MELPAR-A-GRAPH

Volume 9, Number 10 MELPAR, INC. • A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE CO. **December, 1964**

SPEAKER AT MANAGEMENT MEETING. Paul Howerton, Director of the Center for Technology and Administration of American University, addressed the autumn dinner meeting of Melpar management in the Falls Church plant on November 23. Mr. Howerton, shown above (right) with Vice President and General Manager William C. Purple, spoke about the impact of new technologies on management. Mr. Howerton has lectured on management topics in the United States, Europe, and India.

Chairman Meloy Visits Antarctic

Thomas Meloy, Chairman of the Board of Directors, left Washington November 28 for a trip to the Antarctic.

Mr. Meloy

As a participant in a National Science Foundation project, he is visiting the United States installations at McMurdo, Eights, Byrd and Hallet Cape, among other stations.

The group of which Mr. Meloy is a member was selected to observe and study astronomical, meteorological, and oceanographic developments in the polar region. The United States Navy is furnishing logistics support.

Mr. Meloy's journey, which will end early in the New Year, will also include a short stay in New Zealand.

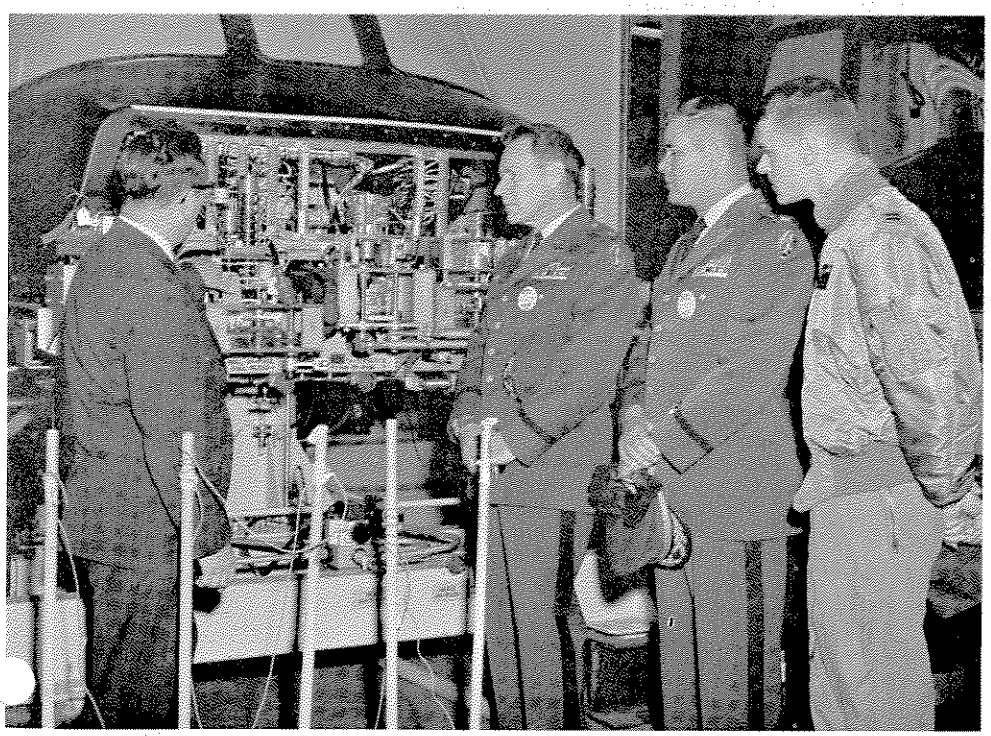
LOOKS A LOT LIKE CHRISTMAS. Lee Delaney helped stock Santa's storeroom with prizes and favors in preparation for the Christmas party, December 20, 2 to 5 p.m. See page 4 for story.

VIP News Notes

Very Important People, so far as the Value Improvement Program is concerned, are those who had their first suggestions accepted in October. They are:

John F. Ambrose, Robert D. Cathell, John A. Chickering, Roger D. Daniero, Alice S. Downer, Elmer R. Fulkerson, Marjorie M. Goddard, John B. Gregg, Peyton B. Jackson, Margaret R. Kiley, Elbert M. Lane, Edward R. McIntyre, Frederick C. Menage, Charles T. Ray, Edward W. Reed, John R. Sayers, Robert R. Thibault, L. Marie Yawornicky, Neil E. Walter, and Robert G. Zelloe.

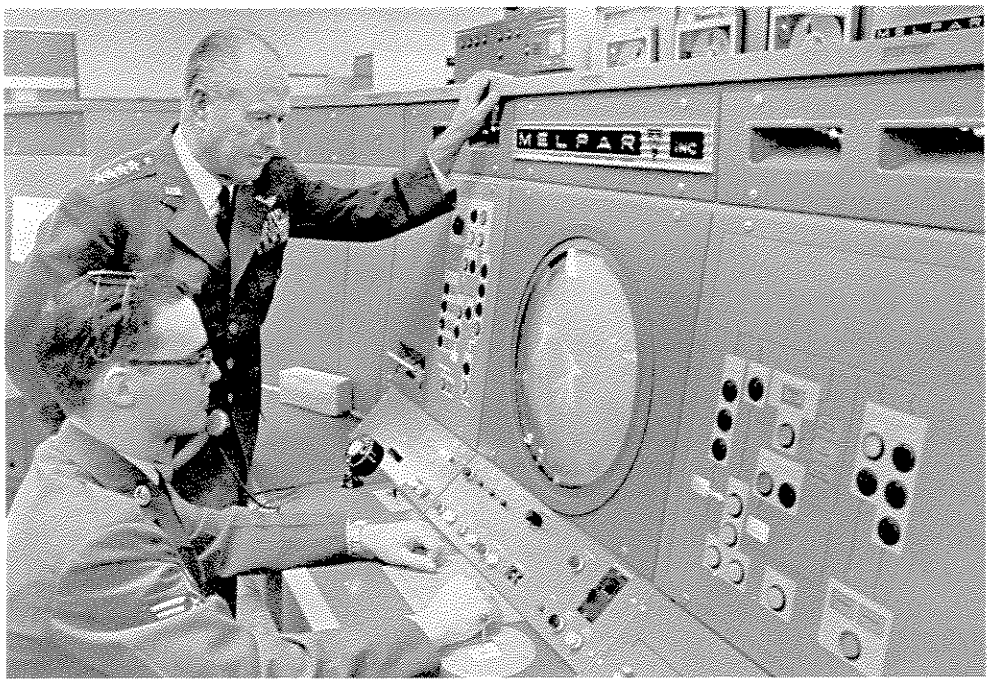
Four employees who were already candidates increased their chances in the competition for the Value Improvement award by having additional suggestions accepted. They are Keene Hepburn, Harry M. McClarren, Alan O. Plait, and C. Richard Shenton.



WHITE HOUSE PILOTS LOOK OVER 2B10. Members of the White House Helicopter Squadron visiting Melpar hear Thomas G. Walkinshaw (left) explain some features of the 2B10 helicopter simulator. Members of the squadron shown are, from left to right, Maj. R. L. Johnson, Lt. Col. J. W. Maschmann, and Capt. P. F. Rice. Mr. Walkinshaw heads Melpar's Simulator Laboratory, which developed the 2B10, one of the first flight simulators to include real-time solution of flight equations by a digital computer.

Company Gets $3 Million Contract For Flight Trainer

Melpar has been awarded a $3,252,167 contract by the Navy, for two flight trainers for the A-7A Val aircraft.



SAC COMMANDER RETIRES. At Strategic Air Command Headquarters, Offutt AFB, Nebr., General Thomas S. Power takes a last look at the FINDER computer before his retirement November 30. General Power was Commander-in-Chief of SAC from 1957 until last month. Air Force operator of the equipment is A1/c Bobby R. Chandler.

One of the largest special-purpose data-processing systems in existence, FINDER was developed and built by Melpar under contract to General Dynamics/Fort Worth. At present, Melpar has 23 technical and administrative personnel assigned to Offutt AFB for support of FINDER. They are directed by Dallas J. Ralph, System Supervisor, Field Service.

Photo by courtesy of The World Herald, Omaha, Nebr., Magazine Section. Photographer Lawrence Robinson. November 29, 1964.

Electronic Research Lab Scientists Give Papers

S. Joseph Campanella and David C. Coulter of the Electronics Research Laboratory presented a paper at the Symposium on Models for the Perception of Speech and Visual Form, in Boston, Mass., November 11-14. The paper was entitled "A Statistical Analog of Perception." The Data Sciences Laboratory of the Air Force Cambridge Research Laboratories sponsored the symposium. Dr. James C. Pickett also presented a paper, on work done at Melpar in speech recognition. It was entitled "Acoustic Cue Interactions for an Intervocalic Nasal-Stop Distinction."

Crenshaw Speaks to IEEE Group

Arthur N. Crenshaw, Supervisor, Reliability Department, spoke at the November 30 meeting of the Components Group of the Washington chapter of the IEEE. Subject of the meeting was high-density interconnections. Mr. Crenshaw talked on fabrication techniques for multilayer printed-circuit boards and on failure modes of the boards.

GOING UP!

Enjoying recent promotions are the employees listed below. The titles are their new ones.

Richard A. Castle, Principal Engineer; Robert C. Cannon, Senior Mechanical Engineer; and John T. Chandler, Senior Engineering Assistant.

Charles E. Gane, Senior Electrical Engineer; Robert A. Henry, Assistant to Purchasing Agent; and Kenneth Hoggarth, Design Engineer.

Norman T. Jeffries, Principal Engineer; Margaret T. Muth, Administrative Assistant; and George D. Smith, Principal Engineer.

Lee D. Underhill, Senior Chemist, and Herbert L. Wilson, Branch Supervisor.

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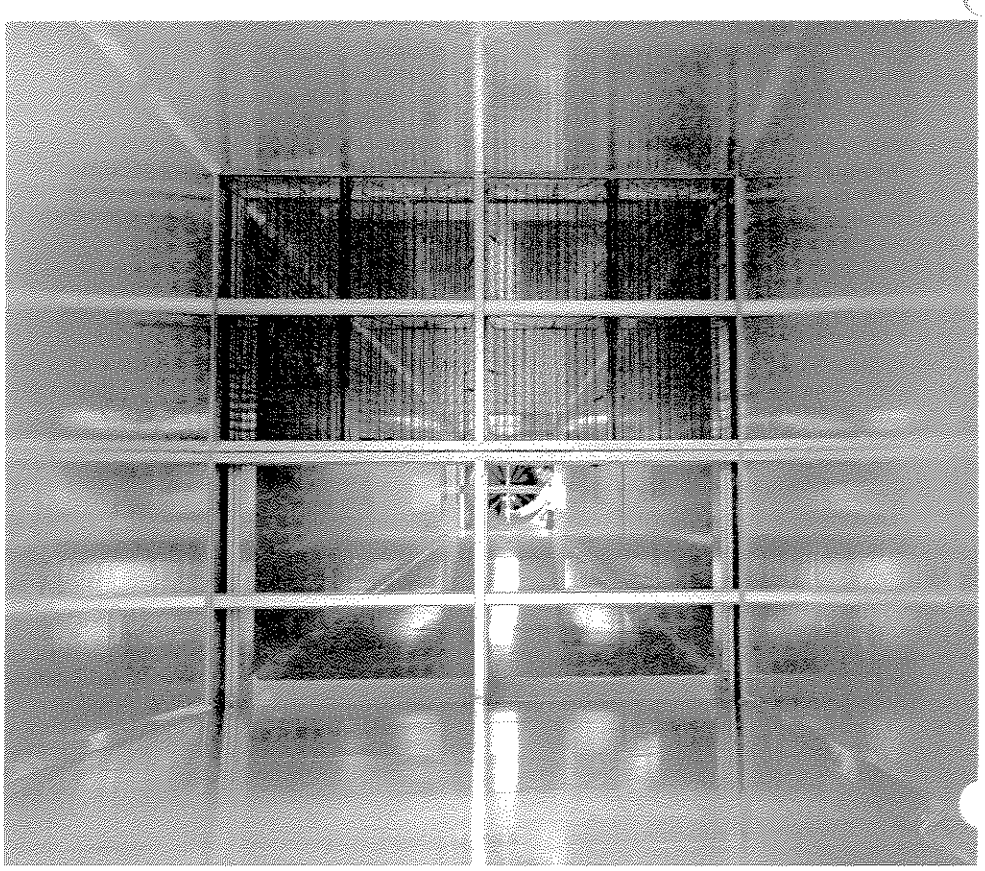
Published by

MELPAR, Inc.

A Subsidiary of
Westinghouse Air Brake Co.

3000 Arlington Blvd. Falls Church, Va.

Editor . . . . . M. R. Kiley, Ext. 2350



PERSPECTIVE. Reflections add interest to the geometric pattern made by the walls and grids of this aerosol test facility, now nearing completion at the Shirley Research plant. Ron McKenzie is shown placing an anemometer in what is called a working section. A preliminary study of air-flow characteristics at various wind speeds is under way. Photo by Sakamoto

Test Equipment Group Specializes in Custom Design

When off-the-shelf test equipment won't do the job, Melpar engineers and research men often find the Special Test Equipment Design group their best friends.

The group modifies commercial test equipment to specifications, or if modification is not the answer, it designs entirely new test instruments.

Part of the Metrology Laboratory, the group consists of senior electrical engineer Robert Byard, electrical engineer Gerald Stanley and senior electronic technicians James Lookabaugh and James Largent.

Their ability and versatility are revealed in some of the devices they designed in recent months:

—A sensor to differentiate between muscle and other kinds of tissue.

—A power supply analyzer so accurate that manufacturers of some commerical supplies had to change specifications to bring them in line with what the analyzer revealed.

—A production-line tester of a new air compressor being built by Westinghouse Air Brake Division for a rapid transit system.

—A device for remote control of the dispersion of aerosols for meteorological studies.

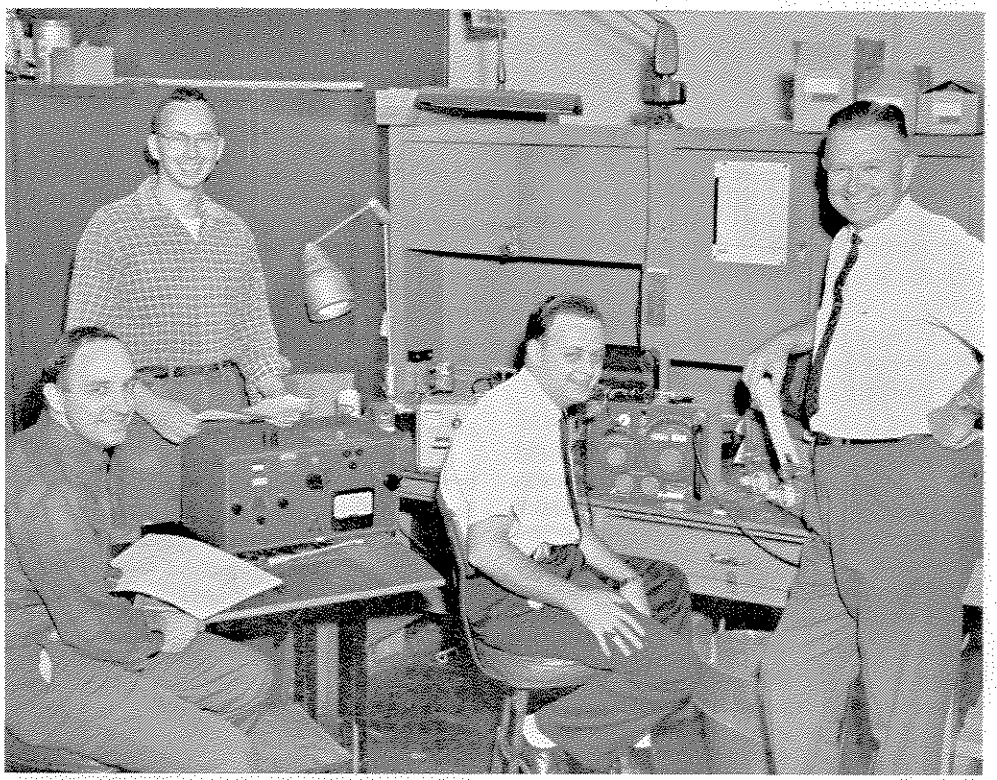
—A cable tester to check simultaneously the continuity of hundreds of wires in the harness of Melpar-built equipment.

—A diathermy machine.

—An ultraprecise timer for a photo flash.

—Test fixtures for microintegrated circuits.

Along with the designs go prints and operating instructions. Any research or engineering organization can request the services of the Special Test Equipment Design group by calling Dominick Brunetti, the group supervisor, on extension 2270.



Special Test Equipment Design group: from left, James Lookabaugh, James Largent, Gerald Stanley, and Robert Byard. Photo by Sakamoto

In Print . . .

An article by Michael Hacskaylo of the Physical Electronics Laboratory appeared in the October 1964 issue of the Journal of Applied Physics. It is entitled "A Relationship Between the Schottky Emission Mechanism and the Energy Bands of Thin Film–Metal–Insulator Configuration.

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The November 9, 1964, issue of "Electronic Design" carries an article by Barry J. Weiner, Charles E. Gane, and Dr. Charles Feldman of the Physical Electronics Laboratory. It is entitled "Designing Circuits for Thin-Film tive Devices."

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A paper by James H. Meyer of the Simulator Laboratory won honorable mention in the 1964 Fluid Power Prize Paper Contest sponsored by *Hydraulics & Pneumatics* magazine. Mr. Meyer's paper, "Hydraulic Cockpit Motion System for a Helicopter Flight Trainer," will appear in a future issue of *Hydraulics & Pneumatics.*

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The November 1964 issue of the AIAA Journal contains a paper, "Some Dimensional Considerations of Studies in Space Flight Simulation" by Dr. Kuldip P. Chopra of the Space Sciences Research Center. The paper describes the scaling relationships to simulate various magnetofluidynamic phenomena associated with the rapid motion of objects in ionized media pervaded by a magnetic field. With these scaling relationships for the various parameters, the Mach number, the Hartmann number, the Alfven number, and the drag ratio are maintained identically equal in the model and the prototype, thereby satisfying the condition of similitude. It is shown that, under certain favorable conditions, it is not necessary to exactly duplicate in the laboratory model studies the low densities encountered in space flight.

Math, Physics Courses To Be Offered at Melpar

Four college-credit courses will be offered in Melpar plants in the spring semester by local universities. College Algebra, Trigonometry, and Basic Principles of Statistical Methods II will be given by George Washington University, and Nuclear Physics by American University. All courses will be offered subject to sufficient enrollment.

Registration is scheduled for January 19. Information on the time and place of registration, and on fees and methods of paying them, will appear along with course descriptions in the next issue of the *Melpar-a-graph.*

SUPERVISORS' FORUM

This month's column by Lawrence E. Shaw discusses the interest of Security in incoming U. S. mail.

On occasion mail addressed to me in care of the company has been opened by Security. Why the violation of the privacy of my mail?

To set one matter straight, Security has no interest in, and is unlikely to open, what appears to be personal correspondence, monthly statements, and the like. It does open mail from Government agencies, customers, and other sources which might be involved with classified information. When it does open a piece of mail, it does so for two reasons:

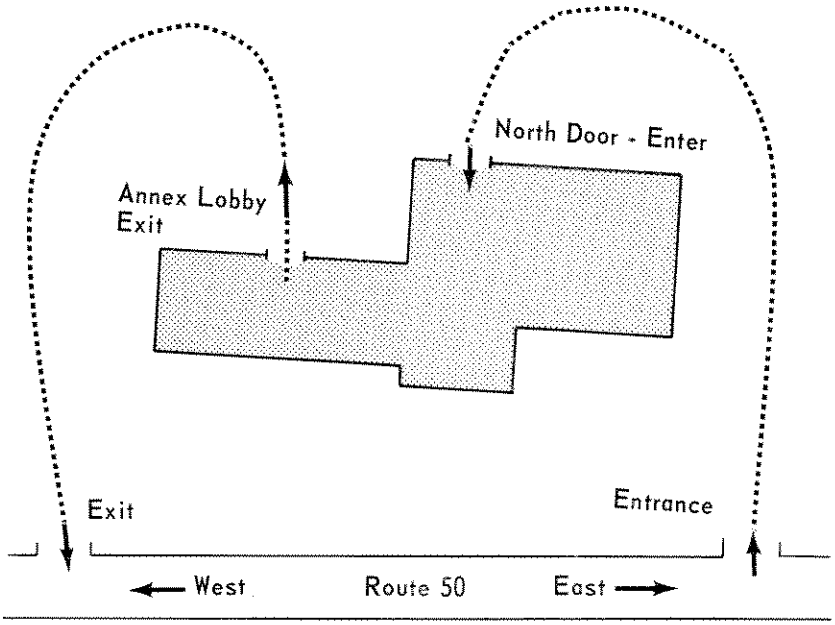
First, every contractor involved with classified defense information is responsible under Department of Defense industrial security regulations for proper handling and safeguarding of such material. To insure proper recording and handling of incoming classified mail, the mailroom delivers to Security all matter from sources involved in or likely to be involved in classified projects. It is immaterial that a piece of mail may be addressed to an individual. Classified matter may come from unexpected sources. A copy of a classified proceeding was once found in a letter to an employee from a professional society.

Second, in addition to its responsibility for recording all incoming classified matter, Security must report to the Department of Defense anything it encounters with respect to a sender's violation of prescribed methods of transmitting classified matter. Every firm engaged in classified defense projects must maintain an excellent reputation for handling classified matter. A poor reputation can cause withdrawal of the security clearance, which in turn would cause instant termination of every classified contract on hand. Proper safeguarding of security information is everybody's business, not only from the standpoint of national security but also from the standpoint of a company's success in the classified project field.

Is it a violation of privacy of an employee's mail when Security opens it? The House Counsel says it is not. The position of the Post Office Department is that mail addressed in care of a firm is technically the mail of that firm. To avoid having your "strictly private" correspondence opened under the circumstances outlined above, it is a good idea not to use the company as a mailing address.

Regardless, you can be sure that any information read by a security clerk which is personal in nature is as carefully guarded as any classified security information.

All's Set for Christmas Party



Recommended route to Christmas party.

Santa's storeroom is stocked with toys and favors for the children. Musicians tune their instruments. A magician waits in the wings with a trunkful of mysteries. And choirboys practice caroling the message of the season. In short, everything is ready for the Christmas Party December 20 in the cafeteria of the Falls Church plant.

Festivities will start at 2 p.m. and end at 4 p.m. There will be two shows, one at 2:15 and the other at 3:15. Each show will feature performances by the St. Stephen's Boys Choir, the magician Scalzo the Great, and the folk-singing Chantilly Three.

To prevent a crush, it is suggested that if your last name starts with a letter from A to K, you come at 2 o'clock; and if it starts with a letter from L to Z, you come at 3 o'clock. But Abbot to Zwilsky, you're welcome to come early or late, as you wish.

Again in the interest of order, please enter by the North door and leave by way of the Annex lobby, as shown on the map.

E. M. Connelly Speaks On Trainable Networks

E. M. Connelly of the Advanced Computer Laboratory presented a paper to the Society of Automative Engineers on December 11 at Miami Beach, Fla. The paper was entitled "Application of Trainable Networks to Flight Control Systems."

The gift that keeps on giving.

Note to Parents

Here's your chance to get a picture of your offspring with Santa. Security Director Bert Lane says that you may bring your cameras into the building for the Christmas party.