

# ORLANDO SECTION NOTES



---

VOLUME LX, NO. 20

JUNE 1975

---



THE ELECTRIC CAR - Its Past, Present  
and Future as told by Mr. John MacMichael.  
Don't miss it! Come to the June Banquet.

-----

JUNE BANQUET  
LAKE BUENA VISTA CLUB  
FRIDAY, JUNE 13, 1975

---


PUBLISHED BY ORLANDO SECTION  
INSTITUTE OF  
ELECTRICAL AND ELECTRONICS ENGINEERS

## We're with you all the way.

If you move or expand, or have a fire. If some part of **your** telephone system breaks down, you simply call Southern Bell and what needs to be done is done.

The dependable maintenance and repair service that you have come to expect from Southern Bell is just one of the reasons you'll find that when it comes to business communications, **nobody talks business like Southern Bell.**



 Southern Bell

---

WELCOME! New members to the Orlando Section of I. E. E. E.

Glenn E. Riley

Steven K. Barnoske

Robert Fischer

David M. Weihman

John W. Barrs

J. H. Green

Lucious C. Williams

Robert Breaux

Louis Green

Gene E. Baker

James Ely

George D. Prickett, Jr.

David B. Shaw

Milo Van Auken

William Selph



## Chairman's Corner

It has been a pleasure to have served as Section Chairman during the past twelve months. My thanks to all members of the Executive Committee, who have worked very hard throughout the year. My best wishes go to Harold Downing and the other new officers who will be taking over July 1.

Partial payment has been received from IEEE headquarters for SouthEastCon Symposium Proceedings sent to the IEEE Warehouse (New Jersey) last year. John Tracy is working the problem of getting the \$3000 still owed to us, and we hope to receive final payment in the near future.

With the change of officers I'd like to remind all members that volunteers are needed for participation in Executive Committee activities. All members are also invited to attend the monthly Executive Committee meeting held on the first Tuesday of the month, 5:30 PM, at Southern Bell on Sand Lake Road. We'll look forward to seeing you at the June Banquet.

Dr. James C. Wiltse  
Chairman

NEW SECTION OFFICERS

JULY 1975 to JUNE 1976

**CHAIRMAN - Harold Downing**

Mr. Harold Downing has been associated with Southern Bell for 19 years and is presently a District Engineer. He received his Electrical Engineering degree from the University of Florida in 1948 and Master's degree from Rollins College in 1971. He is a registered Professional Engineer in the State of Florida and holds membership in the FES and NSPE. During the past two years Harold has served as Vice Chairman and Secretary of the Orlando Section and in 1969 was chairman of the Communication Technology Group.

**VICE CHAIRMAN - Dr. Ed McCarter** received the B.S., M.S. and Ph.D. in Electrical Engineering from Oklahoma State University. He is a senior member in IEEE, has held the office of Chairman in the Orlando AES group, was Treasurer of the Section, and this year was selected as the Orlando Section IEEE Engineer of the Year. He is Faculty Counselor for the Florida Technological University IEEE Student Group. Dr. McCarter is presently Professor, Electrical Engineering at FTU and is a registered Professional Engineer in Florida and Oklahoma.

**TREASURER - John H. Boyton**

John Boyton attended the University of Georgia, the University of Washington, Seattle, Montana State School of Mines, and received his Master's degree from Rollins College. He had 15 years of employment with General Electric Company in Engineering and Management. Since 1964 he has been with Orlando Armature Works. Mr. Boyton is currently Southeastern Regional manager for McGraw Edison Company.

John has been a member of AIEE and IEEE since 1947. He is also a member of the National Society of Professional Engineers, Florida Engineering Society, North Carolina Society of Engineers, Mason Master, and Rotary Club of Orlando. He is a registered Professional Engineer in the State of Florida and was awarded the 1974 IEEE Electrical Engineer of the Year Award for Central Florida.

**SECRETARY - William Rhoden**

Mr. Rhoden was born in Moultrie, Georgia and received his BEE degree from Georgia Tech in 1963. He received his MCS degree from Rollins College in 1972. He has been employed by Hewlett Packard Company as a field engineer for eight years. He was formerly with Martin Marietta and served two years as an Army officer.

Bill has been a member of IEEE since 1966. He has served the Orlando Section as Facilities and Arrangements Chairman for three years was Exhibits Chairman for SouthEastCon '74. He is currently Chairman of the MTT Chapter and is Group Chapter Representative to the Executive Committee.

MEETING NOTICE

COMMUNICATIONS SOCIETY

Program for Thursday, June 12, 1975

- Speaker: Mr. Richard Jaeger  
Department Head TSTS, Planning and Operational Program  
Department, Bell Labs, Holmdel, New Jersey
- Subject: Remote Trunk Arrangement
- Location: Kahler Plaza Inn  
151 East Washington Street, Orlando
- Schedule: Cocktails 6:30 PM, Dinner 7:00 PM, Meeting 8:00 PM
- Reservations: Contact Carolyn Lee, at 422-0353, by Monday, June 9th.
- Price: \$7.50 per person

-----  
STUDENT CHAPTER NEWS

Election of officers was held at the May 1st. meeting. The following officers were elected to serve during the Summer and Fall Quarters of 1975:

- Chairman - Leo Mallete  
Vice Chairman - Arthur Hollows  
Secretary - Gary Horn  
Treasurer - Jay Klaasen

The May 15 meeting featured Mr. William Leff from General Dynamics. Mr. Leff demonstrated the ICT105 Printed Circuit Card Tester.

The following student members will be June 1975 graduates of Florida Technological University:

- Robert (Hoot) Gibson - Computers - Ga. Tech.  
Robert M. Hill - Microelectronics - Stanford  
Ben Matthews - Digital  
Glenn Snyder - Digital

## VEHICULAR TECHNOLOGY GROUP

--- NEWSLETTER ---

New Chapter officers for the 1975-1976 season were elected at the meeting on May 15. The new officers are: Mel Kelch - Chairman, Herb Zwarra - Vice Chairman, and Dick Endicott - Secretary. At the same meeting there was a unanimous vote favoring an invitation to the VTG Administrative Committee to hold its Annual Vehicular Technology Conference in Orlando in March, 1977. The offer will be considered by AdCom at its June meeting.

The next Vehicular Technology Conference will be held in Washington, D. C. in March, 1976.

1975 may be remembered by some as the Year of the Microprocessor, and this is quite evident in developments in automotive electronics. At the VTG Conference on Automotive Electronics, held last year, the keynote speaker, Elliot Estes, President of General Motors, predicted the possible use of a microcomputer to control automotive power plants by the early 1980's. Advanced concept vehicles are now being tested to evaluate the use of a microcomputer to control all aspects of engine operation including air-fuel mixture, ignition timing and emission control subsystems.

At its annual meeting in April, Chrysler announced that it will use two computer logic packages in some 1976 models to control air-fuel mixtures dynamically, and that the innovation may be extended to all its automobiles by 1977 if emission control standards are not changed. An eventual 15 percent improvement in fuel economy is expected through use of electronic controls.

In a speech, in which he described work on a microprocessor for automotive use, Robert Sarnoff, Chairman of RCA, predicted that more than 500 million gallons of gasoline could be saved annually in the U.S. by the widespread use of microprocessors for engine control. He placed the cost at no more than \$100 per unit for the devices. The capability would be provided for automatic adjustment of both choke and throttle for maximum starting efficiency, and for best fuel economy the fuel mixture will be continuously adjusted and gears shifted at precisely at the right times.

In the interest of better radio discipline and spectrum efficiency, the FCC has proposed the adoption of an Automatic Transmitter Identification **System (ATIS)** which would provide for broadcasting of a unique transmitter address at the beginning and end of every radio transmission and every 30 seconds during extended transmissions. A digital coding format, ASCII, would be used with audio frequency shift keying. A major advantage cited is the proper identification of transmitters used by unskilled operators who may not comply fully with current regulations regarding voice identification requirements, such as in the Citizens' Radio band. Voice identification would be retained, since it is required under international agreements.

A new standard, "Mobile FM Transmitters", has been announced by the Law Enforcement Standards Laboratory of the National Bureau of Standards. It is available through the Government Printing Office, Washington, D. C. 20402, Stock No. 2700-00287, for 70 cents per copy.

JUNE BANQUET  
LAKE BUENA VISTA CLUB  
JUNE 13, 1975

SPEAKER: G. John MacMichael  
General Manager  
Electric Vehicle Division  
West India Trading Company

SUBJECT: "The Electrical Automobile - Available  
Now"  
Mr. MacMichael will trace the history  
of the electric car through the years to  
the latest production models, and give us  
an idea of what the future will bring. In  
addition he will describe the Sebring -  
Vanguard Citi-Car, a two passenger vehi-  
cle his own company distributes and he  
will have the car available for inspection.

SCHEDULE: SOCIAL 6:30 PM (Dutch)  
DINNER 7:30 PM ( Coq Au Vin)  
PROGRAM 8:30 PM

TICKETS: Price \$8.25 per person

CONTACT:  
Bill Rhoden 859-2900  
Jim Wiltse 352-2887  
Jim Gay 645-1510  
or any member of the Executive Committee.

PRELIMINARY SCHEDULE  
 SUMMER 1975

<u>PFX</u>	<u>NO.</u>	<u>Course Title</u>	<u>Time</u>
------------	------------	---------------------	-------------

COLLEGE OF EDUCATION

EDVE	401	Philosophy & Prin. of Tech. Ed.	17-2050M
EDVE	422	Evaluation of Occ. Instruction	17-2050T

COLLEGE OF ENGINEERING

*CEES	518	HYDRAULIC ENGINEERING	20-2050M;19-2050W
*CEES	612	ENVIRON. ENGR. -WASTEWATER	18-1950M;17-1850W
EECS	612	SYNTHESIS OF ELECT. FILTERS	17-1850T;17-1750R
EECS	633	NONLINEAR CONTROL SYSTEMS	19-1950T;18-1950R
*EECS	641	ELECTROMAGNETIC FIELDS	17-1850T;18-1850R
*EMCS	573	ANALYTICAL METHODS IN ENGR.	20-2050M;18-1950W
*IEMS	431	ENGR. APPL. OF COMP. METHODS	16-1750M;16-1650W
*IEMS	620	QUEUEING SYSTEMS	18-1950M;17-1750W
*MEAS	688	RADIATION HEAT TRANSFER	16-1650T;16-1750R

\* = Lecture on TV tape.

GRAD: Engr. Thesis, Research Reports, and Special Topics Available

May 22 DEADLINE FOR RECEIPT OF APPLICATION FOR ADMISSION  
 If you have failed to apply for proper admission by this date you may still register on the temporary form.

May 12 thru May 16 START REGISTRATION AT SORC. 9AM-5PM. After contacting your advisor you may process your registration at SORC only if:  
 1. Your total FTU course load is SORC courses;  
 2. Your total FTU course load is SORC and Main Campus engineering courses;  
 3. Your total FTU course load is Main Campus graduate engineering courses.  
 Otherwise you must register at the Main Campus for both SORC and Main Campus courses. Previously admitted graduate engineering students only may register at SORC by TELEPHONE TO SORC, subject to the above cited rules. Fee statements may be picked up at the Center after May 21.

May 17 to Jun 16 REGULAR REGISTRATION AT SORC. 11AM-5PM, or later by appointment, subject to the rules cited above. Registration after this date must be done at the Main Campus on Friday, June 20, 9AM-9PM.

Jun 5 After this date \$25 LATE FEE CHARGED for Readmissions and Temporary Admissions.

Jun 17 to Jun 23 DROP, ADD, or WITHDRAW with full refund. After June 23 DROP-ADD must be done on Main Campus, as follows:  
 June 24 - 1:00-3:30 PM  
 June 25 - 8:30-11:30AM  
 June 26 - 1:00-3:00PM

Jun 23 CLASSES BEGIN

Jun 25 LAST DAY TO ACCEPT READMISSION AND TEMPORARY ADMISSIONS forms at Main Campus

Jun 26 LATE REGISTRATION 4:00-6:00PM Main Campus only. No Late Registration at SORC.

Jun 27 FEES DUE IN CASHIER'S OFFICE. Midnight postmark accepted.

ALL FEE STATEMENTS FOR STUDENTS REGISTERING AT SORC WILL BE AVAILABLE AT CENTER, AND MUST BE PICKED UP BY STUDENT, AFTER JUNE 19.



PROFESSIONAL ACTIVITIES COMMITTEE

NEWSLETTER

Mr. Walt Elden has been appointed Chairman of the Ethics Subcommittee of the PAC representing the Orlando Section of the IEEE. In this capacity he will coordinate the activities between the national IEEE Committee on Ethics, a subcommittee of PAC which is a subcommittee of the U. S. Activities Board, the Orlando Section of the IEEE, and the Florida Engineering Society.

WHAT'S GOING ON IN WASHINGTON

The following excerpts were taken from the Washington Newsletter of the IEEE Washington Office, May 1975 issue.

ENERGY A Department of Commerce Technical Advisory Board has called for a concerted attack on the Nation's energy problems and warns that "the U. S. is more vulnerable to an embargo today than it was in the Fall of 1973." The board's report, entitled "CTAB Recommendations for a National Energy Program" concludes that it is unlikely that the U. S. will be able to eliminate the need for imported oil during the next decade and that "declining dependence on foreign energy sources will exist by 1985 only if a strong, coordinated, all-encompassing national energy supply and conservation program is implemented immediately." The report notes that movement toward U. S. energy independence cannot be accomplished by exclusive concentration on one or two energy sources and calls for a comprehensive program aimed at developing the full potential of all energy sources. A report written for the National Science Foundation and the former Atomic Energy Commission gave a mixed blessing to the safety features of the U. S. nuclear energy program. It found no reason for short-term concern. However, in view of the increasing number of nuclear power plants it recommended a continuing effort to improve reactor safety as well as to understand and mitigate the consequences of possible accidents.

NATIONAL SCIENCE POLICY It is expected that hearings by the House Science and Technology Committee on legislation to establish a U. S. science policy and organization will begin in June.

CONSUMER PROTECTION Opposition to a consumer protection agency (S. 200), which cleared Senate Government Operations Committee, is growing. Various polls and studies indicate that most of the consumers interviewed oppose creation of such an agency. The President asked the Senate to postpone floor action so that both line agencies and regulatory commissions can take a good look at their responsiveness to the consumer and at the same time give Congress some solid legislative proposals in regulatory reform -- cutting unnecessary, costly and regressive regulations.

The PAC urges people to write their congressman voicing their position on these and other Legislative matters.

Submitted by,

Ted Stefanik  
Professional Activities Chairman

# ORLANDO SECTION NOTES

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Published Monthly by the Orlando Section except during the months of  
July and August

Inquiries concerning advertising and /or announcements should be forwarded to  
Mr. Charles Curley, 6655 Durango Court, Orlando, Florida 32809.

## 1974-75 Executive Committee

		Business	Residence
* Chairman	Jim Wiltse	352-2887	876-2561
* Vice Chairman	Harold Downing	351-9962	628-0676
* Secretary	John Boynton	423-0555	339-8077
* Treasurer	Ed R. McCarter	275-2548	647-0134
* Group Chap. Rep.	Bill Rhoden	859-2900	671-3469
Jr. Past Chairman	Karl Lohman	628-3442	644-1144
Sr. Past Chairman	Gene Dashiell	859-2900	859-2497
Program	Jim Gay	645-1510	645-1510
Publicity			
Membership	John Tracy	352-2738	859-1214
Arrangements	Bill Rhoden	859-2900	671-3469
Student Activities	Bruce Mathews	275-2786	645-0549
Publications	Charles Curley	352-4688	855-6972
Barbecue	Ted Stefanik	352-2049	671-4240
Awards	Jim Walter	898-9033	339-2071
Reg. III 1974	Sam Hartin	352-3563	838-1788
Student Chapter	Ben Matthews		422-2276
AES Chairman	Richard Brueggemann	352-3704	862-4520
CS Chairman	Russell Theisen	834-1000x288	671-4139
MTT Chairman	Bill Rhoden	859-2900	671-3469
COMSOC Chairman	Edwin Scott	422-4584	293-1377
PS IGA Chairman	Bill Cram	841-9015	647-4123
PAC Chairman	Ted Stefanik	352-2049	671-4240
VT Chairman	George McClure	352-3782	647-5092
Member-at-Large			
Member-at-Large	Ernest E. Erickson	275-2414	671-5026
IEE-FES Liaison	Walter L. Elden		851-2082
Area 4 Chairman	Joe Pullara	352-4516	339-1327
Area 4 PAC Chairman	Ted Stefanik	352-2049	671-4240
* Members of Executive Board			

REMINDER! The Executive Committee meets the first Tuesday of the month.  
This is an open meeting and ALL members are invited to attend. The meeting  
is held at the Southern Bell Telephone Bldg. on Sand Lake Road and begins  
at 5:30 PM.

# A cost-effective communicator... anywhere! Martin Marietta's 15 GHz (AN/GRC-200) solid state microwave.

Our tactical microwave radio operates in the 14.4 to 15.25 GHz frequency band, has solid state circuits for improved reliability, lower power consumption.

Rugged, compact and readily relocatable (it can be mounted on a vehicle), it is designed for tactical down the hill, intra-base or tail circuit applications.

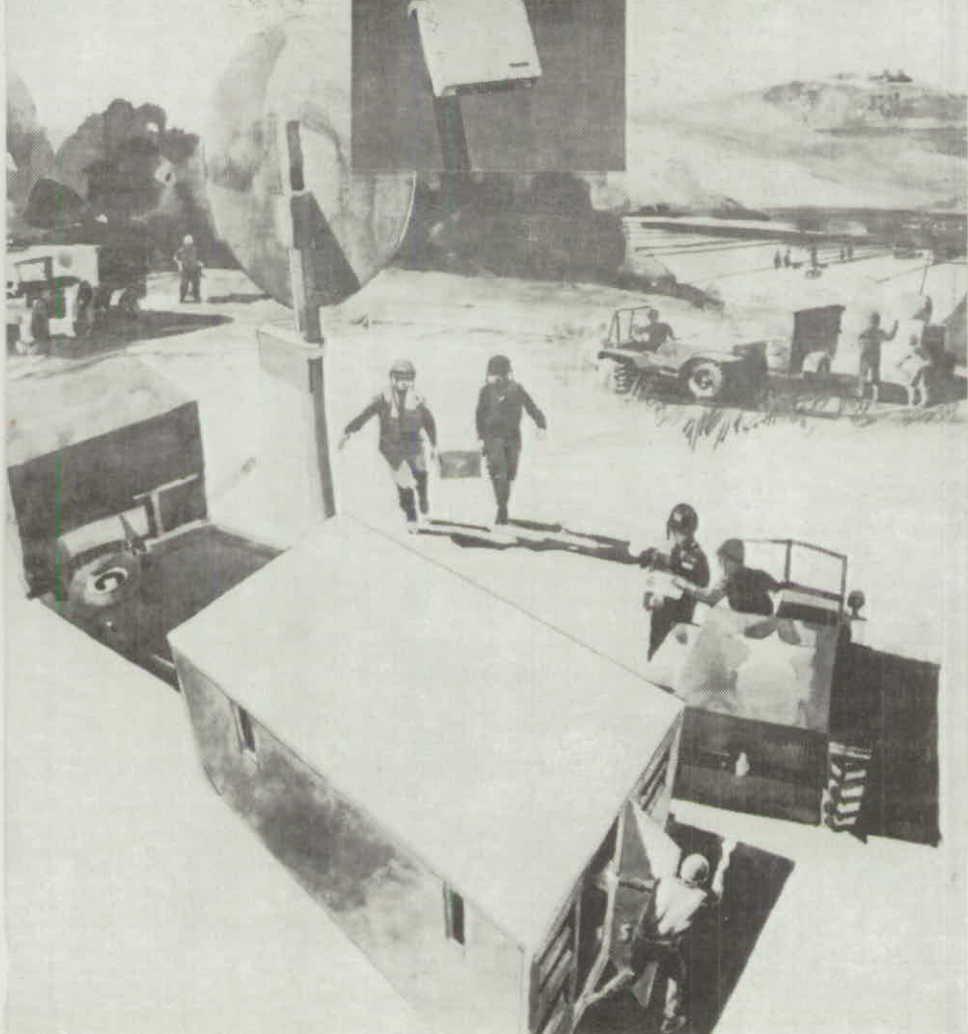
It is compatible with:

- TD-976 (96 channel super group multiplexers and digital master group multiplexers)

- TD-660 TD-754 TD-204 TD-352 TD-968 TD-202 AN/GSC-24(v)
- 2.4 B.12, and 16 T-1 carrier lines
- UCC-4 FCC-17 and other FDM equipment

The TLD-15 is furnished in an outdoor weather-protected housing and is suitable for mast or shelter mounting.

For more information, write or call: Martin Marietta Communications and Electronics, Box 5837, Orlando, Florida 32805, phone (305) 855-6100 ext. 3451.



**MARTIN MARIETTA**

Communications and Electronics

ORLANDO SECTION  
I. E. E. E.  
ORLANDO, FLA.

U. S. POSTAGE  
PAID 1.8¢  
Permit No. 3492

Orlando, Florida  
Non-Profit  
Organization



TWO NEW SPECTRUM ANALYZERS FOR HIGH-ACCURACY  
AMPLITUDE MEASUREMENTS FROM 10 Hz TO 13 MHz

Two new spectrum analyzers, one manually operated, the other fully automatic and programmable, are designed for fast, accurate production testing of consumer electronics, for quality control, and for laboratory applications. Amplitude is measured to 0.01 dB resolution and displayed in dB on a digital display. Accuracy of amplitude measurements is not limited by CRT accuracy as on conventional analyzers. Operator error is significantly reduced.

Hewlett-Packard Model 3044A is manually operated and can be used with either of two synthesizers, depending upon the frequency resolution requirement.

The Model 3045A is an automatic, programmable version using a high resolution synthesizer with a choice of three different programmable desktop calculators. Control and computational capabilities of the calculators and their peripherals make the system fully automatic. Software for several general types of measurements, and programming instructions for more specific measurements are supplied.

**FOR INFORMATION  
CALL OR WRITE  
HEWLETT PACKARD**

**P.O. Box 13910  
Orlando, Florida 32809  
Phone 859-2900**