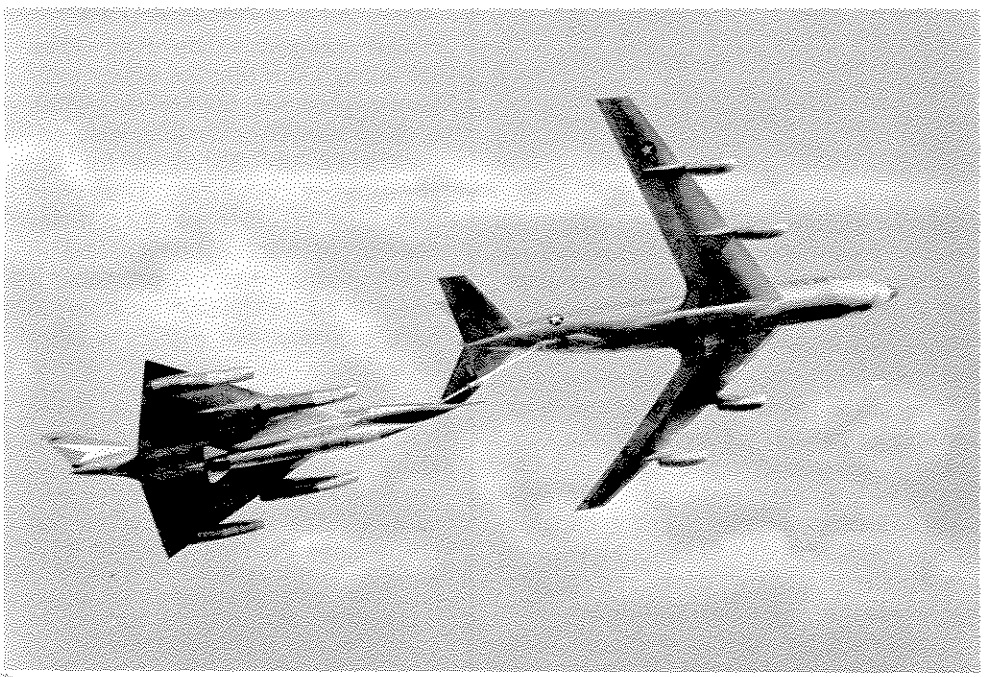
MELPAR-A-GRAPH

MELPAR, INC. • A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE CO.

Volume 6, Number 1 **January-February, 1961**



AERIAL 'DRINK'—Convair-built B-58 Hustler supersonic bomber that flies faster than twice the speed of sound on its revolutionary triangular-shaped wing was caught from this dramatic angle by photographer in chase plane below as the B-58 refueled from an Air Force KC-135 tanker. B-58, United States Air Force and Strategic Air Command's newest and fastest bomber, is built at Fort Worth, Texas, by Convair Division of General Dynamics Corporation. Tanker is built for SAC by Boeing Airplane Company. Airborne equipment for the B-58 is furnished by Melpar.

Photo Courtesy of Convair.

SIMULATOR CONTRACT RECEIVED

Under a $1,770,892.54 contract received from the U. S. Naval Training Device Center at Port Washington, N. Y., Melpar will produce two A4D-2N Flight Trainers and associated equipment, for the latest model of the A4D-2N single place, all-weather attack aircraft.

The contract also includes a modular radio aids equipment to provide simulation of all land and carrier-based radio aids and communication facilities used by fleet aircraft. This equipment is of flexible design and will be suitable for use as standard radio aids equipment in future weapons system trainers.

Design and development is assigned to T. G. Walkinshaw of the Simulation and Training Systems Laboratory. Production of the trainers has been assigned to M. E. Hill of the Production Division.

Selected Navy and Marine Corps personnel will receive in-plant training at Melpar's Field Service Division on the maintenance of the Flight Trainers.

Executive Changes Announced

The Melpar Board of Directors recently announced the following executive elections:

Thomas Meloy, formerly President, was elected *Chairman of the Board.*

Edward M. Bostick, who was Executive Vice-President and General Manager, was elected *President and Chief Executive Officer.*

Arthur C. Weid, formerly Vice-President for Operations was named *Executive Vice-President.*

HAPPY HOLIDAY

In observance of George Washington's birthday, Melpar will close all plants on Wednesday, February 22 and will resume normal operations on Thursday, February 23.

PROGRESS ON B-58 RECORDER SYSTEM CITED BY CONVAIR

In a January 25 letter to Executive Vice-President A. C. Weid, Convair Assistant Manager M. L. Hicks summarized the quarterly progress review of Melpar's work on the B-58 Recorder System, closing with the statement, "The above evaluation reflects your overall program performance status as being very good and from all indications, it will continue to be satisfactory."

Ratings on the various activities associated with the Melpar contract ranged from "good" to "excellent". Our congratulations to those who helped to establish another good performance rating for Melpar.

MELPAR RECEIVES SECOND CONTRACT ON ARTIFICIAL NERVE SYSTEM

Under a recently awarded contract, Melpar will construct a small network of artificial nerve cells to simulate biological functions such as learning ability and initiative. A previously awarded Melpar contract providing for study of a larger network of these cells on a computer was reported in the last issue of Melpar-A-Graph. Both contracts are with the USAF Air Research and Development Command, Electronic Technology Laboratory, Bionics and Computer Branch, and have been assigned to the Simulation and Training Systems Laboratory.

The particular system of artificial nerve cells to be used was developed by Melpar's Robert J. Lee, who calls them ARTRONS (ARTificial neuRONS). Mr. Lee says that an objective of the Artron work is to build machines that can solve problems without being told how. According to Lewey O. Gilstrap, Project Engineer for the two contracts, the term Bionics is descriptive of the combined program, inasmuch as Bionics is the application of biological knowledge to the design of electronic devices.

Editorial

LOOKING AHEAD

Much is being said today of the United States being in the most challenging, competitive era in its history, and of the role that business and industry will play in meeting that challenge. Industry particularly will play a more vital role than ever before in determining how effectively these challenges will be met.

Melpar has thrived on challenge, growing from an idea in 1945 to a national leader in the electronics field today. Our prime moving force was our ability to meet quickly the challenge of contributing to the defense effort and at the same time remain adaptable to the continually changing technology. This ability, reflected in our key programs such as Flight Simulators, GIRDHS, FINDER, the B-47 and B-58 programs, to mention a few, was based on the contributions of all Melpar employees, from the top engineering and scientific personnel to the technicians, clerical and support personnel.

How is Melpar preparing to meet the challenge?

First, by continuing to forge new frontiers in electronic research. Expanded efforts in the Research Division include studies in low and high temperature chemistry, synthesis of new materials, enzymology and polymer research. Melpar is one of few companies engaged in bionics, and already has received two contracts for work in this exciting science. Other new scientific ventures, the potential of which can only be imagined, are under way. Of these we cannot yet talk, but we shall report on them as they firm up.

Second, by expanding and intensifying our efforts in the development of commercial products for government and industry. Future plans include acquisition of other companies whose product lines and production capability will complement ours, giving us added strength and diversification.

The challenge of the space age, with continuing change the order of the day, requires new concepts and a changed emphasis in company planning. With wisdom, courage, flexibility and confidence in our goals, Melpar will continue to meet the challenge. Many doors remain unopened in the quest for knowledge. We are confident the Melpar team will open them and make the most of the opportunities they reveal.

UNITS FOR NIKE CONTROL SYSTEM

Two transistorized Signal Converter equipments for the Nike control system were recently shipped to the United States Army Signal Research and Development Laboratory, Fort Monmouth, New Jersey by the Communication and Navigation Systems Laboratory.

The units, consisting of a battery converter and a launcher converter, provide a means of communication between the System Control Center and the launching sites, using wire or radio links. Field service on the units will be provided to the Signal Corps by the project group.

Doug Early was Project Engineer for the contract, with M. Watson as Section Head.

MILLER NAMED TO NEW TOP POSITION

On December 8, 1960, the Melpar Board of Directors elected Robert E. Miller to the position of Vice-President for Advanced Development.

Mr. Miller has directed the Advanced Development Staff since October 1959, prior to which he was head of the Reconnaissance Systems Engineering Department. Previous positions held include head of the Naval Communications Station's Terminal Equipment Section, Radio Research Division, and Assistant Chief Engineer of the Air Track Manufacturing Company, in which capacity he worked principally on Ionospheric Height Measuring Equipment.

Patent Awarded

D. Alstadter, a Principal Engineer in Melpar's Antenna Laboratory is the inventor of an "Air Dielectric Strip-Line Tunable Bandpass Filter", on which Patent #2,968,012 was issued 10 January 1961 by the U. S. Patent Office.

Melpar has a nonexclusive royalty-free license in the patent, of which the U. S. Government is assignee.

New Products Corner

MELVAR, TYPE V-500

(This is the tenth in our series of reports on new products being marketed by Melpar's Special Products Department.)

"Neither sleet nor salt nor sun so bright Shall bother Melvar in its fight"

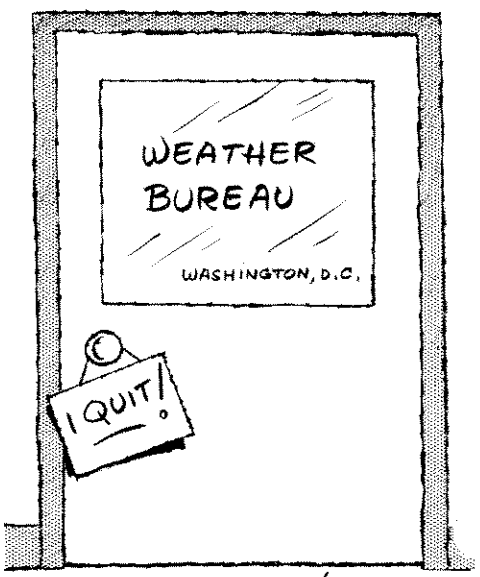
Our apologies to the Post Office for taking a few liberties with a well-known quotation, but Melvar V-500, a clear protective coating, also enjoys a healthy disrespect for the vagaries of weather. The most promising of our epoxy-base compounds, Melvar can be applied to wood, plastic or metal, providing a smooth, tough finish, resistant to heat, moisture, salt and most other such destructive agents.

Various applications now under test include those on wood floors, snow skis, water skis, and cabin cruisers, from the sunny, salt-sprayed shores of Florida to the crispy, snow-covered slopes of Vermont.

(Ed. Note: It's *really* not supposed to be this way in Washington!)

Available in 1/2 pint to 5 gallon lots, Melvar V-500 can be applied by brushing, spraying or dipping. The range of possible applications seems almost endless, but we're open to suggestions.

How about it? What would *you* Melvar? Special Products would like to hear your ideas.



Cartoon by H. Glittenberg

Industrial College Members Tour Melpar

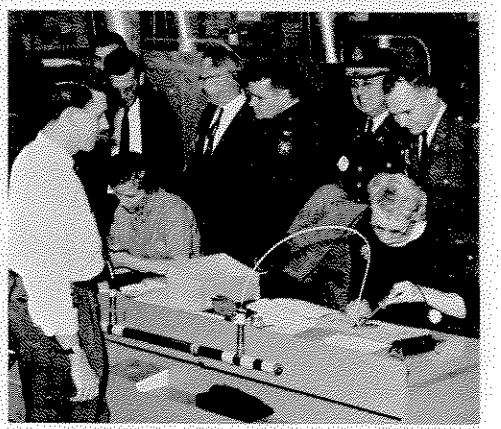
A group of members of the Industrial College of the Armed Forces visited Melpar facilities in the Northern Virginia area on January 6.

After a welcome by Executive Vice-President A. C. Weid, the group spent the morning in briefing sessions conducted by key Melpar Personnel. Topics covered were the company's organization, Advanced Development activity, Engineering and Research programs and Melpar's Quality Assurance program. A tour of the Falls Church plant preceded lunch.

In the afternoon the group traveled to the Hardin Street plant for a briefing on printed circuit assembly and the ALD-4, followed by a tour. (See photos) At the Leesburg Pike Plant the visitors were briefed on the FINDER system. The last stop of the afternoon was at the Shirley Highway Plant for a briefing on simulators now in development.

A similar tour was made by a group from the Industrial College last February. The Industrial College ranks with the service War Colleges and is the highest staff course in economic mobilization within the Department of Defense. Selected military officers and key civilian personnel participate in the one-year course, dealing with logistic management, contracting within the services, staff administration and over-all supply management.

Engineer Richard Legere discusses with one of the Industrial College visitors the automatic eyeletting and fusing machine operated by Lenna Reid. Photo by Sakamoto.



Visiting members of the Industrial College observe Beatrice Miedzinski and Hazel Jackson perform, as Foreman W. Tilley looks on. Photo by Sakamoto.

Penn State Head Named to Melpar Board

Dr. Eric A. Walker, President of the Pennsylvania State University, was elected to the Melpar Board of Directors in December.

Filling the vacancy left by the resignation of John A. Mayer, Mellon National Bank and Trust Company President, Dr. Walker brings to the Board a long and distinguished record of technical and administrative consulting experience.

Dr. Walker, who is also a member of the WABCO Board of Directors, was dean of the University's College of Engineering from 1951 to 1956, when he succeeded Dr. Milton Eisenhower as President of Penn State.

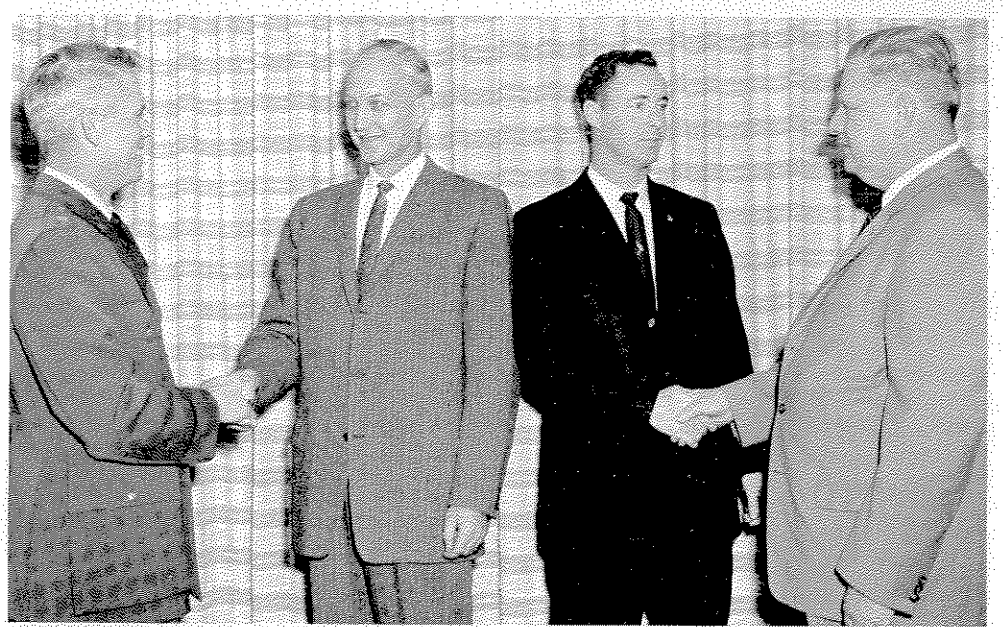
Holder of a BSEE degree from Harvard, Dr. Walker also earned there his M.S. in Business Administration and his Doctor of Science in Engineering.

President of the American Society for Engineering Education, Dr. Walker is also a member of the National Research Council's Committee on Underseas Warfare and the Naval Research Advisory Committee. He is a trustee for the Institute of Defense Analysis, a member of the National Science Board of the National Science Foundation, and is a Fellow of the AIEE, the American Physical Society and the American Acoustical Society.

AIR FORCE AWARDS 10-YEAR PINS

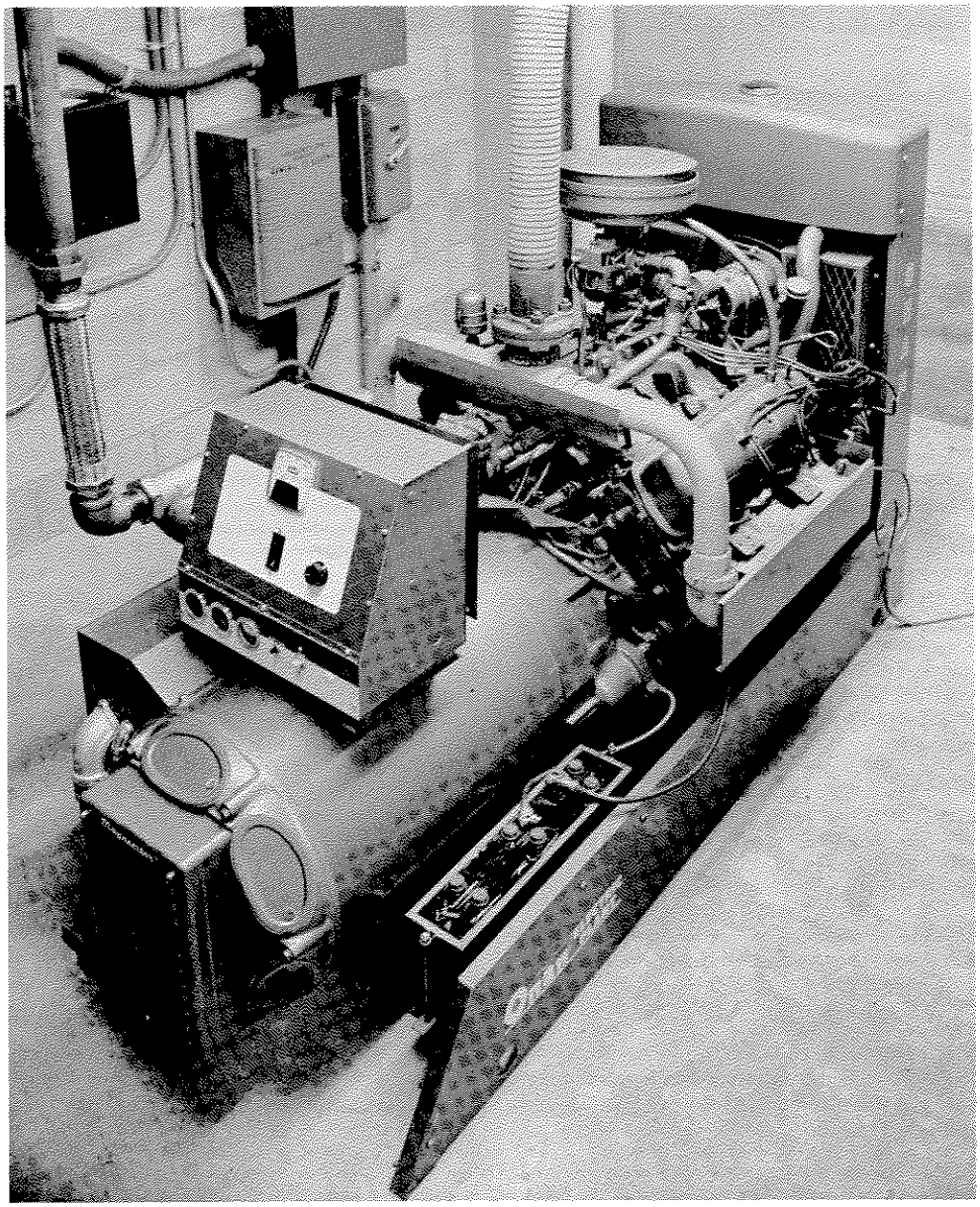
In recognition of their 10 years of government service, W. B. Hicks, Electronic Equipment Inspector Specialist, and D. H. Wright, Technical Data Specialist, were recently presented their service awards by the Air Force.

Mr. Hicks, assigned to the Melpar Office in March 1959, is the Air Force Quality Control Representative at the Leesburg Pike Plant. Mr. Wright, Air Force Quality Control Inspector at Falls Church Plant, has been with the Air Force Melpar Office since April 1958.



WELL DONE—Major D. H. Strube (left), Manager of the Falls Church Sub-office, congratulates W. B. Hicks; and Mr. J. H. Adams (right), Chief of the Air Force Quality Control office, congratulates D. H. Wright, after the two were presented their service awards. Photo by Norton.

MELPAR-a-graph
Published by
MELPAR, Inc.
A Subsidiary of
Westinghouse Air Brake Co.
3000 Arlington Blvd. Falls Church, Va.
Editor ..... S. E. Bush—Ext. 2181



EMERGENCY GENERATOR INSTALLED—Maintenance personnel recently completed wiring and installation of a 75,000 watt ONAN emergency generator in the Falls Church Annex. The new unit, powered by a 180 HP International Harvester gas engine, will automatically provide power for emergency lighting, the fire alarm system and the public address system in the event of regular power failure. Equipped with governors to regulate cycle and voltage output, the unit also is designed to "cut out" automatically when regular service is restored. Built-in controls and an automatic line transfer panel eliminate the need for manual attention. Photo by Norton.

COLE NAMED PATRON OF I.R.E.

Ralph I. Cole, Manager of Military Project Planning, was named a Patron of the Washington Section of the I.R.E. Mr. Cole, who is already a Fellow of the national organization, will be presented a scroll and the formal designation as Patron at a dinner on February 11 in the Presidential Room at the Statler.

Mr. Cole was Technical Director of the Rome Air Development Center prior to joining Melpar in 1952. In addition to holding a number of advisory and committee positions, he is presently Chairman of the D. C. Council of Engineering and Architectural Societies.

ANTENNA ENGINEER TO PRESENT PAPER AT IRE CONFERENCE

Joseph C. Pullara, a Senior Engineer in Melpar's Antenna Laboratory, will present a technical paper at the Radio Frequency Interference Session of the 1961 IRE National Convention in New York City on March 20.

The paper, titled "Radiation Characteristics of Antennae at Other Than Design Frequencies", will describe the author's investigation of the antenna's role in the generation of radio frequency interference. The paper was co-authored by J. P. Jones.

MELPAR FAMILY FIRST TO USE NEW FAIRFAX HOSPITAL

Minutes after the new Fairfax Coun Hospital opened for business on February 6, Patrick Biller of Falls Church Drafting admitted his wife as the first patient. Mr. & Mrs. Biller are now the proud parents of a baby girl, the first baby born in the new hospital facility.

The new hospital, located west of the Falls Church Plant on Gallows Road, is a welcome addition to the county scene. Ninety-six of its 300 beds and three of its seven operating rooms were ready for patients on opening day. County residents, including Melpar, can point with pride to one of the most modern, up-to-date facilities in the area.

APPLIED SCIENCE MEMBER RECEIVES COMMENDATION

Mr. Louis Katz, a member of Melpar's Applied Science Division since 1956, recently received a commendation from U. S. Army Signal Research and Development Laboratory (USASRDL) for his participation in the preparation of the Army program for the Environment File phase of the Department of Defer Radio Frequency Compatability Program. Mr. Katz has been stationed at USASRDL, Fort Monmouth, as Project Engineer for Melpar Job J1008.01, Project Monmouth.

Following are quotes from the commendation which was addressed to Mr. Katz and another participant.

". . . you attacked the task with great enthusiasm, assuming the initiative whenever others participating in the task demonstrated any hesitancy to do so.

". . . the final document turned out was much better than could normally be expected in the short time allowed for its preparation.

". . . you demonstrated unstinting devotion to the task by working long hours, including nights and Saturday with complete enthusiasm and without complaint. Your unflagging energy in spite of lack of adequate sleep during this task gave further testimony to your strong sense of responsibility for doing the best job possible.

". . . you, at the same time, reflected great credit on your respective companies."

GOING UP!

Falls Church promotions include W. T Cullipher to Computer Programmer a P. V. Jenneman to Senior Engineer. Leesburg Pike promotions include H. E. Wert to Engineer and C. B. Sawyer to Senior Engineer. S. W. Poorbaugh was promoted to Test Engineer at Hardin Street.