



## The EMR-Telemetry News

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### EMPLOYEES SEE PREVIEW OF VEHICLE TEST SYSTEM

Employees were given an advance look at EMR-T's new Vehicle Test System last week in an equipment demonstration in the Cafeteria during afternoon coffee break.



Wyatt Bishop (left) demonstrating Vehicle Test System in Cafeteria.

Kent Morgan, Wyatt Bishop and Bob Anderson, of Special Systems, and John McQueen, of Marketing, showed employees a preview of the new system which is aimed at the commercial market. The EMR-T equipment provides a data system to aid the development and test engineers in evaluating handling performance and safety characteristics of surface vehicles such as automobiles, tractors, trucks, boats, tanks, helicopters.

"We'll supply the instrumentation as a complete, end-to-end telemetry system-- a standard product-- which designers and manufacturers can use to test their vehicles," says Wyatt Bishop. "For example, our 11-channel Vehicle Test System will

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### NASA-WALLOPS ISLAND ORDERS EMR T/C SYSTEM

NASA, Wallops Island, Va., has ordered an EMR Telemetry/Computer PCM Data Handling System for use at the Wallops Station in support of range and aeronautical experiments requiring processing of PCM telemetry data.

The system will include two racks of EMR-T 2700-series PCM equipment, plus data displays, and a Model 6130 Digital Computer produced by EMR-Computer, Minneapolis.

Scheduled for year-end delivery, the system requires some specially-designed software and includes the first sale of TELEVENT -- EMR-T's newest telemetry system software package. System integration will be handled in Digital Systems with Jack Cain as Project Engineer.

### LEASING COMPUTER TIME

Want to rent a computer? Aiming to get maximum value out of the IBM 360 business computer system leased by EMR-T, Accounting's Data Processing and Systems Department has started leasing time on our computer to outside clients. Computer Programming Center, Inc., is currently using our computer for programming language instructions to students during evening hours.

"The additional revenue helps offset the costs of EMR-T's lease of this equipment, and we are investigating other sub-leasing possibilities for our IBM computer," reports Dale Dennis, Manager of Data Processing.

## EMR-C, EMR-T COOPERATE IN NUMEROUS ACTIVITIES

Closer ties between EMR-Computer, of Minneapolis, and EMR-Telemetry in Sarasota are evident at EMR-T in increasing activity between the two facilities.

In Research and Engineering at EMR-T, several projects are underway to assist EMR-C in developing equipment for the process control market segment they are addressing. Engineers and Technicians are at work in Frank Bost's Digital Products Engineering area developing a new, simpler Buffered Multiplex Channel which will be used in EMR-C systems. Another project in the same area involves developing a Low Speed Analog Multiplex card for EMR-C's Low Speed Analog Input subsystem. A third task: evaluating an Analog-to-Digital Converter for use with the 6130 Computer and in conjunction with the Low Speed Analog Multiplex card.

EMR-T's Microelectronics Lab has just completed delivery of nearly 3000 microcircuits to the EMR Minneapolis facility.

In Production, some 4000 printed circuit cards have been manufactured to EMR-C's specifications in recent months for use in Model 6130 Computers.

Products from the two EMR facilities are also working together. EMR-C is ordering EMR-T 2700 series equipment to use with their systems in domestic and foreign markets. Here at EMR-T we use EMR Computers in telemetry/computer systems such as those delivered to NASA, Lockheed, U. S. Army helicopter testing, etc.

In-house, EMR-T has an EMR 6130 Computer in our Systems' Data Processing Lab. It is used in complex design problems, in checkout of product/computer interface, in computer software development, and for customer demonstrations.

## OVER \$7,500 DISTRIBUTED TO CREDIT UNION MEMBERS

Members of EMR Sarasota Employees Credit Union gained more than \$7,500 in interest refunds and dividends credited to their accounts effective July 1, 1970.

"Our assets have grown to \$310,900, and we have 596 members," reports Treasurer Ruth LaCroix. "The Board of Directors declared a 3% semi-annual dividend, which amounted to \$6,711, and a 5% interest refund which totaled \$758. Our Christmas Club depositors received \$80 in interest."

Rose Marie Latchem is the only full-time employee of the Credit Union. EMRSECU Board Members are: President John Brady, Vice President Bill Gregory, Secretary Josephine Snyder, Treasurer Ruth LaCroix, Royal Bechtold, Bob Bush, Hal Roberts; Supervisory Committee: Ed Annaratone, Glen Johnson and Joe Sheppard; Credit Committee: Marshall DuBois, John Norton, George Zimmerman.

## ANNIVERSARY GREETINGS

Among the 54 employees marking anniversaries of employment in July are those of our colleagues listed here--observing service anniversaries of 5, 7, 10 and more years:

<u>1957</u>	<u>1963</u>
Ida Pape	Barbara Ames
George Strait	Pat Bowers
<u>1959</u>	Hubert Cashmore
George Bennett	Bill Doe
Marianna Borris	Caryl Faso
Frances Crawford	Graham Hildebrand
Richard Davies	Roma Parker
Wayne Norman	Berthe Salage
H. E. Robison	Dorothy Smith
<u>1960</u>	
Shelby Bass	
Olie Becker	<u>1965</u>
Roy Paxton	Robert Van Doninck
Clarice Wynn	

## TO USE MOBILE T/C SYSTEM FOR HELICOPTER TESTING

A new high-speed telemetry data reduction center on wheels will soon be en route from EMR-T, Sarasota, to California where it will be used in U. S. Army helicopter testing.

This van-mounted EMR telemetry/computer system is part of a large Advanced Instrumentation and Data Analysis System (AIDAS) ordered by the U. S. Army Aviation Systems Test Activity at Edwards Air Force Base, Calif., for real-time flight safety and data monitoring of new Army aircraft such as helicopters.

Inside the big white van are an EMR 6135 Computer and peripherals, provided by EMR-Computer, Minneapolis, and a multi-rack telemetry system consisting of EMR-T 2700-series equipment, Model 4150 Discriminators, plus recorders and related equipment.

The van will travel to remote mountain locations in California to serve as a quick-look telemetry data reduction system for on-the-spot evaluation of helicopter tests at various elevations.

EMR has already delivered other segments of this large AIDAS system to Edwards Air Force Base. They include a central ground station (Model 6135 Computer and telemetry front end) for processing flight test data, and an EMR-T airborne system which conditions the data coming in during the flight testing, FM and PCM multiplexes the data, and stores the information on tape for processing on the ground.



Van-mounted telemetry/computer system will be used in helicopter testing.



Dick Haase at telemetry front end; Joe West seated at 6135 Computer console.

Another add-on order was received in June for a second airborne system to be delivered to the U. S. Army Aviation Systems Test Activity at Edwards AFB. Acquisition and implementation of AIDAS will span a 3-year period, and the Army's contract with EMR specifies options to buy additional equipment.

### EEA VOLLEYBALL LEAGUE STARTED FOR EMPLOYEES

Over 25 employees have signed up for a newly-organized EMR Employees Association Volleyball League, according to EEA Sports Chairman Jim Rexrode. The Chairman of the new Volleyball League is Ed Rainey of Production Test.

The Employees Association has voted to support the activity with a new net and ball, and the volleyball courts are being set up in the southeast corner of EMR-T property. Play is scheduled for after work hours only. Noontime play is not permitted.

Employees who wish to join the League can sign up with Ed Rainey or Pervis Sanders, Ext. 394, or Jim Rexrode, 414.

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M. E. Herbst, Editor

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## DEVELOP NEW PRODUCT FOR NASA SPACE FLIGHTS

EMR-T has been awarded a contract by NASA - Goddard Space Flight Center, Greenbelt, Md., to develop and produce a quantity of a new Analog Multiplexer Quantizer. The new product will be used at NASA tracking stations to receive biomedical data from future manned space flights such as Skylab.

Design activity on this contract is currently centered in Digital Products Engineering, with E. H. Buck as Project Engineer. Production of the units on a compressed schedule is expected to start this fall.

## H.C. GORDON EARNS DEGREE

Horace C. Gordon, of Analog Products Engineering, has been awarded the degree of Master of Science in Engineering from the University of South Florida. He calculates he traveled 18,000 miles in the three years and nine months it took him to earn his Master's Degree.



To complete the requirements for his advanced degree in June, Horace commuted for nearly four years to evening classes at the University of South Florida's St. Petersburg and Tampa campuses while employed during the day at EMR-T. EMR-T's Tuition Refund Program provided financial assistance for his tuition and transportation costs.

His thesis -- "An Active RLC Building Block for the Cascade Synthesis of a Class of Arithmetically Symmetrical Bandpass Filters" -- is closely related to his work in designing filters for analog products at EMR-T.

A native of Tampa, Horace earned his BSEE degree from the University of Florida in 1964, and joined EMR in January, 1965.

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provide test data on general handling parameters such as:

steering angle	engine RPM
throttle position	vehicle speed
brake pressure	oil pressure
fore/aft acceleration	water temperature
lateral acceleration	ammeter
vibration of front wheel	voice channel

"In addition," Wyatt continued, "the VTS can be used in impact and roll-over tests, and even pollution monitoring."

For the preview demonstrations, Wyatt Bishop wired his own Volkswagen with the EMR-T VCO's, Transmitter, Mixing Amplifiers and antenna needed for the vehicle portion of the system. He then drove the instrumented car around the plant area in a one- to two-mile radius and put the car through its paces while commenting on the vehicle's route and handling for the benefit of listening employees. In the Cafeteria, employees listened to the commentary and watched the displays and printout as EMR-T Discriminators handled the data.

"In the past, we've sold telemetry components to customers in the auto industry for their specific requirements," says Paul Germond, Manager of Applications Engineering. "With this new Vehicle Test System, we have a complete measurement data handling package to be marketed as a standard product -- including customer training, installation assistance and maintenance service. We hope to attract many new customers who have never used telemetry before."

Early aspects of the VTS project have involved Frank Bost, of Digital Products Engineering, and many other areas throughout EMR-T. Currently the project centers in Special Systems, with Wyatt Bishop responsible for project engineering. District Sales Manager Tom Antzack has nation-wide sales responsibility for the VTS, and John McQueen is responsible for instrumenting demonstration vehicles.