

The IEEE

# Newsletter

The Magazine of the North Jersey Section

JOINT

SECTION DINNER MEETING — AUTOMATIC CONTROL GROUP

**THURSDAY, JUNE 10, 1965**

**ROBIN HOOD INN, CLIFTON**

COCKTAIL HOUR  
5:30 P.M.

NASA ELECTRONICS RESEARCH CENTER  
DR. GEORGE KOVATCH

J U N E 1 9 6 5

Volume 11 / Number 10



# Ballantine AC-DC Digital Voltmeter

Model 355

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to 10 mV

Measures  
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Full scale, most sensitive range	0 to 1000 10 mV	0 to 1000 100 mV	1 mV to 500 V	1/4%, 50 Hz to 10 kHz 1/2%, 30 Hz to 50 kHz 1%, 50 kHz to 250 kHz	1/4%
Frequency Range	30 Hz to 250 kHz	DC	Power Requirements	115/230 V, 50-60 Hz, 52 W	
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	Relay Rack Version . . . Model 800 rack mounting kit is optional				

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### STUDENT AFFAIRS

#### NCE BRANCH STARTS EVENING GROUP

At Newark College of Engineering the evening students in the E.E. Department now have a functioning offshoot of the IEEE Student Branch. With Mr. James Earle as its advisor the new group hopes to prepare and present its own programs pertinent to current technology. The students received an able assist for their first attempt from Prof. Zambuto who lectured on April 8th to the group. His topic was masers and their application to optics.

#### ENGINEERS VOLUNTEER

As a result of our March request for speakers to address high school students, three engineers replied. We are grateful to Messrs. J. J. Canavan, Lockheed Electronics Co.; V. T. Johannes, Bell Telephone Laboratories; and A. M. Kallop, General Electric Co.

#### IEEE Component Parts and Product Engineering and Production Groups to Merge

The Administrative Committees of the IEEE Component Parts Group and Product Engineering and Production Group have voted unanimously to merge the two Groups into a new IEEE Group to be known as the Parts Materials and Packaging Group.

The Administrative Committees of both Groups feel that, as a result of this merger, this newly formed PMP Group would provide the following advantages:

1. One enlarged TRANSACTIONS, published more frequently, having wider circulation, and attracting the best in technical papers;
2. Broadened scope of activities available to the composite membership;
3. Fewer and better meetings on both a local and national level;
4. More and better service as a result of combining Chapter activities. Final details of the merger will be completed by the 1st of July.

#### JOINT AUTOMATIC CONTROL CONFERENCE

June 22-25

Rensselaer Polytechnic Institute  
Troy, N. Y.

For information, contact:  
PROF. JAS. W. MOORE  
University of Virginia  
Charlottesville, Va.

About The Cover:

#### APOLLO SPACE PROJECT

After two astronauts climb through the hatch from the Command Module into the Lunar Excursion Module, the two modules will be detached. The LEM module will then descend to the lunar surface. This and other interesting aspects of America's space effort will be discussed at the North Jersey Section Meeting on June 10, 1965. See page 5 for details.

## The IEEE Newsletter

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### ABOUT ADDRESS CHANGES

It is not necessary to inform the North Jersey Section when you change your mailing address. The NEWSLETTER and other section mailings use a list provided by IEEE's national headquarters in New York. This means the Section has no need to maintain a mailing list or addressing plates. Section membership records are changed when Headquarters notifies us.

**REPORT ALL ADDRESS CHANGES TO:**  
**INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, BOX A, LENOX HILL STATION, NEW YORK 21, N. Y.**

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### North Jersey Section IEEE Executive Committee

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Member-at-Large ..... Roger McSweeney  
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Program ..... J. O'Grady  
Publications ..... Bernard Meyer  
Publicity ..... J. Fitzpatrick  
Student Affairs ..... J. W. Earle

The Newsletter, June 1965

## EDITORIAL Vivent les Vacances!

This means it is time for the Section to take a rest from all its activities, and for its members to devote more time to their other interests.

Concerning the activities, the Chairman's Corner in this issue, the Executive Column in previous issues, have covered the subject quite thoroughly. It is appropriate, at this time, to thank them in the name of the Newsletter Staff, as well as of the whole North Jersey Section membership.

For the Newsletter is the voice of the membership. In addition to carrying all the facts pertinent to meetings, such as subject, date, time and place, it reports on the results and reactions from such meetings. It could also discuss any topic of interest brought up by the membership.

Enough of this for now. Vivent les vacances! It is time to respond to the call of other activities, hobbies. Nature with its fair weather, and commercial advertising create the urge to the great outdoors. How about a picnic, fishing trip, a game of tennis, a day of swimming? Whether single or married, if the train of children is not already too long, you may want a partner for the occasion. Sometimes a neighbor, or a relative is fine. Sometimes you may want another EE with whom you share more profound interests. How about the John Doe you met at the last Section meeting? Or the fellow, at the Group meeting, from whom you borrowed a copy of the Newsletter to look up the program? In either case your meeting attendance may have provided you with a "useful contact." So make that call, pack up the bag and away you go. Vivent les vacances!

### IEEE Group Chairmen

Group Coordinator ..... Raymond Kudisch  
Group Automatic Control  
(AC) ..... Dr. Andrew Meyer  
Group Communications  
Technology (CT) ..... R. D. Chipp  
Group Engineering Writing  
& Speech (EWS) ..... L. G. Lee  
Group Electronic  
Computers (EC) ..... D. Perry

Group Microwave Theory &  
Techniques (MTT) ..... B. Mindes  
Group Power (P) ..... Herbert Blaicher

### Executive Committee Meeting

at Verona Public Library  
June 2

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## POWER GROUP CHAPTER NOMINATIONS

The slate of candidates for Chapter Officers for the 1965-66 season is as follows:

*Chairman:*

**Carl Torell**

Federal Pacific Electric Co.

*Vice-Chairman:*

**John Diercks**

General Electric Company

*Meetings and*

*Program Secretary:*

**Jack Gill**

Public Service Elec. & Gas. Co.

*Corresponding and*

*Membership Secretary:*

**Jim Jones**

Newark College of Engineering

*Finance Officer:*

**Joe Skroski**

Jersey Central Power & Light Co.

The slate has been assembled by a Nominating Committee comprised of Herb Blaicher, Chairman, Mel Nuechterlein and John Diercks. Since the slate was not completed in time to be presented at our last meeting of the 1964-65 season, a post-card ballot will be mailed to all known Chapter Members within the next few days.

Please complete the ballot and return it as soon as possible.

## CHAIRMAN'S CORNER

As the year 1964-65 comes to a close, I want to take this opportunity to thank all the Executive Committee and the Group Officers for their assistance and cooperation during my chairmanship of the Section.

This has been an interesting and, in many respects, a very successful year for the Section. The routine items have been handled in an acceptable manner, and some of the goals we set for ourselves were not attained. But some outstanding items did occur and I would like to comment on these.

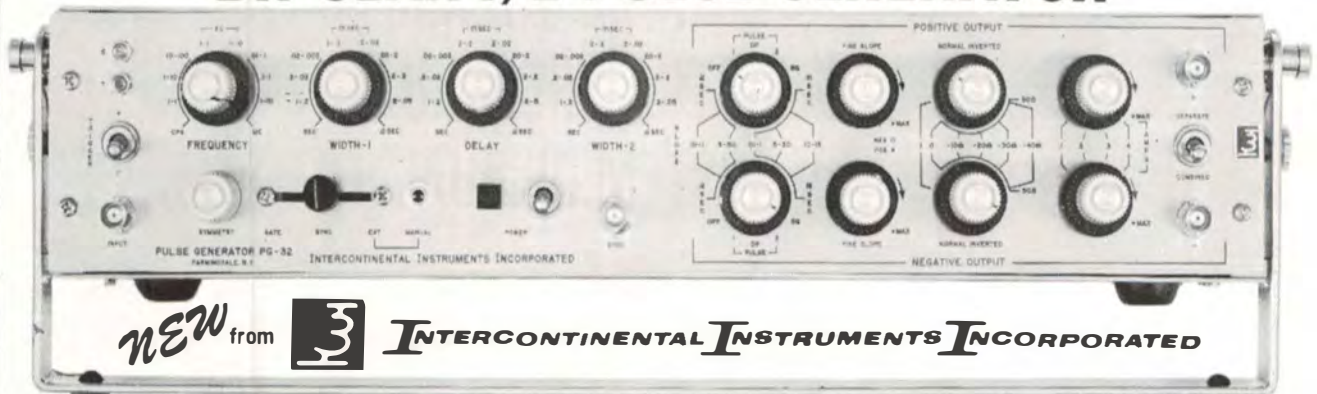
Our relations with the Student Chapters have been strengthened a great deal and our Annual Student Night in December is just one example of this activity. I feel that the Metropolitan Student Council, which serves the Student Branches of the colleges in the North Jersey, New York, Long Island Sections, has done an excellent job in promoting IEEE to the students in this area. The student chairman, Mr. Karl Auerbach of Stevens Institute, is to be congratulated for his leadership this year.

Our Group Activities have shown progress in some areas this year. The new Power Group has gotten off to an excellent start during its first full year of operation and the program chairman as well as the elected officers have done a fine job. The older established Groups have had excellent programs during the year, many of which I have been able to attend and have enjoyed. Petitions have been received for the forming of three new Groups, either jointly with New York and Long Island, or full sponsored by North Jersey. You will be hearing more about these in the near future as they get going.

We experimented this year in jointly sponsoring meetings with the various Groups, in an attempt to strengthen the Group meetings and in an effort to cut down on the total number of meetings without a loss of service to the Section membership. In addition, through the untiring efforts of the Program Chairman, we have planned some special events, such as the Airport Tour, the Trip to Shea Stadium, and the June joint meeting scheduled for a few days after you receive this issue of The Newsletter. A special committee was also appointed to investigate the problem of meeting attendance, and with the recommendations of this committee on hand, we are planning some bigger and better activities for next year.

(Continued on page 6)

## BIPOLAR I/E PULSE GENERATOR



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## SECTION DINNER MEETING

### NASA ELECTRONICS RESEARCH CENTER

#### ITS MISSION AND FUTURE IMPACT



On Thursday evening, June 10, 1965, the North Jersey Section, in co-sponsorship with the Automatic Control Group, will hold a dinner meeting at the Robin Hood Inn, Clifton, New Jersey. A dutch-treat cocktail hour preceding the dinner will begin at 5:30 P.M.

The Guest Speaker for the evening will be Dr. George Kovatch, Acting Chief of the Control and Information Systems Laboratory of the National Aeronautics and Space Administration. The subject of Dr. Kovatch's talk will be "NASA's Electronics Research Center—Its Mission and Future Impact."

The talk will highlight the organization and mission of NASA in the peaceful exploration of space, and the relationship of the Electronics Research Center to other NASA Centers will also be discussed. The mission and research interests of the various laboratories of the Electronics Research Center will also be summarized.

Illustrative color slides of the major NASA programs will be shown along with a short movie on a NASA venture into space.

This meeting promises to be most interesting and every electrical and electronics engineer will take pride in learning more about the role of his profession in furthering America's efforts in the peaceful exploration of outer space.

#### You Are Urged To Attend

For tickets and further information write:

Mr. Robert Brown  
Communications Systems, Inc.  
South 60 Route 17  
Paramus, New Jersey

Please send me ..... tickets at \$4.00 each for the June 10 dinner meeting.

Name .....

Address .....

City .....

State .....

Make checks payable to North Jersey Section, IEEE and enclose a stamped, self addressed envelope for the return of your tickets.

Reservations will be accepted up to June 3, 1965.

Dr. Kovatch obtained his undergraduate degree in Electrical Engineering from Princeton University in 1955, and MS and PhD degrees from Cornell University in 1960 and 1962. He was associated with both the General Electric Co. and the Martin Company, working in the electronics field, before joining the NASA Electronics Research Center in Cambridge, Massachusetts in October 1964. He is a member of IEEE, Sigma Xi, and is a registered Professional Engineer in New York State. He is also the author of several technical papers on analog multipliers, non-linear oscillations and optimal guidance and control systems.

Advance registration for this meeting is required

The price of the dinner is only \$4.00 per person and you can bring a friend if you like. The menu will be a full course turkey dinner served in the usual Robin Hood family style.

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## G-MTT NOMINATIONS

The following members have been nominated for executive committee positions of the Microwave Theory and Techniques Group for the 1965-66 season:

Chairman:

**M. J. Thompson**

Bell Telephone Laboratories

Vice-Chairman:

**D. C. Mitchell**

Airtron Division of Litton Industries

Secretary:

**J. Vogler**

MicroLab

Program Chairman:

**G. C. DiPiazza**

Bell Telephone Laboratories



## CHAIRMAN'S CORNER

(Continued from page 4)

I am sure that those who attended the Annual Section Dinner and Fellows Recognition Night will agree that this was a fine affair and Walter Glomb and his committee are certainly due a vote of thanks for this event. We were able to honor our seven new Fellows as well as the National and Section Award winners.

And, although there remain many things for the new officers to do in the coming year, I feel the section can look back on 1964-65 as another year of progress.

Obviously, I have not been able to mention all the activities, such as those of the Education Committee, the Awards Committee, the Nominations Committee, the Publications Committee, but I am sure that those individuals who have worked so hard to make the year a success will forgive me if it seems that I have overlooked their individual and collective efforts, because the success of the Section Activities certainly is a direct result of the collective effort of all of these fine people. I must, however, mention one more item, and that concerns our Newsletter. Bernard Meyer, as editor, did an outstanding job, almost single-handedly at times, to insure that The Newsletter was put together and mailed out on time. His successor, Marcel Kozuch, has gotten off to a fine start in his editorship. Our Newsletter is one of the finest Section publications of the IEEE, and it is due to the efforts of these dedicated men.

In closing, I address the following comments to the membership of the North Jersey Section, all 5500 of you! It has been a most interesting and rewarding year for me, and I want to thank you all again for permitting me to serve as your chairman. May I challenge you for the coming year 1965-66! Support your Section during the coming season with your time, your efforts, and your talents. Make your desires and wishes known to your Section officers. In order for our activities to be successful, WE NEED YOU! Will YOU help us to serve YOU?

JOHN K. REDMON  
Chairman 1964-65

## professional notices

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### CALL FOR PAPERS

The call for papers for the 1965 Fall Joint Computer Conference, to be held November 30 - December 2 in Las Vegas, Nevada, has been issued by S. Nissim and T. B. Steel, Jr., co-chairmen of the technical program committee.

No restrictions are placed on subject matter for the papers. In addition to state-of-the-art surveys and original research and development reports in the traditional areas of hardware and software, contributions emphasizing the design, selection, installation and management of information processing systems are invited.

Notification of intention to submit a paper is requested. Deadline for full papers is June 15. One complete draft copy, together with a 150-word abstract, should be sent to Mr. Robert Gray, Secretary, Program Committee, 1965 FJCC; P.O. Box 49, Santa Monica, California 90406.



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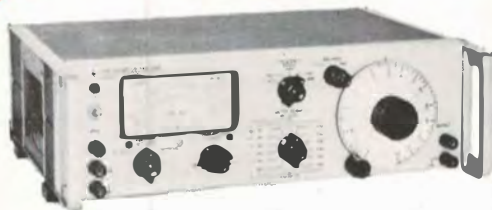
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Input signals as low as 0.3 v rms may be analyzed on all scales, including the 0.1% range. The input attenuator accommodates the meter to measure signals up to 300 v. Input impedance is 1 megohm shunted by less than 60 pf; both input and output are floating. The output delivers at high level an isolated duplicate of the waveform being measured by the meter, for oscilloscope or other observation.

The instrument may also be used as a high-impedance ac voltmeter, flat from 5 cps to 3 mc, with thirteen ranges from 300 uv to 300 v full-scale.

The Model 331A costs \$590.00 and the Model 332A \$620.00. Both models are only 5¼" high.



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Dymec Division offers the 2590A Microwave Frequency Converter which permits precise frequency measurements in the range .5 to 15.0 GC: it is designed for full compatibility with Hewlett-Packard electronic counters to extend their measuring capability to the microwave range.

The 2590A provides positive phase locking of an internal transfer oscillator to the signal frequency, resulting in frequency measurements with accuracy equal to that of the counter time base. When used with the HP-5243L or 5245L counters, this is 5 parts in  $10^{10}$  short term, 3 parts in  $10^9$  per day. Positive locking allows measurement of drift and jitter over long time periods.

Additional features permit frequency measurements of pulsed signals, fm measurements at deviation rates to 1 mc, and measurements of fm and am on rapidly drifting signals.

The all solid state frequency converter is simple to operate. It incorporates an electronic search oscillator to ease capture of the signal frequency, and an agc system to eliminate manual gain adjustments. RFI is virtually eliminated in the 2590A; all rf circuits are totally enclosed in a solid casting.

The 2590A is priced at \$1900.

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