

EDITOR'S PROFILE of this issue

from a historical perspective ...

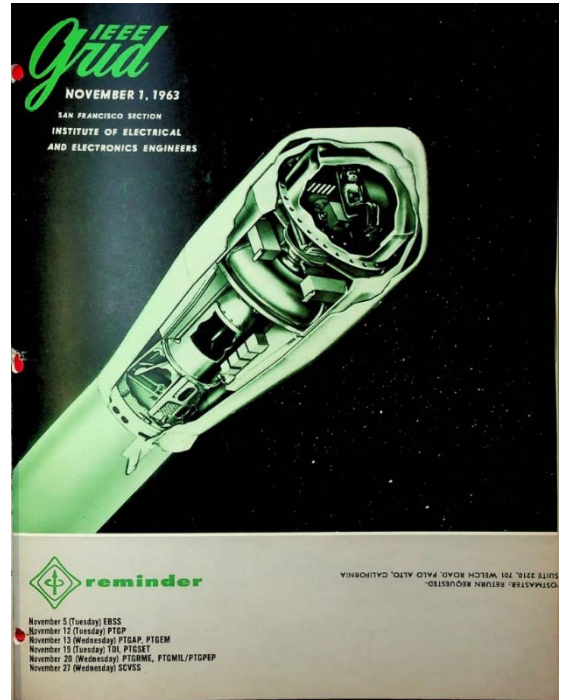
with Paul Wesling, SF Bay Area Council GRID editor (2004-2014)

November, 1963:

Cover: Plans are underway to launch a bio-focused satellite, with experiments on tissue samples, plant and animal specimens, and primates. Focus this month is on engineering management of large research projects such as this. More on page 6.

Page 4: The local Power group is forming spontaneously, even though their parent Power Division won't form until next summer. Never mind – it is off and running, with the first meeting this month.

Page 16: IRE member Floyd Kvamme moves to the Bay Area. In 1967 he and others founded National Semiconductor (now a part of TI); he also headed up marketing at Apple and served as a director of the VC firm Kleiner, Perkins, Caufield & Byers. He served several USA presidents in various capacities.



Archive of available SF Bay Area GRID Magazines is at this location:

https://ethw.org/IEEE_San_Francisco_Bay_Area_Council_History

At time of scanning, the bound volumes are held by Paul Wesling.

July, 2021

Contact p.wesling@ieee.org

IEEE *Grid*

NOVEMBER 1, 1963

SAN FRANCISCO SECTION
INSTITUTE OF ELECTRICAL
AND ELECTRONICS ENGINEERS



reminder

- November 5 (Tuesday) EBSS
- November 12 (Tuesday) PTGP
- November 13 (Wednesday) PTGAP, PTGEM
- November 19 (Tuesday) TDI, PTGSET
- November 20 (Wednesday) PTGBME, PTGMIL/PTGPEP
- November 27 (Wednesday) SCVSS

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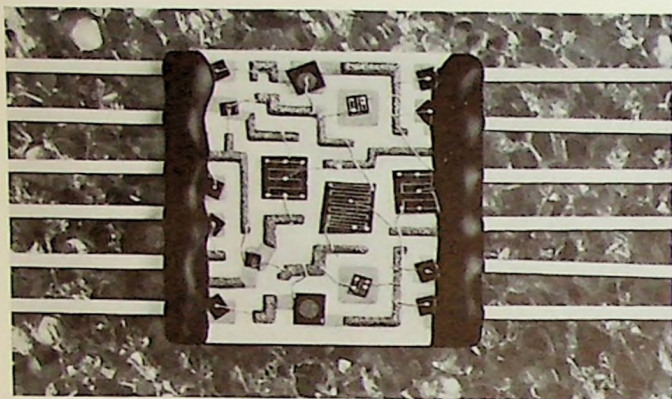
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Typical example of multichip circuits: General Instrument PC-15 Dual NAND circuit

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THE LIMITATIONS, of course, spring from the very nature of the monolith itself: the fact that it consists, essentially, of a single silicon substrate, or wafer, which is *shared in common* by all components: resistor, capacitor, transistor, diode or whatnot. Some of the inherent, intrinsic, and inevitable inadequacies of this intimacy of components, as indicated in other advertisements of this series, are inductive, electrostatic and capacitive *intercoupling* (which can limit high-frequency performance). Other disadvantages include physical interaction of one form or another, such as heat-exchange, which can cause one component to alter the performance and reliability of a propinquient one.

JUST AS IMPORTANT — and frequently more so — is the fact that the common substrate of a monolith, on which different components must be created in different regions, must be a *compromise* substrate. It is simply not feasible to diffuse and treat individual areas on the same chip as independent entities. Moreover the "best" substrate for a particular component may be anything but ideal for another component in the same circuit.

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THE VERSATILITY of the multichip technique is, of course, only one of its basic advantages. There is also, where a customized design is involved, the not unimportant matter of *costs*. Monoliths, as a general rule, require several thousand dollars' worth of tooling-up investment — and, as a result, are not usually justified except in circuits that are to be produced, unaltered, in extremely large quantities. GI Multichips, however, can generally be assembled to your precise circuit specifications at a cost no higher than a few hundred dollars.

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MEANWHILE, IF you'd like a good bit more information on the somewhat-neglected subject of multichip circuit packages, we have it waiting for you. A note to Jerry Fishel at the address below will bring it to you without delay.

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cover

The proposed biosatellite, typical of the projects demanding a high degree of technical management, is to be launched into a 200-mile-high circular orbit by a Delta launch vehicle starting in 1965. Experiments will in-

clude effects of weightlessness on live tissue, effects on plant and animal specimens, including primates in orbital flights up to 30 days. For more on this and the technical management of similar projects, see page 6.

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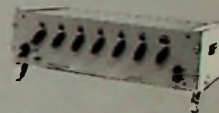


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IEEE POWER GROUP

A professional technical group on power (PTGP) was approved by the IEEE executive committee at its meeting on August 22. This move of the former AIEE Power Division, with its 2,400 committeemen, into the IEEE PTG structure opens the way for fuller participation in technical activities for the estimated 30,000 power-oriented members of IEEE.

All members of IEEE interested in power will be invited to join. Sections may organize PTGP chapters. Several have already begun to do so. An informal canvass last spring indicated that at least 50 expected to have PTGP chapters.

Plans include a monthly publication based on the present bimonthly *Power Apparatus and Systems* with added features such as news of group and chapter activities, meeting notices, and reports and abstracts of unpublished but available papers. Present PA&S subscribers, as members of PTGP, will be pleased to find their publication expanded and appearing monthly. In addition they should enjoy the added privileges of PTGP membership at little or no increase in annual cost, now \$6.00.

Present plans contemplate that the new PTG will be governed by a council representing the membership. Included in the council will be all chapter chairmen, members-at-large regionally distributed, all department and committee chairmen, and the group officers. An administrative committee of the council will include members-at-large, department chairmen, and the group officers. Related committees will be coordinated by departments. The 12 technical committees, their subcommittees and working groups, along with a standards coordinating committee, will constitute the technical operations department and carry on many of the functions previously performed in the Power Division of IEEE, and formerly in AIEE.

The initial PTGP administrative committee, charged by the IEEE executive committee with the responsibility for writing the constitution and bylaws, organizing the council, committees, and publications, includes the following: C. A. Woodrow, chairman; Bradley Cozzens, A. P. Fugill, C. T. Hatcher, L. F. Kennedy, J. T. Lusignan, and C. T. Pearce.

EAST BAY SUBSECTION

8:00 P.M. • Tuesday, November 5

Survey of Far Eastern Television

Joseph Roizen, Ampex Corporation, Redwood City

Place: Banquet Room of Livermore Lanes, Rincon Avenue, Livermore

Dinner: 7:00 P.M.

SANTA CLARA VALLEY SUBSECTION

8:00 P.M. • Wednesday, November 27

Medical Electronics

Dr. Noel Thompson, Palo Alto Medical Research Foundation, Palo Alto Medical Clinic

Place: Lockheed Auditorium, 3251 Hanover St., Palo Alto

No dinner

TECHNICAL DIVISIONS

Industrial

7:30 P.M. • Tuesday, November 19

Precision Measurements Utilizing Servo-Manometer Techniques

Eugene Glassey, president, Exactel Instrument Co., Mountain View

Place: Pacific Gas & Electric Co., 245 Market St., San Francisco, Room 232

PROFESSIONAL TECHNICAL GROUP CHAPTERS

Antennas and Propagation

8:00 P.M. • Wednesday, November 13

(Dinner Meeting)

Whistler-Triggered Periodic Emissions from the Ionosphere

Professor Robert A. Helliwell, Stanford Electronics Laboratory, Stanford

Place: Algiers Restaurant, 2620 El Camino Real, Redwood City

Dinner: 6:30 P.M. (roast beef, \$3.95)

Reservations: Al Dunbar, Lockheed Missiles and Space Company, RE 9-4321,

Ext. 26114 or: Rolf Dyce, Stanford Research Institute, DA 6-6200, Ext. 2940, by Monday, November 11.

Bio-Medical Electronics

8:00 P.M. • Wednesday, November 20

Automatic Recognition of E.C.G. Abnormalities: Advances and Problems

Dr. J. von der Groeben, Dept. of Medicine, Stanford University

Place: Room M-112 Medical School Bldg., Palo Alto-Stanford University Medical Center

Dinner: 6:00 P.M., Red Cottage Restaurant, 1706 El Camino Real, Menlo Park

Reservations: Con Rader, 326-1970, Ext. 328, by November 19

Engineering Management

7:00 P.M. • Wednesday, November 13

(Dinner Meeting)

Technical Management of Research Projects

Dr. G. Dale Smith, Manager, Experiment and Life Support Systems, Biosatellite Project, NASA-Ames

Place: Ming's Restaurant, 4100 El Camino Real, Palo Alto

Dinner: 7:00 P.M.; no-host cocktails, 6:00 P.M.

Reservations: Mrs. Newcomb, 321-4175, Ext. 356, by November 12, 5:00 P.M.

Military Electronics

8:00 P.M. • Wednesday, November 20

(Joint meeting with PTCPEP, see below)

Power

7:30 P.M. • Tuesday, November 12

(Special Organizing Meeting for S.F. Chapter of PTGP)

Future of Fuels and Generation in the West

James S. Moulton, Vice President and Executive Engineer, Pacific Gas & Electric Company

Place: Engineers Club of S.F., 206 Sansome St., San Francisco

Dinner: 6:30 P.M. (cocktails at 5:30)

Reservations: Phone Engineers Club, GA 1-3184

Product Engineering and Production

8:00 P.M. • Wednesday, November 20

Opto Electronics: A New Technology for Military & Space Components

W. Brooks, Opto Electronics Devices, Inc.

Place: Lockheed Auditorium, 3251 Hanover St., Palo Alto

Dinner: 6:00 P.M., Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto

Reservations: Victor Conrad: 326-4000, Ext. 2212

Space Electronics and Telemetry

8:15 P.M. • Tuesday, November 19

PCM Decommutation

Charles Jamgotchian, Telemetrics, Los Angeles

Place: Lockheed Auditorium, Bldg. 202, 3251 Hanover St., Palo Alto

Dinner: 6:15 P.M., El Camino Bowl, 2025 El Camino Real, Mountain View

Reservations: Robert H. Light, 968-6211, Ext. 2024, by noon, November 19

ptg news

NOVEMBER 12 POWER MEETING

Activities of power-oriented IEEE men in the Bay Area got under way with a rush at mid-month, following announcement from national headquarters that PTC-Power had been approved.

Operating without national or local organization, a group of power engineers met with IEEE Vice Chairman J. C. Beckett, PTC Coordinator C. F. Hochgesang, and Executive Secretary J. D. Warnock to chart the course.

First step was to call an evening meeting to organize the S.F. chapter of PTGP. The meeting was set for the Engineers Club at 206 Sansome Street, San Francisco, November 12 (see Calendar).

Following the organizing sessions, PG&E Vice President and Executive Engineer James S. Moulton will address the power engineers on "The Future of Fuels and Generation in the West," a vibrant subject today. Moulton's qualifications to handle the speaking assignment are attested to by his having served as chairman of the subcommittee which produced the Federal Power Commission Advisory Report on Fuels for Electric Generation in the Western United States.

Mr. Moulton has been with PG&E since 1930, having joined its predecessor company, San Joaquin Light and Power Co., in 1921 following graduation from Yale's Sheffield Scientific School with a Ph.B., ME, magna cum laude in 1920. He is a fellow of IEEE and active in many professional societies and civic organizations.

Information from New York indicates the national PTC-Power will not have official status until July 1, 1964. Technically, this means an S.F. chapter can't be formed until then. This, however, did not daunt the ad hoc committee which formed almost spontaneously.

Taking advantage of encouragement from headquarters to proceed on a local level regardless, J. E. Barkle of Bechtel Corp. started circulating the required petitions demanding chapter recognition. Although only 12 signa-



Moulton

Hochgesang

ptg news

PTG COORDINATOR NAMED

Charles F. Hochgesang, manager of power systems engineering, Bechtel Corp., San Francisco, has been appointed PTC coordinator for the San Francisco Section, according to Dr. William A. Edson, chairman. His special mission for the 1963-64 program year will be the activation of the new PTC on Power, and continued integration of technical division programming and organization into the PTC chapter structure.

W. H. Peterson, PG&E, Oakland, previously announced for this appointment, was unable to accept it because of current business obligations.

At Bechtel the new officer is responsible for electric utility power system analysis and economic studies. He returned to Bechtel in 1962 after six years with Electrical World magazine as western editor and as editor-in-chief. He previously had been with Bechtel for eight years, and with General Electric and Carbide and Carbon Chemicals Corp. He graduated from the University of Maryland with a B.S. in EE. He is a member of the U.S. National Committee for CIGRE, secretary-treasurer of the SF Bay Area Engineering Council, serves on several IEEE national committees, and is a registered professional engineer in California.

tures are required, Barkle reported at press time knowledge of over 40 signatures and said the total is mounting rapidly.

PTC Coordinator Hochgesang announced that the completed petition for PTGP chapter status will be presented to the Section Executive Committee for approval October 30. It would then be transmitted to headquarters to "get in line" for processing with similar petitions from other chapters springing up around the country.

To maintain the momentum of activities, the initial meeting November 12 will set the local chapter organization and further plot the course of business and technical affairs.

Direct mail to all members of the former AIEE S.F. Section is giving strong publicity to the resurgence of interest. Power men not receiving such direct mail by now should contact the section office.

Until July 1, 1964, all technical activities, meetings, and publications in this field will be continued without interruption under the IEEE Power Division, as part of the IEEE Technical Operations Committee, of which C. A. Woodrow is chairman.

TECHNICAL MANAGEMENT

Technical management of research projects will be the topic at the November 13 dinner meeting of PTC on Engineering Management, where Dr. G. Dale Smith, manager, experiment and life support systems, project biosatellite of NASA, Ames, will discuss the diverse aspects of project management.

Dr. Smith received a Bachelor of Science degree from Washington State University in 1950, and in 1952 earned the D.V.M. from W.S.U. After serving in the U.S. Army during World War II, and with the U.S. Air Force from 1951 to 1961 as a captain, he joined NASA in Washington, D.C., in 1959 as an assistant director of the office of life sciences programs, and in 1961 joined the staff of Ames Research Center.

He served as chief of bio-technology for NASA's Project Mercury program, and as a member of the Lovelace committee (secretary, NASA special committee on life sciences). He is a member of Aerospace Medical Association, Association of Military Surgeons, American Veterinary Medical Association, and American Association for the Advancement of Science, a fellow in the American College of Veterinary Toxicologists, and has memberships on many other committees.



Smith

Helliwell

meeting ahead

WHISTLERS FROM IONOSPHERE

Professor Robert A. Helliwell will discuss whistler-triggered periodic emissions from the ionosphere at the November 13 dinner meeting of the PTCAP chapter.

A "whistler" results from the ionospheric dispersion of a burst of radio energy from a lightning stroke. The radio wave components are guided along the earth's magnetic field, at or beyond about one earth's radius from the surface of the earth, and are observed to "bounce" between conjugate positions in the northern and southern hemispheres.

Helliwell will discuss a recent experimental observation that other VLF emissions are apparently "triggered," or arranged in temporary coherent bundles by the above whistlers. Occasionally, even Navy VLF transmitters have been noted to trigger such ionospheric emissions. His talk will be illustrated by a stereo recording made by combining VLF recordings obtained in opposite hemispheres.

SERVO-MANOMETER MEASURING

Eugene Glassey, president of Exactel Instrument Co., Mountain View, will discuss precision measurements utilizing servo-manometer techniques at the November 19 meeting of the Industrial Division.

The speaker is a graduate of Stanford University who spent the first 11 years of his professional life at NACA/NASA, Moffett Field Ames Laboratory, doing work in instrumentation. In 1956 he founded Exactel Instrument Co. to manufacture precision instrumentation equipment for use by such laboratories.

Today, the Exactel Instrumentation line has been expanded and equipment has been supplied for varied uses, including water level gaging in water moderated atomic reactors, steam plant feed water flow in large power plants, stream and reservoir level measurement, tank level measurement, automatic weather observation stations, and research standards, all with accuracies of .01 percent or better.

He will discuss the principle and design of his equipment, illustrated by slides and including pictures of typical installations. Instruments are designed for local read-out, remote read-out, and computer input. Therefore, the talk should be of interest to a number of members in various fields.

computer notes

PEACE RESEARCH COMPUTER PROJECT URGED BY FJCC SPEAKER

Arguing that computers are among our best intellectual resources, a physicist and computer expert has suggested that computers be put to work on the problem of world peace.

One of several San Francisco Section members planning to participate in the Fall Joint Computer Conference for 1963 to be held at the Las Vegas convention center November 12-14, Dr. Louis Fein of Palo Alto pointed out that each person has private convictions about what actions will lead to peace, including strengthening or abolishing the U.N., embracing capitalism or communism, democracy or totalitarianism, religion or atheism, moral rearmament, etc.

The problem, according to Dr. Fein, is that while many of these convictions may be dearly held and even pursued by governments, they are little more than subjective viewpoints. Further, he notes, the fact that we have not yet had a nuclear war does not mean that we have sufficiently reliable information on how to continue to avoid one.

To develop this knowledge, Dr.

Fein advocates establishment of a large-scale, non-national, comprehensive, and expensive (billion dollar) peace research project. In his paper he describes a hypothetical organization along these lines designated as PERC — an acronym formed from Peace on Earth Research Center.

Dr. Fein identifies the two principal objectives of PERC as ascertaining the conditions under which people of the world would live in peace with each other and determining ways of getting from the present world conditions to conditions ensuring peace.

PERC would begin, Dr. Fein suggests, by testing all available hypotheses of roads to world peace, therefrom deriving stratagems most likely to lead to world peace. The task, he admits, is formidable; he also notes that some will claim it to be impossible. However, he argues, it may be suicidal not to attempt such a study.

All nations would have access to what Dr. Fein refers to as the "pedagogic, not coercive" results of PERC's study. He hopes that the results would

be so intellectually persuasive that no nation would reject them, but instead follow them of their own free will.

Present-day peace research projects, Dr. Fein notes, are handicapped because they are isolated, narrow, underfinanced, uncoordinated, empirical, or development (as opposed to research) programs. In particular, he notes, since the existing projects sprang up at random, their results cannot be fitted into any over-all scheme. He suggests instead that the first need is for a single master peace-research plan.

Dr. Fein is a physicist who works as a free-lance consultant in the fields of computers, automation, and artificial intelligence. He has been in the computer field for fifteen years as a computer designer and builder (RAY-DAC); company founder and president (Computer Control Co., Inc.); university lecturer (Stanford, Wayne); author and consultant (reliability, management, university education, synnoetics, information-retrieval, artificial intelligence, peace research).

MATERIALS AVAILABLE

IEEE letterhead stationery and envelopes can be obtained in quantity from the section office by officers and committee chairmen of the section, the subsections, the divisions, and the PTC's. Two different versions of bond and tissue are on hand: one for section correspondence, one for professional technical group correspondence. Officers may receive a supply by calling the office or, preferably, to save postage, by visiting the office or sending a representative.

Also available are new lapel cards for use at meetings, PTC application folders, complete membership kits for every grade, IEEE Standards, meeting report forms, and many other items for use of the component groups of the section, including blue order forms for IEEE membership pins.

meeting review

PLASMAS & RADIO WAVES

At the first fall meeting of the PTCGAP chapter, Dr. Tetsu Morita of Stanford Research Institute discussed several topics concerning plasmas and their effect on radio waves. His talk was illustrated by the results of several experimental observations beginning with the microwave attenuation measurements made through the plume of a static-fired rocket. In this case, microwave attenuation through the plasma proved to be much more severe for solid-fueled rockets and was markedly dependent upon subtle impurities in the fuel. This effect is similar to the loss of telemetry signals during launch and re-entry associated with the ionized plume or wake. Efforts to increase the radiated power from an antenna under such conditions leads to the creation of additional plasma by the RF energy with the result that the actual radiated power remains roughly constant.

Dr. Morita also described recent laboratory-simulation experiments, laboratory diagnostics, and relevant physics for:

- the radar behavior of re-entry wakes;
- rocket plumes operating in a vacuum;
- resonance of secondary electrons under low frequency, low pressure conditions (multipactor); and
- the radio wave, plasma, and optical features of a high-speed shock front.

ROLF DYCE



J. F. Hinchey, Friden engineer, demonstrates Marosi machine to PTCGEP visitors

meeting review

AUTOMATED BOARD PRINTING

The first meeting of the year found PTCGEP members and guests observing a new machine capable of producing a printed circuit board every three minutes.

J. F. Hinchey, staff assistant to the factory manager at Friden Corporation, San Leandro, described the machine and demonstrated its capabilities to approximately 50 observers. Friden has been operating the first machine of this kind in the area since last April.

The process deplates the undesired copper by electrolysis from a copper clad blank (anode) toward a cylindrical master (cathode). Copper never reaches the cathode, however, due to an electrolyte solution passing between the board and master at a rate

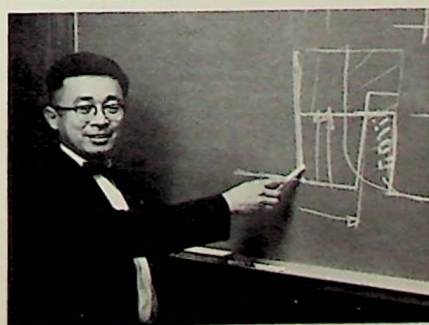
of five gallons per minute. The copper is reclaimed from the solution by an ion exchange process. Each cathode master will make between 400 and 1,000 boards. Costing only \$25 apiece, these masters are made by etching the pattern 0.004 inch deep in high-purity spring copper sheet and filling with epoxy.

Several parameters must be closely controlled to achieve uniform results. For example, the electrolyte must be maintained at 100°F. Close gap spacing of 0.006 inch and current densities of 1,500 amps/square foot allow the rapid cycle. Most important is the drum and table speed. This is controlled by a thickness sensing mechanism associated with the anode clamps.

The machine, which is made by Marosi Precision Products, Inc., El Cajon, eliminates the usual silk screen and etching process. Friden says it has the capacity of 10 operators using conventional methods.

The tour included other interesting facilities such as electrostatic painting and double injection molding. A brief tour of the assembly and test areas included products such as Friden calculators, compitypers, and computers. However, the majority of the meeting centered around the process for making printed circuit boards.

RONALD K. CHURCH



Dr. Tetsu Morita diagrams effects of plasmas



Whittle



Tarczy-Hornoch



Thorson



Grumet



Latter



Buurma

grid swings

IT IS REPORTED:

(IEEE members and their firms are invited to submit brief personnel and business items with appropriate photographs for use in this department.)

Patrick Whittle has been appointed to the newly created position of export manager for the Donner division of Systron-Donner Corp., Concord, Calif.

Zoltan Tarczy-Hornoch, technical director of Eldorado Electronics, Concord, Calif., and former professor of theoretical electrodynamics at the Technical University of Budapest, has returned from a summer tour of key technical centers in Europe.

Joseph S. Imirie has joined Litton Industries, Beverly Hills, as corporate vice president of the industrial group, following his resignation October 1 as assistant secretary of the Air Force (material).

Secode Corporation's telecommunications division has named two new members of the San Francisco headquarters office; Asa Putnam and Ronald L. Newton.

James H. Smith has been appointed product manager, advanced developments, of Dalmo Victor Co., division of Textron Inc., Belmont.

Richard W. Wieser has been appointed general manager of the Chatham division of Tung-Sol Electric Inc., Newark, N.J.

Samuel Rubinovitz has been appointed marketing manager for products of Edgerton, Germeshausen & Grier, Inc., Boston.

William H. Grumet has been appointed sales manager of Crydom Laboratories, Inc., Garden Grove, Calif.

William E. Thorson has been promoted to the position of plant manager at Electro Engineering Works, San Leandro.

Douglas L. Hamilton has been elected corporate controller of Sylvania Electric Products, Inc., New York.

Milton LaDuc has been appointed manager, field engineering, for Data Products Corp., Culver City.

William F. Ruck has been appointed product manager, magnetics and anti-submarine warfare, of Dalmo Victor Co., division of Textron Inc., Belmont.

Kurt R. Machein, president and board chairman of Machtronics, Mountain View, has announced the election of Alfred C. West, Chicago, and Joseph C. Fennelly, San Francisco, to the board of directors.

Charles E. Mick has been appointed to the public relations staff of Lenkurt Electric Co., Inc., San Carlos, and will be in charge of the technical press and public relations program, reporting to R. Denis Richter, public relations manager.

William L. Zongker has been appointed to the newly created post of digital products manager for Cubic Corporation, San Diego.

Ronald E. Jachowski has been appointed manager of applications engineering for instrumentation products of Motorola Instrumentation and Control, Inc., Phoenix.

John N. Latter, former controller, has been appointed vice president-general manager of the newly established consumer products division of Ampex, with headquarters in Chicago. John P. Buchan, vice president-finance and treasurer, will assume the functions of the controller's office at Ampex headquarters in Redwood City.

Edward C. Buurma has been appointed manager of field operations for Philco's WDL division, Palo Alto.

Harold V. Wallace has been elected vice president of Edgerton, Germeshausen & Grier, Boston.

George H. Balding has been appointed manager of advanced development for Kaiser Aircraft and Electronics Division, Palo Alto. Jerold H. Gard becomes assistant chief engineer.

Edward S. Seaman has been elected vice president, sales, of Memorex Corporation, Santa Clara.

D. R. Fewer has been appointed technical assistant to the vice president, technique, of Schlumberger Limited, Houston.

Richard F. Lazzarini has joined the applications engineering staff of Watkins-Johnson Co., Palo Alto.

Jackson W. Granholm has been elected vice president of Informatics, Inc., Culver City.

Harry G. Turner has been appointed manager of manufacturing operations for the Motorola solid states systems division, Phoenix.

Bill Shurtleff has been appointed manager, microwave marketing at Motorola's Chicago military electronics center.



Wieser



Rubinovitz



Zongker



Jachowski



Turner



Shurtleff


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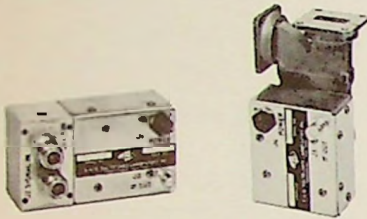
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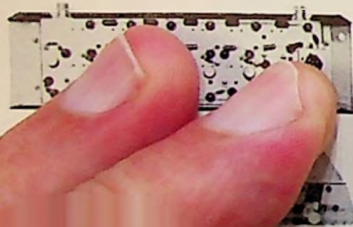


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Randmer



Kane

Jacob A. Randmer has joined Machlett Laboratories, Springdale, Conn., as chief engineer for the firm's power tube operation.

Ira W. Kane has been named manager of telemetry tracking and control programs for Philco's WDL division in Palo Alto.

William G. Van Polanen has been added to the engineering staff of the instruments/subsystems division of Huggins Laboratories, Inc., Sunnyvale. John D. Noll has been appointed supervisor of the manufacturing fabrication department in the tube division. Ivan M. Zubow has been appointed production control manager of the instruments/subsystems division.



Dimmick



Jennings

Walter F. Dimmick has been appointed quality assurance manager of Precision Instrument Co., Palo Alto.

Robert W. Jennings, former manager of equipment assembly for Ampex Corp., video and instrumentation division, Redwood City, has been named manufacturing manager of the division.

Francis X. O'Doherty has been named assistant manager, government sales division, of American Electronic Laboratories, Inc., Colmar, Pa. Wilbur J. Heritage has been named sales engineer.

Roger E. Gaumer has been appointed director of the mechanical and mathematical sciences laboratory in the research and development division of Lockheed Missiles & Space Co., Palo Alto.

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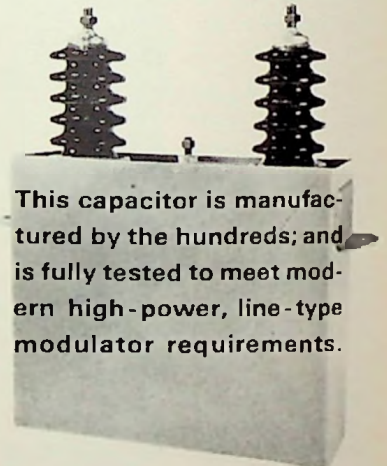
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Digital circuit modules. Expanded germanium line. Silicon digital modules. Bulletin and brochure. Packard Bell Computer, 1905 Armacost Ave., Los Angeles 25, Calif.

Kanigen plating, an electroless nickel alloy coating making all metals easily solderable. Brochure. Electro-Coatings, Inc., 1401 Park Ave., Emeryville 8, Calif.

Standardization and certification of test instruments. Brochure. Radiation Incorporated, Melbourne, Fla.

Traveling wave tubes for radar and space applications. Bulletin. Alan D. Maier, Microwave and Power Tube Division, Raytheon Co., Waltham 54, Mass.

"When to Specify Thermoelectric Temperature Stabilization." Brochure. Carter-Princeton, 178 Alexander St., Princeton, N.J.

New recorder series. Catalog. Esterline Angus Instrument Co., Inc., P.O. Box 596, Indianapolis 6, Indiana.

Electronic laboratory test equipment. 16 pp. short form catalog. Robert Dabbs, Advertising Manager, Houston Instrument Corp., 4950 Terminal Ave., Bellaire 101, Texas.

System approach to magnetics instrumentation. Bulletin. Radio Frequency Laboratories, Inc., Powerville Rd., Boonton, N.J.

Illuminated push button switches and matching indicator lights. Catalog. Dialight Corp., 60 Stewart Ave., Brooklyn, N.Y.

Group research, its conduct, administration and advantages. Brochure. Publications Office, Battelle Memorial Institute, 505 King Ave., Columbus 1, Ohio.

New monograph series, first three-book set in nine-volume series, entitled "Metallurgy in Nuclear Technology." Technical book dept., American Society for Metals, Metals Park, Ohio, \$4.45 ea.

ASM Review of Metal Literature, 1962. American Society for Metals, Metals Park, Ohio. Vol. 19, 1962, 1566 pages, \$25.

Single-pole, double-throw, miniature, snap-acting switches. Data sheet. Unimax Switch, Ives Rd., Wallingford, Conn.

Connector catalog and mating guide. Robins Industries Corp., 15-58 127th St., Flushing, N.Y.

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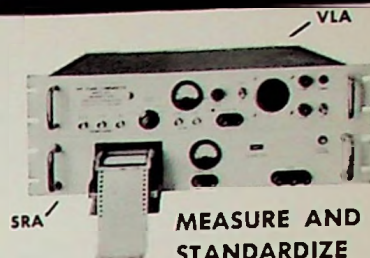
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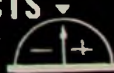
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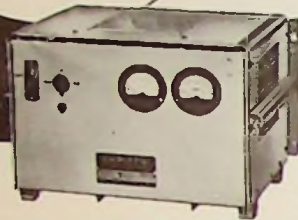


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events of interest

IEEE

November 12-14—Fall Joint Computer Conference. Las Vegas Convention Center, Las Vegas, AFIPS (IEEE/ACM). Program: Paul Davies, Abacus, Inc., 1718-21st St., Santa Monica. Proceedings.

November 18-20 — 16th Annual Conf. on Engineering in Medicine & Biology. Lord Baltimore Hotel, Baltimore 3. IEEE/ISA. Program: R. L. Schoenfeld, c/o 16th Annual Conf., Jenkins Hall, Johns Hopkins Univ., Baltimore 18. Digest at conference.

December 4-6—Ultrasonics Engineering Symposium, Marriott Motor Hotel, Washington, D.C. PTGUE. Program: Dr. T. R. Meeker, Bell Tel. Labs., 555 Union Blvd., Allentown, Pa. IEEE Transactions on UE after symposium.

December 6-4th Annual Seminar on Reliability in Space Vehicles, Los Angeles. PTGR / PTGED / PTGCP. Program: J. Doshay, Space General Corp., 9200 E. Flair Dr., El Monte, Calif. Proceedings at seminar.

December 5-6-14th National Conference on Vehicular Communications, Adolphus Hotel, Dallas, Tex. PTGVC. Program: A. C. Simmons, Comm. Industries, Inc., 511 N. Akard, Dallas, Tex. IEEE Transactions on VC after conference.

December 9-11—URSI-IEEE Fall Meeting, Seattle, Wash. IEEE-URSI et al. Program: U.S. National Committee, URSI, 2101 Constitution Ave., N.W., Washington 25, D.C. No proceedings.

January 7-9-10th National Symposium on Reliability & Quality Control, Statler - Hilton Hotel, Washington, D.C. IEEE/ASQC. Program: Dr. Landis S. Gephart, Lockheed Missiles and Space Co., Dept. 64-01, Bldg. 104, Sunnyvale, Calif. Order proceedings from IEEE HQ.

February 2-7—IEEE Winter Power Meeting, Statler-Hilton Hotel, New York. IEEE. Program: A. P. Fughill, Detroit Edison Co., 2000-2nd Ave., Detroit 26, Mich. Preprints.

February 5-7-5th Winter Convention on Military Electronics (MILECON), Ambassador Hotel, Los Angeles. PTGMIL/L.A. District. Program: IEEE L.A. Office, 3600 Wilshire Blvd., Los Angeles.

February 19-21 — International Solid-State Circuits Conference. Sheraton Hotel and University of Pennsylvania, Philadelphia. IEEE/U of P. Program: Howard Parks, Martin Co., R&AT Dept., Mail 683, Baltimore 3. Digest at conference.

events of interest

LOCAL NON-IEEE

November 18-21 — Workshop on Technical Writing, University of California Extension Center, 55 Laguna St., San Francisco. Two all-day sessions on sales dept. technical literature, two on engineering and research dept. technical literature. Either session \$75, both sessions \$120. Faculty: Gordon W. Goesch, IBM; Paul E. T. Jensen, Sylvania; Harry J. Lewenstein, Hewlett-Packard; Hyman Olken, Lawrence Rad. Lab.; Edgar N. Sanford, Lockheed; Charles Susskind, UC EE Dept. Information: Conference Dept., University Extension, Berkeley 4, TH 5-6000, Ext. 4147.

February 26-28 — Scintillations & Semiconductor Counter Symposium Shoreham Hotel, Washington, D.C. IEEE. Program: Dr. George A. Morton, RCA Labs, Princeton, N.J. IEEE Transactions on Nuclear Science after symposium.

March 23-26—IEEE International Convention, Coliseum and New York Hilton, New York. All PTC's. Exhibits: W. C. Copp, IEEE Adv. Dept., 72 W. 45th St., New York 36, N.Y. Publicity: E. K. Gannett, IEEE HQ. Program: IEEE HQ. Order convention record from HQ.

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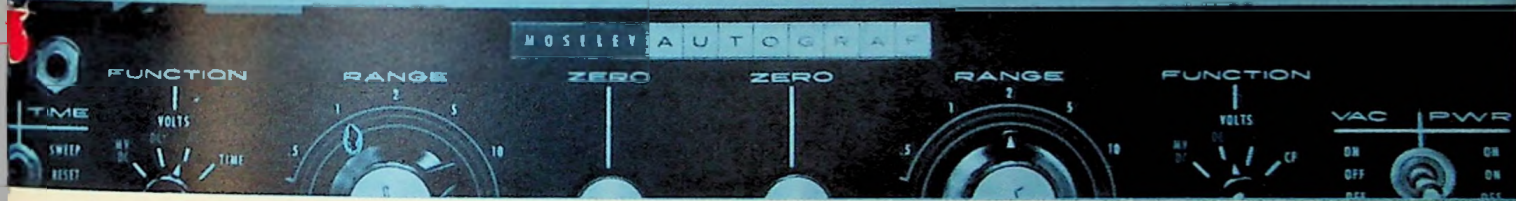
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Please submit detailed resume with salary history to Engineering Placement.

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Will provide technical guidance to Procurement on materials and metallurgical process specs. Responsibility for purchase specs, supplier approval, and materials inspection criteria. Requires materials engineering experience (Metallurgical) in electronics industry.

Requires BSMetE, BSMatE, or BSChemE plus minimum of 3 years relevant experience.

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the section

MEMBERSHIP



Nanevitz

Kiessling

Following are the names of members who have recently been transferred to a higher grade of membership as noted:

Senior Member

Joseph E. Nanevitz
Robert C. Kiessling

Following are the names of individuals who have been elected to current membership:

W. H. Beall	A. C. Putnam
K. K. Chan	F. K. Tanaka
W. P. Cormey	M. C. Walker, Jr.
T. W. Doak	D. Westreich

Following are the names of IEEE members who have recently entered our area, thereby becoming members of the San Francisco Section:

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C. Askanas	D. W. Brown
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Positions Available

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Will carry out materials R&D for vacuum and specialized device applications using refractory metals and ceramics. Emphasis on vacuum brazing using refractory metals. Will generate and carry out proposals for both company and outside sponsored programs.

Requires graduate level degree in Metallurgy or Materials and minimum of 5 years relevant experience.

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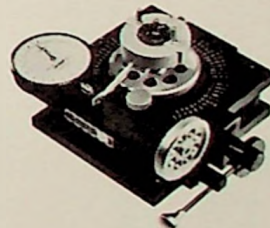
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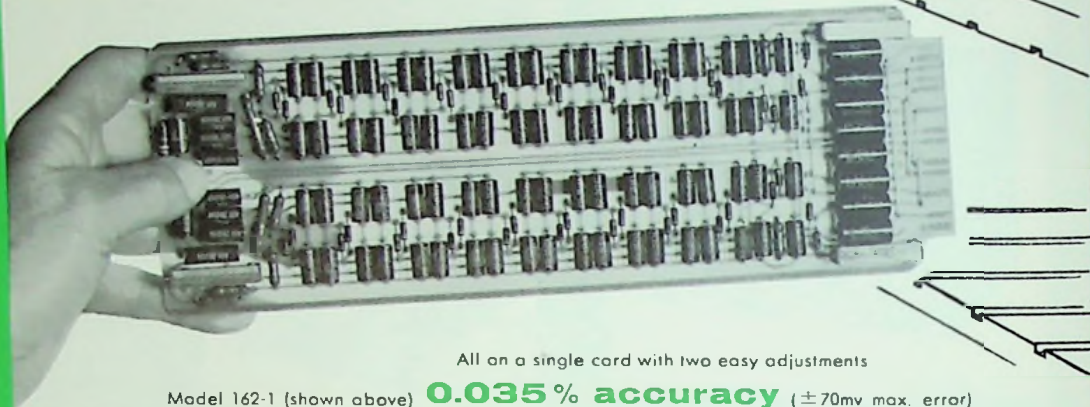
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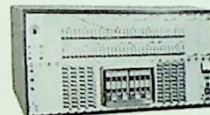


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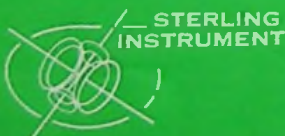


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