

The EMR-Telemetry News

Sarasota, Florida

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Happy Valentine's Day!

14 February 1969

EMR MANAGEMENT MEETS IN SARASOTA

EMR Division President J. P. Magnin met with the EMR General Managers here at EMR-Telemetry last week. Dr. Magnin holds periodic meetings with his Managers and Division Staff to review EMR Division objectives and to explore areas of cooperation and mutual interest. The most recent previous session had been held at EMR-Computer, Minneapolis.

EMR General Managers who attended the Sarasota meeting were: J. Bulhon, EMR-Hatboro, Pa.; L. G. Chappell, EMR-Telemetry; J. L. Heath, EMR-Computer, Minneapolis; M. Rome, EMR-Photoelectric, Princeton, N. J., and T. E. Stewart, EMR-Aerospace Sciences, College Park, Md. Present from Dr. Magnin's EMR Division Staff, Princeton, were: Director of Personnel C. D. Campbell and Controller W. F. Clendenin. Attendees from Schlumberger Limited, New York City, were: L. E. Dake, Senior Vice President, and J. B. Markolf, Group Personnel Manager.

Briefings by EMR-Telemetry Organization Managers and a plant tour were part of the all-day business session.

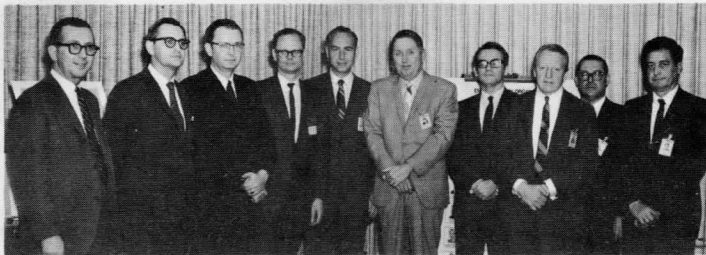
Pictured during their meeting in Sarasota last week are, left to right: J. B. Markolf, W. F. Clendenin, C. D. Campbell, J. Bulhon, M. Rome, J. L. Heath, J. P. Magnin, L. E. Dake, T. E. Stewart and L. G. Chappell.

THREE EMR TRANSMITTERS LAUNCHED ON TITAN III C

Three of EMR-Telemetry's S-Band Transmitters -- designed and built for Martin Marietta Corporation's Titan program-- flew for the first time last Sunday, February 9, during the launch from Cape Kennedy of the Titan III C which carried the Tactical Communications Satellite. Initial information indicates that the EMR Transmitters sent back all available data which will permit engineers to evaluate the performance of the entire launch vehicle.

Launched by the 144-foot-tall Titan III C, the TACCOMSAT (Tactical Communications Satellite) was placed in a "stationary" orbit 22,300 miles above the Equator off the west coast of South America. After a 6-1/2 hour flight, the vehicle's maneuverable upper stage, called the Transtage, was required to shift from its initial 100-mile-high orbit to a peak altitude of 22,300 miles. The payload was then placed in a synchronous orbit with the earth. This program is the forerunner of a satellite network which could link small military units on the front lines, at sea, and in the air.

Two of EMR-Telemetry's Transmitters are located in the Transtage itself, while
(Continued on Page 3)



JUST A ROUTINE TRIP-- UNTIL THE BOMB SCARE

"Enjoy the convenience of jet age travel on your next business trip..." say the ads. After his business trip to Washington last week, Peter M. Smith, of Applications, is ready to rewrite the ads.

On the northbound trip, late planes and missed connections turned a simple Sarasota-Washington flight into an 11-hour detour, Sarasota-Fort Myers-Orlando-New York-Baltimore. Then, after two days of sales meetings and calling on the customer, came the return trip.

"The Baltimore-Atlanta flight was routine. We took off from Atlanta at 8:40 p. m., and were due in Sarasota at 9:55 p. m. After flying for over an hour, the pilot announced, 'We are now landing in Atlanta,'" Peter relates. "As we touched down, the runway was lined with fire trucks and police cars. We deplaned at the edge of the field. Next our baggage was searched for a BOMB. At 10:30, an announcement told us the crew was being questioned by the FBI, and projected departure time was 11:30 p. m. Finally, we left Atlanta at 11:45, arriving in Sarasota at 12:50," Peter says.

Ho hum, another routine business trip!

VORCE AUTHORS ARTICLE

R. G. Vorce, Section Manager in Analog Products Engineering, appears in print in the January, 1969, issue of The Electronic Engineer as the author of an article on Frequency-Division Multiplexing. Dick's eight-page tutorial article includes a "Primer on FM," and tips on "How to Select a VCO," and "How to Buy a Discriminator" -- aimed at the reader who might have to buy an FM system, but is not yet an expert in the field. The article is the second in a five-part Telemetry Course the magazine is running.

P. S. If Dick's readers want some really good Discriminators and VCO's, we suggest they buy the best--from us, of course!

TREE PLANTING PART OF NEW EMR POLLUTION CONTROL PLAN

Eleven thousand slash pine seedlings were planted this week in a 15-acre corner of EMR-Telemetry property, bordering Fruitville Road. The re-forestation project is part of EMR's own pollution-control plan and ties in with a new chemical waste treatment plant soon to go into operation here.

Cooperating closely with the Forestry Service, Soil Conservation Service, and State and local pollution control agencies, Joe Wood, Manager of Plant Engineering and Maintenance, is the man behind the scenes on this unusual project.

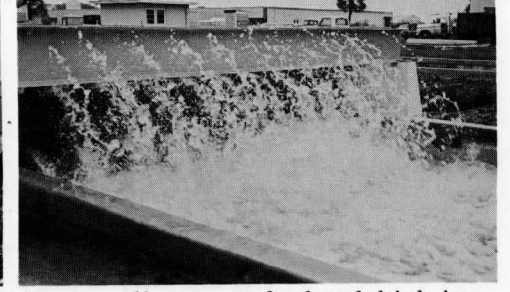
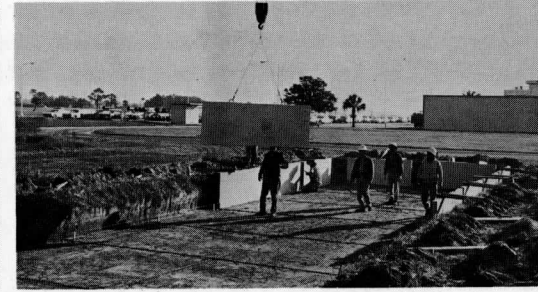
"An overhead sprinkling system for the pine trees will use water from our new chemical waste treatment system and will avoid discharging any of this treated waste water into the drainage canal network which flows into Phillippi Creek," Joe explains.

The new experimental treatment plant will process and purify chemical waste from EMR-Telemetry's manufacturing processes. Chemical wastes from our printed circuit manufacturing area, plating room, Microelectronics Lab, and Metallurgical Lab will be channeled via underground pipes to the new chemical waste treatment plant west of the Production Building. The system uses a complex series of holding ponds and treatment machinery to aerate, neutralize and break down harmful chemical properties in the waste water and to add needed oxygen to the water. (Pollution thrives in warm, still, low-oxygen streams or ponds.)

Specially-designed grids, circulating mechanisms, churning aerators, pumps,

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M. E. Herbst, Editor

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At left, Joe Wood with seedling. The 11,000 slash pine seedlings will grow to be head-high in three years. Center, EMR-T Maintenance Crew during construction of rectangular chemical waste treatment pond. Right, aerator churns water in oval-shaped treatment pond to add oxygen.

and control machinery will regulate the flow and treatment of the large quantities of liquid waste involved. Copper, cadmium, aluminum and other potential pollutants will be removed or counteracted before the treated waste water is deemed safe for use in the tree-sprinkling system. Daily chemical testing in our several waste treatment facilities keeps a watchful eye on any potentially harmful waste.

Why this emphasis on pollution control? First, EMR desires to retain its reputation as a "clean" industry and to refrain from any pollution of our air and streams. In addition, new regulations for stricter pollution control measures go into effect during the next few years. "I believe this system will far exceed the requirements of the new law," Joe says, "and by getting a head start, we've been able to develop an advanced system at much lower cost."

Work was done by EMR-T's Maintenance staff, and Joe Wood designed much of the equipment himself. Long interested in pollution control, he has served two terms as a member of the Sarasota County Pollution Advisory Committee. "The Committee drew up the Sarasota County pollution code -- the toughest in the State," Joe states. He also spent three weeks on a European pollution-control study tour in 1967. Some of the ideas incorporated in

this new chemical waste treatment system came out of that trip.

"Our goal is to see that by 1970 EMR discharges no waste of any kind--no matter how safely-treated it may be--into any stream," Joe says. "The sprinkling system for the pines is a safe and constructive way of disposing of the treated water. Even the trees themselves give off oxygen and will serve as an anti-pollution aid."

EMR-Telemetry is also concerned about water conservation methods. Thousands of gallons of water are treated and re-used daily in various EMR-T water systems. We treat and recycle water in operations such as our air conditioning system, Plating Room's de-greasing operation, Paint Shop's water spray booth, and in the Microelectronics Lab and Environmental Lab.

Conservation, pollution control, and re-forestation--three steps EMR-T is taking to maintain its reputation as a good citizen and "clean" industry in the community.

TRANSMITTERS (Cont'd from Page 1)
a third is in the second stage of the Titan III C launch vehicle.

Work continues here on our large order from Martin Marietta Corp., Denver, Colo., which calls for EMR-Telemetry to deliver more than 90 S-Band Telemetry Transmitters for the U. S. Air Force Titan III Program.

WHO'S WHO — ALICE MITTELBACH



She's attractive, soft-spoken, pleasant, conscientious. That's the impression a visitor gets when he walks into the EMR-Telemetry lobby and is greeted by Alice Mittelbach, Receptionist and Reservation Clerk. Alice has been at the front desk since June and readily admits, "I love it." She greets visitors--sometimes more than 200 a week--and sees that they sign in, are badged, escorted, and put in touch with the right EMR person. Visitors include customers, vendors, job applicants, EMR employees from other facilities, and various repair and service men.

"One thing I've learned in this job is to read upside down--to catch the visitor's name as he signs the register," Alice says. "It saves time in getting the badges ready."

Then there's the hectic job of making travel arrangements--airlines, hotels, car rentals--for EMR-T personnel and frequently for visitors, too. A National Airlines two-week intensive training course in Miami helped train Alice to handle air travel routing, ticketing, and the intricate tariff schedules to calculate the best fares. EMR utilizes as many as 17 different airlines for domestic and foreign travel.

A native of LaCrosse, Wisconsin, Alice moved to Sarasota and joined EMR in 1962--first in Accounting, then Quality Control, and now in Procurement. In her spare time she's a conchologist (shell collector). Alice enjoys concocting floral arrangements, often combining the shells she picks up at the beach with artificial flowers. (She has even addressed a garden club group on the subject.) In her complete shell collection are perfect specimens of limpets, star fish, sea horse, olive shells, and many others.

Heading her interests, however, are her two sons--Mark, 17, star defensive Right End for the Sarasota High School football team, and Kim, 13, who seems bent on a career as a veterinarian, judging by his love for animals of all shapes and sizes.

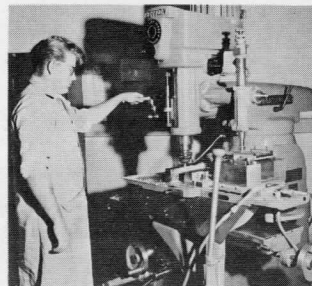
What about air travel complications, such as detours to Cuba? "No, we haven't had any of our personnel on hijacked planes, so far," Alice states, "and I'm keeping my fingers crossed!"

NEW MILLING MACHINE

A new, advanced milling machine in the Fabrication Machine Shop has added to our machining capabilities and is easing our dependence on outside suppliers for certain castings.

The Gorton Mastermil permits an EMR machine operator to duplicate complicated parts--such as an aluminum Exciter housing for S-Band Transmitters--at a significant reduction in cost. When castings for similar housings were purchased from outside suppliers, there were many problems--slow delivery, marginal work, plus additional milling operations done here. Now the Mastermil can follow the intricate pattern of a Transmitter Exciter housing and neatly carve an exact copy of the small compartmentalized box from a solid block of aluminum. As the machine's cutting tool bites into the aluminum or steel at up to 5600 rotations per minute, a coolant spray mist keeps the cutting tool cool--much as your dentist's drill is cooled with a liquid spray.

More in-house labor is required, but we can meet our customers' rigid requirements in more timely fashion by using the new machine. And, the cost is lower than



buying and machining the castings--adding up to a three-fold advantage: quality, speed, and economy. At left, Leonard Fletcher runs the new machine.