

VOLUME 10

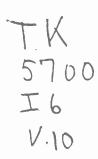
1922



EDITED BY
ALFRED N. GOLDSMITH, Ph.D.

PUBLISHED EVERY TWO MONTHS BY
THE INSTITUTE OF RADIO ENGINEERS
(INC.)

THE COLLEGE OF THE CITY OF NEW YORK



GENERAL INFORMATION

The Proceedings of the Institute are published every two months and contain the papers and the discussions thereon as presented at the meetings in New York, Washington, Boston, Seattle, San Francisco, or Philadelphia.

Payment of the annual dues by a member entitles him to one copy of each number of the PROCEEDINGS issued during the period of his membership.

Subscriptions to the Proceedings are received from non-members at the rate of \$1.50 per copy or \$9.00 per year. To foreign countries the rates are \$1.60 per copy or \$9.60 per year. A discount of 25 per cent is allowed to libraries and booksellers.

The right to reprint limited portions or abstracts of the articles, discussions, or editorial notes in the Proceedings is granted on the express condition that specific reference shall be made to the source of such material. Diagrams and photographs in the Proceedings may not be reproduced without securing permission to do so from the Institute thru the Editor.

It is understood that the statements and opinions given in the PROCEED-INGS are the views of the individual members to whom they are credited, and are not binding on the membership of the Institute as a whole.

COPYRIGHT, 1922, BY
THE INSTITUTE OF RADIO ENGINEERS, INC.
THE COLLEGE OF THE CITY OF NEW YORK
NEW YORK, N. Y.

CONTENTS OF VOLUME 10

1922

NUMBER 1; February, 1922	
	PAGE
Officers of The Institute of Radio Engineers	2
ALEXANDER MEISSNER, "THE DEVELOPMENT OF TUBE TRANSMITTERS	3
BY THE TELEFUNKEN COMPANY"	3
A. CROSSLEY, "IMPROVEMENTS IN PILOTING CABLE RECEIVING APPARATUS FURTHER DISCUSSION ON "PILOTING VESSELS BY ELECTRICALLY ENER-	'' 24 33
GIZED CABLES," BY A. CROSSLEY V. BUSH AND C. G. SMITH, "A NEW RECTIFIER"	41
HUDSON R. SEARING AND MARK H. REDMOND, "POLYPHASE RECTIFICA-	
TION"	52
JOHN R. CARSON, "NOTES ON THE THEORY OF MODULATION"	57
John B. Brady, "Digest of United States Patents Relating to Radio Telegraphy and Telephony, Issued November 1, 1921– December 27, 1921"	65
NUMBER 2; April, 1922	
Officers of The Institute of Radio Engineers	82
W. G. CADY, "THE PIEZO-ELECTRIC RESONATOR"	83
JAMES E. IVES AND C. N. HICKMAN, "A STUDY OF THE OSCILLATIONS OCCURRING IN THE CIRCUITS OF THE PLIOTRON"	115
FULTON CUTTING, "A SIMPLE METHOD OF CALCULATING RADIATION RESISTANCE"	129
JOHN B. BRADY, "DIGEST OF UNITED STATES PATENTS RELATING TO RADIO TELEGRAPHY AND TELEPHONY, Issued January 3- 1922-	
February 21, 1922''	137
NUMBER 3; June, 1922	
Officers of The Institute of Radio Engineers	152
Louis W. Austin, "The Monthly Averages of Signal Strength of Nauen in Washington, 1915-1921 and the Monthly Averages	1 - 1.
OF ATMOSPHERIC DISTURBANCES IN WASHINGTON, 1918-1921"	153
LOUIS W. AUSTIN, "RECEPTION MEASUREMENTS AT NAVAL RADIO RESEARCH LABORATORY, WASHINGTON	158
GREENLEAF W. PICKARD, "THE DIRECTION AND INTENSITY OF WAVES FROM EUROPEAN STATIONS"	161
Julius Weinberger, "The Recording of High Speed Signals in Radio Telegraphy"	617
JOHN B. BRADY, "DIGEST OF UNITED STATES PATENTS RELATING TO RADIO TELEGRAPHY AND TELEPHONY, Issued February 28, 1922-	200

NUMBER 4; August, 1922	AGE
GUGLIELMO MARCONI, "RADIO TELEGRAPHY"	214 215
TURBANCES AT THE NAVAL RADIO RESEARCH LABORATORY, BUREAU OF STANDARDS, WASHINGTON, March and April, 1922" EDWIN H. ARMSTRONG, "SOME RECENT DEVELOPMENTS OF REGENER-	239
ATIVE CIRCUITS"	744
	261
JOHN B. BRADY, "DIGEST OF UNITED STATES PATENTS RELATING TO RADIO TELEGRAPHY AND TELEPHONY, Issued May 2, 1922-June 20, 1922," Together with "Partial List of Registered Radio	287 290
NUMBER 5; October, 1922	
Officers of The Institute of Radio Engineers	314
	315
ALBERT W. HULL, E. F. HENNELLY, AND F. R. ELDER, "THE DYNATRON DETECTOR—A NEW HETERODYNE RECEIVER FOR CONTINUOUS AND MODULATED WAVES"	320
LLOYD ESPENSCHIED, "APPLICATIONS TO RADIO OF WIRE TRANSMISSION	344
	369
	373
D. C. PRINCE, "MATHEMATICAL TREATMENT OF RECTIFICATION PHENOMENA"	393
	399
JOHN B. BRADY, "DIGEST OF UNITED STATES PATENTS RELATING TO RADIO TELEGRAPHY AND TELEPHONY, Issued June 27, 1922-August 22, 1922, Together with a Partial List of Registered Radio Trade-	401
NUMBER 6; December, 1922	
	420
L. W. Austin, "Receiving Measurements and Atmospheric Disturbances at the Naval Radio Research Laboratory, Bureau of Standards, Washington, July and August, 1922"	421
	426
E. LEON CHAFFEE, "OSCILLOGRAPHIC STUDY OF ELECTRON TUBE CHAR-	440
	451
	468
JOHN B. BRADY. "DIGESTS OF UNITED STATES PATENTS RELATING TO	-00
RADIO TELEGRAPHY AND TELEPHONY, Issued August 29, 1922	486