

PULSE

EMR
Schlumberger



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BENTLY NEVADA ORDERS SPECTRUM ANALYZERS

Bently Nevada Corporation, specialists in the rotating machinery field, has placed an initial order with EMR for a quantity of Spectrum Analyzers--part of a potential \$1,000,000 order over a two-year period.

The EMR instrument, designated the Model 1511-01, will be used for vibration analysis, and is a modification of our Model 1510.

EMR's equipment will be combined with Bently Nevada's Rotating Machinery Protection Systems in monitoring and protective maintenance applications for large rotating motor systems such as power generators, motor pumps and large cooling systems.

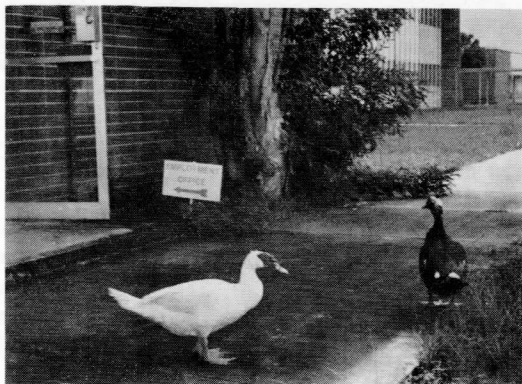
"This is an expanding field," says Dick Ridgewell, Acting Instruments Products Manager, "and this order increases EMR's potential in both domestic and foreign markets."

LOVE THOSE COFFEE BREAKS?

Just one cup of coffee does some amazing things to the body. The temperature of the stomach jumps 10 to 15%; salivary glands double their flow; the heart beats 15% faster; the lungs work 13% harder; blood vessels dilate in the brain and near the heart; the metabolism rate goes up 25%; and the workload of the kidneys doubles.

G. E. Headliner

WANNA HIRE A DUCK?



"Let's duck in and see if we can get a job," these Muscovy ducks seem to be saying as they spotted the EMR "Employment Office" sign. They must have heard EMR is an equal opportunity employer!

ITALY ORDERS EMR SYSTEM

EMR-T's Export orders continue to come in from abroad. The latest is an order from the Italian Air Force for a three-rack PCM system to be used in conjunction with an IBM computer.

"This \$100,000 order is our first 'rack & stack' job for Italy," Gerry Breyton reports. "Heretofore our sales to Italy were individual products, not systems." Joe Faso is Project Engineer for this job and delivery is scheduled for year-end. Included in the equipment will be three Schlumberger UV (Ultraviolet) Recorders from SIS, Paris.

who's who -

ARMAND CHERAMIE SAYS "EVERYTHING IS BEAUTIFUL"

Armand Cheramie is his proper name. Translated from the French, Cheramie means "dear friend." His colleagues at EMR call him "Shorty."

His effervescent personality and love of people have won him many friends in his 11 years at EMR. As a Carpenter/Masonry Craftsman in our Plant Engineering Department, Shorty moves quickly from project to project -- installing locks or CO₂ lines; paneling offices; working on major renovations such as clean rooms, P. C. Fab area, paint booths, air conditioning water system; water treatment plant, etc. With the other skilled craftsmen in Maintenance, Shorty has had a hand in building or renovating just about every part of our facility.

"Before joining EMR I worked for the contractor who built several of these buildings," he said. "I've been in carpentry for 30 years now.

"Back in Louisiana where I was born, I was one of nine children. My parents were from the bayou country, but we lived near New Orleans. We Creoles spoke French at home, and I didn't learn to speak English until I went to school.

"My dad was a fur trapper in the winter--trapping mink, otter, muskrat and raccoon. I loved fishing, swimming and diving... Yes, I used to go to Mardi Gras every year and mask with the club I belonged to!"

Shorty served in the Air Force for three years in the military police. He and his wife, Gaynell (a native of Palatka, Fla.) have one daughter and three grandchildren. "We are going to tour Florida on vacation this month," Shorty says. "Would you believe I've never been south of Venice?" Most outstanding about Shorty is his zest for life. His conversation is spiced with his philosophy:

"I love people... everything is beautiful



... I want to live to be at least 110 -- my mother reached 96 and my grandmother 98... It's a great big happy life."

At Christmastime, EMR ladies can count on his annual tradition--a hug and kiss from Armand Cheramie. "I just love all the girls!" he says.

Shorty flashed his engaging smile, executed a few quick steps from a soft shoe routine, and said, "Would you ever guess that this old man is over 50?"

That's only half way to his goal of 110.

ANNIVERSARY GREETINGS



Kathryn Dilks and Jerry Johnson reached their 15-year service anniversaries with EMR this month. Five-year milestones are being observed by Glenn Campbell and Doris Getgood during September.

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NEW ENVIRONMENTAL MONITORING SYSTEM SHIPPED

Another EMR Environmental Monitoring System has been shipped to the U. S. Army Corps of Engineers for use at Lake Allatoona, Cartersville, Ga., for measuring water quality in connection with a new hydroelectric generating station.

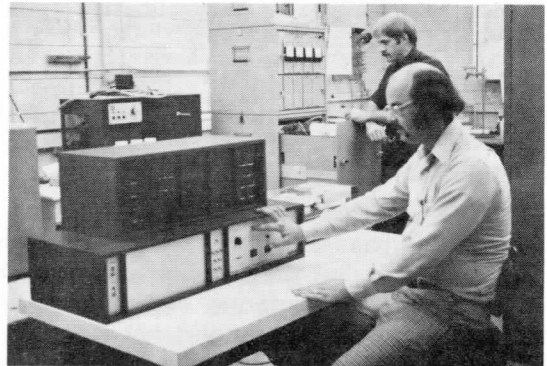
EMR's Model 1110 Central Console will allow the Corps of Engineers to process data from several independent remote water quality measuring stations and to bring the information into a central network for environmental control. The system includes a complete remote measuring station and telemetry link, in addition to the Central Console.

"We have been supplying environmental monitoring equipment and service to the Corps of Engineers since 1971," reports Bill Hardman, Industrial Data Systems Product Line Manager. "Initially we delivered a water quality monitoring system consisting of remote measuring stations, placed on the Pearl River in Louisiana, and a Central Control Station where telemetry data is received, displayed, and prepared for computer entry," Bill said. "The Corps of Engineers computer at Mobile, Ala., then processes the data and evaluates trends in river conditions, and provides data on the effects of lock and dam structures on the river."

Later, EMR was awarded service contracts for all the COE environmental stations in Mississippi, Alabama and Georgia in 1973 and again in 1974.

Alan Benik, EMR Senior Service Technician in the Southeast, services the Corps of Engineers water quality monitoring equipment over a three-state area. Alan is delivering and installing this new Environmental Monitoring System at its Georgia location this month.

The Environmental Monitoring System was built in Manufacturing, and final system integration and test were performed by Phil Potts in Engineering Development.



Phil Potts (foreground) and Alan Benik ready EMR Environmental Monitoring System for delivery.

CREDIT UNION CLERK

Monica Davis, new Credit Union Clerk in the EMR Employees Credit Union, is looking forward to serving you. She succeeds Cindy Butler who resigned recently to get married.



Monica Davis

Monica's background includes experience in several credit, collections and accounting offices in the Philadelphia area. She also studied accounting at LaSalle Evening College.

"I'd like to help all our Credit Union members with their financial questions through counseling," Monica says. "Stop in at the Credit Union office and see how the Credit Union can help you with your financial affairs."

Credit Union hours are: 9 - 11 a. m. , and 2 - 4 p. m. , Monday through Friday. The office is closed on the first and second working day of each month, and on the 15th for the required posting and recordkeeping. Monica's phone is 113.

EMR CONTINUES TO SUPPLY EQUIPMENT FOR SPACE

It's been five years since our Astronauts first landed on the Moon... 13 years since Alan Shepard's historic first sub-orbital flight in "Freedom 7."

Mercury, Gemini, Apollo, Skylab -- EMR employees and EMR equipment were part of the many successful missions of the manned space program.

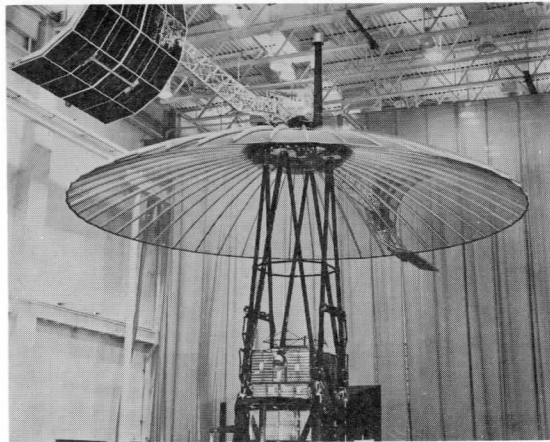
Is EMR still active in space programs?

Yes. Emphasis has shifted from manned space flight, but EMR is working in other facets of space projects, and the practical applications of space-age technology -- weather satellites, deep space probes, scientific, communications and reconnaissance satellites. Here are examples of projects in which EMR has participated recently:

ATS-6 -- This Applications Technology Satellite, launched on May 30, is called the world's first "education satellite." Its complex assignment is to televise health and training programs to doctors and school teachers in Appalachia, the Rocky Mountain states and Alaska. Veterans Hospitals can also exchange medical data via this satellite. Later, ATS-6 will be moved and stationed over East Africa -- and India will use it for transmission of educational TV programs to 5000 isolated villages. Also on board this versatile satellite are scientific experiments for air and ship navigation, communications, meteorology and agricultural observations.

ATS-6 is in a geosynchronous orbit, 22,000 miles above the equator. It will also serve as a tracking and data relay during the Apollo-Soyuz mission in 1975.

Fairchild Industries, Germantown, Md., is prime contractor for the ATS-6 spacecraft. EMR-Telemetry provided several ground stations to Fairchild for use in checkout of the sophisticated spacecraft. Dollar volume of EMR's business on this one satellite program was over \$300,000.



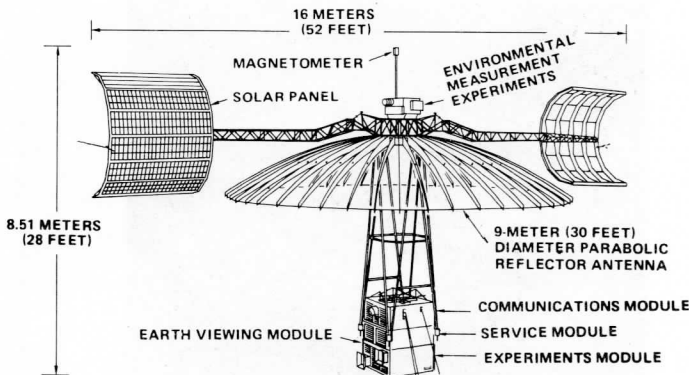
Applications Technology Satellite (ATS-6) during final test at Fairchild plant, Germantown, Md. (Photo courtesy of NASA)

Dr. Wernher von Braun, the distinguished space scientist, predicted the capability of this education satellite "could turn out to be the most important advance since movable type as a means for reaching people now separated by vast geographic, economical and cultural barriers."

WESTAR -- Another recent communications satellite launch was Western Union's Westar I, America's first domestic communications satellite system. American industries are now leasing circuits for voice, video and data transmission services via Westar's capabilities. EMR's transmitters--sold to McDonnell Douglas--helped monitor the Delta launch vehicle for this satellite.

ALADDIN -- At NASA's Wallops Island (Va.) installation, Scott Blair, of our Field Service Department, recently participated in an intensive 24-hour period of activity, called Project Aladdin. Some 54 sounding rockets were launched by an international group of experimenters studying atmospheric conditions and the dynamics of the upper atmosphere between 70 and 160 kilometers. EMR's telemetry/computer system and other

APPLICATIONS



ATS-6 SPACECRAFT

sounding rockets launches and won praise for "our outstanding support," according to Scott Blair.

WEATHER SATELLITES -- EMR's Digital Interface Electronics at the National Oceanic & Atmospheric Administration and National Environmental Satellite Services (NOAA/NESS) at Suitland, Md., is processing weather data for the SMS/GOES weather satellite. Several earlier telemetry/computer systems which EMR delivered to Suitland are also being used in weather satellite data handling.

GOES is geostationary and transmits a picture of this hemisphere every half hour, producing exceptional photographs of our weather in the making.

DEEP SPACE PROBES -- EMR equipment has helped and will continue to handle data gained from the Jupiter encounter and forthcoming Jupiter (Pioneer) and Mars (Viking) programs, including the soft landing on Mars scheduled for 1975. EMR supplied a variety of equipment to JPL, TRW, and NASA Ames Research Center for use in Deep Space Probes. The systems supplied to JPL are placed at Deep Space Network tracking stations in Spain, Australia and Goldstone, Calif. In addition, our 1410 Frequency Response Analyzer runs daily checks on the performance of the hy-

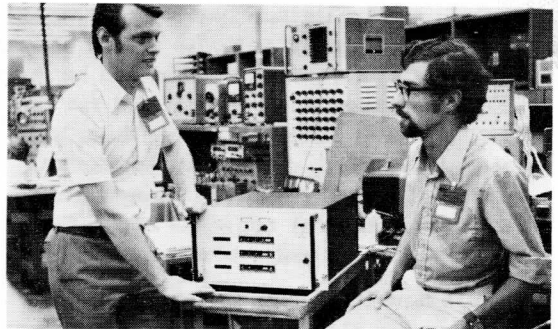
draulic servos that move the huge antennas for the Deep Space Tracking Stations.

LAUNCH SUPPORT -- Sizeable amounts of EMR ground support equipment have been delivered to Kennedy Space Flight Center for use in Titan/Atlas/Centaur launch vehicle programs. These boosters are used to launch deep space probes and various satellites. For example, the Titan III-C rocket launched the ATS-6.

FOREIGN SATELLITES, too, are supported via EMR equipment. In Japan, EMR systems are at work in the early phases of that country's scientific and communications satellites program. Over \$1,000,000 worth of EMR ground systems have been ordered for the Japanese launch facility. Some EMR digital interface electronics went to France, too, for the SMS/GOES meteorological satellite.

The Space Age continues -- and EMR is still with it!

Visitors from Abroad



Yves Mathieu, of SIS, France (left) and David Flowerday, of SEG, England, are visiting EMR for orientation on EMR equipment and FM/PCM courses. They are pictured with a Model 410 Discriminator soon to be shipped to France. Mr. Mathieu, in Engineering with Société d'Instrumentation Schlumberger, will help provide technical service on EMR equipment. Mr. Flowerday, in Sales with Solartron Electronic Group, Farnborough, will help sell EMR products in England.

EMR EQUIPMENT IN MEDICAL ELECTRONICS FIELD

Equipment made by EMR is now working in the field of advanced medical electronics--transmitting and receiving brain waves (electroencephalographs) via long distance telephone lines.

EMR-Telemetry and Beckman Instruments have entered into an agreement whereby Beckman is marketing EMR's Telephone Data Sets (Model 604) for use with Beckman's Accutrace electroencephalograph.

A quantity of EMR 604 data sets have already been delivered and installed by Beckman's Electronic Instruments Div., of Schiller Park, Ill. The EMR/Beckman sales agreement calls for Beckman to market EMR's Telephone Data Sets exclusively for the EEG market. EMR's Marketing and Sales organization will continue to pursue other applications for the Data Sets.

In one EEG application, Beckman reports that 15 transmitters and two receivers have been installed for the Omaha Neurological Clinic. The system works to the advantage of patients and physicians. A patient at a remote station can have his EEG data taken and transmitted via the EMR data set over telephone lines to a central hospital, clinic, or doctor's office. The Neurologist (a specialist in diagnosing EEG's) receives a printed graph of the patient's brain waves.

Here's how it works: A technician attaches the electrodes to the patient, hooks up the machine, dials the central facility, and, after calibration, sends the brain wave information. Identical brain wave graphs are recorded on paper via the Beckman Accutrace EEG equipment at both locations--the transmitting and receiving stations. The receiving technician turns the EEG over to the Neurologist for diagnosis.

The transmission may take about 45



EMR Model 604 Telephone Data Set (seen here under the telephone) is used in transmitting and receiving EEG information. Photo courtesy of Beckman Instruments.

minutes. Then, after analysis, the Neurologist can quickly get his expert diagnosis back to the attending physician. Patients are spared long trips to a major hospital facility or to visit a Neurologist in a distant city; physicians are able to diagnose many more patients in less time.

At another location, Beckman has sold a system consisting of two transmitters and one receiving unit to an Illinois physician. Earlier, EMR delivered other data sets for use in hospitals in Virginia and in the State of Washington.

"Distance is no problem, and accuracy is very high," reports John Norton, of Marketing.

Our Model 604 Telephone Data Sets are also used in other applications. For example, several modified data sets have been delivered to Martin Marietta, Orlando,

(Continued on Page 7)

KEY LADIES -- KEY PUNCH ON NEW MACHINES

New equipment being installed in Accounting's Data Processing area this month is designed to enhance our data processing operation. One immediate result we will notice is the new, smaller punch card used in EMR's computerized records system.

In the Key punch Department, five ladies are busy tickling the keys on brand new keypunch machines, called Interpreting Data Recorders. These Keypunch Operators transcribe a wide variety of documents, time cards, reports, etc., into the vital punched cards which go into EMR's business computer system.

Group Leader Shirley Buerge, and Patsy Parker, Doris Peters, Sandra Sharpe and Jean Soutar are our regular Keypunch Operators. During rush periods of overtime, keypunch assistance is also provided by Barbara Jefferson, of Quality Assurance, and Linda Boldt, of General Accounting.

What kind of data is keypunched? Inventory, payroll, parts lists, invoices, some wire lists, manufacturing unit status, time cards, and much more. About 75 different formats are used. The computer uses these cards to print out reports needed by all EMR departments.

The new 96-column minicards have a 20% greater capacity than earlier, larger cards--and they are more economical. New keypunch machines are faster and have automatic features which will help our Keypunch employees do an even better job.

"One especially good timesaver," says Shirley Buerge, "is that all five keypunch machines can now be used for punching and verifying." Verifying means having the newly-punched cards keyed again by an alternate Operator to catch any errors in the punched data.

What helps a Keypunch Operator do her



Shirley Buerge, seated at new keypunch machine, with Jean Soutar, Sandra Sharpe, Doris Peters and Patsy Parker.

thing? "Legibility and complete data," Shirley says. "Missing information means a delay while we phone the Department for the information. Poor handwriting leads to misinterpretation of the data and possible errors."

And when you punch over 10,000 cards a week, that's a lot of numbers to keep straight!

MEDICAL ELECTRONICS--DATA SETS (Continued from Page 6)

for use with their hybrid computer facility. Their clients lease time on the Martin Marietta hybrid computer facility, and the EMR data sets permit both voice and data interaction--simultaneously--between the computer facility and the leasing customer.

Another recent development by EMR for use in the medical data handling field is an arrangement whereby a tape recording can be made of the EEG data and transmitted later--if the central machine is busy.

"We are enthusiastic about the various applications for our data sets," said Dick Vorce, FDM Product Line Manager. "We also expect to be active in the electrocardiograph data handling market," he said.

DIANA COLE IS A VERSATILE GIRL

By Larry Dunham, Q. A.

If you attended any of the Sunday afternoon water ski shows at the Sarasota Bayfront in the past couple of years, you probably saw Diana Cole perform.



Diana

Diana is Secretary to Chris Papastrat,

Manager of Quality Assurance. She is also a member of the Sarasota "Ski-A-Rees," a local club chartered a few years back to provide top quality water ski shows for the Sara De Soto Pageant and other area events. The Club, consisting of unpaid volunteers, is managed by a local resident, Larry Sheppard--former water ski champion at Cypress Gardens. The group was recently offered an all-expense-paid trip to perform in Chicago, but because of other commitments, the Club had to turn down the offer.

Diana is a graduate of Riverview High and a native of Sarasota--except for the first two months of her life which were spent in Michigan. "No one had better ever call me a Yankee," she quickly adds.

Besides skiing, Diana enjoys horseback riding and bowling (for which she has two trophies). Recently, this versatile young lady baked and decorated a surprise birthday cake for two QA colleagues -- a giant daisy-shaped cake. Right now she is concentrating on making a home for her husband-to-be, Dan Denham. Diana and Dan will be married on October 12.

"Dan has started water skiing, too," she said, "and when the Ski-A-Rees season starts in January, we expect to be the first local husband-and-wife doubles team." She will be perched atop Dan's shoulders. There are to be eight shows and a pageant performance this season.

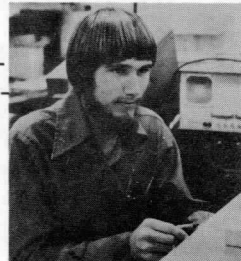
The Ski-A-Rees may need one or two additional performers soon. Interested? Call Diana on Ext. 178.



Ski-A-Rees, with Diana Cole, second from the left.

BRUCE RANDALL AMONG CONTEST SEMIFINALISTS

Bruce Randall, Engineering Technician in Applications Engineering, is among the semifinalists in a Motorola HEP Semiconductors "Design-In" Contest.



His entry--a Voltage to Frequency Converter design -- was selected for judging in the semifinals and he received a check to cover the cost of the parts to build his project. Then he shipped his project to Motorola earlier this month. Now Bruce and his colleagues are awaiting final judging -- with fingers crossed. Prizes are scholarships--from \$250 to \$2500.

Bruce has been interested in electronics since high school days and throughout his four years in the Air Force. He joined EMR in October, 1973, following a year of study at Tampa Technical Institute.

"My current project at home is building an electronic music synthesizer--similar to a Moog Synthesizer," Bruce said. He enjoys the variety of sound effects he can create, and his wife, Mary Rose, is the musician in the family who plays the instrument.

Good luck in the contest, Bruce.