



The EMR-Telemetry News Sarasota, Florida

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EMR GIVES TO SCHOOLS

EMR-T has made it a practice over the years to contribute surplus, usable electronic equipment to the various schools and colleges in the Sarasota-Manatee area.

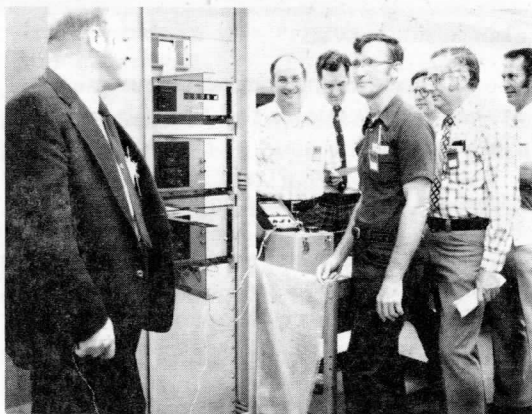
Latest such gift was to Pine View School's Electronics Club. Included in the gift to Pine View were obsolete EMR models and miscellaneous salvage parts. Material Control Supervisor Don Parker handled the transfer.



Accepting a small portion of the donated equipment are: Philip Kroll, Pine View Physics Instructor and advisor for the Electronics Club; students Gary Rudy, Ken Robinson, Kevin Houts, and Eric Pepke. At right, Harold Leslie, of EMR.

FAULT LOCATOR SYSTEM DELIVERED TO F P & L

EMR has delivered a Fault Locator system to Florida Power & Light to monitor power transmission lines running from the Fort Myers plant to the Ranch substation and Fort Lauderdale plant.



Shown at EMR plant during final acceptance of Fault Locator System: Claude Smith, of EMR; Bill Ray, FP&L Western Area System Protection Manager, Sarasota; Pete Farinas, Power Protection Group; John Lanier, FP&L, Fort Myers Plant; Don Barichak, FP&L, Sarasota; Arthur Drexel, FP&L General Engineering, Miami; and Steve Brown, of Rowe Engineering Sales, Miami, our Sales Representative.

This Fault Locator equipment will aid the power company in locating power failures along the 100-mile stretch through nearly-inaccessible areas of the Everglades. (cont'd on Page 3)

HARRY DURRETT — TEACHING EMR COURSES FROM PACIFIC TO

Harry Durrett, Customer Service Specialist, teaches quite a few PCM * courses to EMR equipment users and to potential clients -- usually in Sarasota. However, recent requests for EMR's PCM instruction have taken Harry to a small tropical atoll in the Pacific and to Holland.

EMR's technical PCM course gives our tuition-paying clients broader technical know-how, and often creates greater interest in buying EMR equipment. For Harry, this teaching part of his job has meant meeting interesting people and also some travel.



Harry Durrett

Were there many contrasts between the Marshall Islands in the Pacific and the Netherlands?

"One noticeable difference was weather," Harry says. "In the Marshall Islands in March, it was a balmy 85°. In late April in Holland, it was cool and rainy--about 40°--but the cherry blossoms were in bloom, and the tulips were beautiful.

For the Pacific trip, Harry flew via Hawaii to Kwajalein--three-quarters of the way across the broad Pacific. Then he helicoptered to Ennylabegan (called Carlos) where he taught his one-week PCM course for 15 Kentron-Hawaii personnel. Kentron services equipment for the Marshall Island Tracking Range.

"It's a small island, about 1/4 mile by 2 miles, and one of two islands of the atoll where natives live," Harry relates. "It's a beautiful tropical island with rocky beaches and coral reefs. About 25 Americans live on the island for purposes of



Island paradise--Ennylabegan in the Marshall Islands.

maintaining equipment. Living accommodations are in six-man air-conditioned trailers, plus a few permanent buildings for recreation and mess hall.

"There was taped TV (just one set) and a movie every night, and for exercise the men play ball or practice archery," he continued. "Native Marshalese seem reluctant to be photographed. It appears that the women are the heads of the household, and families share their food and supplies with each other. There's usually one supply ship a week."

A month later, Harry was en route from Sarasota to Holland. "I flew to Amsterdam via London, and drove to Noordwijk Aan Zee, a Dutch seaside resort on the North Sea. There I stayed at a Dutch hotel and enjoyed the Dutch breakfasts--four or five types of bread, cold cuts and cheese, jam and chocolate. A hard-boiled egg was a side order."

There were 15 "students" in each of Harry's two PCM courses. Most of the students were with ESTEC--European Space Research and Technology Centre at Noordwijk, Netherlands. The agency

* Pulse Code Modulation



is responsible for studying and developing scientific and applications satellites and for applied research work on space technology.

"Many were English, and they invited me to their homes--very nice, small two-story town houses all in a row.

"The Noordwijk beach was beautiful and covered on weekends with people in their overcoats!" Harry noted. Highlight of his weekend sightseeing was a visit to the Keukenhof gardens with thousands of tulips, narcissus, and daffodils in bloom. And, of course, there were the windmills and canals.

Who said teaching PCM is dull?

HAPPINESS IS ... a four-day holiday for Memorial Day.

HAPPINESS IS ... rain -- anytime. Even at quitting time!

Fault Locator System to F P & L

(Cont'd from Page 1)

This power protection equipment can pinpoint a failure in the line within 3% of line length, or even closer.

A group of Florida Power & Light Engineers visited our plant prior to shipment of the equipment to be briefed on this "turn-key" package. The equipment, mounted in a special cabinet, is designed to eliminate engineering time spent on interface at the site, and total installation time is less than one hour, according to Pete Farinas of the Power Protection Group.

"We are anticipating an additional order from F P & L for equipment to monitor lines feeding the Sarasota area," Pete said.

Visitors

Recent school groups visiting EMR-T have included Pine View's Electronics Club, Riverview High's Electronics Club, and Sarasota Junior High careers study students.

Tourney

GOLFERS -- watch the bulletin boards for an announcement about the big forthcoming Golf Tournament.



EMR's newest product for the environmental market is called a Scanning Radiometer Data Manipulator (SRDM). Aimed at the weather data market, the SRDM works in Automatic Picture Transmission (APT) systems which receive cloud cover pictures from weather satellites.

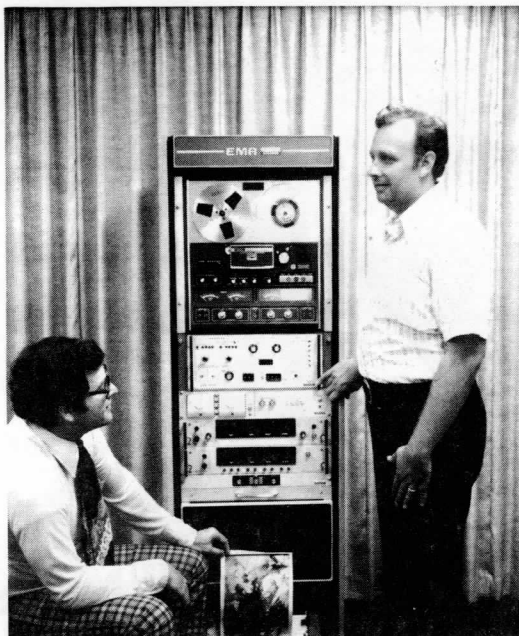
Our SRDM enhances the weather pictures by enabling the user to change the brightness/contrast to emphasize the clouds or land masses. It also provides "correction" for the effects of the earth curvature and changes in the area of coverage as the satellite sensors make horizon-to-horizon pictures. This correction technique produces pictures of land masses in the proper geometric relation and size.

The resulting pictures are clear, aerial map-like images of the land and water masses, their cloud cover, and the temperature (infrared) of the earth's surface and atmosphere.

"While the visual pictures are interesting to observe," Project Engineer Tom Osmer explains, "the infrared pictures can be used to determine areas of interest to local populations--thunderstorms, hurricanes, tornadoes--and long-term seasonal variations, such as movement of the Gulf Stream."

What weather satellites are involved? At present, NOAA III and NOAA IV. NOAA stands for National Oceanic and Atmospheric Administration.

These two satellites circle the earth at an altitude of approximately 910 miles, and make one revolution of the earth every 115 minutes in a polar orbit.



Tom Osmer (left) and Ed Domrzalski with EMR's SRDM--Scanning Radiometer Data Manipulator--located in center of this Automatic Picture Transmission Station. Equipment in the Station includes (from top to bottom): tape recorder, SRDM, antenna control, time code translator and time code generator, signal receiver, and at bottom, facsimile display.

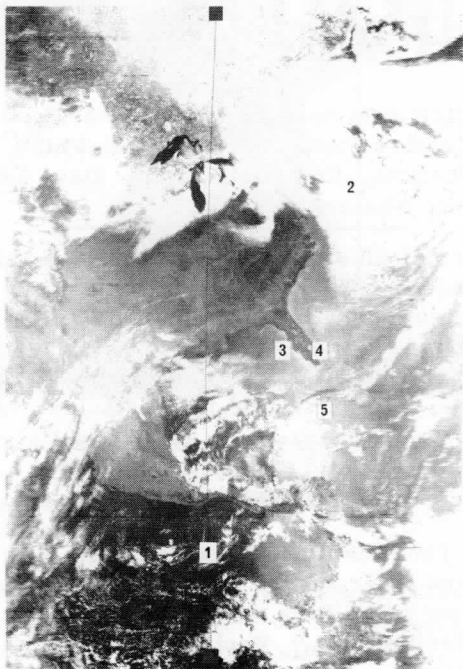
Because of the type of satellite orbits, EMR can receive two or three Florida cloud cover pictures every day--one in the Atlantic area, one over Florida, and one over California. With an overlap of 1000 miles, each "pass" gives a picture of about 2800 miles (east to west) and approximately 4200 miles, north to south.

A complete Automatic Picture Transmission station was built at EMR--for development, checkout and test purposes, and now for demonstration to clients.

WEATHER SATELLITES

EMR'S SRDM

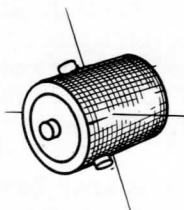
- PROCESSES IMAGE DATA TO MAKE THE EARTH APPEAR FLAT LIKE A MAP.
- PROVIDES VARIABLE CONTRAST TO EMPHASIZE LAND, CLOUDS, WATER, ETC.



1. SATELLITE TRACK
2. STORM JUST OFF THE NORTHEAST COAST ON MARCH 28th.
3. TAMPA BAY
4. LAKE OKEECHOBEE
5. CUBA

The antenna for receiving signals from the spacecraft is located on top of the S-1 Engineering building. Other com-

NOAA IV SATELLITE



ponents of the system include a tape recorder, FM receiver, SRDM, antenna control, time code translator and generator, and facsimile (picture) display.

The system is being installed in the Engineering DPL room for demonstrating our SRDM to customers.

Who are our potential clients? There are currently over 600 ground stations receiving NOAA satellite pictures. These users are all potential buyers of the SRDM. Prospective clients include Government meteorological agencies (foreign and domestic), universities, weather bureaus, private meteorologists, military, shipping interests, port authorities and airports, and other agencies and personnel interested in weather forecasting.

"The EMR system with the SRDM and its modest cost represents one of the most versatile, up-to-date systems available on the commercial market," according to Osmer.

Development time of the SRDM by the Engineering team was a fast 50 working days. "To meet the deadline, we received assistance from people in just about every Department in the company," Tom acknowledged. The SRDM team included Ed Domrzalski, Marie Gordon, Bill Gregory, Charlie Hall, Don Jones, Jay Marshall, Roger Mort, Mike Russell, and others. "There were many contributors, and we'd like to thank them all," he said.

TRAIL BIKE RIDERS FIND A GOOD VACATION SPOT

Trail bike enthusiasts at EMR-T have found the perfect place for a family weekend vacation, with an added bonus--the freedom to zoom over the trails on their fast-moving machines.

The location is near Brooksville, Fla., at Crooms in the Withlacoochee State Forest. There, the Buttgenbach mining site of years past is now a pleasant, tree-shaded area with acres of trails and a fine camping ground. The 2,600-acre area is reserved for trail bikes, and for an annual \$12 fee, you can take your motor bike in as often as you like.

"It has become a favorite place for a family outing or weekend," says Paul Shetler, of our Machine Shop. "Camping spots are available for a mere \$2.50 or \$3 a night, and speed limits and safety regulations are strictly enforced for the bike crowd."

Bud Steinhoff and his wife Jill and their two youngsters are among the EMR families who enjoy Crooms frequently. Others include Dave and Holly Cobb, Phil and Sally Stockton, Bill and Cinda Whaley, Ron and Ada Postlethwait, Larry and Tanya Stewart and others.



Young bike rider does a "wheelie" at Crooms. (Photos from Phil Stockton)



EMR men during trail bike weekend at Crooms Park: Bud Steinhoff, Phil Stockton, Ron Postlethwait, Dave Cobb, Bill Whaley.

Trail bikes are rugged, light-weight bikes with knobby tires. With Bud Steinhoff's Can Am Enduro, or Paul's Honda Trail 70 "mini" or the other Yamaha, Kawasaki, or Suzuki models, the men can tackle the obstacles--hills or sandy areas such as "White Face" or "Suicide Hill" or the "Dust Bowl" -- to their heart's content.

"The kids these days are doing 'wheelies' and other skilled tricks on a bike that a few years back were considered dare-devil stunts," Paul Shetler relates. His own five-year-old son has started riding a bike already, and the wives of some of the EMR bike men have their own bikes, too.

"There's another trail bike area closer to home, suitable for a Sunday afternoon's outing. It's in North Port, south of Sarasota, and the trails are flatter with some water obstacles," Paul said.

These EMR families on weekend vacations are helping to change the public's old concept of the trail bike crowd, from the "Hell's Angels" image of years ago to a modern family recreation.

MAKING CANDLES -- A "MATCHLESS" RELAXER FOR BUD THURMOND

Burning the candle at both ends would be easy for Bud Thurmond, if he wanted to. He makes candles as a hobby.

"I caught the candle-making 'bug' when we visited my sister-in-law's candle shop in Illinois. It's a form of relaxation for me--and provides us with gift items for friends," Bud said.

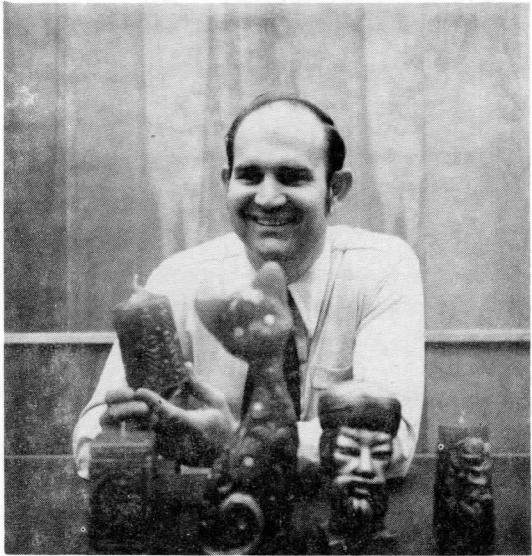
His hobby also benefits others. The candles are a good fund-raising project at the Thurmond family's church bazaars or other charity events, as well as at the children's school fairs. Bud has supplied hundreds of novelty candles for these benefits.

"To make the candles, I buy wax in big 55-pound blocks," he explains. "Then I melt it -- a small batch at a time. I add coloring and the appropriate scent, and pour the wax into the various molds.

"The wax must be temperature-controlled at 185°. After the initial pouring, you have to go back in about an hour or so and pour a little more, and finally a third pouring (usually the next morning) to bring the wax back up to the top of the mold. This helps eliminate bubbles and makes for a better shaped candle with fewer flaws.

"When the candle comes out of the mold, I carve away any excess wax around the mold marks. Then some candles are painted with a paste-type paint, using my fingers. Finally I spray with an acrylic protective coating so that the paint doesn't come off," Bud explains.

The small, novelty shapes have been popular sellers at church and school benefits--little Volkswagens and owls, mushrooms, ice cream cones, cupcakes, etc. Other molds Bud uses include forms of a Chinese man's head, a cat, ice cream soda, a large match, etc.



Candle-making is a relaxing hobby for Bud Thurmond.

Bud is a Senior Applications Engineer in Marketing. He has been with EMR since 1957. His wife, Helen, was employed in EMR's Procurement department back in 1959. The Thurmond youngsters -- Douglas, Cynthia, and Kristi -- are all students in Pine View School.

"My family all agree that making candles is a great way for Dad to unwind," Bud said.

ANNIVERSARY GREETINGS

Happy anniversary to Horace Mink of our Paint and Metal Finishing Department. Horace marks his fifth service anniversary with the company during May.

PULSE - The EMR-Telemetry News

M. E. Herbst, Editor

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CHRIS' CROWBAR--AN ORIGINAL DESIGN FOR A USEFUL TOOL

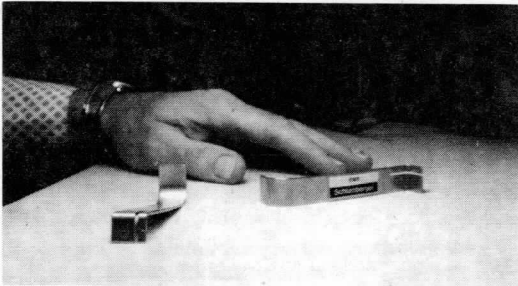
Chris Freeberg, Senior Test Technician in our Production Test Department, used his ingenuity to design a new implement which makes it easier to remove printed circuit boards from tight places in EMR's units.

Like all good ideas, it looks simple-- a small, S-shaped metal tool with a slit at one end.

"I call it a crowbar," Chris said. "During Production testing, we remove and insert printed circuit boards frequently. Of course, P. C. cards must fit snugly to assure good contact. Because the fit is tight and the amount of space for gripping the boards in certain units is very small, we found that our fingers were often getting nicked and scratched as we extracted the cards," Chris relates.

"So I discussed my idea for a small tool with Pervis Sanders, Test Supervisor, and he gave the go-ahead to make it. The first set was made of scrap metal, using simple tools, in our Test Engineering lab."

After trying out the implement for a few weeks, it was determined that the tool would be very useful, and Hass Burroughs, of Engineering, made several sets in stainless steel. Extracting the P. C. cards is now easier and faster, according to Pervis Sanders.



Chris' Crowbars are handy tools.



Chris Freeberg, of Test, uses his new "crowbars" to extract tightly-fitting Printed Circuit cards during testing.

Chris' "crowbar" is currently being used as a P. C. Card Extractor by a number of Test Technicians as they test units such as the EMR Models 1510-02, 410, 711 and 713.

"Inventor" Chris is one of our Ridgefield pioneers. He joined EMR back in 1956 and is looking forward to celebrating his 20th anniversary with the company in 1976.

VOLLEYBALL CHALLENGE

EMR-T's volleyball players responded quickly to a challenge from the Palmer Bank team for a match on May 5 at Brookside Junior High gym. Our players included Wayne Brinton, Rich Brogan, Jack Cain, Bernie Lombard, Jim Maguire, Chris Papastrat, Dan and Tom Toler.

Although very little mention was made of the score, a team spokesman said, "We'll beat 'em next time!"