# VOLUME 1 - 1986

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td></td>
</tr>
<tr>
<td>THE FOUNDING AND DEVELOPMENT OF THE ANTIQUE WIRELESS ASSOCIATION AND ITS MUSEUM</td>
<td>Charles M. Brelsford</td>
</tr>
<tr>
<td>JOHN STONE STONE ON NIKOLA TESLA'S PRIORITY IN RADIO AND CONTINUOUS-WAVE RADIOFREQUENCY APPARATUS</td>
<td>Leland I. Anderson</td>
</tr>
<tr>
<td>FARNSWORTH'S CONTRIBUTIONS TO MODERN ELECTRONIC TELEVISION</td>
<td>Stephen F. Hofer</td>
</tr>
<tr>
<td>A RADIO AMATEUR IN WORLD WAR I</td>
<td>Clarence D. Tuska</td>
</tr>
<tr>
<td>A BRIEF HISTORY OF THE NATIONAL COMPANY, INC.</td>
<td>John J. Nagle</td>
</tr>
<tr>
<td>ATWATER KENT EARLY RADIO DEVELOPMENT</td>
<td>Ralph O. Williams</td>
</tr>
<tr>
<td>FIELD TEST OF THE ARMSTRONG WIDE-BAND FREQUENCY MODULATION SYSTEM FROM THE EMPIRE STATE BUILDING, 1934 AND 1935.</td>
<td>Thomas J. Buzalski</td>
</tr>
<tr>
<td>AN INTERVIEW WITH PAUL GODLEY</td>
<td>Wayne M. Nelson, W4AA</td>
</tr>
</tbody>
</table>

# VOLUME 2 - 1987

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td></td>
</tr>
<tr>
<td>DEFOREST RADIO TELEPHONE COMPANIES, 1907-1920</td>
<td>Thorn L. Mayes</td>
</tr>
<tr>
<td>ACROSS THE GAP: AN APPRAISAL OF SPARK RADIO TELEGRAPH ENGINEERING</td>
<td>A. C. Goodnow</td>
</tr>
<tr>
<td>ATWATER KENT EARLY RADIO DEVELOPMENT - THE MAHOGANY AND METAL BOXES</td>
<td>Ralph O. Williams</td>
</tr>
<tr>
<td>HAMMARLUND RADIO</td>
<td>Stuart Meyer</td>
</tr>
<tr>
<td>A CENTURY OF TELEGRAPH KEY DEVELOPMENT</td>
<td>Louise Ramsey Moreau</td>
</tr>
<tr>
<td>THE PHILADELPHIA RADIO STORY - THE FIRST FIFTY YEARS</td>
<td>Rexford M. Matlack</td>
</tr>
</tbody>
</table>
## VOLUME 3 - 1988

**FOREWORD** ........................................................ 4

**GUEST EDITORIAL**
Donald Christiansen .................................................. 5

**ATWATER KENT RADIO DEVELOPMENT - PART III**
**THE A.C. POWERED RECEIVERS**
Ralph O. Williams .......................................................... 6

**PROGRAM TRANSMISSION AND THE EARLY RADIO NETWORKS**
Ludwell A. Sibley .......................................................... 34

**AUDIO FREQUENCY CHARACTERISTICS IN EARLY BROADCASTING**
Robert M. Morris ............................................................ 48

**A.C. SUPPLY FOR RADIO RECEIVERS - HOW THE LOWELL AND DUNMORE PATENTS (ALMOST) CHANGED THE INDUSTRY**
Alan Douglas ................................................................. 61

**THE RADIO APPARATUS OF ERNEST C. MIGNON**
Lauren A. Peckham ............................................................ 79

**FOREIGN AND MILITARY TELEGRAPH KEYS**
Louise R. Moreau and Murray D. Willer ............................ 98

**THE ALEXANDERSON SYSTEM FOR ELECTRO-MECHANICAL PRODUCTION OF RADIO-FREQUENCY ENERGY**
Glen C. Fuller ................................................................. 120

## VOLUME 4 - 1989

**FOREWORD** ............................................................ 5

**A SKETCH OF EARLY RADIO VACUUM-TUBE RESEARCH AND DEVELOPMENT AT THE GENERAL ELECTRIC COMPANY**
J. M. Anderson ................................................................. 6

**THE HRO REPORT: DATING THE EARLY HRO**
Charles P. Fisher ............................................................. 32

**TUBE MANUFACTURING AT WESTERN ELECTRIC: THE WE 300B**
Attila R. Balaton ............................................................. 45

**THE FEMININE TOUCH IN TELECOMMUNICATIONS**
Louise R. Moreau ............................................................. 70

**A DECADE OF ELECTROACOUSTIC REPRODUCTION (1920-1930)**
Floyd A. Paul ................................................................. 84

**AN ELUSIVE FRAME OF TELEVISION HISTORY PRESERVED**
William E. Denk .............................................................. 99

**WESTERN ELECTRIC TUBES: SOME INTERESTING AND HISTORIC TYPES**
Ludwell Sibley ............................................................... 110
<table>
<thead>
<tr>
<th>Title</th>
<th>Author/Translator</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO INVENTED THE SUPERHETERODYNE?</td>
<td>Robert Champeix, translated by Richard Foster</td>
<td>97</td>
</tr>
<tr>
<td>AMATEUR RADIO IN THE NEW YORK CITY AREA PRE-WW I</td>
<td>Daniel C. McCoy</td>
<td>115</td>
</tr>
<tr>
<td>RADIO TUBE MANUFACTURE IN AUSTRALIA</td>
<td>Fin Stewart</td>
<td>125</td>
</tr>
<tr>
<td>THE MILITARY COMMUNICATIONS EXPLOSION, 1914-18</td>
<td>Louise Moreau</td>
<td>135</td>
</tr>
<tr>
<td>THE U. S. PATENTS OF ALEXANDERSON, CARSON, COLPITTS, DAVIS, GERNISBACK, HOGAN, LOOMIS, PUPIN, RIDER, STONE, AND STUBBLEFIELD</td>
<td>David W. Kraeuter</td>
<td>155</td>
</tr>
<tr>
<td>FOREWORD</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>RICEVITORE POPOLARE ITALIANO (THE ITALIAN PEOPLE'S RECEIVER)</td>
<td>Robert Lozier</td>
<td>1</td>
</tr>
<tr>
<td>MEMORIES OF EARLY ELECTRON-TUBE DEVELOPMENT</td>
<td>Edward W. Herold</td>
<td>15</td>
</tr>
<tr>
<td>THE FIRST HIGH-POWER TRANSMITTER AT POLDHU</td>
<td>Desmond Thackeray</td>
<td>29</td>
</tr>
<tr>
<td>SECRET TUBES FOR RADAR: THE WESTERN ELECTRIC 700-SERIES</td>
<td>Ludwell Sibley</td>
<td>47</td>
</tr>
<tr>
<td>APPENDIX - PRODUCTION OF VT90 (710A) IN VALVES IN AUSTRALIA</td>
<td>Colin MacKinnon</td>
<td>66</td>
</tr>
<tr>
<td>MILITARY ELECTRONIC EQUIPMENT - NAVAL EQUIPMENT MANUFACTURERS</td>
<td>Fred Chesson</td>
<td>69</td>
</tr>
<tr>
<td>A BRIEF HISTORY OF THE VALVE AUDIO AMPLIFIER</td>
<td>Carlos Fazano</td>
<td>91</td>
</tr>
<tr>
<td>THE EATON TUBE COLLECTION REVISITED</td>
<td>Jerry Vanicek</td>
<td>107</td>
</tr>
<tr>
<td>THE ARC METHOD OF PRODUCING CONTINUOUS WAVES</td>
<td>William J. Byron, W7DHD</td>
<td>119</td>
</tr>
<tr>
<td>ROBERT H. GODDARD AND THE GODDARD OSCILLATOR</td>
<td>M. D. Hall, K2LP</td>
<td>151</td>
</tr>
<tr>
<td>THE EVOLUTION OF BROADCASTING FROM THE TRANSMITTER VIEWPOINT</td>
<td>Author Unknown</td>
<td>159</td>
</tr>
<tr>
<td>INDEX AND ADDITIONS TO PATENTS LISTS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VOLUME 8 - 1993

Foreword .............................................................. i

UNUSUAL MILITARY MORSE KEYS
Louis Meulstee, PA0PCR ............................................... 1

RARE TUBES: HOW TO RECOGNIZE THEM, AND WHY THEY ARE RARE
Gerald F. J. Tyne .................................................. 47

A NEW BIBLIOGRAPHY OF REGINALD A. FESSENDEN
David W. Kraeuter ........................................ 55

'FEDERAL' AS A TELEPHONE COMPANY
Ludwell Sibley ................................................... 67

THE KFS-FEDERAL-MACKAY STORY. FROM CW ARC TO SILICON VALLEY
Hank Olson, W6GZN, and Bill Orr, W6SAI ...................... 75

JOSEPH T. FETSCH: VACUUM-TUBE ENGINEER AND COLLECTOR
Jerry Vanicek .................................................. 107

A HISTORY OF THE NATIONAL ELECTRICAL SUPPLY CO.
Edward B. Duvall, ex-3DW ........................................ 117

NAVY ELECTRONICS DIRECTORY
Frederick W. Chesson ........................................ 123

A GLIMPSE AT OLD-TIME TRANSMITTER DEVELOPMENT
Walter H. Nelson ........................................ 149

VOLUME 9 - 1995

FOREWORD .............................................................. 5

MARCONI - THE MAN AND HIS APPARATUS
James H. and Felicia A. Kreuzer ................................. 7

THE INTERNATIONAL CONTEST FOR RADAR
Ed Lyon .......................................................... 97

THE REAL STORY OF THE MAGNETRON
Ed Lyon .......................................................... 181

FRITZ LOWENSTEIN - THE FORGOTTEN MAN OF THE VACUUM TUBE
Pat Dowd ....................................................... 205

83 YEARS OF U.S. AMATEUR LICENSING
Neil D. Friedman ........................................ 225
VOLUME 10 - 1996

FOREWORD ........................................................ 5

ATWATER KENT-MASTER OF MARKETING
Ralph O. Williams ............................................... 7

THE RACE FOR RADIOTELEPHONE: 1900-1920
Mike Adams ..................................................... 78

COMMENORATING THE 75th ANNIVERSARY OF RADIO CENTRAL
Christopher Bacon .............................................. 150

DEFIANCE IN THE WEST- THE HEINTZ AND KAUFMAN STORY
Hank Olson and Al Jones ........................................ 188

THE COLLINS RADIO COMPANY- INGREDIENTS OF SUCCESS
F. Parker Heinemann ........................................... 222

GILFILLAN BROS. INC., EARLY RECORDS
Floyd Paul ........................................................ 245

VOLUME 11 - 1998

FOREWORD ........................................................ 5

THE TECHNOLOGY OF THE E. H. SCOTT RADIO LABORATORIES
Kent A. King .................................................... 6

THE BEGINNINGS OF VACUUM TUBE RADIO AT WESTERN ELECTRIC
Dirk J. Vermeulen .............................................. 104

TRANS-PACIFIC RADIO TELEPHONE CIRCUITS AND THE A-3 PRIVACY DEVICE
Roy S. Blackshear .............................................. 150

THE NATIONAL RADIO COMPANY, INC. - THE COIL-CATACOMB
RADIOS AND VARIATIONS ON A THEME...
Lawrence R. Ware .............................................. 166

VOLUME 12 - 1999

FOREWORD ........................................................ 5

INTRODUCTION .................................................... 7

CHAPTER 1. RADIO INSTRUMENTS AND MOUNTING BOARDS ............... 9

CHAPTER 2. AMPLIFYING INSTRUMENTS .................................. 16
Detectors, Sockets, Radio Frequency Amplifiers,
Audio Frequency Amplifiers, Detector Amplifiers,
Other Instruments, Manufacturing.
CHAPTER 17. THE 1933 SERIES ................................... 230

CHAPTER 18. THE 1934 SERIES ................................... 253

CHAPTER 19, THE 1935 SERIES ................................... 283

CHAPTER 20. CLOSING ........................................... 305

APPENDIX
1. THE BOARDS, RESTORATION .................................... 312
2. INDEX OF MODELS ............................................ 318
3. CHARACTERISTICS OF MODELS - INSERT

AUTHOR'S PROFILE .............................................. 320

VOLUME 13 - 2000

FOREWORD ........................................................ 5

MANUFACTURE OF BROADCAST RECEIVERS BY THE NORTHERN ELECTRIC COMPANY IN THE 1920s
Robert Murray .................................................... 7

MARCONI v. BRITISH RADIO TELEGRAPH AND TELEPHONE COMPANY: THE PATENT CASE THAT CHANGED THE WORLD
Graeme Bartram .................................................. 39

MARCONI'S TRANSATLANTIC TRIUMPH - A SKIP INTO HISTORY
Bartholomew Lee .................................................. 81

RADIO DIRECTION FINDING AND "HUFF-DUFF"
Richard C. Foster and Pierre Demerseman ....................... 98

"ANYTHING YOU CAN THINK OF DOING, WE'D JUST DO IT" THE EARLY HISTORY OF CHARLOTTE'S RADIO STATION WBT
Pamela Grundy .................................................... 115

EARLY RADIO STATIONS: WEEDS AND TREES
George A. Freeman .............................................. 124
FOREWORD ........................................................ 5

SPARK KEYS: THE INTERPLAY OF WIRELESS HISTORY AND TECHNOLOGY
Russ Kleinman, Jim Kreuzer, Karen Blisard, and Felicia Kreuzer .. 7

THE SPARK KEY PROJECT
Russ Kleinman and Karen Blisard ................................ 82

THE FIRST THIRTY YEARS OF THE CANADIAN MARCONI COMPANY
Roger Hart and Robert Murray ................................. 92

DOCTOR LEE DEFOREST, PROFESSOR WARREN JOHNSON,
AND THE AMERICAN WIRELESS TELEGRAPH COMPANY
Glenn Trischan ................................................ 148

THE BAKELITE RADIO: AN ICON OF THE 20TH CENTURY
Barbara Havranek .............................................. 178

CUMULATIVE TABLE OF CONTENTS OF ALL VOLUMES
OF THE AWA REVIEW ............................................. 196

FOREWORD ........................................................ 5

RADIO SPIES: EPISODES IN THE ETHER WARS
Bart Lee ........................................................ 7

THE MARCONI WIRELESS TELEGRAPH APPARATUS IN R.M.S. TITANIC
AS CONFIRMED BY PHOTOGRAPHS OF THE WRECK
Parks Stephenson ............................................... 98

SOWING SEEDS: GROWING AMERICA'S BROADCASTING SYSTEM
George A. Freeman ............................................. 126

"JUST PLUG-IN - THEN TUNE IN" - THE FIRST COMMERCIAL LIGHT-SOCKET
OPERATED RADIO RECEIVERS FROM ROGERS RADIO LTD., TORONTO, CANADA
Maurice Chaplin ............................................... 147

CUMULATIVE TABLE OF CONTENTS FOR ALL VOLUMES
OF THE AWA REVIEW ............................................. 179

FOREWORD ........................................................ 5

THE EMINENT YEARS OF POWEL CROSLEY JR., HIS TRANSMITTERS,
RECEIVERS, PRODUCTS, AND BROADCAST STATION WLW, 1921-1940
Charles J. Stinger ............................................ 7

EARLY WIRELESS PACK SETS: SPARK HITS THE BEACH
Russ Kleinman, Karen Blisard, 
Jim and Felicia Kreuzer, and August Link ....................... 96

JOHN F. RIDER, HUGO GERNSBACK, AND RCA RADIOTRON:
THE SAGA OF RIDER’S EARLY RADIO MANUALS
Charles C. Kirsten .................................................. 135

THE HISTORY OF THE DEVELOPMENT OF RADIO GRILLE CLOTH
Barbara Havranek .................................................. 180

CUMULATIVE TABLE OF CONTENTS FOR ALL 16 VOLUMES
OF THE AWA REVIEW ............................................. 206

VOLUME 17 - 2004

THE REGENCY TR-1 FIFTY YEARS LATER
Paul R. Farmer .................................................. 1

A HISTORY OF THE KODEL RADIO CORPORATION
John E. Leming, Jr .................................................. 31

THE EVOLUTION OF THE SUBMARINE TELEGRAPH,
WITH AN EXTENSIVE BIBLIOGRAPHY
by Bill Holly .................................................. 73

BROADCAST RECEIVER MANUFACTURE BY GENERAL ELECTRIC
AND WESTINGHOUSE IN THE FIRST DECADE OF RCA
Robert Murray .................................................. 107

THE EVOLUTION OF THE NATIONAL HRO AND ITS CONTRIBUTION
TO THE WINNING OF WORLD WAR II
Barry Williams .................................................. 145

VOLUME 18 - 2005

MOTOR BUZZER TRANSMITTERS
by Russ Kleinman, Karen Blisard, 
and A. J. Link .................................................. 1

WIRELESS SPECIALTY APPARATUS NOMENCLATURE GONE AWRY
by Eric Wenaas .................................................. 25

20TH CENTURY EVOLUTION OF THE SUBMARINE TELEGRAPH
by Ludwell Sibley .................................................. 49

RADIO ADVERTISING AND FASHION
by Barbara Havranek ............................................. 65

MADE IN ROCHESTER
by Allan Pellnat .................................................. 101

CUMULATIVE TABLE OF CONTENTS, AUTHOR AND SUBJECT
INDEX FOR VOLUMES 1 THROUGH 18 OF THE AWA REVIEW .......... 137
THE EXTRAORDINARY TRIPLETT 630 VOM SERIES
by Charles Kirsten ........................................... 1

RADIO PIONEER DR. DAVID G. MCCAA
by Lloyd Jury and Brian Belanger ............................... 29

CQ “SMALL FORMAT” AMATEUR RADIO BOOKS,
1947-1984: AN ANNOTATED BIBLIOGRAPHY
by Neil Friedman ............................................... 49

TELEVISION HISTORIAN: AN APPRECIATION OF
GEORGE SHIERS (1908-83)
by Christopher Sterling ........................................ 61

E.H. SCOTT SERIAL NUMBERS: AN UPDATED ANALYSIS
by Kent King and Norman Braithwaite .......................... 73

TECHNIQUES OF RADIO INTELLIGENCE IN THE SECOND WORLD WAR
by Gary Cain .................................................. 85

FESSENDEN’S CHRISTMAS EVE BROADCAST:
RECONSIDERING AN HISTORIC EVENT
by Donna Halper and Christopher Sterling ...................... 119

MORSE CODE TRAINING DEVICES
by David and Julia Bart ....................................... 139

ONE HUNDRED YEARS OF ELECTRONIC COMMUNICATIONS
by Ludwell A. Sibley ............................................1

HENRY J. NOLTE AND GENERAL ELECTRIC’S HIGH POWER,
METAL ENVELOPE TUBES
by John M. Anderson ............................................. 19

MARCONI VS. DE FOREST AUDION INFRINGEMENT LITIGATION REVISITED
by Eric P. Wenaas ............................................. 31

FIRST WORLD WAR AIRCRAFT RADIO
by Larry Babcock ............................................. 75

THE 1902 WIRELESS CONNECTION – SANTA CATALINA ISLAND TO SAN PEDRO, CALIFORNIA
by Norwood Teague and Joe A. Knight ........................... 97

THE EARLY HISTORY OF THE ELECTRIC LOUDSPEAKER
by John D. Jenkins .......................................... 125

EMIL J. SIMON: A BUSY LIFE INDEED
by Russ Kleinmann, Karen Blisard, A.J. Link & Warren Berbit 145

A PORTAL INTO RADIO’S PAST: FRANCIS A. HART AND HIS RADIO LOG
by James E. O’Neal ........................................... 169
by Russ Kleinman, Dick Clark and Karen Blisard ............... 1

MENTAL RADIO: WIRELESS AND TELEPATHY
by Graeme Bartram ............................................. 63

ORIGINS OF THE EDISON MEDAL ON ITS 100TH ANNIVERSARY
by David and Julia Bart ........................................ 89

PROFESSOR DAVID EDWARD HUGHES
by Ivor Hughes .................................................. 111

HOW DUNWOODY’S CHUNK OF ‘COAL’ SAVED BOTH DE FOREST AND MARCONI
by Bartholomew Lee ............................................. 135

FROM COHERERS TO CRYSTAL RECTIFIERS
by Eric P. Wenaas .............................................. 147

THE DEVELOPMENT OF RADIO IN A SMALL SOUTHERN CITY
by Allan G. Pellinat .............................................. 233

THE GROSS RADIO COMPANY - A HISTORICAL BACKGROUND
by Bruce J. Howes .............................................. 257

MEISSNER REGENERATED
by Michael J. Murphy ........................................... 275

VOLUME 23 - 2010

"IF IT BE PERMISSIBLE TO PROPHESY WILDLY..."
by Graeme Bartram ............................................. 1

COMMUNICATIONS RELATED U.S. ARMY RECRUITING POSTERS
by David and Julia Bart ........................................... 23

THE 1000Z STRATOSPHERE: ZENITH RADIO ENTERS THE
BLACK DIAL ERA IN GRAND FORM, 1933-1937
by Martin W. Blankinshi ....................................... 49

THE EARLIEST HEATHKITS AND A DATABASE FOR 1947 - 1956
by Erich Brueschke ............................................. 81

SWAN ISLAND, ITS RADIO HISTORY, INCLUDING THE CIA
AND THE REVENGE OF UNITED FRUIT
by Bartholomew Lee ............................................. 115

SCR-54/A (BC-14/A) RADIO RECEIVER SETS FOR ARTILLERY SPOTTING
by Eric P. Wenaas .............................................. 141

EARLY SUBMARINE CABLE INSTRUMENTS AND APPARATUS
by Bill Burns .................................................... 177

BRITISH WORLD WAR TWO ARMY ANTI-AIRCRAFT RADAR
by Crawford MacKeand ........................................ 195

MIRROR SCREW TELEVISION: 25 YEARS OF EXPERIENCE
by Peter F. Yanczer .................................................. 215

WIRELESS AND THE SINKING OF THE REPUBLIC, 1909
by Jack Binns and Virginia Utermohlen Lovelace .............. 239

VOLUME 24 - 2011

The History of Japanese Radio (1925 - 1945) by Tadanobu Okabe .. 1

Henry Clifford - Telegraph Engineer and Artist by Bill Burns .. 19

Toyota Radio: 1946-49 by Tadanobu Okabe ....................... 41

Culture, Technology, Britannia: The BBC Handbooks by David Wunsch ......................... 55

John Graeme Balsillie: Australia's Forgotten Wireless Pioneer by Graeme Bartram ........................................... 75

How the 1923 Radiola Season Really Came About by Eric Wenaas .. 99

Development of Television in Germany until 1939 by Franz Pichler .................................................. 125

Eddystone Radio and their mid-1930’s All World Two by Gerry O’Hara, Graeme Wormald and Ian McQueen ....................... 145

The Radio Products of the Globe Electric Company by Glenn Trischan .................................................. 215

WIRELESS AND THE SINKING OF THE REPUBLIC, 1909
by Jack Binns and Virginia Utermohlen Lovelace .............. 167

The Airship America by John Dilks ......................... 189

The Origins of the Institute of Electrical and Electronic Engineers’ Medal of Honor by David and Julia Bart .......... 207

Wireless Comes of Age on the West Coast by Bart Lee.......... 241

VOLUME 25 - 2012

Forward...........................................................iv

Development of Television in Germany until 1939 by Franz Pichler ........................................... 1

Wireless Equipment of the Titanic: A Commemorative Overview by Eric P. Wenaas and Parks Stephenson ....................... 21

Wavemeters for Frequency Measurement by the British Army in World War Two by Anthony Davies .......... 79

Father Archibald Shaw, Australia’s “Wireless Priest” by Graeme Bartram .......... 101
Early Martian Radios: the Big 4, Little Gem, Special and Beauty by Erich Brueschke ......................... 125

Wireless - its Evolution from Mysterious Wonder to Weapon of War, 1902 to 1905 by Bartholomew Lee ....................... 147

Elmer T. Cunningham and the Tube Tangle by Eric P. Wenaas ... 185

Titanic - Lessons for Emergency Communications by Bartolomew Lee ..................................................... 215

The Rise and Decline of the Cathode Ray Tube Rebuilding Industry by James O'Neal .................................................. 259

Letter to the Editor .............................................................. 293