

# THE BELL SYSTEM TECHNICAL JOURNAL

A JOURNAL DEVOTED TO THE  
SCIENTIFIC AND ENGINEERING  
ASPECTS OF ELECTRICAL  
COMMUNICATION

## *EDITORS*

R. W. KING      J. O. PERRINE

## *EDITORIAL BOARD*

W. H. HARRISON	O. E. BUCKLEY
O. B. BLACKWELL	M. J. KELLY
H. S. OSBORNE	A. B. CLARK
J. J. PILLIOD	F. J. FEBLY

## TABLE OF CONTENTS

AND

## INDEX

VOLUME XXVI

1947

AMERICAN TELEPHONE AND TELEGRAPH COMPANY  
NEW YORK

## Index to Volume XXVI

### A

- Analysis, Spectrum, of Pulse Modulated Waves, *J. C. Lozier*, page 360.  
Antennas, Polyrod, *G. E. Mueller and W. A. Tyrrell*, page 837.  
Antennas, Radar, *H. T. Friis and W. D. Lewis*, page 219.  
Attenuation, Tables of Phase Associated with a Semi-Infinite Unit Slope of, *D. E. Thomas*, page 870.

### B

- Becker, J. A., C. B. Green and G. L. Pearson*, Properties and Uses of Thermistors—Thermally Sensitive Resistors, page 170.  
*Bennett, W. R.*, The Biased Ideal Rectifier, page 139.

### C

- Cavity Resonator, Circular Cylinder, End Plate and Side Wall Currents in, *J. P. Kinzer and I. G. Wilson*, page 31.  
Cavity Resonators, Cylindrical, Some Results on, *J. P. Kinzer and I. G. Wilson*, page 410.  
Code Modulation, Pulse, Telephony by, *W. M. Goodall*, page 395.  
Crystal, Silicon, Rectifiers for Microwave Radar Receivers, Development of, *J. H. Scaff and R. S. Ohl*, page 1.  
Crystals, Piezoelectric, Expressed in Tensor Form, First and Second Order Equations for, *W. P. Mason*, page 80.

### F

- Fay, C. E.*, High-Vacuum Oxide-Cathode Pulse Modulator Tubes, page 818.  
*Friis, H. T. and W. D. Lewis*, Radar Antennas, page 219.

### G

- Goodall, W. M.*, Telephony by Pulse Code Modulation, page 395.  
*Green, C. B., G. L. Pearson and J. A. Becker*, Properties and Uses of Thermistors—Thermally Sensitive Resistors, page 170.

### H

- Hoyt, Ray S.*, Probability Functions for the Modulus and Angle of the Normal Complex Variate, page 318.

### I

- Impedance Mismatches in Waveguide, Precision Measurement of, *Allen F. Pomeroy*, page 446.

### K

- Kinzer, J. P. and I. G. Wilson*, End Plate and Side Wall Currents in Circular Cylinder Cavity Resonator, page 31.  
*Kinzer, J. P. and I. G. Wilson*, Some Results on Cylindrical Cavity Resonators, page 410.

### L

- Lewis, W. D. and H. T. Friis*, Radar Antennas, page 219.  
*Lozier, J. C.*, Spectrum Analysis of Pulse Modulated Waves, page 360.

### M

- Mason, W. P.*, First and Second Order Equations for Piezoelectric Crystals Expressed in Tensor Form, page 80.

- Microwave Radar Navigation, Targets for, *Sloan D. Robertson*, page 852.  
 Microwave Radar Receivers, Development of Silicon Crystal Rectifiers for, *J. H. Scaff and R. S. Ohl*, page 1.  
 Mismatches, Impedance, in Waveguide, Precision Measurement of, *Allen F. Pomeroy*, page 446.  
 Modulated Waves, Pulse, Spectrum Analysis of, *J. C. Lozier*, page 360.  
 Modulation, Pulse Code, Telephony by, *W. M. Goodall*, page 395.  
 Modulator Tubes, High-Vacuum Oxide-Cathode Pulse, *C. E. Fay*, page 818.  
*Morrison, Jr., L. W.*, The Radar Receiver, page 693.  
*Mueller, G. E. and W. A. Tyrrell*, Polyrod Antennas, page 837.

## N

- Navigation, Microwave Radar, Targets for, *Sloan D. Robertson*, page 852.

## O

- Ohl, R. S. and J. H. Scaff*, Development of Silicon Crystal Rectifiers for Microwave Radar Receivers, page 1.  
 Oscillators, Reflex, *J. R. Pierce and W. G. Shepherd*, page 460.

## P

- Pearson, G. L., J. A. Becker and C. B. Green*, Properties and Uses of Thermistors—Thermally Sensitive Resistors, page 170.  
 Phase, Tables of, Associated with a Semi-Infinite Unit Slope of Attenuation, *D. E. Thomas*, page 870.  
*Pierce, J. R. and W. G. Shepherd*, Reflex Oscillators, page 460.  
 Piezoelectric Crystals Expressed in Tensor Form, First and Second Order Equations for, *W. P. Mason*, page 80.  
 Polyrod Antennas, *G. E. Mueller and W. A. Tyrrell*, page 837.  
*Pomeroy, Allen F.*, Precision Measurement of Impedance Mismatches in Waveguide, page 446.  
 Probability Functions for the Modulus and Angle of the Normal Complex Variate, *Ray S. Hoyt*, page 318.  
 Pulse Code Modulation, Telephony by, *W. M. Goodall*, page 395.  
 Pulse Modulated Waves, Spectrum Analysis of, *J. C. Lozier*, page 360.  
 Pulse Modulator Tubes, High-Vacuum Oxide-Cathode, *C. E. Fay*, page 818.

## R

- Radar: High-Vacuum Oxide-Cathode Pulse Modulator Tubes, *C. E. Fay*, page 818.  
 Radar: End Plate and Side Wall Currents in Circular Cylinder Cavity Resonator, *J. P. Kinzer and I. G. Wilson*, page 31.  
 Radar: Some Results on Cylindrical Cavity Resonators, *J. P. Kinzer and I. G. Wilson*, page 410.  
 Radar: Polyrod Antennas, *G. E. Mueller and W. A. Tyrrell*, page 837.  
 Radar: Reflex Oscillators, *J. R. Pierce and W. G. Shepherd*, page 460.  
 Radar Antennas, *H. T. Friis and W. D. Lewis*, page 219.  
 Radar Navigation, Microwave, Targets for, *Sloan D. Robertson*, page 852.  
 Radar Receiver, The, *L. W. Morrison, Jr.*, page 693.  
 Radar Receivers, Microwave, Development of Silicon Crystal Rectifiers for, *J. H. Scaff and R. S. Ohl*, page 1.  
 Receiver, Radar, The, *L. W. Morrison, Jr.*, page 693.  
 Receivers, Microwave Radar, Development of Silicon Crystal Rectifiers for, *J. H. Scaff and R. S. Ohl*, page 1.  
 Rectifier, Biased Ideal, The, *W. R. Bennett*, page 139.  
 Rectifiers, Silicon Crystal, for Microwave Radar Receivers, Development of, *J. H. Scaff and R. S. Ohl*, page 1.  
 Reflex Oscillators, *J. R. Pierce and W. G. Shepherd*, page 460.  
 Resistors, Thermally Sensitive—Properties and Uses of Thermistors, *J. A. Becker, C. B. Green and G. L. Pearson*, page 170.  
 Resonator, Circular Cylinder Cavity, End Plate and Side Wall Currents in, *J. P. Kinzer and I. G. Wilson*, page 31.  
 Resonators, Cylindrical Cavity, Some Results on, *J. P. Kinzer and I. G. Wilson*, page 410.  
*Robertson, Sloan D.*, Targets for Microwave Radar Navigation, page 852.

## S

- Scaff, J. H. and R. S. Ohl*, Development of Silicon Crystal Rectifiers for Microwave Radar Receivers, page 1.  
*Shepherd, W. G. and J. R. Pierce*, Reflex Oscillators, page 460.  
Silicon Crystal Rectifiers for Microwave Radar Receivers, Development of, *J. H. Scaff and R. S. Ohl*, page 1.  
Spectrum Analysis of Pulse Modulated Waves, *J. C. Lozier*, page 360.

## T

- Tensor Form, First and Second Order Equations for Piezoelectric Crystals Expressed in, *W. P. Mason*, page 80.  
Thermistors, Properties and Uses of—Thermally Sensitive Resistors, *J. A. Becker, C. B. Green and G. L. Pearson*, page 170.  
*Thomas, D. E.*, Tables of Phase Associated with a Semi-Infinite Unit Slope of Attenuation, page 870.  
*Tyrrell, W. A. and G. E. Mueller*, Polyrod Antennas, page 837.

## V

- Vacuum, High-, Oxide-Cathode Pulse Modulator Tubes, *C. E. Fay*, page 818.

## W

- Waveguide, Precision Measurement of Impedance Mismatches in, *Allen F. Pomeroy*, page 446.  
*Wilson, I. G. and J. P. Kinzer*, End Plate and Side Wall Currents in Circular Cylinder Cavity Resonator, page 31.  
*Wilson, I. G. and J. P. Kinzer*, Some Results on Cylindrical Cavity Resonators, page 410.

CORRECTION FOR ISSUE OF OCTOBER, 1946

In the article *SPARK GAP SWITCHES FOR RADAR*, lines 2-14 inclusive on page 593 should have appeared between lines 10 and 11 on page 588.

