

# MELPAR-A-GRAPH

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

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WE HAD A MILLION OF 'EM . . . Accident free hours, that is. Taking part in the ceremony are, from left to right, W. F. Fenton, L. Grande, R. T. Cosby, E. M. Lane, Mrs. J. T. Lafrank, B. R. Deschaine, G. Griffiths and J. Murray.

## MELPAR CITED FOR MILLION ACCIDENT-FREE MAN HOURS

"An unusual and distinct accomplishment" were the words used by Liberty Mutual Insurance Company Area Manager G. Griffiths in presenting Melpar with an Award of Merit for working 1,052,845 man hours without a lost time accident. Accepting the award on behalf of all Melpar employees were Vice President and Treasurer R. T. Cosby and Personnel Director J. T. Lafrank, responsible for administering the company's safety program.



The plaque represents the first such award presented to Melpar and the first to any Washington area employer in the past four years. Present at the time the award was made were Safety Committee Chairmen B. R. Deschaine, W. F. Fenton and E. M. Lane along with L. Grande, Loss Prevention Engineer and J. Murray, Sales Representative from Liberty Mutual. The award covered the period September 23 to November 9, 1957 and proves that accidents can be reduced to the point where long periods may pass without loss of time due to injury.

After being on display at the various plants the award will be permanently displayed in the lobby of the Employment Office at Falls Church as evidence that we at Melpar are concerned with safeguarding the lives and limbs of our employees. The next award is given for two million manhours of no lost time. Coming up!

## NAVY - AF ACCEPT TWO SIMULATORS

Acceptance tests were successfully concluded and customer acceptance confirmed on two Melpar-built flight simulators during the week of April 7, at points an ocean apart. At the Falls Church Laboratory, representatives of the Navy's Training Devices Center accepted an A4D-1 Operational Flight Trainer. At a USAF base overseas, approval was given an RF-101A Simulator.

Recently returned from that overseas assignment, Field Engineering representatives W. P. Tuck and T. W. String have reported that the RF-101A installation was carried out in less than three weeks—speed record due in large part to the active work of USAF base personnel in carrying out their 'make ready' plans in advance of actual installation. Remaining with the Simulator are Field Engineering men W. R. Liddington and J. F. Doty.

The opening move of still another RF-101A Flight Simulator installation was signalled late last week when a special USAF cargo flight, comprising two C-124 aircraft, departed Bolling AFB on the first leg of an airlift transporting the new Simulator to its overseas base. Field Engineering men R. J. Fairchild and N. E. Crider accompanied the shipment, and are to be joined at the site by R. E. Mill.

C. W. Winter, Jr. and E. J. Todd are scheduled to shepherd the newly completed A4D-1 Trainer to its installation point at Miramar Naval Air Station, California, where they will oversee the task of setting it into operation.

Naval personnel assigned to operate and maintain the A4D-1 Trainer recently completed an instruction course given at the Falls Church Laboratory.



**IN THIS CORNER**—Representing the various sections associated with the design, manufacture and assembly of five Bomber System Signal Simulator (BSSS) trailers recently delivered are, from left to right, R. B. Matthews, Electrical Engineering; W. E. Barnette, Drafting; W. G. Wells, Final Assembly; J. A. Rowe, Planning; R. W. Bolka, Mechanical Engineering. The deliveries were noteworthy in that all were made prior to scheduled completion dates, with one unit being shipped seven weeks ahead of schedule.

The BSSS trailers are products of the BXR Test Equipment group headed by Section Head L. Lerner and cognizant Project Engineers, J. A. Getz (Mechanical) and M. A. Price (Electrical).

## LAST MSQ-1A UNIT SHIPPED IN APRIL

Tuesday, April 29, marked the shipment of the last MSQ-1A radar system from the Arlington Plant. With the last delivery made, all hands had just a moment to reflect on a successful production effort before directing their energies toward the B-58 and Flight Simulator campaigns.

Starting late in 1953, the MSQ-1A program eventually resulted in the production of 36 units plus roughly 8 million dollars in spare parts. Deliveries began in February 1956 at the rate of one unit per month, and built up to two units per month in mid 1957.

Each MSQ-1A unit consists of three equipment vans plus a self-contained generator, and ships have been made to all parts of the world. One of the uses to which the units are being put is to guide the USAF's Matador guided missile through maneuvers to effect its safe recovery after test and training flights.

## MAGAZINE FEATURES WILLIAMS ARTICLE

"Reliability Evaluation of the Human Component in Man-Machine Systems" is the title of an article authored by H. L. Williams of the Falls Church Human Engineering group and published in the April issue of "Electrical Manufacturing" magazine.

The article proposes the use of probability analysis techniques to the quantitative analysis of operator reliability, as a major step toward "designing in" the human being as a component of today's intricate weapon systems.

## EXPERTS EXPLAIN MAGNESIUM USES

A symposium on Magnesium was conducted last week by the Dow Chemical Company at the Falls Church Plant. Designed to aid in using magnesium where light, yet sturdy metal is required, the meeting dealt with design factors, finishing, fabrication and safety. A question and answer period followed the presentation with C. E. Lenhart, E. Hill, J. Ellis and J. A. Barbier, of the Dow Chemical Company, explaining salient features.

## SCIENTISTS VIEW DATA PROCESSING

Work in progress at Melpar in the field of data processing, a term nearly as broad in its present scope and future implications as the world 'electronics' itself, drew the especial interest of some distinguished visitors to our Northern Virginia facilities during April.

Choosing Melpar as one of their first points of call on a nation-wide tour of research centers, Mr. J. H. Briggs, Head of Data Processing, and Mrs. J. F. Gough, Head of Radar for the Royal Research Establishment at Great Malvern, England, conferred with a group of Falls Church engineers on programs of mutual interest being pursued both here and in England.

Earlier in April Dr. George Valley, Chief Scientist of the USAF, inspected our Bailey's Cross Roads, Columbia Pike, and Arlington installations. Dr. Valley's tour encompassed a number of the activities associated with our B-58 program.

## KELLEHER, LOWERY PROGRAM AT JOINT URSI-IRE MEETING

A study of "Reflector Antenna Surface Errors" was presented by Project Manager K. S. Kelleher and Engineer G. R. Lowery of the Falls Church Laboratory during a joint meeting of the International Scientific Radio Union (URSI) and the Institute of Radio Engineers held last week in Washington.

The Melpar men appeared under the dual sponsorship of the IRE's Professional Group on Antennas and Propagation, and URSI's Commission 6. Mr. Kelleher serves the International Scientific Radio Union as a member of the United States' National Committee.

## AIEE-IRE HEAR MELPAR TALKS

Melpar was well represented at the Joint District No. 2 AIEE, Washington Section IRE Meeting held on April 30, at the Sheraton Park Hotel. Technical Staff Assistant S. J. Campanella spoke on "A Continuous-Analysis Speech-Bandwidth-Compression System," while Project Engineer A. H. Ballard's topic was "Improved Methods of Automatic Error-Correction for Teletypewriter and Other Binary Signals." Mr. Ballard is stationed with Project Manager B. Boymel's group.

## NEW BUILDING HOUSES B-58 TEST UNIT

An environmental test chamber almost large enough to live in is to be the 'star boarder' of a 10,000 square foot building under construction near Bailey's Cross Roads and due to be acquired by Melpar late this month. In it will be 'flown', under the most rigorous conditions of simulated flight, various airborne systems being developed and produced by Melpar for Convair-Fort Worth's B-58 Hustler.

Measuring 40 feet long, 7 feet high and 9 feet wide, the test chamber will create extremes of high and low temperature, very high altitude, and controlled humidity. Automatic cycling controls will guide the chamber's workings, and an elaborate array of metering and recording instruments externally mounted will tell the tale of the performance of the airborne systems being tested while 'on the air'. Giving some hint of the range and extent of the tests necessary to prove out our B-58 systems work, it has been estimated that each system will be in the chamber for approximately 30 days.

To be constructed, in the main, 'on site' by a contractor specializing in

the building and equipping of such facilities, the new chamber will be insulated so as to provide a working temperature range of  $-100^{\circ}\text{F}$  to  $+300^{\circ}\text{F}$ . Personnel and equipment access doors will be installed, as well as multipane glass observation windows. A particularly novel feature of the design is expected to involve the use of a two-stage steam ejector system to attain extremely high altitude.

This, coupled with the chamber's heavy demands on refrigerating capacity, will call for a cooling tower having a capacity of 500 gallons per minute; this item can be tried on for size by comparing it to the 2700 gpm tower which serves the 265,000 foot Falls Church Laboratory. The custom-tailored electrical installation being planned for the building will bring in a connected load of about 500 KVA.

Engineering responsibility for the new test facility lies with the Quality Control Department and is assigned specifically to Manager of Environmental Test D. A. Hill, supported by Dr. Alan Surosky, Staff Assistant.

## FIRE EXERCISE RESULTS IN ADDED EMERGENCY LIGHTING

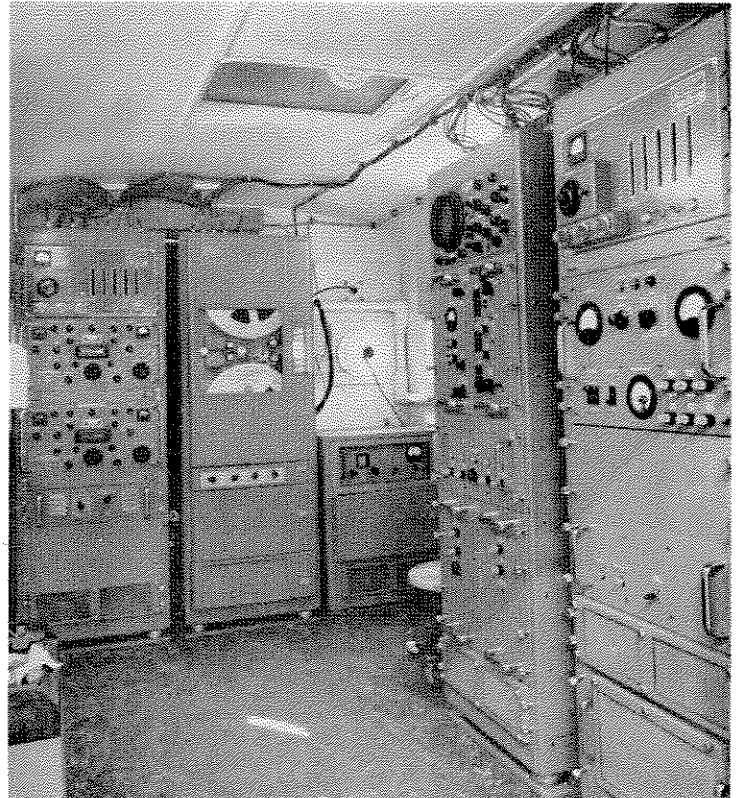
A full scale fire evacuation exercise using only emergency lighting resulted in additional automatic, battery powered lights being installed at points wherein work-area rearrangements had recently occurred at the Falls Church plant. The drill, first to be staged under such conditions, was preceded by an announcement that only emergency lighting would be used during the exercise.

At exactly 4:00 p.m. on April 3, 1958 the master electrical switch was pulled and the emergency generator began supplying illumination in passage ways as the fire bells signaled the start of the exodus. Files containing classified material were locked and in six and one-half minutes the building was cleared of all occupants.

Further surveys to determine emergency lighting requirements will be made by Maintenance Supervisor J. M. Barnes and Foremen R. E. Worsham and R. L. Herring, as changes in plant layout are made.



**ALLEZ-OOP . . .** Being lifted into position is one of two shelters containing a radically new radio-teletype system designed to combat both natural and man-made interference. The shelters, each weighing three tons, were then bolted to the bed of the truck to prevent shifting.



**INSIDE STORY . . .** The interior of one of two vans which comprise a system is shown as it undergoes final evaluation tests prior to "on the air" field tests scheduled for early May. The project is being completed by Project Manager B. Boymel's group for the U. S. Army Signal Corps.



MURGATROYD MISFIT

by dick prescott



Murgatroyd, if you've memorized those magazines, please route them on.

## GOING UP!

J. P. Shelton has been promoted to Project Engineer at Falls Church. Now named Chief Expediter is J. Shanahan. In Personnel R. Cahill has moved up to Senior Personnel Clerk and A. K. Kihn has become Personnel Assistant.

E. Bleckner and W. M. Poe have risen to Senior Engineer. Promoted to Senior Technician were J. W. Land and W. N. Berkley. P. H. Gum advanced to Lead Chemical Technician, and J. R. Piedmont rose to Senior Chemical Technician.

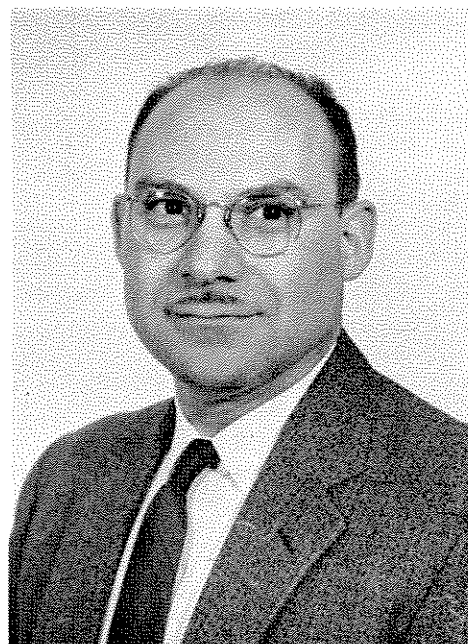
P. B. Day, of Falls Church, was promoted to Field Engineer. N. Dawson, Jr. moved up to Engineer. Named Carpenter Group Leader were R. Coffman and F. Hayes. J. M. Hill has been promoted to Buyer. B. W. Jackson moved up to Control Clerk, and W. W. Cocke-rlle rose to Lead Stock Clerk.

B. J. Simpson has advanced to 1st Class Mechanical Technician at Falls Church. J. M. Lookabaugh was promoted to Senior Technician and A. W. Hosmer moved up to 1st Class Wire Technician. D. K. Forrester was promoted to 1st Class Line Inspector. M. T. Muth rose to Senior Clerk-Typist and R. W. Fairbanks moved up to Dispatcher.

At Arlington, J. J. Mayman was promoted to Engineer. F. H. Marchionna is now a Senior Planner, and N. O. Brooks has risen to Planner. R. W. Dameron moved up to Scheduler, while D. M. Wright rose to Dispatcher. S. Stone was promoted to 1st Class Light Assembler Task Leader and A. Croson rose to 1st Class Light Assembler. H. B. Markle is a Senior Technician. E. R. Wise rose from Guard to Maintenance Man.

A. M. Crenshaw, of Bailey's Cross Roads, is now a Senior Engineer. J. G. Karanikas moved up to Senior Draftsman. J. B. Lynch is an Engineering Assistant, and W. E. Peterson has risen to Senior Technical Writer. K. McMichen was promoted to Electro Mechanical Inspection Group Leader. R. E. Earhart is now a Junior Planner, and C. L. Dunfee is a Junior Engineering Assistant. E. W. Hurst rose to Spares Planner.

At Columbia Pike, A. L. Witt moved up to Lead Senior Technician and D. C. King became a Senior Technician. At Melpar-Boston, F. J. Fortin was promoted to Senior Illustrator. R. M. Madaris, of the Alexandria Plant, is now a Senior Planner.



Dr. Stanley J. Lawwill

## Snake Bite Remedy Vital To Engineers' Field Trip

When presented with a request for a snake bite kit and complete operating instructions, Chief Nurse Patricia E. Griffith's curiosity required satisfaction. Investigation revealed that a group of engineers from Project Engineer R. A. Mauller's group were engaged in a data collection program at various rocket engine test facilities in the western part of the United States. Moreover, one such facility was in a very remote location, so much so that a snake bite was not an uncommon occurrence. In order to reach the scene of action, it was necessary to travel over rugged mountain roads, burning out a jeep engine in the process.

Upon arriving at this remote base, Sr. Engineers Martin Butler, and Edward Jettner, along with Engineers Charles N. Adkins, Gregory V. Haddock and Towner H. Stevens were cautioned about various spots which had been posted "off limits" because of quicksand. The final blow would have sent less sturdy men off in search of tranquilizers, but not our band of intrepid explorers—who quivered not when told that the cave they had been using for shelter during the rocket engine tests had been taken over by a mountain lion. Engineers have a soft life? . . . Don't you believe it.

## DR. S. J. LAWWILL TO DIRECT SCIENTIFIC ANALYSIS OFFICE

Dr. Stanley J. Lawwill, lately Deputy Chief Scientist for the USAF's Strategic Air Command, has been named Technical Director, Scientific Analysis Office, in Melpar's Operations Analysis Department. Dr. Lawwill took up his duties on April 14, according to the announcement by Director of Operations Analysis H. W. Riley.

Dr. Lawwill's long association with USAF has been highlighted particularly by his work in the development of Radar Bomb Scoring techniques; he directed the RBS detachment which trained the bomb drop crew for Operation Crossroads, first of the atomic test programs at Bikini Atoll.

Dr. Lawwill is an alumnus of the University of Cincinnati, where he earned A.B., M.A., and Ph.D. degrees in Mathematics. He is a member of Phi Eta Sigma, Phi Beta Kappa, and Sigma Xi.