	New York, N. Y.
Mar. 19-22	1951	22,919	5,082	277	45,672'	198	New York, N. Y.
Mar. 3-6	1952	28,673	6,306	365	54,246'	211	New York, N. Y.
Mar. 23-26	1953	35,642	7,493	412	63,033'	214	New York, N. Y.
Mar. 22-25	1954	39,302	8,799	605	87,192'	242	New York, N. Y.
Mar. 21-24	1955	42,133	9,504	704	95,782'	248	New York, N. Y.
Mar. 19-22	1956	41,017***	8,851	716	98,684'	277	New York, N. Y.
Mar. 18-21	1957	53,811	11,757	840	105,240'	284	New York, N. Y.
Mar. 24-27	1958	55,811	12,555	950	110,828'	285	New York, N. Y.
Mar. 23-26	1959	60,050	13,509	1,200	114,117'	263	New York, N. Y.

\* Figures not available    \*\* Estimated    \*\*\* Reduction in attendance due to blizzard

Table XXIII - Summary of Income and Expense, 1959

INCOME

Advertising	\$1,597,469	
Member Dues and Convention	1,527,984	
Subscriptions	196,644	
Sales Items, Binders, Emblems, etc.	167,176	
Investment Income	40,676	
Miscellaneous Income	<u>1,559</u>	
	Total Income	\$3,531,508

EXPENSE

Proceedings Editorial Pages	\$ 540,922	
Advertising Pages	838,505	
Directory	277,172	
Section Rebates	80,147	
Student Program	137,658	
Professional Group Expense	225,737	
Sales Items	71,221	
General Operations	565,805	
Convention Cost	<u>434,266</u>	
	Total Expense	\$3,171,433

Reserve for Future Operations - Gross	<u>360,075</u>	
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Depreciation	<u>24,285</u>	
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Reserve for Future Operations - Net	<u><u>\$ 335,790</u></u>	
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Table XXIV - Balance Sheet - December 31, 1959

ASSETS

Cash and Accounts Receivable	\$ 718,317	
Inventory	<u>26,656</u>	
Total Current Assets		\$ 744,973
Investments at Cost	1,830,927	
Buildings and Land at Cost	974,140	
Furniture and Fixtures at Cost	251,519	
Other Assets	<u>75,041</u>	
Total		<u>3,131,627</u>
Total Assets		<u><u>\$3,876,600</u></u>

LIABILITIES AND SURPLUS

Accounts Payable	<u>\$ 96,371</u>	
Total Current Liabilities		\$ 96,371
Deferred Income	1,022,280	
Professional Group Funds on Deposit	<u>198,955</u>	<u>1,221,235</u>
Total Liabilities		\$1,317,606
Reserve for Depreciation	100,939	
Reserve for Publications	<u>30,000</u>	
Total Reserves		130,939
Surplus Donated	595,287	
Surplus	<u>1,832,768</u>	
Total Surplus		<u>2,428,055</u>
Total Liabilities and Surplus		\$3,876,600

Table XXV - Editorial Department

The year 1959 saw the IRE publication program continue its rapid growth. During the year the IRE published 131 issues totaling 17, 968 pages, an 18% increase over 1958. The increased publication output reflected the stepped-up program of PROCEEDINGS special issues and the fact that the Professional Group TRANSACTIONS enjoyed the largest annual growth since their inception eight years ago.

PROCEEDINGS OF THE IRE

The year was highlighted by the appearance of four special issues: "The Nature of the Ionosphere--An IGY Objective" in February, "Government Research" in May, "Infrared Physics and Technology" in September, and "Bio-Medical Electronics" in November. The resulting increase in the number of PROCEEDINGS papers from 183 in 1958 to 208 in 1959 was accompanied by an expansion of the Correspondence section from 180 letters to 209 letters. Consequently, the number of editorial pages reached an all-time high of 2,370 pages, as shown in Table 1 and Fig. 1.

Table 1 - Volume of PROCEEDINGS Pages

	<u>1959</u>	<u>1958</u>	<u>1957</u>	<u>1956</u>
Editorial	2370	2199	1868	1996
Advertising	<u>2760</u>	<u>2169</u>	<u>2700</u>	<u>2800</u>
TOTAL	5130	4368	4568	4796

The increase in special issues was largely responsible for the 25% increase in the number of papers reviewed for the PROCEEDINGS, 363 papers totaling 2965 pages. Of these, 38% were accepted, 34% were referred to the TRANSACTIONS for publication consideration, and 28%

were rejected. Four IRE Standards also appeared during the year.

### TRANSACTIONS

The health and vigor of the Professional Groups was unmistakably evidenced by a 44% increase in TRANSACTIONS output during 1959. As shown in Fig. 1 and Table 2, total pages increased from 5,388 in 1958 to 7,778. The total number of papers and letters published, 1,068, for the first time accounted for more than half the total IRE output (1,875).

### IRE CONVENTION RECORDS

The 1959 IRE NATIONAL CONVENTION RECORD, published in 10 parts, contained 223 papers and 20 abstracts totaling 2,116 pages, while the 8-part IRE WESCON CONVENTION RECORD contained 107 papers and 12 abstracts totaling 1,008 pages. In an important innovation, the IRE WESCON CONVENTION RECORD was published in time for distribution at WESCON.

### IRE STUDENT QUARTERLY

Four issues, totaling 224 pages, were sent free to IRE Student members during the year. In addition, approximately 24,000 free copies of the September issue were distributed to all non-IRE junior and senior electrical engineering students.

### IRE DIRECTORY

A new photographic method for reproducing listings from typed cards was adopted for the membership listings in the 1960 IRE DIRECTORY, resulting in a substantial savings in cost. The DIRECTORY, which was published in November, contained 1,312 pages including covers, of which 570 were membership listings and information and 742 were advertisements and listings of manufacturers and products.

CONFERENCE PUBLICATIONS

The Proceedings of the 1959 Western Joint Computer Conference, sponsored jointly by the IRE, AIEE and Association for Computing Machinery, was published by the IRE Editorial Department. The issue contained 364 pages including covers.

NEW PUBLICATIONS

Work on two new publications was gotten under way in 1959 for issuance during 1960. The first was a five-year cumulative index to all IRE publications which came out during 1954-1958. The second was an IRE Dictionary of Electronic Terms, containing all definitions of terms, graphical symbols and abbreviations which have appeared in IRE Standards over the past 15 years.

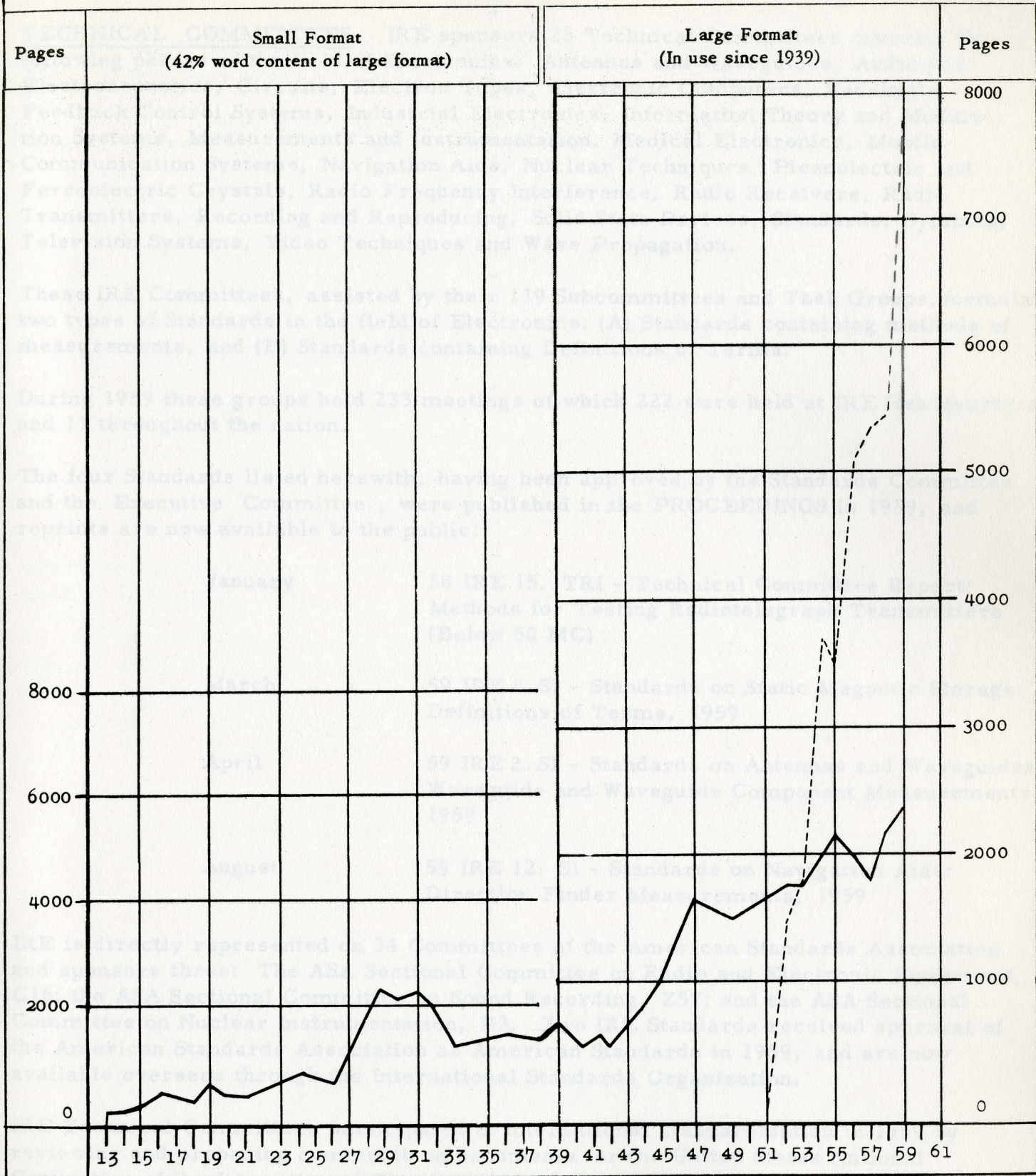
Automatic Control	3	398
Electronic Computers	4	438
Engineering Management	3	189
Engineering Writing and Speech	3	78
Industrial Electronics	4	249
Information Theory	3	344
Instrumentation	3	132
Medical Electronics	5	382
Microwave Theory and Techniques	4	324
Military Electronics	4	208
Nuclear Science	4	172
Production Techniques	3	140
Radio-Frequency Interference	1	32
Reliability and Quality Control	1	88
Space Electronics and Telemetry	4	232
Ultrasonics Engineering	1	44
Vehicle Communications	2	160
	36	778

Table 2 - Volume of TRANSACTIONS Pages, 1959

	<u>Issues</u>	<u>Pages</u>
Aeronautical and Navigational Electronics	4	280
Antennas and Propagation	5	952
Audio	6	188
Automatic Control	3	308
Broadcast and Television Receivers	3	252
Broadcasting	2	76
Circuit Theory	5	752
Communications Systems	4	308
Component Parts	4	300
Education	4	164
Electron Devices	4	492
Electronic Computers	4	600
Engineering Management	3	100
Engineering Writing and Speech	3	78
Industrial Electronics	4	240
Information Theory	5	544
Instrumentation	3	132
Medical Electronics	5	392
Microwave Theory and Techniques	4	524
Military Electronics	4	208
Nuclear Science	4	172
Production Techniques	3	140
Radio Frequency Interference	1	32
Reliability and Quality Control	1	88
Space Electronics and Telemetry	4	232
Ultrasonics Engineering	1	44
Vehicular Communications	2	180
	<u>95</u>	<u>7,778</u>

# VOLUME OF TECHNICAL AND EDITORIAL MATTER PUBLISHED IN THE PROCEEDINGS AND THE TRANSACTIONS

1913 to 1959



- - - - - TRANSACTIONS  
 \_\_\_\_\_ PROCEEDINGS

Table XXVI - Technical Activities - 1959

TECHNICAL COMMITTEES. IRE sponsors 25 Technical Committees covering the following phases of the field of Electronics: 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, Solid State Devices, Standards, Symbols, Television Systems, Video Techniques and Wave Propagation.

These IRE Committees, assisted by their 119 Subcommittees and Task Groups, formulate two types of Standards in the field of Electronics: (A) Standards containing methods of measurements, and (B) Standards containing Definitions of Terms.

During 1959 these groups held 233 meetings of which 222 were held at IRE Headquarters and 11 throughout the nation.

The four Standards listed herewith, having been approved by the Standards Committee and the Executive Committee, were published in the PROCEEDINGS in 1959, and reprints are now available to the public:

January	58 IRE 15. TRI - Technical Committee Report: Methods for Testing Radiotelegraph Transmitters (Below 50 MC)
March	59 IRE 8. S1 - Standards on Static Magnetic Storage: Definitions of Terms, 1959
April	59 IRE 2. S1 - Standards on Antennas and Waveguides: Waveguide and Waveguide Component Measurements, 1959
August	59 IRE 12. S1 - Standards on Navigation Aids: Direction Finder Measurements, 1959

IRE is directly represented on 34 Committees of the American Standards Association and sponsors three: The ASA Sectional Committee on Radio and Electronic Equipment, C16; the ASA Sectional Committee on Sound Recording, Z57; and the ASA Sectional Committee on Nuclear Instrumentation, N3. Two IRE Standards received approval of the American Standards Association as American Standards in 1959, and are now available overseas through the International Standards Organization.

IRE Technical Committees participated in international standardization in 1959 by reviewing and preparing comments on documents for the United States National Committee of the International Electrotechnical Commission.

## APPOINTED IRE DELEGATES ON OTHER BODIES

The IRE appointed delegates to the following bodies for the one-year period - May 1, 1959, to April 30, 1960:

American Standards Association, Inc., (ASA) U.S. Advisory Committee of the International Organization for standardization Technical Committee 69 on Statistical Treatment of Series of Observations (ISO/TC 69)

International Electrotechnical Commission (IEC) U. S. National Committee

International Radio Consultative Committee (CCIR) Executive Committee of U. S. Delegation

International Scientific Radio Union (URSI) Executive Committee, U. S. National Committee

Joint IRE-EIA-SMPTE-NARTB Committee for Inter-Society Coordination (JCIC) (Television)

In addition to the above, the IRE appointed representatives to serve on the following bodies for the year 1959:

Armed Forces National Research Council Committee: Panel on Bio-Instrumentation

Council for the American Association for Advancement of Science (AAAS)

National Academy of Sciences - National Research Council, Advisory Board of the Office of Critical Tables

National Bureau of Standards (NBS) IRE Technical Advisory Committee

National Electronics Conference (NEC)

National Research Council (NRC) Division of Engineering and Industrial Research

National Stereophonic Radio Committee (NSRC)

The Annual Spring Meeting of the International Scientific Radio Union (URSI) was held May 5, 6, and 7, 1959, in Washington, D. C. The Fall meeting was held October 19, 20 and 21, 1959, in San Diego, California. The IRE Professional Groups on Antennas and Propagation, Circuit Theory, Information Theory, Instrumentation, and Microwave Theory and Techniques cosponsored these meetings. The XIIIth General Assembly of URSI will be held on September 5 through 15, 1960, at the University College of the University of London, London, England.

During 1959, the Executive Committee of the U. S. Preparatory Committee of the International Radio Consultative Committee (CCIR) held five meetings. At these meetings, the representatives of the fourteen Study Groups summarized and reported on their activities. Numerous responses to the questions under review by the Study Groups have been received in IRE during 1959. Lists of all material received from these organizations were distributed quarterly to the Chairmen of IRE Technical Committees and Professional Groups, as well as to The Joint Technical Advisory Committee.

The CCIR IXth Plenary Assembly was held at the Biltmore Hotel, Los Angeles, April 2 to 30, 1959. At this Assembly the United States' proposals were formulated for the International Telecommunication Union (ITU) conference which was held in Geneva beginning August 17, 1959, and ending December 18, 1959.

A report entitled "Radio Transmission by Ionospheric and Tropospheric Scatter" by the Joint Technical Advisory Committee was circulated to all delegates at the Geneva conference in connection with the proposals being considered to amend the radio, telegraph and telephone regulations and to determine frequency allocations during the periods between international conferences.

#### THE JOINT TECHNICAL ADVISORY COMMITTEE (JTAC)

The Joint Technical Advisory Committee held a total of ten meetings for the period July 1, 1958, through June 30, 1959. The Eleventh Anniversary dinner was held in May, 1959.

Volume XVI, the cumulative Annual Report of the JTAC Proceedings was published in 1959. This included in Section I - Official Correspondence between the Federal Communications Commission and The Joint Technical Advisory Committee (IRE-EIA). Also included were items of correspondence pertinent to the activities of the JTAC. Section II of the Report contained the approved Minutes of Meetings of The Joint Technical Advisory Committee for the period July 1, 1958, through June 30, 1959.

The JTAC Subcommittee 55.1 on the Study of Forward Scatter Propagation, and its two working groups on Ionospheric Scatter Transmission, and Tropospheric Transmission rendered a report on "Radio Transmission by Ionospheric and Tropospheric Scatter." This was forwarded in preprint form to all delegates attending the CCIR Plenary conferences. This report will be published in the January, 1960, issue of the IRE PROCEEDINGS.

#### THE INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

The International Electrotechnical Commission Subcommittee 12-1 on Measurements met in Ulm, Germany, from October 3 to 9, 1959. IRE secured the services of a delegate to represent the United States, and the IRE Technical Committees prepared this delegate on all items to be discussed at this meeting.

The annual meeting of the International Electrotechnical Commission was held in Madrid, Spain, June 30 to July 10, 1959. IRE did not actively participate in these meetings, since there were no meetings of IEC Technical Committee 12 on Radio Communication, or Technical Subcommittee 12-1 on Measurements scheduled at this time.

A list of all documents and material received in the Office of the IRE Technical Secretary from the IEC was distributed to the Chairmen of all Professional Groups, Technical Committees and Subcommittees.

## PROFESSIONAL GROUP SYSTEM

### GENERAL

There are currently 28 Professional Groups operating actively within the IRE.

Approximately 65% of all IRE members have taken advantage of the Professional Group System which now has a total membership of 87,027. Included are 5667 Student members of the IRE who have joined the Groups at the special Student member rate of \$1.00 annually. Under the newly instituted Affiliate Plan, 421 scientists and medical doctors, whose major interests lie in fields other than electronics, have affiliated with a number of the Professional Groups.

All of the Groups have levied publications fees and their members are receiving the pertinent Group TRANSACTIONS regularly. In addition, a large number of company, university and public libraries have subscribed to the TRANSACTIONS of all the Groups. There is also a demand for individual Group subscriptions and individual copies of the TRANSACTIONS from outside sources.

Financial and editorial assistance were among the many services rendered by Headquarters to the Groups during 1959. The Office of the Technical Secretary provided administrative services for Group operations, the planning of meetings, advance publicity and the recording and mailing for all activities, including 838 mailings to Group members during the year.

### SYMPOSIA

The procurement of papers and actual management of national symposia are entirely in the hands of the Professional Groups. Each of the Groups sponsored one or more technical meetings during this year, in addition to Technical Sessions at the IRE International Convention, the WESCON, The National Electronics Conference and other jointly sponsored meetings, for a total of 50 meetings of national import in 1959 (see list attached).

### PUBLICATIONS

During the year, 27 Groups published 95 TRANSACTIONS containing 7,778 pages. Since publication began in 1951, 487 issues (33,870 pages) have appeared. Full details on Group TRANSACTIONS are included in the Report of the Editorial Department.

### PROFESSIONAL GROUP CHAPTERS

263 Professional Group Chapters have been organized by Group members in 58 IRE Sections (see list attached). Chapter growth is continuing at a healthy rate. The Chapters are meeting regularly and sponsoring meetings in the fields of interest of their associated Groups in the various Sections.

Professional Group Chapters

Established as of December 31, 1959

<u>Group Code No.</u>	<u>Name of Group</u>	<u>No. of Chapters</u>	<u>Section Location</u>	
G-11	Aeronautical & Navigational Electronics	10	Akron Baltimore Boston Dayton Fla. West Coast	Kansas City-Wichita Met. NY, No. NJ & LI Oklahoma City Philadelphia St. Louis
G-3	Antennas & Propagation	14	Akron Alb. - Los Alamos Boston Chicago Columbus Dayton Denver-Boulder	Los Angeles Orange Belt Philadelphia San Diego San Francisco Syracuse Washington, D. C.
G-1	Audio	17	Alb. - Los Alamos Baltimore Boston Chicago Cincinnati Cleveland Dayton Hawaii Houston	Milwaukee Philadelphia San Antonio San Diego San Francisco Syracuse Twin Cities Washington, D. C.
G-23	Automatic Control	11	Akron Baltimore Boston Dallas-Ft. Worth Fla. West Coast Long Island	Los Angeles Milwaukee New York Philadelphia Twin Cities
G-2	Broadcasting	12	Boston Chicago Cleveland Fla. West Coast Houston Omaha-Lincoln	Philadelphia Pittsburgh San Francisco Twin Cities Vancouver Washington, D. C.
G-8	Broadcast & Television Receivers	2	Chicago	Los Angeles
G-4	Circuit Theory	12	Alb. - Los Alamos Boston Chicago Houston Los Angeles Omaha-Lincoln	Quebec Philadelphia San Antonio Seattle Syracuse Tucson

Professional Group Chapters

Established as of December 31, 1959

(continued)

<u>Group Code No.</u>	<u>Name of Group</u>	<u>No. of Chapters</u>	<u>Section Location</u>	
G-19	Communications Systems	13	Baltimore Chicago Fla. West Coast Hawaii Los Angeles Oklahoma City	Omaha-Lincoln Philadelphia Rome-Utica San Francisco Syracuse Toronto Washington, D. C.
G-21	Component Parts	8	Baltimore Buffalo-Niagara Chicago Dayton	Los Angeles Met. NY, NJ, LI Philadelphia Washington, D. C.
G-15	Electron Devices	9	Boston Elmira-Corning Los Angeles New York Philadelphia	San Francisco Schenectady Syracuse Washington, D. C.
G-16	Electronic Computers	19	Akron Baltimore Binghamton Boston Chicago Dallas-Ft. Worth Dayton Detroit Houston Long Island	Los Angeles Montreal New York & N. J. Omaha-Lincoln Philadelphia Pittsburgh San Francisco Twin Cities Washington, D. C.
G-14	Engineering Management	11	Boston Chicago Dayton Los Angeles NY, No. NJ, LI Philadelphia	Rome-Utica San Francisco Syracuse Twin Cities Washington, D. C.
G-26	Engineering Writing & Speech	6	Boston Chicago Los Angeles	New York San Francisco Washington, D. C.
G-13	Industrial Electronics	4	Chicago Cleveland	Omaha-Lincoln Schenectady
G-12	Information Theory	4	Boston Los Angeles	White Sands Proving Grounds Washington, D. C.

Professional Group Chapters

Established as of December 31, 1959

(continued)

<u>Group Code No.</u>	<u>Name of Group</u>	<u>No. of Chapters</u>	<u>Section Location</u>	
G-9	Instrumentation	8	Atlanta Chicago Fla. West Coast Houston	Long Island Los Angeles St. Louis Washington, D. C.
G-18	Medical Electronics	16	Baltimore Boston Buffalo-Niagara Chicago Columbus Houston Los Angeles Montreal	Met. NY, NJ, LI. North Carolina Omaha-Lincoln Philadelphia Portland San Diego San Francisco Washington, D. C.
G-17	Microwave Theory & Techniques	19	Alb. -Los Alamos Baltimore Boston Buffalo-Niagara Chicago Columbus Denver-Boulder Long Island Los Angeles New York	No. New Jersey Omaha-Lincoln Philadelphia San Diego San Francisco Schenectady Syracuse Tokyo Washington, D. C.
G-24	Military Electronics	19	Baltimore Boston Buffalo-Niagara Central Florida Chicago Dayton Jt. Ft. Huachuca, Phoenix, Tucson Fort Wayne Indianapolis	Long Island Los Angeles North Carolina Northwest Fla. Philadelphia Rome-Utica San Diego San Francisco Syracuse Washington, D. C.
G-5	Nuclear Science	9	Albuquerque Boston Chicago Conn. Valley Dayton	Los Alamos Oak Ridge Pittsburgh Washington, D. C.
G-22	Production Techniques	6	Boston Los Angeles NY, NJ, LI	Philadelphia San Francisco Washington, D. C.

Professional Group Chapters

Established as of December 31, 1959

(continued)

<u>Group Code No.</u>	<u>Name of Group</u>	<u>No. of Chapters</u>	<u>Section Location</u>	
G-27	Radio Frequency Interference	2	Ft. Worth	Washington, D. C.
G-7	Reliability & Quality Control	10	Boston Chicago Columbus Fla. West Coast Fort Worth	Los Angeles NY, NJ, LI Philadelphia San Francisco Washington, D. C.
G-10	Space Electronics & Telemetry	10	Albuquerque Central Fla. Chicago Dayton Detroit	Huntsville Los Angeles Philadelphia San Francisco Washington, D. C.
G-6	Vehicular Communications	12	Baltimore Chicago Dallas Detroit Fla. West Coast Houston	Los Angeles NY, NJ, LI Omaha-Lincoln Philadelphia Twin Cities Washington, D. C.

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25	263	58
Groups	Chapters	Sections

Conference on Analog & Digital Recording & Controlling Instrumentation Philadelphia, Pa. April 20-21

15th Annual Conference on Television & Transistors Cincinnati, Ohio April 21-22

Nat'l. Aeronautical Electronics Conference Dayton, Ohio May 4-6

URSI Spring Meeting Washington, D. C. May 5-7

Electronic Components Conference Philadelphia, Pa. May 6-8

7th Regional Technical Conference & Trade Show Albuquerque, N.M. May 6-8

Joint Conference on Automatic Techniques Chicago, Ill. May 11-13

National Technical Meetings, 1959

<u>Name of Meeting</u>	<u>Sponsoring Groups</u>	<u>Place</u>	<u>Date</u>
5th Nat'l. Symposium on Reliability & Quality Control	PGRQC, AIEE, ASQC, EIA	Philadelphia, Pa.	January 12-14
Solid State Circuits Conference	PGCT, AIEE, Univ. of Pennsylvania	Philadelphia, Pa.	February 12-13
6th Annual Cleveland Electronics Conference	Cleveland Section, AIEE, ISA, Cleveland Physics Society	Cleveland, Ohio	February 12-13
Western Joint Computer Conference	PGEC, AIEE, ACM	San Francisco, Calif.	March 3-5
IRE Nat'l. Convention	All PG's	New York, N. Y.	March 23-26
Symposium on Millimeter Waves	PGCT, PGED, PGMTT, PIB, Dept. of Defense Research Agencies	New York, N. Y.	March 31-April 1-2
5th Nuclear Congress	EJC, PGNS	Cleveland, Ohio	April 5-10
4th Conference on Industrial Instrumentation & Control	Armour Research Found., PGIE	Chicago, Ill.	April 14-15
Southwestern Regional Conference (SWIRECO)	Region 6	Dallas, Texas	April 16-18
Conference on Analog & Digital Recording & Controlling Instrumentation	PGIE, PGI, AIEE	Philadelphia, Pa.	April 20-21
13th Annual Conference on Television & Transistors	Cincinnati Section	Cincinnati, Ohio	April 21-22
Nat'l. Aeronautical Electronics Conference	PGANE, Dayton Section, IAS	Dayton, Ohio	May 4-6
URSI Spring Meeting	URSI, PGAP, PGI, PGIT, PGCT, PGMTT	Washington, D. C.	May 5-7
Electronic Components Conference	PGCP, AIEE, EIA, WCEMA	Philadelphia, Pa.	May 6-8
7th Regional Technical Conference & Trade Show	Region 7	Albuquerque, N. M.	May 6-8
Joint Conference on Automatic Techniques	PGIE, AIEE, ASME	Chicago, Ill.	May 11-13

National Technical Meetings, 1959  
(continued)

<u>Name of Meeting</u>	<u>Sponsoring Groups</u>	<u>Place</u>	<u>Date</u>
PGMTT National Symposium	PGMTT	Cambridge, Mass.	June 1-3
3rd Nat'l. Conference on Production Techniques	PGPT	San Mateo, Calif.	June 4-5
Symposium on Electro-magnetic Theory	University of Toronto, USSI Com. 6, PGAP, PGMTT	Toronto, Canada	June 15-20
International Conference on Information Processing	UNESCO, PGEC, AIEE, ACM	Paris, France	June 15-20 (Exhibits June 13-22)
International Symposium on Circuit & Information Theory	PGIT, PGCT	Los Angeles, California	June 16-18
International Conference on Medical Electronics	UNESCO, CIOMS, PGME, Rockefeller Institute	Paris, France	June 24-28
IRE-RTCA Meeting	RTCA, Los Angeles Section	Los Angeles, Calif.	July 15-17
1st Nat'l. Ultrasonics Symposium	PGUE	San Francisco, Calif.	August 17
WESCON	Los Angeles & San Francisco Sections	San Francisco, California	August 18-21
Engineering Writing & Speech Symposium	PGEWS	Boston, Mass. & Los Angeles, California	September 17-18
Symposium on Antennas & Propagation	Cedar Rapids Section	Cedar Rapids, Iowa	September 18-19
Special Technical Conf. on Non-Linear Magnetics & Magnetic Amplifiers	PGIE, AIEE, ISA	Washington, D. C.	September 23-25
9th Annual Broadcast Symposium	PGB, AIEE	Washington, D. C.	September 25-26
Nat'l. Symposium on Space Electronics & Telemetry	PGSET	San Francisco, California	September 28-30
Industrial Electronics Symposium	PGIE, AIEE	Pittsburgh, Pa.	September 30-October 1

National Technical Meetings, 1959

(continued)

<u>Name of Meeting</u>	<u>Sponsoring Groups</u>	<u>Place</u>	<u>Date</u>
Nat'l. Communications Symposium	PGCS, Rome-Utica Section	Utica, N. Y.	October 5-7
Conference on Radio Interference Reduction	PGRFI, Signal Corps, Armour Res. Foundation	Chicago, Ill.	October 6-8
IRE Canadian Convention	Region 8	Toronto, Canada	October 7-9
Nat'l. Electronics Conference	IRE, AIEE, EIA, SMPTE	Chicago, Ill.	October 12-15
URSI Fall Meeting	URSI, PGAP, PGCT, PGIT, PGMTT	San Diego, Calif.	October 19-21
East Coast Aeronautical & Navigational Electronics Conference	PGANE, Baltimore Section, ARDC	Baltimore, Md.	October 26-28
Electron Devices Meeting	PGED	Washington, D. C.	October 29-31
Mid-America Electronics Convention (MAECON)	Kansas City Section	Kansas City, Mo.	November 3-5
Nat'l. Automatic Control Conference	Dallas Section, PGAC, PGIE, ISA, AIEE	Dallas, Texas	November 4-6
Radio Fall Meeting	IRE, EIA	Syracuse, N. Y.	November 9-11
4th Instrumentation Conference	PGI	Atlanta, Georgia	November 9-11
12th Annual Electrical Techniques in Medicine & Biology Conference	PGME, AIEE, ISA	Philadelphia, Pa.	November 10-12
Conference on Magnetism & Magnetic Materials	IRE, AIEE, APS, AIM, ONR	Detroit, Michigan	November 16-19
New England Research & Engineering Meeting (NEREM)	Region 1	Boston, Mass.	November 17-19
PG on Nuclear Science 6th National Meeting	PGNS	Boston, Mass.	November 19-20
Eastern Joint Computer Conference	PGEC, AIEE, ACM	Boston, Mass.	December 1-3
4th Midwest Symposium on Circuit Theory	PGCT, Marquette University	Milwaukee, Wisc.	December 1-2
PGVC Annual Meeting	PGVC	St. Petersburg, Fla.	December 3-4

Table XXVII - Section Activities

We were glad to welcome five new Sections into the IRE during the past year. They are as follows:

- |   |                   |
|---|-------------------|
| 1. Benelux  | May 13, 1959      |
| 2. Gainesville (formerly Subsection)                  | October 8, 1959   |
| 3. India  | November 16, 1959 |
| 4. Italy  | May 13, 1959      |
| 5. Orlando (formerly part of Central Florida Section) | May 13, 1959      |

The total number of Sections is now 105. Reference to Table XXVIII will show Section Membership statistics for the years 1958 and 1959, as well as meetings held in all Sections for the same period.

The Subsections of Sections now total 27, the following being formed in 1959:

Reading (Philadelphia)	February 10, 1959
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The following Subsections were dissolved in 1959:

Palo Alto (San Francisco)	March 30, 1959
USAFIT (Dayton)	October 7, 1959

## MEETINGS\*\*

## MEMBERSHIP

Reg.	Section	1959			1958			1958		1959	
		Section	PG	Total	Section	PG	Total	Sub. - Section	Total	Sub. - Section	Total
1	Binghamton	9	1	10	9	4	13		410		495
	Boston	6	59	81	5	60	81		4,640		5,297
	Merrimack Valley S.	6	-	-	3	-	-	347		503	
	New Hampshire S.	5	-	-	4	-	-	164		193	
	No. Vermont S.	5	-	-	9	-	-	52		67	
	Buffalo-Niagara	8	1	9	8	1	9		405		418
	Connecticut	6	3	13	5	3	9		971		1,060
	Fairfield County S.	4	-	-	1	-	-	374		409	
	Elmira-Corning	9	0	9	9	0	9		132		149
	Erie	4	-	4	9	-	9		69		60
	Ithaca	5	0	5	10	0	10		150		168
	Rochester	6	0	6	10	0	10		462		496
	Rome-Utica	9	4	13	7	5	12		473		524
	Schenectady	9	0	9	9	3	12		426		411
	Syracuse	7	15	22	5	24	29		914		963
	Western Mass.	7	0	7	8	0	8		264		262
		105	83	188	111	100	211		9,316		10,303
2	Long Island	21	14	35	21	16	37		3,730		3,982
	New York	4	30	58	9	46	77		4,703		5,002
	Mid-Hudson S.	8	-	-	9	-	-	551		763	
	Monmouth S.	8	-	-	8	-	-	545		564	
	Westchester S.	8	-	-	5	-	-	657		713	
	Northern New Jersey	7	6	13	8	6	14		3,436		3,696
	Princeton	7	0	7	8	0	8		609		677
			63	50	113	68	68	136		12,478	
3	Atlanta	8	4	12	15	0	15		621		688
	Baltimore	9	18	27	10	20	30		1,222		1,367
	Central Florida	10	4	14	16	8	24		906		448
	Florida West Coast	9	6	15	10	22	32		318		357
	* Gainesville	3	-	3	0	0	0				229
	Huntsville	13	0	22	10	0	18		506		551
	Memphis S.	9	-	-	0	-	-	41		55	
	Nashville S.	0	-	-	8	-	-	129		112	
	Miami	10	0	10	7	0	7		272		282
	North Carolina	10	0	24	10	0	23		514		594
	East. No. Carolina S.	7	-	-	5	-	-	160		167	
	W. No. Carolina S.	7	-	-	8	-	-	64		66	
	Northwest Florida	9	0	13	10	4	19		143		171
	Panama City S.	4	-	-	5	-	-	42		45	
	* Orlando	5	-	5	0	0	0				347
	Philadelphia	9	63	87	8	60	81		3,797		4,318
	Lancaster S.	4	-	-	5	-	-	269		221	
	Lehigh Valley S.	5	-	-	8	-	-	176		216	
	* Reading S.	6	-	-						67	
	South Carolina	8	0	8	5	-	5		234		310
	Virginia	9	0	9	8	0	8		466		475
	Washington	9	45	54	10	69	79		3,010		3,368
		163	140	303	158	183	341		12,009		13,505

Table XXVIII - Section and Subsection Meetings and Membership - 1958, 1959  
(Continued)

Reg.	Section	MEETINGS **						MEMBERSHIP			
		1959			1958			1958		1959	
		Section	PG	Total	Section	PG	Total	Sub. - Section	Total	Sub. - Section	Total
4	Akron	10	7	17	10	9	19		297		316
	Central Penn.	7	0	7	8	0	8		235		241
	Cincinnati	10	4	14	7	4	11		420		466
	Cleveland	7	3	10	10	4	14		512		533
	Columbus	8	3	11	14	0	14		349		389
	Dayton	4	11	15	9	22	31		777		835
	Detroit	7	12	19	10	12	22		1,094		1,188
	Emporium	13	0	13	12	0	12		131		143
	Pittsburgh	1	0	1	10	9	19		679		758
	Toledo	8	0	8	9	0	9		158		161
	Western Michigan	7	0	7	11	0	11		115		120
	Williamsport	5	0	5	4	0	4		54		63
		87	40	127	114	60	174		4,821		5,213
5	Cedar Rapids	10	0	12	11	0	14		633		701
	Burlington S.	2	-	-	3	-	-	22		35	
	Chicago	4	26	30	10	43	53		2,709		2,932
	Evansville-Owensboro	10	0	10	10	0	10		133		134
	Fort Wayne	7	0	7	10	3	13		226		235
	Indianapolis	6	5	11	8	0	8		513		508
	Louisville	4	0	4	6	0	6		167		163
	Milwaukee	6	5	11	9	3	12		788		915
	Omaha-Lincoln	8	16	24	9	10	19		246		273
	So. Bend-Mishawaka	5	0	5	9	0	9		236		235
	Twin Cities	6	8	14	8	4	12		881		975
			68	60	128	93	63	156		6,532	
6	Beaumont-Pt. Arthur	9	0	9	10	0	10		106		137
	Dallas	14	3	17	10	3	13		882		979
	Denver	8	0	8	9	1	10		614		726
	El Paso	7	0	12	9	0	16		196		229
	Las Cruces-										
	White Sands S.	5	-	-	7	-	-	73		89	
	Fort Worth	13	2	15	15	3	18		278		382
	Houston	9	8	17	10	6	16		540		613
	Kansas City	8	0	8	9	0	9		605		618
	Little Rock	8	0	8	7	0	7		135		139
	Lubbock	7	0	7	7	0	7		96		88
	New Orleans	9	0	9	5	0	5		259		273
	Oklahoma City	10	9	19	9	5	14		293		293
	St. Louis	7	0	7	8	0	8		707		747
	San Antonio-Austin	9	1	10	20	2	22		352		377
	Shreveport	10	0	10	10	0	10		75		73
	Tulsa	7	0	7	8	0	8		291		280
Wichita	6	0	6	9	0	9		101		153	
		146	23	169	162	20	182		5,530		6,107

Table XXVIII - Section and Subsection Meetings and Membership - 1958, 1959

(Continued)

Reg.	Section	MEETINGS **						MEMBERSHIP			
		1959			1958			1958		1959	
		Section	PG	Total	Section	PG	Total	Sub. - Section	Total	Sub. - Section	Total
7	Alamogordo-Holloman	9	0	9	11	0	11		108		105
	Albuquerque-Los Alamos	7	13	20	8	26	34		586		673
	Anchorage	10	-	10	5	-	5		100		107
	China Lake	3	0	3	8	0	8		103		108
	Fort Huachuca	10	0	10	8	0	8		93		104
	Hawaii	8	0	8	9	0	9		99		131
	Los Angeles	9	86	138	9	95	151		6,740		8,033
	Buenaventura S.	10	-	-	7	-	-	122		155	
	Orange Belt S.	6	-	-	10	-	-	504		571	
	Pasadena S.	4	-	-	7	-	-	590		636	
	San Fernando S.	6	-	-	8	-	-	1,092		1,442	
	Santa Ana S.	9	-	-	7	-	-	777		1,104	
	Santa Barbara S.	8	-	-	8	-	-	305		394	
	Phoenix	8	0	8	10	0	10		536		592
	Portland	13	0	13	12	0	12		327		376
	Sacramento	8	0	8	8	0	8		190		227
	Salt Lake City	7	0	7	7	0	7		335		410
	San Diego	11	3	14	12	4	16		800		834
	San Francisco	2	67	69	11	72	86		3,305		3,773
	East Bay S.	0	-	-	3	-	-	557		583	
	Seattle	6	0	10	11	0	17		959		1,173
	Richland S.	4	-	-	6	-	-	98		99	
	Tucson	6	0	6	7	1	8		246		271
		164	169	333	192	198	390		14,527		16,917
8	Bay of Quinte	7	0	7	7	0	7		111		145
	Hamilton	7	0	13	8	0	14		197		220
	Kitchener-Waterloo S.	6	-	-	6	-	-	73		77	
	London	8	0	10	7	0	7		123		119
*	South Western Ontario S.	2	0	-	-	-	-			32	
	Montreal	9	4	13	9	4	13		611		646
	Newfoundland	9	0	9	10	0	10		48		45
	Northern Alberta	5	0	5	9	0	9		138		183
	Ottawa	8	0	8	10	0	10		353		431
	Quebec	8	-	8	3	1	4		123		145
	Regina	4	0	4	9	0	9		79		104
	Southern Alberta	5	0	5	6	0	6		146		185
	Toronto	11	0	11	9	0	9		727		741
	Vancouver	8	1	9	10	0	10		250		255
	Winnipeg	8	0	8	11	0	11		151		158
		105	5	110	114	5	119		3,057		3,377

Table XXVIII - Section and Subsection Meetings and Membership - 1958, 1959

Reg.	Section	MEETINGS**						MEMBERSHIP				
		1959			1958			1958		1959		
		Section	PG	Total	Section	PG	Total	Sub. - Section	Total	Sub. - Section	Total	
* Benelux		1	-	1	-	-	-					88
Buenos Aires		11	0	11	15	0	15		117			110
Colombia		0	0	0	5	-	5		30			26
Egypt		5	-	5	5	0	5		26			23
* India		0	0	0								174
Israel		0	0	0	5	0	5		67			80
* Italy		0	0	0								152
Rio de Janeiro		7	0	7	8	0	8		47			49
Tokyo		6	1	7	6	0	6		274			308
		30	1	31	44	0	44		561			1,010
Totals		931	571	1,502	1,056	697	1,753		68,831			76,860

\* Established during 1959 \*\* As reported to IRE Headquarters 1/5/60

RECAPITULATION

1959

Region	1	2	3	4	5	6	7	8	Foreign	Totals
Sections	12	4	14	12	10	16	15	13	9	105
Subsections	4	3	8	0	1	1	8	2	-	27
Membership	10,303	13,357	13,505	5,213	7,071	6,107	16,917	3,377	1,010	76,860
Section Meetings	105	63	163	87	68	146	164	105	30	931
PG Meetings	83	50	140	40	60	23	169	5	1	571
Total Meetings	188	113	303	127	128	169	333	110	31	1,502

1958

Region	1	2	3	4	5	6	7	8	Foreign	Totals
Sections	12	4	12	12	10	16	15	13	6	100
Subsections	4	3	8	1	1	1	9	1	-	28
Membership	9,316	12,478	12,009	4,821	6,532	5,530	14,527	3,057	561	68,831
Section Meetings	111	68	156	114	93	162	192	114	44	1,054
PG Meetings	100	68	183	60	63	20	198	5	-	697
Total Meetings	211	136	341	174	156	182	390	119	44	1,753





(Continued)

Table XXIX - Professional Group Chapter Meetings, by Section, by Group - 1958, 1959 \*

SECTION		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total
Florida	1958		6				4	3		2		3								2				2						22
West Coast	1959		2				0	1		0		1								1				1						6
Ft. Huachuca	1958																								0					0
	1959																								3					3
Fort Wayne	1958																								0					0
	1959																								0					0
Fort Worth	1958																2											1		3
	1959							1									0											1		2
Gainesville	1958																													
	1959																													
Hamilton	1958																													
	1959																													
Hawaii	1958	0																		0										0
	1959	0																		0										0
Houston	1958	1	1		0		0			2							2		0											6
	1959	0	1		0		1			1							2		3											8
Huntsville	1958																													
	1959										0																			0
India	1958																													
	1959																													
Indianapolis	1958																													
	1959																								5					5
Israel	1958																													
	1959																													
Italy	1958																													
	1959																													
Ithaca	1958																													
	1959																													
Kansas City	1958											0																		0
	1959											0																		0
Little Rock	1958																													
	1959																													
London	1958																													
	1959																													
Long Island	1958						0			5		0			0	0			5	0			0	0	3	3				16
	1959						0			3		0			0	0	0		3	0			0	0	5	3				14







(Continued)

Table XXIX - Professional Group Chapter Meetings, by Section, by Group - 1958, 1959 \*

SECTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total	
Williams- port	1958																													
	1959																													
Winnipeg	1958																													
	1959																													
		77	39	64	31	39	52	43	15	30	66	32	22	6	79	65	123	132	73	53	0	44	31	43	81	0	25	3	0	1,268

\* As reported to IRE Headquarters 1/5/60

- a - Two separate G-5 Chapters
- b - Joint with Northern New Jersey, Long Island and Princeton
- c - Joint with Northern New Jersey and Long Island
- d - Joint with Northern New Jersey
- e - Joint with Fort Huachuca and Tucson
- f - Joint with Fort Worth
- g - Chapter dissolved in 1959

Akron  
 Albuquerque-Los Alamos  
 Alamo-Rio-Holloman  
 Baltimore  
 Beaumont-Port Arthur  
 Boston  
 Cedar Rapids  
 Central Florida  
 Central Pennsylvania  
 Chicago  
 Cleveland  
 Connecticut  
 Dallas  
 Dayton  
 Denver  
 Detroit  
 El Paso  
 Emporium  
 Evansville-Owen  
 Florida West Coast  
 Houston  
 Huntsville  
 Kansas City  
 Long Island  
 Los Angeles  
 Miami  
 Monmouth Subsection  
 (New York)  
 New York  
 North Carolina  
 Northern New Jersey  
 Northern Vermont Subsection  
 (Boston)  
 Oklahoma City  
 Ottawa  
 Philadelphia  
 Pittsburgh  
 Princeton

Table XXX - Section and Subsection Publications, 1959

A growing major activity of many Sections and the larger Subsections in recent years is the publication of a local monthly Bulletin to fulfill the need for announcing to the Section member the increasing activities of the Section, including (1) Section Meetings (2) Professional Group Chapter Meetings and (3) Information on the local and national level of interest to the Section member.

Forty-eight of the Sections and Subsections now issuing these monthly publications are listed below:

Akron	"Bulletin"
Albuquerque-Los Alamos	"The Blast"
Alamogordo-Holloman	"The Missile"
Baltimore	"The Speaker"
Beaumont-Port Arthur	"The Scatter"
Boston	"The Reflector"
Cedar Rapids	"Meeting Notice"
Central Florida	"Indian River Engineer"
Central Pennsylvania	"Newsletter"
Chicago	"Scanfax"
Cleveland	"Cleveland Section News"
Connecticut	"The Connector"
Dallas	"Direction"
Dayton	"Wave Guide"
Denver	"The Denver Decibel"
Detroit	"Cross Talk"
El Paso	"El Paso Electronics"
Emporium	"Newsletter"
Evansville-Owensboro	"The Transmitter"
Florida West Coast	"Suncoast Signal"
Houston	"The Scope"
Huntsville	"The Live Wire"
Kansas City	"The Local Oscillator"
Long Island	"The Pulse"
Los Angeles	"The Bulletin"
	"The Mid-month Bulletin"
Miami	"Miamitron"
Monmouth Subsection (New York)	"The Scanner"
New York	"The Monitor"
	"The Mid-month Monitor"
North Carolina	"Bulletin"
Northern New Jersey	"IRE Newsletter"
Northern Vermont Subsection (Boston)	"The Viren"
Oklahoma City	"Sooner Satellite"
Ottawa	"IRE Bulletin"
Philadelphia	"Almanack"
Pittsburgh	"Bulletin"
Princeton	"P. S."

Table XXX - Section and Subsection Publications, 1959 (Cont'd.)

Rome-Utica	"IRE Echoes"
St. Louis	"The Mighty Mho"
San Antonio-Austin	"The Analog"
San Diego	"Bulletin"
San Francisco	"The Grid"
Schenectady	"IRE Bulletin"
Seattle	"DataLink"
Syracuse	"Scanner"
Tokyo College of Texas	"Denshi Tokyo"
Tucson	"The wIRE"
Twin Cities	"The Radiator"
Washington	"Bulletin"

Table XXXI - Student Branches, 1959

The number of Student Branches formed during 1959 was 15. The total number of Student Branches is now 183, 118 of which operate as joint IRE-AIEE Branches and 15 as Student Associate Branches.

Following is a list of the Student Branches:

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
* Academy of Aeronautics	IRE	
Agricultural & Mechanical College of Texas	IRE-AIEE	
Air Force Institute of Technology	IRE	6/30/59
Akron, University of	IRE-AIEE	
Alaska, University of	IRE-AIEE	6/30/59
Alabama, University of	IRE-AIEE	
Alberta, University of	IRE-AIEE	
Arizona State University	IRE	
Arizona, University of	IRE-AIEE	
Arkansas, University of	IRE-AIEE	
Auburn University	IRE	
Bradley University	IRE	
Bridgeport, University of	IRE	5/12/59
Brigham Young University	IRE	
British Columbia, University of	IRE-AIEE	
Brooklyn, Polytechnic Institute of	IRE-AIEE (Day Div.)	5/12/59
Brooklyn, Polytechnic Institute of	IRE-AIEE (Eve. Div.)	
* Broome Technical Community College	IRE	6/30/59
Brown University	IRE-AIEE	
Bucknell University	IRE-AIEE	
California Institute of Technology	IRE-AIEE	
California State Polytechnic College	IRE	
California State Polytechnic College (Kellogg-Voorhis Campus)	IRE	
California, University of (Berkeley)	IRE-AIEE	

Table XXXI- Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
*Capitol Radio Engineering Institute	IRE	
Carnegie Institute of Technology	IRE-AIEE	
Case Institute of Technology	IRE-AIEE	
Catholic University of America	IRE-AIEE	
*Central Technical Institute	IRE	
Cincinnati, University of	IRE-AIEE	
Clarkson College of Technology	IRE-AIEE	
Clemson College	IRE-AIEE	
Colorado, University of	IRE-AIEE	
Colorado State University	IRE-AIEE	
Columbia University	IRE-AIEE	
Connecticut, University of	IRE-AIEE	
Cooper Union	IRE-AIEE	
Cornell University	IRE-AIEE	
Dayton, University of	IRE-AIEE	
Delaware, University of	IRE-AIEE	
Denver, University of	IRE-AIEE	
Detroit, University of	IRE-AIEE	
*Devry Technical Institute	IRE	5/12/59
Drexel Institute of Technology	IRE-AIEE	
Duke University	IRE-AIEE	6/30/59
Fairleigh Dickinson University	IRE	
Fenn College	IRE	
Florida, University of	IRE-AIEE	
George Washington University	IRE-AIEE	

Table XXXI - Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
Georgia Institute of Technology	IRE	
Hofstra College	IRE	
Houston, University of (College of Engineering)	IRE	
*Houston, University of (College of Technology)	IRE	
Howard University	IRE-AIEE	
Illinois Institute of Technology	IRE	
Illinois, University of	IRE-AIEE	
Idaho, University of	IRE-AIEE	2/10/59
Iowa, State University of	IRE	
Iowa State College	IRE-AIEE	
John Carroll University	IRE	
Johns Hopkins University	IRE-AIEE	
Kansas State College	IRE	
Kansas, University of	IRE-AIEE	
Kentucky, University of	IRE	
Lafayette College	IRE-AIEE	
Lamar State College	IRE	
La Salle College	IRE	4/2/59
Laval University	IRE-AIEE	
Lehigh University	IRE-AIEE	
Los Angeles State College of Applied Arts & Sciences	IRE	
Louisiana Polytechnic Institute	IRE-AIEE	

Table XXXI - Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
Louisiana State University	IRE-AIEE	
Louisville, University of	IRE-AIEE	
Lowell Technological Institute	IRE	
Loyola University of Los Angeles	IRE	
Maine, University of	IRE	
Manhattan College	IRE-AIEE	
Manitoba, University of	IRE	11/16/59
Marquette University	IRE-AIEE	
Maryland, University of	IRE-AIEE	
Massachusetts, University of	IRE-AIEE	
Massachusetts Institute of Tech.	IRE-AIEE	
Miami, University of	IRE	
Michigan College of Mining and Technology	IRE-AIEE	
Michigan State University	IRE-AIEE	
Michigan, University of	IRE-AIEE	
*Milwaukee School of Engineering	IRE	2/10/59
Minnesota, University of	IRE-AIEE	
Mississippi State College	IRE	
Missouri School of Mines and Metallurgy, University of	IRE-AIEE	
Missouri, University of	IRE-AIEE	
*Mohawk Valley Technical Institute	IRE	5/12/59
Montana State College	IRE-AIEE	
Nebraska, University of	IRE-AIEE	
Nevada, University of	IRE-AIEE	

Table XXXI - Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
Newark College of Engineering	IRE	
*New Bedford Institute of Technology	IRE	11/16/59
New Hampshire, University of	IRE-AIEE	
New Mexico State University	IRE-AIEE	
New Mexico, University of	IRE-AIEE	
New York, College of the City of	IRE	
New York University	IRE (Day Div.)	
New York University	IRE-AIEE(Eve. Div.)	
North Carolina State College	IRE-AIEE	
North Dakota, University of	IRE-AIEE	
North Dakota State College	IRE-AIEE	
Northeastern University	IRE-AIEE	
*Northrop Institute of Tech.	IRE	11/16/59
Northwestern University	IRE-AIEE	
Norwich University	IRE-AIEE	
Notre Dame, University of	IRE-AIEE	
Ohio Northern University	IRE-AIEE	
Ohio State University	IRE-AIEE	
Ohio University	IRE-AIEE	
Oklahoma, University of	IRE-AIEE	
Oklahoma State University	IRE-AIEE	
Oregon State College	IRE	
*Oregon Technical Institute	IRE	
Ottawa University	IRE	

Table XXXI - Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
Pennsylvania, University of	IRE-AIEE	
Pennsylvania State University, The	IRE-AIEE	
Pittsburgh, University of	IRE	
Pratt Institute	IRE-AIEE	
Princeton University	IRE-AIEE	
*Provincial Institute of Tech. & Art	IRE	
Puerto Rico, University of	IRE	12/15/59
Purdue University	IRE-AIEE	
Rensselaer Polytechnic Institute	IRE-AIEE	
Rhode Island, University of	IRE-AIEE	
Rice Institute	IRE-AIEE	
Rose Polytechnic Institute	IRE-AIEE	
Royal Military College of Canada	IRE	12/15/59
Rutgers University	IRE-AIEE	
*Ryerson Institute of Tech.	IRE	
St. Louis University	IRE	
San Diego State College	IRE	
San Jose State College	IRE-AIEE re-established as Joint Branch	5/28/59
Santa Clara, University of	IRE-AIEE	
Saskatchewan, University of	IRE	
Seattle University	IRE	
South Carolina, University of	IRE-AIEE	
South Dakota School of Mines and Technology	IRE	
South Dakota State College	IRE-AIEE	

Table XXXI - Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
Southern California, University of	IRE-AIEE	
Southern Methodist University	IRE-AIEE	
Southwestern Louisiana Institute	IRE	
Stanford University	IRE-AIEE	
Stevens Institute of Technology	IRE-AIEE	
Swarthmore College	IRE-AIEE	
Syracuse University	IRE-AIEE	
Tennessee Agricultural & Industrial State University	IRE	
Tennessee, University of	IRE-AIEE	re-established as Joint Branch - 8/25/59
Texas, University of	IRE-AIEE	
Texas College of Arts & Industries	IRE	
Texas Technological College	IRE-AIEE	
Toledo, University of	IRE-AIEE	
Toronto, University of	IRE	
Tufts University	IRE-AIEE	
Tulane University	IRE-AIEE	
Union College (Schenectady)	IRE-AIEE	
U. S. Naval Postgraduate School	IRE	
Utah State University	IRE	
Utah, University of	IRE-AIEE	
Valparaiso University	IRE	
Vermont, University of	IRE-AIEE	
Vanderbilt University	IRE-AIEE	
Villanova University	IRE-AIEE	

Table XXXI - Student Branches, 1959 (Cont'd.)

<u>School</u>	<u>Branch</u>	<u>Formed 1959</u>
Virginia Polytechnic Institute	IRE-AIEE	
Virginia, University of	IRE-AIEE	
Washington University	IRE-AIEE	
Washington, State College of	IRE-AIEE	
Washington, University of	IRE-AIEE	
Wayne University	IRE-AIEE	
*Wentworth Institute	IRE	
Western Ontario, University of	IRE	
*West Virginia Institute of Technology	IRE	2/10/59
West Virginia University	IRE-AIEE	
Wichita, University of	IRE-AIEE	
Wisconsin, University of	IRE-AIEE	
Worcester Polytechnic Institute	IRE-AIEE	
Wyoming, University of	IRE-AIEE	
Yale University	IRE-AIEE	
Youngstown University	IRE-AIEE	

\*Student Associate Branches