

MELPAR-A-GRAPH

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

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NEW FACILITIES PROGRAM UNDER WAY

FIRST RF-101A SIMULATOR SHIPPED

Pilot training for the USAF's RF-101A, a supersonic photo reconnaissance aircraft, has been inaugurated at Shaw AFB in Sumter, South Carolina. Using the RF-101A Flight Simulator designed and developed by Melpar, Air Force pilots will make ready to fly the airplane now in final production stages at McDonnell Aircraft Corp.

Shipped from the Falls Church laboratory on January 30, the Simulator signalled "power on" one week later; and, just two weeks after shipment, on February 13, the first pilot climbed aboard to learn how an airplane as yet undelivered will respond to its natural element. For to whom a flight simulator is not a common household item—that was right good time.

Headed by C. R. Shenton, Assistant

Fabrication Supervisor in the Simulator Section, a six-man team from the Section dug in at Shaw AFB to put the equipment in service. In addition to Mr. Shenton, the team included Technicians R. D. Cathell, I. Corbin Jr., J. L. Schwier, C. W. Showman, and L. W. Tice Jr.

Along with being the first RF-101A Simulator to reach the field, Melpar's unit incorporates another "first". It is the first such device to include simulated photographic viewfinder techniques along with the usual camera controls found in reconnaissance aircraft.

Additional RF-101A Simulators called for under our development contract with AMC are under construction at Falls Church. Destined for service at USAF overseas bases, the follow-on units are scheduled for shipment this summer.

FALLS CHURCH, ARLINGTON TO ADD TOOLS, PROCESSES

Purchase order placement is virtually completed, and initial deliveries are expected soon, on a mass procurement of new manufacturing and processing equipment for the Falls Church laboratory and Arlington Division. The major portion of the new facilities is scheduled to be in place within 3 to 4 months.

The shopping list is impressive, not only in length but in its variety. Arlington Division will install a bank of dip-brazing equipment built around the "molten salt" method which, for the first time, will render practical the brazing of aluminum in production rates and quantities. The Falls Church machine shop is to be fortified against the rush of on-coming work by, among other things, 13 Cincinnati Toolmaster milling machines.

Additional tools assigned to the Falls Church machine shop include 3 Hardinge HLV lathes, a Hardinge universal milling machine, a Norton surface grinder, and a Norton pantograph.

A Weideman turret punch press heads the list of major items ordered for the Falls Church Model Shop. With it will come a Whitney Jensen power punch press, a Pullmax press, two box and pan brakes, a tube bender, and a squaring shear.

Arlington Division will install anodizing and electro-plating equipment, generating cadmium and silver finishes. Its painting capacity is to be increased by the installation of a 12-foot booth and an air-handling system capable of exhausting and replacing (with heated and filtered air) the atmosphere of a 25,000-foot bay in a half hour.

Printed circuits in volume and variety will be turned out with Arlington's new processing equipment. Important new machine tools are an 18" Cincinnati lathe and a #00 B&S automatic screw machine.

Other major tools booked for Arlington are: a 100KVA spot-welder, 4 vertical millers, 2 Hardinge lathes, 4 250 Amp arc welders, and 2 20-ton punch presses.



IT'S ALL THE SAME simulator job, though slightly different stages are pictured here. While the first RF-101A Simulator stands ready to go in the background, one of the cable harnesses for another gets a good going-over from (left to right) Mary Williams, Dorothy Blackburn, Frank Mahoney, and Velmer Sirman.

OPINION

Seeking a neatly packaged definition of the word "quality" is like picking up quicksilver; both are persistently elusive. Far simpler is it to say what quality is not . . . any article, dime store toy or zillion-dollar navigation system, which fails to perform as expected is not quality merchandise.

There is nothing overly dramatic at all in saying that we—in designing, fabricating, assembling, inspecting, or testing a piece of equipment—can and should take it for granted that lives will be staked on its performance.

If we regard this as the natural state of things, and dismiss the occasional exception as irrelevant, we will be helped in giving our customer what he wants: performance as specified plus reliability a man can count on as he counts on an ace in the hole.

Attaining that brand of quality is somewhat more exacting than the cook's tech-

nique of a pinch of this and a dash of that. It happens first by design (pun intended), and must be aided and abetted by all hands.

Can the quality thing be overdone? Yes, and at rare intervals we probably do it. In our kind of job, there are areas in which judgment rules, in which a measurement is not enough. There, one man's masterpiece may be another man's scrap report.

But when the objective—performance—is seen in proper perspective, there is method in the madness which insists upon doing "the little things" right. If honest workmanship is apparent in the little things you see, more than likely it was applied to the working innards. This tends to give a man confidence in the integrity of what we offer him.

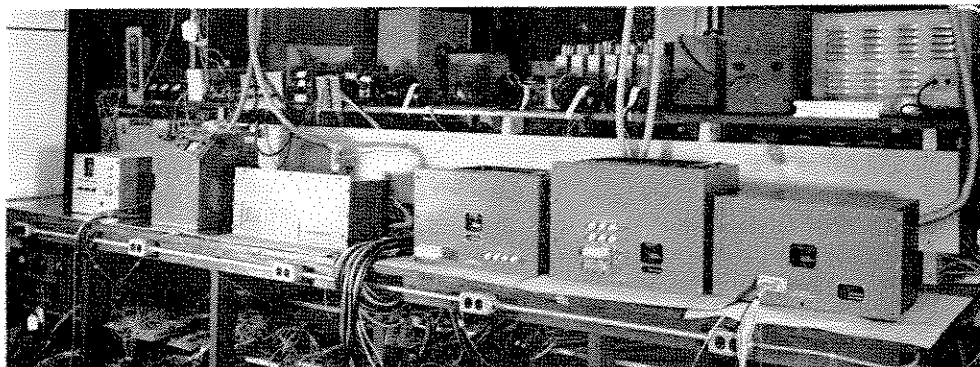
On every piece of gear we hand over, the nameplate should be positioned front and center, where the man will be glad to see it.

ICAF GROUP TOURS FALLS CHURCH LAB

More than twenty ranking officers, all the armed services and officials of various Government departments, currently enrolled in the Industrial College of the Armed Forces, attended an inspection tour and briefing at Melpar's Falls Church laboratory during February.

The group sought to gain some insight into the special conditions and problems confronting an electronics organization engaged in the phasing of equipment from development into production.

The briefing was conducted by Melpar President Thomas Meloy, J. P. Chambers, Director of Engineering Services, Section Head Lincoln Brown, Production Planning and Control Superintendent B. Thomasian, and H. W. McMurtry, Assistant Director of Quality Control. The ICAF group was led by R. P. Hollis, Major-General, USA, Commandant of the Industrial College; and Col. H. L. Davis Jr., Group Moderator.



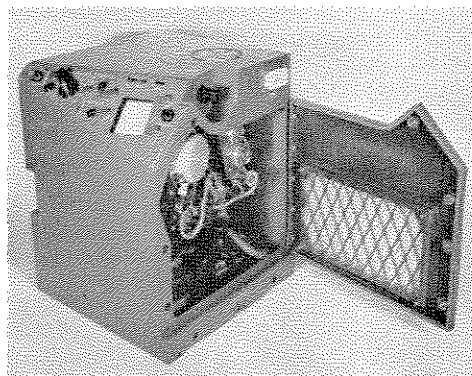
LINE-UP . . . these six packages constitute the Photo Recording System designed and developed by Melpar for use in Convair's B-58 Hustler, USAF's first supersonic bomber. Only one of a group of major systems being developed here, it is the first to be shipped in final form.

FIRST MELPAR-DESIGNED UNIT USED IN HUSTLER IS SHIPPED

Shipment of the first of a group of major electronic sub-systems being developed by Melpar for the B-58 supersonic bomber took place in mid-February, when the prototype unit of the airplane's Photo Recording System was dispatched to Convair-Fort Worth.

With Melpar's first phase work on the B-58 far advanced and later phases in process, especial interest was manifested here in a recent speech by Air Force Secretary Donald Quarles. Mr. Quarles told the Air Force Association, according to daily press reports, that the 1958 AF

budget included funds for the procurement of the B-58 in quantity.



WELL SHAPED . . . the odd planes and cut-outs of this In-Flight Printer had to be custom-tailored to fit a precise position in the B-58.

COLE IS GENERAL CHAIRMAN OF SCIENCE AWARDS EVENT

Ralph I. Cole, Manager of Military Project Planning at Melpar, served as General Chairman of the annual Engineers and Architects Day Observance held February 20 in Washington, D. C. More than 700 attended the session, featured by the presentation of achievement awards to outstanding professional people, and scholarship awards to outstanding public school teachers of the Washington area.

Designed to promote the advancement of the engineering, architectural, and scientific professions, the yearly event is sponsored by The D. C. Council of Engineering and Architectural Societies, The Washington Academy of Sciences, the Washington Section, IRE, and The D. C. Society of Professional Engineers.

BRADLEY GIVEN AMPLIFIER PATENTS

A group of three patents covering inventions stemming from his work on distributed amplifier circuits has been granted to Falls Church Section Head Emmett Bradley, according to an announcement in the Official Gazette of the U. S. Patent Office.

The patents apply to a Triode Distributed Amplifier, Distributed Amplifier Transmission Line Terminations, and Distributed Amplifiers. All have been assigned by Mr. Bradley to Melpar, Inc.

'Lead Time' – What's It Worth?

In today's less-than-perfect world, nothing protects like strength. America's strength lies in its weapons on hand. Those push buttons, labelled PEACE, promised us 5 years hence, can't help us now. The best way to ensure that our current arsenal keeps pace with our current need is to shrink production lead time to the minimum, while our research and development effort builds our protection on into the future.

The 'normal' approach—contract for the development, wait for the prototype, approve the prototype, then follow with a production contract—merely loads the other fellow's gun. Production planning can be phased into a development contract at an appropriate point, and thus save precious time.

This approach requires intimate coordination between the development engineers and the production groups. In Melpar, the Engineering and Quality Control sections based at Arlington Division are brought in almost from the inception of the job for training in and familiarization with technical problems



ensures that every requirement, once established, is immediately analyzed for the production schedule. Procurement or fabrication lead time normally exceeds the time available between the prototype unit and the production delivery demand, necessitating concurrent orders for at least a portion of the production run. Good judgment must guide the selection of the right quantity of parts to meet the schedule with minimum waste.

The status of thousands of parts must be known at all times; drawings and changes must be controlled up to the minute. Pieces must flow into sub-assemblies and on into higher assemblies. Manufacturing hours must be utilized in close accord with the original plan; 10,000 man hours of work cannot be accomplished on the day before delivery. Bottlenecks must be circumvented, and flexible scheduling becomes a must.

At times, the apparent confusion threatens the sanity of some of us. Everything **but** good planning is visible. Vendors do not meet their promises. Parts are obsolete when received. Parts require rework before acceptance. Parts from stock are found to be unuseable. Parts do not mate, match paint, or take plating. Too much rework is required of the fabrication shops and their production jams up. Hardware, wire, and paint bought in liberal quantities suddenly turns up on shortage lists. The usual lead time

for these items perversely becomes inadequate. An avalanche of material clogs incoming inspection. A crisis for every hour becomes the routine of the day.

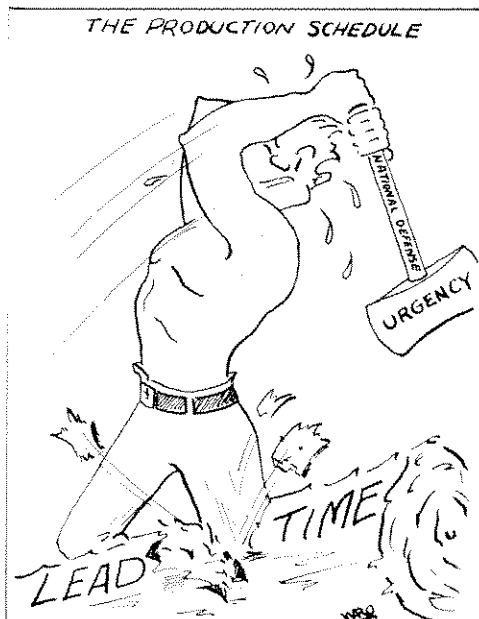
As delivery dates draw inexorably closer the effort becomes even more feverish. Overtime is required; skilled workers are shifted to cover temporary peaks in the production activity. Completed sub-assemblies are cannibalized to cover the last few component shortages, units are hand carried from operation to operation, parts are picked up from scattered vendors and walked through receiving and inspection and then to the assembly line. The project must be "sparked" from beginning to end with constant and extensive effort.

The scheduled delivery date for the first unit is met! But still there is no time to spare; the next demand date is breathing hotly down our necks. The cycle continues, its momentum growing; and, despite the apparent chaos, systems keep rolling out the door.

Why this method of operation? Why not take the normal lead time? Wait for fewer changes! Wait until all the material is on hand! Wait while drawings are thoroughly checked! Wait for all things to become neat and orderly!

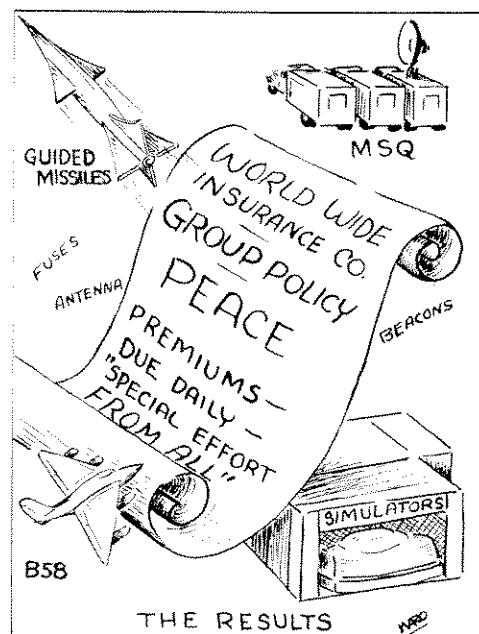
We cannot wait. We must not wait.

Time is the premium we pay for peace insurance.

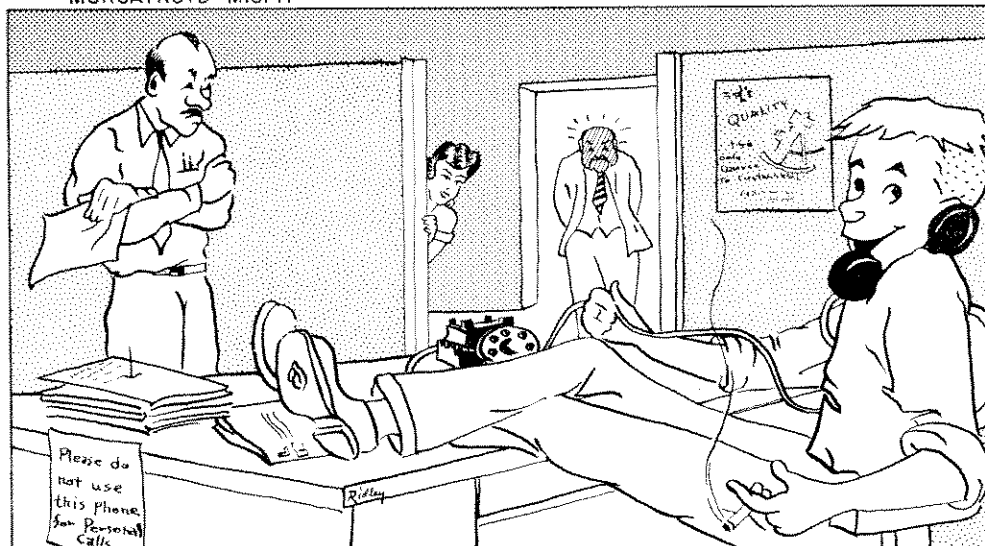


they will face together. And because the flow of design information seldom follows the best laid plans, the Planning function must engage in an enormous amount of administrative control.

Melpar's method of tying production planning closely to the development phase



MURGATROYD MISFIT



We installed Public phones, Murgatroyd—just for you!

GOING UP!

Lawrence W. Gay has been named Head of Technical Services at Melpar-Watertown. H. A. Misenor, promoted from Design Engineer, succeeds Mr. Gay as Standards Engineer. Also at Watertown, L. J. Klemola rose to Scheduling Supervisor and M. A. Petty was promoted to Junior Procurement Planner.

At Arlington Division, H. Hodges has become Project Planning Supervisor. F. Hutsenpiller was promoted from Junior Planner to Fabrication Estimator, and C. R. Green rose to Junior Methods Engineer.

Former Engineers W. S. Boone and J. F. Delany, of Falls Church, were promoted to Senior Engineer. R. M. Phillips rose from Technician to Junior Engineer. F. K. Brockwell is now an Engineer at Falls Church. He formerly served as Line Inspection Group Leader, assigned to Arlington.

At Melpar-Boston, L. J. Bullard, former PBX Operator, has been named Staff Assistant (Personnel) to the Director of Research.

Promoted to 1st Class Light Assembler at Arlington were V. L. Blanton, L. G. Duquette, and S. S. Stone. R. D. Hurley and H. M. McClarren are now 1st Class Heavy Assemblers. C. D. Burner moved up to 1st Class Precision Assembler, as did L. D. Weaver.

At Falls Church, J. W. Swing was named Assistant Machine Shop Foreman and G. F. Lemon rose to Machinist Group Leader. In Maintenance, P. H. Hiers now is a Group Leader. R. A.

Markham has become Assistant Supervisor, Packing and Shipping; he is located in Arlington Division.

Also at Falls Church, H. R. Bundren moved up from 1st Class Wiring Technician to Lead Technician. R. Hevey and R. J. Riley have advanced to Senior Technician. Promoted from Clerk-Typist to Secretary were S. M. Gleason and B. J. Proctor. R. A. Compla is now a Junior Procurement Planner, having been promoted from Expediter.

D. W. Spear and J. Marvich, formerly Technicians at Arlington Division, have been promoted to Junior Engineer. At the same plant, J. D. Guard rose from Mail Clerk to Expediter.

MARSH OUTLINES PROCEDURES BEFORE MANAGEMENT SOCIETY

The organizational structure and principles of operation of the General Services Department at Melpar were discussed by its Director, R. Brandon Marsh, at a meeting of the Research and Development Panel of the Society For The Advancement Of Management. The session took place at the Cosmos Club in Washington on February 13.

Mr. Marsh described to the panel salient aspects of the Company's procurement practice, supply procedures, and methods of transportation of personnel and material in the local area; he also told of our procedures for the handling of security clearances and incoming and outgoing mail.

MELOY IS WITNESS AT AIRBORNE ACTION

Training exercises of the XVIII Airborne Corps, U. S. Army, were observed by Melpar President Thomas Meloy during a recent tour of the Corps' installations at Fort Bragg, North Carolina. The exercises involved parachute drops of paratroopers, combat materiel, and resupply materiel, as well as demonstrations by Army helicopters and a 280 mm. atomic gun crew.

The Corps' invitation to Mr. Meloy, to observe training methods, was fulfilled in a most literal sense when he boarded a C-119 troop carrier aircraft loaded with paratroopers; from a position uncomfortably close to the airplane's wide-yawning door, he watched the planeload of troopers 'hit the silk'.

In still another phase of active participation in the Corps' training program, Mr. Meloy was assigned to fire a round from the 280 mm. atomic cannon. Reporting the experience, Mr. Meloy described the gun as an extremely large object which creates a violent uproar when a simple button is pressed.

FALLS CHURCH CHEMISTS JOIN PRINTED CIRCUIT COMMITTEE

Dr. Paul Ritt, Project Engineer, and Senior Engineer E. L. Ditz, of Falls Church, have been appointed charter members of a Professional Activities Committee on Printed Circuits sponsored by the Society of Plastics Engineers.

The appointments were announced during the course of a recent convention of the Society held in St. Louis, Mo. Speaking at a technical session of the convention, Dr. Ritt discussed "Epoxy Encapsulation of Transistor Flip-Flops" and Mr. Ditz spoke on "New Fabrication Techniques for Flush Circuitry".

FUSCA JOINS TWO RTCA COMMITTEES

Senior Engineer J. A. Fusca, of Falls Church, has been named a member of two special committees of the Radio Technical Commission For Aeronautics. As a member of the committee on Helicopter Air Navigation, Communication, and Traffic Control, Mr. Fusca joins Sect Head B. R. Boymel, a long standing member of the group. On the committee for Radar Safety Beacons, Mr. Fusca again joins Mr. Boymel as well as another Melpar member, Vernon I. Weihe.