

JULY/AUGUST, 1976

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HOW PAST RCA MERIT SCHOLARS ARE GETTING AHEAD

Communicate

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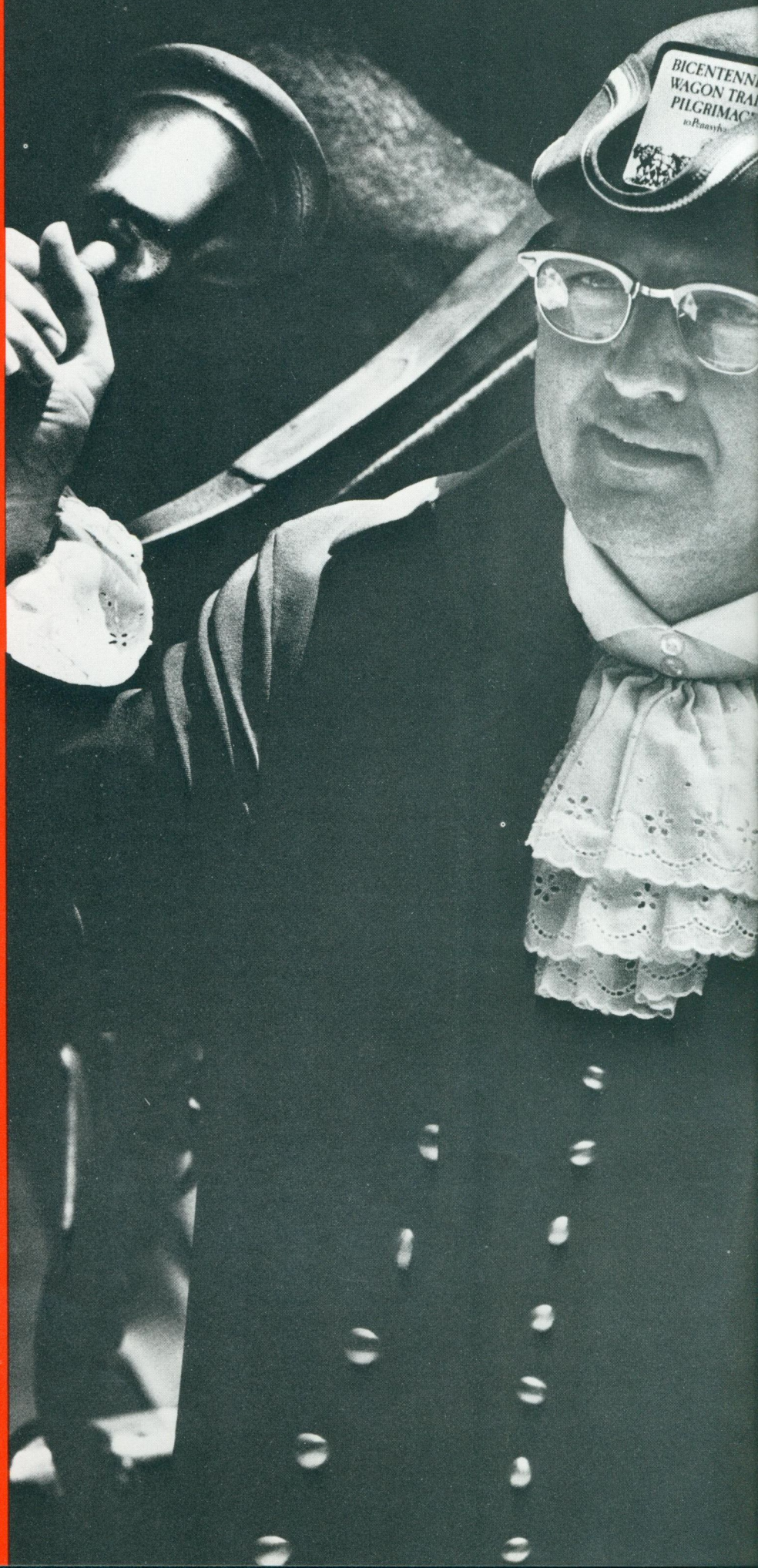
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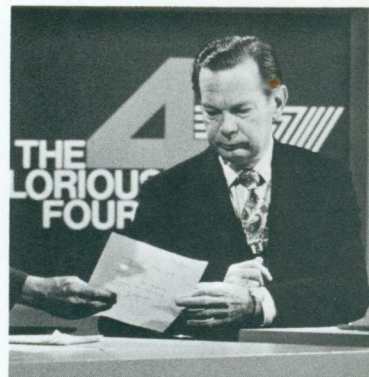


HOW RCA LIVED THE BICENTENNIAL

The people of RCA have been taking part in America's continuing celebration of its 200th anniversary in an infinite—and high-spirited—variety of ways. Since last year, RCA has been commemorating this once-in-a-lifetime event, which had its high point July 4, at the grass roots and on a national scale. The following pages give a glimpse of some of these observances.

In Burlington, a couple of engineers substituted a laser for lanterns reliving colonial history in Boston's Old North Church tower. RCA people at Marion paid homage to some early Americans by making it their project to restore an Indian cemetery. NBC gave America an unforgettable 14-hour account of how a happy people commemorated a nation's birthday. In Lancaster, RCA people flung themselves into a day-long, nationally broadcast celebration in the very homes, churches, and parks where Revolutionary history was made. And elsewhere throughout the nation, from Alaska and Hawaii to Independence Hall, RCA men and women celebrated as their nation entered its third century.

Even though July 4 is behind us, the Bicentennial spirit lingers. Lancaster's Frank Fryburg (opposite), who could be counted among RCA's most dedicated and energetic Bicentennial celebrants, points out that he's not yet ready to hang up his breeches or tricorn hat. "As far as I'm concerned," he says, "the Bicentennial goes on until 1989, 200 years after Washington's inauguration."



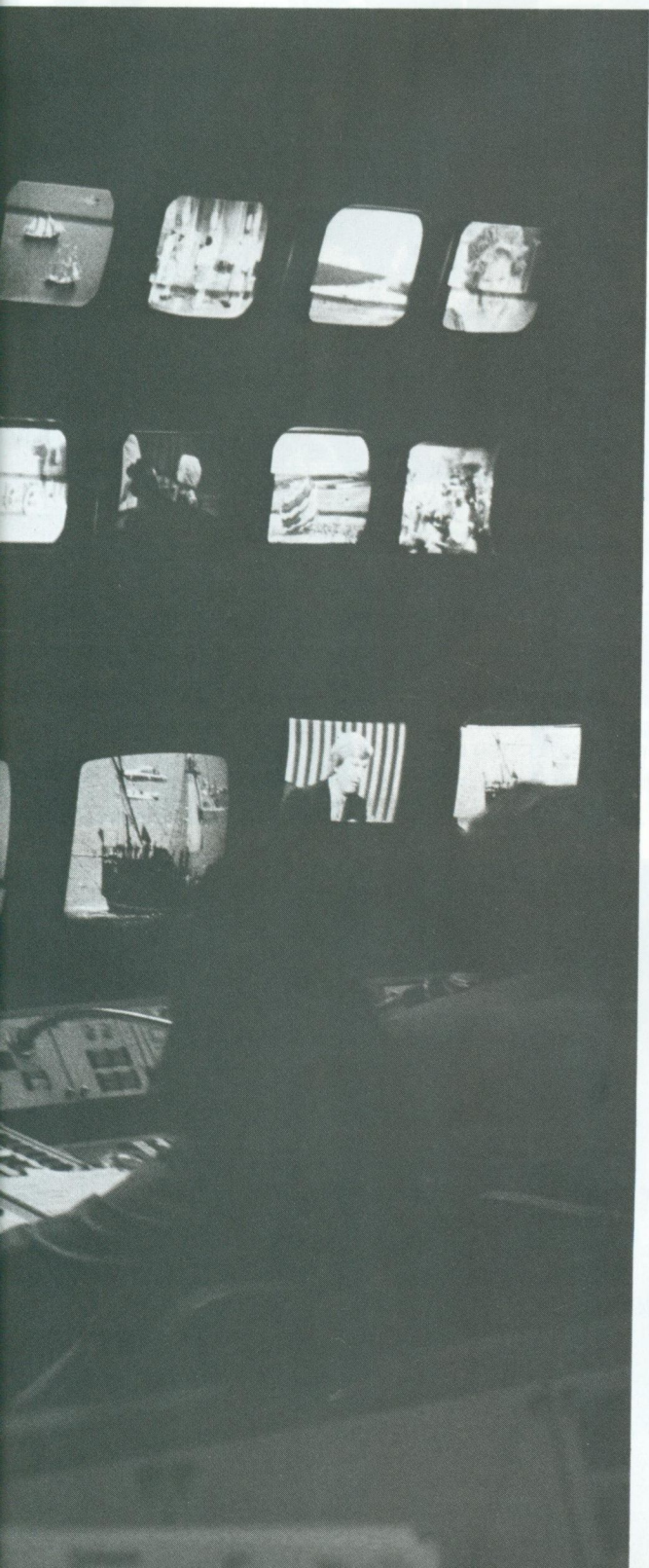
NBC'S 'GLORIOUS FOURTH'



On-set, but off-camera, John Chancellor and David Brinkley receive a fresh script from Editor Gilbert Millstein. Behind the scenes, Executive Producer Shad Northshield (below, center) supervises broadcasts from more than 50 locations fed into 60 monitors (left).



It was a mammoth undertaking by anyone's standards, starting with a shot of the tall ships of Operation Sail clustered in New York Harbor within sight of the Statue of Liberty and continuing through the day with live coverage of 50 locations around the U. S. From NBC-TV Studios 8-H and 8-G, Executive Producer Robert "Shad" Northshield had at his command 1,200 people, 218 color cameras, and 96 mobile units on more than 50 locations, backed up by a production staff of more than 20 people coordinating signals feeding into more than 60 TV monitors. Three teams of top NBC news people anchored the "The Glorious Fourth." John Chancellor and David Brinkley took the morning shift, followed by Jim Hartz and Betty Furness, and then by Catherine Mackin and Edwin Newman on a set constructed especially for the Bicentennial broadcast. The "Glorious Fourth" concluded with "The Best of the Fourth," a wrap-up of the day's taped highlights and Bicentennial activities still in progress ■





NBC affiliate WGAL-TV televises a service in colonial dress at the Donegal Church in Mount Joy near Lancaster. Members of a re-created local rifle company, among them several RCA people, relax before July 4 parade (right).



LANCASTER'S DRESS-UP PARTY

RCA Shares In A Day To Remember Another 200 Years

Among all RCA's locations, the Bicentennial jackpot clearly went to Lancaster, imbued with the Revolutionary spirit and immersed in its history. RCA played a considerable—and varied—part in the observance. Frank Fryburg, the Picture Tube Division's Manager, Materials and Planning, figured prominently in his role as Vice Chairman of the Lancaster County Bicentennial Committee. Dick Faulkner, a Picture Tube Division engineer, demonstrated the colonial art of candlemaking at Lancaster's Long Park, where the day's events were followed by camera crews of WGAL-TV, an NBC affiliate, and could be seen on four strategically located XL-100 sets RCA provided for the occasion. As if this weren't enough, Lancaster was one of 50 locations covered by NBC-TV's "Glorious Fourth" special. WGAL-TV, in turn, presented its own report on Lancaster's Bicentennial celebration on an hour-long program a week later. The sponsor? RCA, which in its commercials showed the very people who took part in the Bicentennial program at their jobs at the Picture Tube Division's headquarters plant. ■



Frank Fryburg, in colonial costume, watches RCA engineers Frank Koch (left) and George Knox set up one of four RCA XL-100s in Lancaster's Long Park. Dick Faulkner (left) demonstrates candlemaking to RCA colleagues Fred Helvy and Gil Butterwick and their wives.



RCA Helps Restore An Historic Indian Cemetery





Leon Wootner, guided by Al Hummer, places a column on its pedestal after sealing cracks and cleaning the masonry (above).

Stella Mondrick makes a "rubbing" (a sort of carbon tracing) of the information on a grave marker (left). The rubbing was subsequently given to the Marion Library.

Before: Decrepit and neglected, these tombstones (far left) marked the graves of Miami Indians whose ancestors inhabited the Marion, Ind., area during Revolutionary times.

After: Cleansed and firmly set into their new concrete bases by a crew of amateur stone masons (below, left), the headstones are restored to the dignity originally meant for them.

MARION'S 'PROJECT RESTORATION'

Even though Marion, Ind., played no part in the American Revolution, the people at the Picture Tube Division plant there were not denied a chance to commemorate the Bicentennial in some way. Forming an RCA Bicentennial Committee, about 30 Marion employees, in cooperation with the Grant County Historical Society, took it upon themselves to restore the historically important Miami Indian cemetery near Marion that had been ravaged by years of vandalism and neglect. On successive May Saturdays, the RCA people cleared overgrown brush, removed the stones from their decaying bases, poured new cement bases, then replaced the stones in the new cement. The cemetery was given an historical facelift as well. The RCA restoration crew made new maps of the cemetery and established a file folder, along with a photograph, for each tombstone for safekeeping in the Marion Public Library.



'ONE IF BY LAND...'

Two RCA Engineers Substitute Lasers For Lanterns

When RCA Burlington engineer Doug Gore marries Sherry Davis this September in Boston's Old North Church, historians as well as family and friends will take note. Reason: hardly anyone gets married in the pre-revolutionary landmark these days, and the Gore-Davis wedding will be among just a few to take place there this year. Not surprisingly, fewer people *propose* marriage there, yet it was in the church—in a drafty, cramped alcove atop the 17-story structure—that Gore popped the question last year.

Gore's selection of the historic church for both marriage proposal and wedding ceremony is less capricious than it may seem. It is linked to a unique electronic salute to the nation's Bicentennial that he and RCA colleague Burt Clay engineered last October.

"The annual meeting of the Optical Society of America was scheduled to take place at Boston's Prudential Center in late October," says Gore, a seven-year veteran at RCA Burlington. "Some members of the society, including Burt, who's vice president of the New England chapter, got it into their heads that the society needed some sort of dramatic Bicentennial/space age kick-off for the four-day meeting—something that would really get things moving."

"We did come up with a terrific idea," adds Clay, an RCA engineer since 1949. "The only problem was that we wound up with about three days in which to execute it."

Clay's brainstorm had two seemingly incongruous inspirations: the work he and Gore do in holography—a form of photography using laser technology—and Henry Wadsworth Longfellow's *The Midnight Ride of Paul Revere*.

"If you recall the poem," says Clay, "the vicar of the Old North Church promised Revere that he'd stand lookout atop the church and hang out lanterns to signal the approach of the British—'one if by land, two if by sea.' " That event, which took place in April, 1775, is commonly regarded as a starting point of the American Revolution. "It was also a milestone in optical com-

munications," says Clay. "We thought an appropriate way to kick-off the Optical Society meeting would be to do the same thing, using lasers rather than lanterns."

Working lunch hours and long evenings at their holography lab at RCA Burlington, Gore and Clay concocted a portable and inexpensive laser transmitter-receiver system that they tried out after working hours in the deserted corridors of the plant.

"I would be at the transmitting station at one end of the hall," says Gore, "and speak into the laser, much as you would speak into a telephone. The modulator would translate my voice into a quarter-inch wide laser beam." Clay would pick up the beam with his receiver at the far end of the corridor and a demodulator would turn the laser beam back into audible sound.

A heavy drizzle was falling in Boston on Monday night, October 20, when Clay and Gore drove to the church to install their gear. "Getting to the top of the church means negotiating a steep wooden staircase which quickly peters out into rickety ladders and tiny

landings that seem continuously in danger of collapsing," says Clay. Nonetheless, he and Gore made the treacherous ascent not once but four times that night.

"The tripod and the modulator weren't much of a problem," Gore says. "But the laser transmitter weighs 40 pounds." The unit was encased in a specially built wooden box that Gore then strapped to his back with a rope harness, Swiss mountaineer-style. "Halfway through the night's ordeal," he says, "I found my heart pounding in my chest, although it wasn't just exhaustion. The sense of history engulfs you, and the realization that you're standing right in the spot where it all started is overpowering."

Gore and Clay worked far into the night, drove home to catch an hour's sleep, and returned to the church at 5 a.m. on Tuesday, under brighter skies. Dropping off Clay, who would man the transmitting station, Gore continued to the Prudential Tower, two miles away, where he rode an elevator to the 58th-floor skywalk and installed his receiver.

Clay, meanwhile, had climbed once again to the top of the church, where



the first order of business was priming the laser transmitter by warming it with his wife's electric hair drier.

Clay fiddled with transmitter and modulator until he had produced the requisite beam. Gore caught the beam through a 40-power army surplus telescope he'd found in his basement and transformed it into a somewhat fuzzy but altogether audible "How are ya, Doug?" After making a few adjustments to focus the signal more sharply, the men were ready.

When the meeting opened at 10 a.m., Clay hit the "start" switch of a portable cassette recorder and played ten minutes of taped greetings from Boston Mayor Kevin White into the laser modulator. The messages were relayed by Gore to the meeting room where the conventioners heard them amplified over public address loudspeakers.

Apart from the demonstration's obvious historical significance and its appeal as a bit of electronic-age showmanship, it also dramatized the future role of lasers in communications. "With additional refinements, the system we produced might be used like a pair of walky-talkies," says Gore, "but more inexpensively and with no interference from other transmissions."

A week or so after the demonstration, Gore returned to the Old North Church. "For several days," he says, "two things had been uppermost in my mind: bringing off the laser experiment, and getting married. Before returning to the church to retrieve my equipment, I asked Sherry to accompany me, under the pretense of helping me cart the stuff down." In the tiny alcove, amid a setting of gleaming scientific gadgetry and 250-year-old wooden beams, he proposed to Sherry, a librarian, whom he'd met three years ago.

"Spending time in the Old North Church had moved me tremendously," he says. "I told Sherry I had brought her here to ask her to marry me because our country's history had started here, and it seemed a singularly appropriate place for *our* history—together—to begin as well."

Doug Gore (left) and Burt Clay with the laser modulator they had to haul up the rickety wooden steps of the Old North Church tower (right).

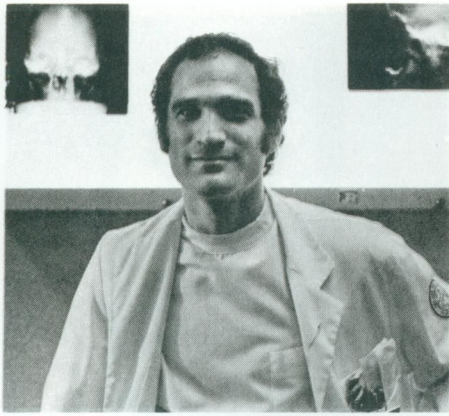


SUCCESS STORY

How Past RCA Merit Scholars Are Getting Ahead

Where are the scholastic heroes of yesteryear? If the lives of nine past winners of RCA Merit Scholarships are any indication, they are applying the same diligence, energy, and intellect to a variety of interesting and rewarding careers. Here, these winners, shown as they are now and as they were as high school graduates, talk about themselves and their work.





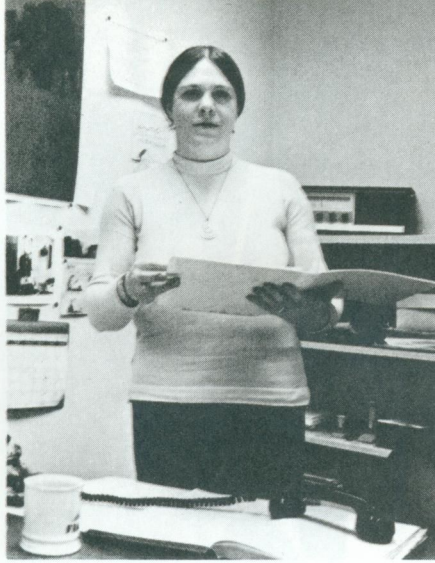
John Kessler, M.D. *Father is Irving K. Kessler, Executive Vice President, Government and Commercial Systems.*

Many merit scholars take up careers in medicine. But few, presumably, are ever called upon to deliver babies in taxicabs. Dr. John Kessler was.

"I was interning at Mt. Sinai Hospital in New York," he remembers. "While I was doing emergency-room duty one night, a taxi pulled up to the curb with a woman about to deliver. I rushed out and delivered a seven-pound boy in the back seat. The mother was simultaneously elated and hysterical." The driver? "He was pretty upset. His cab was a mess."

That was four years ago, and Kessler, a 1964 graduate of Abington High School, in Philadelphia, has since progressed from internship to a residency in neurology at New York Hospital. "I made up my mind as an undergraduate at Princeton that I wanted a career in medicine," says Kessler, now 29, who also attended Cornell Medical School and the National Institutes of Health in Washington, D.C. "It was later that I zeroed in on neurology. It's the brain, after all, that runs everything, and it fascinates me more than any other part of the human anatomy."

Kessler's wife, Marilyn, is also a physician doing a residency at New York Hospital. With husband and wife putting in 100-hour weeks, including round-the-clock-duty several times a week, commuting is out of the question, and the doctors Kessler live with their two-year-old son Eric in an apartment a short walk from the hospital.



Doris Horn McBride, *Director of Federal Grant Division, New York City Department of Correction. Mother is Kay Michaels, secretary to Lawrence Driscoll, Broadcast Systems Division.*

Each year the New York City Department of Correction receives \$9 million from the federal government towards programs to upgrade the city's ten jails and prisons. As Director of the Department's Federal Grant Division, former merit scholar Doris Horn McBride (Camden Catholic High School class of '68), supervises and in many cases helps to innovate those programs.

"Most of the programs funded by the federal grant money are rehabilitative," says Doris. "We found, for example, that many prisoners with an exceptionally high recidivism rate—that is, those apt to repeat—were illiterate. So we started a remedial reading program at one prison hoping for a drop in recidivism rates. Elsewhere in the prison system we've established mini-schools where inmates can earn a general equivalency high school diploma."

Doris, who attended the University of Pennsylvania as an undergraduate, earned a master's degree in psychology at Villanova University in Villanova, Pa. She came to New York City in 1973 with her husband, Mike, a consulting engineer.

"This is a psychologist's job as much as it is an administrator's," she says. Much of her worktime, in fact, is taken with visits to prisons, where she gets a first-hand look at some of the programs she supervises. "I don't want to isolate myself in my office," she says.



Ed Petrillo, Jr., *chemist. Father is Edward Petrillo, Manager, Program Management Operation, (MSRD) Missile & Surface Radar Division, Government and Commercial Systems.*

Ed Petrillo is an organic chemist and, predictably, his world is one of white lab coats and germ-free laboratories. "But a laboratory needn't be an ivory tower," he says. "Mine certainly isn't."

Since September, 1974, Ed has been a research investigator at the Squibb Institute for Medical Research in Lawrenceville, N.J. His assignment: help to create new drugs for the treatment of such modern-age ailments as hypertension and hardening of the arteries.

Ed, now 28, was a senior at Moorestown High School when he won his scholarship in 1965. He attended Princeton University, graduating in 1969. He pursued his interest in organic chemistry at Yale University, where he received a Ph.D., and at California Institute of Technology, where he did postdoctoral work. At present he lives in Pennington, N.J. with his wife, Joan.

"Here at Squibb," he says, "we're trying to come up with new drugs for the treatment of cardiovascular diseases that are specific in their effect, produce no side effects, and can be administered orally." That last criterion is particularly close to his heart. "You're always better off swallowing a pill than having to deal with a hypodermic needle. I feel just as strongly about that as a research scientist as I did when I was a scared five-year-old on a visit to the family doctor."



Daniel Schwartz, research chemist. Father is Morton Schwartz, Auditor, Government and Commercial Systems.

Daniel Schwartz knows drinking waters the way some people know fine wines. With one sip he can tell you whether an unlabeled sample has been chlorinated, whether it came from a well, even whether it's a local brew or an out-of-state import.

Schwartz's keen knowledge of waters is a by-product of his work as a chemist in the Industrial Wastes Unit of the City of Philadelphia's Water Department, a job he's had since November, 1973.

"In 1970, the Department began a program aimed at cleaning up the Delaware River," says Schwartz, 27, a 1966 merit scholar who was graduated from West Deptford Township, N.J., High School and went on to earn a B.A. in chemistry at Rutgers University's Camden, N.J., campus in 1970. "Large industrial users of water, like meat-processing factories and chemical plants, were then required to pay a surcharge proportional to the amount of wastes they produced. The more you foul the water, the more you have to pay."

And his job? "I run tests on samples of industrial waste water to determine who's producing how much pollution. Sometimes I go right down to the river with sampling crews, but most of the time I do my testing in the labs."

To date, the surcharge program has scored some notable successes. "We're getting less money out of the program than we were two years ago," says Schwartz, who is unmarried and lives in Philadelphia. "That's a good sign."



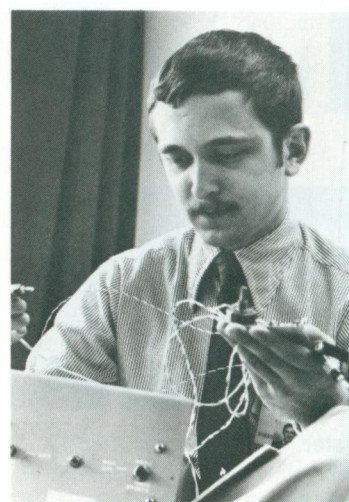
LeBaron Moseby, Jr., assistant professor. Father is LeBaron Moseby, Custodian, Broadcast Systems.

LeBaron Moseby, Jr., one of the original RCA merit scholars, entered Harvard College in the fall of 1962 with an eye to majoring in math.

"Teaching math was what I had in mind," he says. "But the philosophy of teaching itself so fascinated me that I switched my major to education in my senior year."

In the ten years since receiving his bachelor's from Harvard, the 31-year-old Moseby has gotten a master's and Ph.D. from that same institution and has taught in a variety of settings, including predominantly-black Miles College, in Birmingham, Ala., Simmons College, a women's school in Boston, and most recently, Hartford's Trinity College, where he has been assistant professor of education since February. He has also found time to earn a doctorate in education and serve for a period as Assistant Dean of Admissions and Financial Aid at the Harvard Graduate School of Education.

At Trinity, Moseby directs the student teaching program, overseeing the work of 24 seniors and graduate students. He also teaches such courses as "Humanism in Education," a creation of his own, he says, "intended to help future teachers grow, both as teachers and as people."

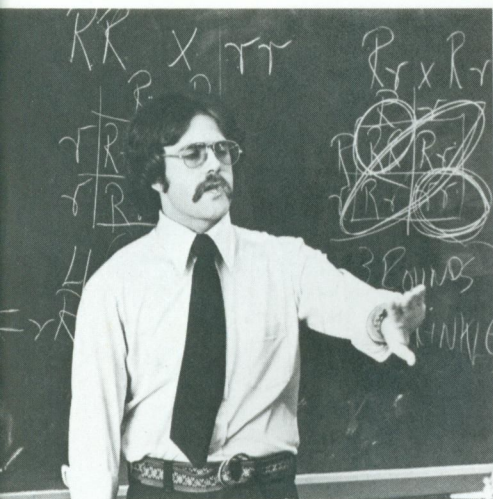


Harald Pschunder, electrical engineer. Father is Dr. Ralph J. Pschunder, Structural Analyst, Missile and Surface Radar Division.

Harald Pschunder, 26, is something of a rarity: the RCA merit scholar whose career plans led him back to RCA. A 1968 graduate of Moorestown (N.J.) Senior High School, Harald studied physics and engineering at Princeton and Massachusetts Institute of Technology, returning to Moorestown in November, 1974 as an electrical engineer in the Missile and Surface Radar Division. His father, Dr. Ralph J. Pschunder, works in the same division.

"During my Princeton years," says Harald, "I wasn't entirely sure whether I wanted to end up in engineering, physics or math. One thing that steered me towards engineering was the two summer internships I had here at RCA Moorestown." During those sojourns, Harald worked on projects related to the electronic computation of orthogonal transformations. Today he works on the electronic compression and transmission of pictorial information.

The education of Harald Pschunder also included a summer spent in Oberpfaffenhofen, a farm community outside Munich, West Germany. "I went to Germany as part of an exchange program run by Princeton's German department," says the Austrian-born Harald. "I lived with a farming family and worked with hybrid computers for the West German counterpart to NASA."



Bill McIntyre, high school teacher. Father is Tom McIntyre, who was, until his recent retirement, Manager, Assembly and Tests, Palm Beach.

Friends joke that Bill McIntyre grabbed his 1970 high school diploma on the run and that he hasn't stopped running since. They're right—and Bill has no intention of slowing down. Not, at least, in the foreseeable future. At the moment, at 24, he's teaching physics and general science at Bishop Gibbons High School in Schenectady, N.Y., studying at night toward his master's degree in education, coaching high school football and—in his spare time—tending bar at the Bavarian Chalet, a local eatery.

Bill, a graduate of Philadelphia's LaSalle High School, attended Rensselaer Polytechnic Institute, in Troy, N.Y., as an RCA merit scholar. "RPI is an engineering school," he says, "and it had been my plan to be an engineer. I even spent a summer interning at RCA's West Palm Beach plant." Upon graduating, Bill worked as a laborer in a meat processing plant and later as a truck driver. "Two years of semi-skilled labor were a welcome relief from the academic grind and gave me time to sort things out," he says. "It was during that time that I realized I wanted to teach."

Since coming to Bishop Gibbons last fall, he's also coached junior varsity sports. "The JV football team had a lousy season," he says. "But coaching is a great opportunity for me to get to know the kids better."



Sheila Harrington Levine, dietitian. Father is William J. Harrington, Picture Tube Division, Manufacturing Operations, RCA Lancaster.

Merit scholars are nothing if not flexible. After graduating from Manheim Township, Pa. High School in 1971, Sheila Harrington Levine entered Penn State as a math major; four years later she was graduated with a bachelor's degree in Biological Health.

Today Sheila, 23, who holds a master's degree in nutrition from Purdue University, is a dietitian at Rancocas Valley Hospital, in Willingboro, N.J. "Once I decided I wanted a career in nutrition, working in a hospital seemed logical," she says. "That way I can combine two of my great interests—people and the art of eating properly and well." At home, in Delran, N.J., Sheila cooks "tasty, work-a-day meals—but nothing terribly exotic," for herself and her husband, Eli B. Levine, whom she married in 1975.

As a dietitian, Sheila spends a sizable part of her 50 and 60-hour workweeks at Rancocas talking with new patients, "finding out their dietary likes and dislikes and acquainting them with the hospital menu. Obviously, what and how a patient eats can play a central role in his treatment and recovery."

There are also frequent visits to the hospital kitchen, where Sheila and her two fellow dietitians look over the meals being prepared "to make sure that the portions are the correct size and that the right meals go to the right patients. You don't want a highly salted ham dinner going to someone on a low-sodium diet."



Robert Bruce Ehrnman, Vice Consul, U.S. Foreign Service. Father is George Ehrnman, Customer Service Representative, Solid State Division.

Four years of undergraduate work at Ohio's Denison University and three years' graduate study at the University of North Carolina convinced Robert Bruce Ehrnman that his true bent was political science. "What I wanted to do most was teach political science," says the 1963 merit scholar, "but it made sense to me to rack up some real-life experience in the field before trying to talk about it in a classroom." The U.S. Foreign Service seemed an excellent vehicle for gaining that experience and Ehrnman, now 30, recently arrived in Kabul, Afghanistan for a two-year assignment with the U.S. Embassy there. He lives in a one-story house near the embassy grounds with his wife Karen and their two young sons, Brad and Gregory.

Life in Kabul has meant studying Farsi, the principal local language, and getting used to boiling drinking water for 30 minutes and soaking vegetables overnight in iodine to cleanse them of harmful bacteria.

"There's no TV in the country, so we make do with movies or social functions," he says. "And bargaining with merchants in the local bazaars over the price of spices and fabrics is one of life's rare pleasures."



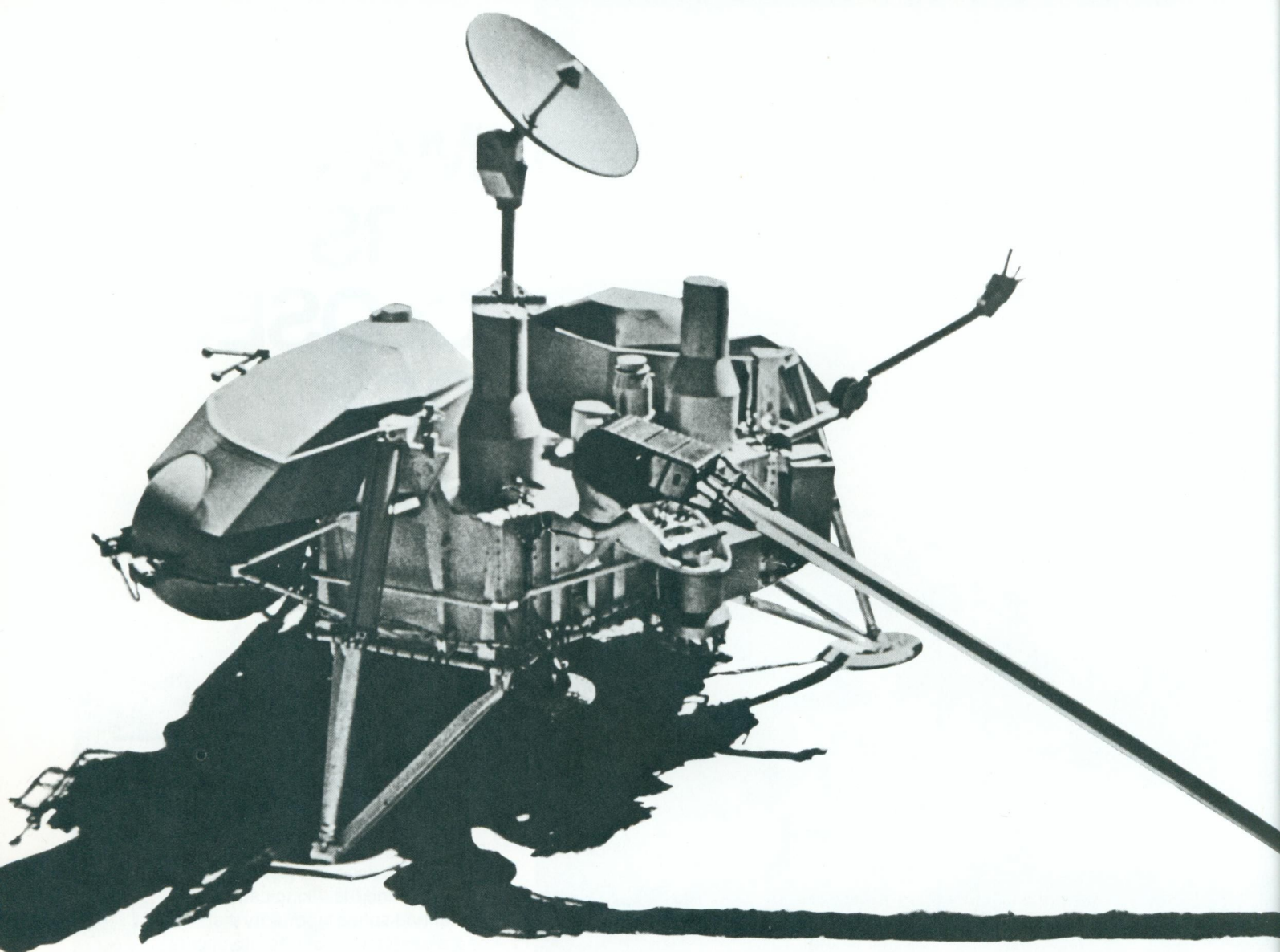


MAN'S FIRST CLOSEUP OF MARS- VIA RCA

The first thing Irv Brown did when he got to work at RCA's Astro-Electronics plant at Hightstown, N. J., July 20 was head for the nearest TV set. It was 7:45 a.m., and the Viking Lander, an unmanned space laboratory that had disengaged from its orbiting mother ship three hours earlier, was just minutes away from touching down on the rock-strewn Chryse Plain on the surface of Mars.

Brown wasn't the only one in front of the TV. Some 60 other AED engineers, technicians and scientists who had labored with him long and hard on developing and building Viking's \$25 million communications systems were already there, poised for the final historic minutes in the 460 million-mile trajectory of Viking I. Similar groups of old Viking hands were massed in front of two or three other TV sets scattered throughout the plant and at Missile and Surface Radar Division (MSRD) headquarters in Moorestown, N. J., where the communications system's three antennas had been developed.

"Until the first clear pictures of the Martian surface were beamed back," says Brown, who had been RCA's Project Manager for the Viking mission,



• “we watched the screen in relative silence. After all, the system we had built had been switched off to conserve energy right after lift-off, and it had been dormant throughout Viking’s entire 11-month journey. We were probably all a bit anxious about whether it would come back to life after so long a hibernation.”

But come back to life it did. Traversing the 225 million straight-line miles to earth at the speed of light, the first photographs appeared on the TV sets 19 minutes after they were recorded by the Viking camera. “There were a few handshakes, people loosened up a bit, and everyone smiled,” says Brown. “Then it was business as usual.”

The Viking cameras are mechanically scanned facsimile cameras of a type not manufactured by RCA. But the pictures they produce, like all the signals carrying information from Mars and those returning with instruc-

tions for the lander, are transmitted and received on that craft through the RCA communications systems made for the Viking project.

At Moorestown, Art Plumer, who was MSRD’s Project Director, watched the screen with a butterfly or two in his stomach. “Our special concern was whether the lander would be tripped up by an undetected obstacle on the Martian surface and land on its side,” he says. “We were more than a little relieved when it landed right side up.”

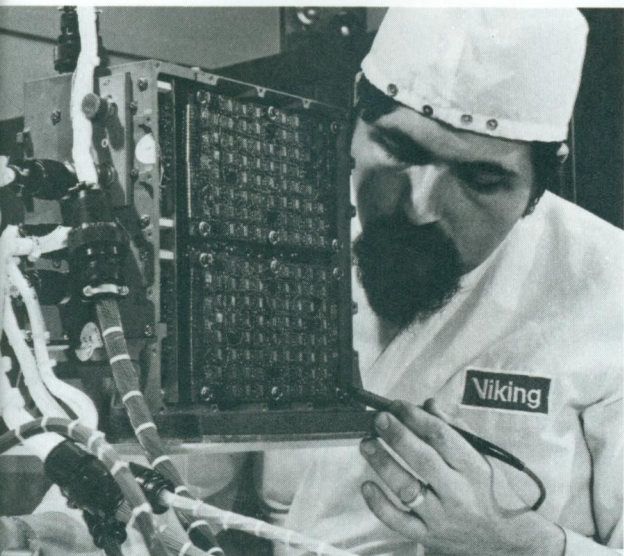
A major purpose of the Viking mission has been to learn if there is or ever has been life on Mars. Scientific instruments aboard the lander were designed to analyze the Martian soil and atmosphere, gauge wind speeds and air pressure, and measure quake activity. The 77-pound RCA communications system then transmits data based on these tests,

along with signals carrying color, infrared and panoramic photographs back to earth—both directly and via the orbiter.

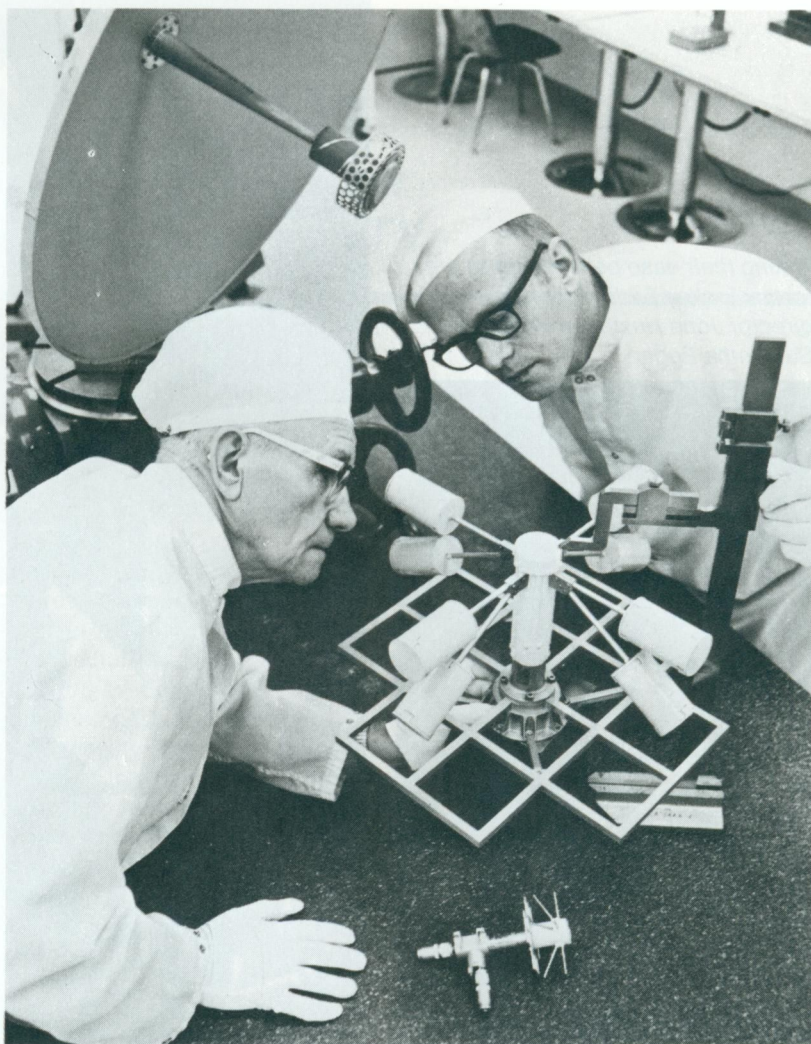
From the beginning, the RCA team grappled with problems of a sort they’d never before encountered, even on lunar missions like the Apollo program. One of them was temperature extremes. The Viking equipment had to be built to withstand not only temperatures of 150 degrees below zero, not uncommon at night on Mars, but a 250-degree “cooking” process on earth as well, designed to purge the equipment of all microorganisms.

Since a major aim of the Viking project is to learn if there is life on Mars, project personnel did not want to muddy the picture—or alter the Martian environment—by introducing foreign organisms from earth. Apart from the extra precaution of the “cooking”

RCA Technology And Craftsmanship Play A Major Role in Viking's Mission



Engineers Ken Schmidt (above), Herman Schleeter (left), and Thomas Kane check RCA communications system that transmitted data gathered by Viking Lander (far left) from the surface and atmosphere of Mars.



process, this meant that all Viking components had to be built under germ-free conditions. RCA technicians wearing white gowns and caps—and in critical operations, sterilized face-masks, shoe coverings and gloves as well—worked in a “white room” in which the air itself was kept as clean as possible. Doors to the white room were built to open only after incoming employees had passed through an airlock that cleansed them of dust particles.

A third problem was the thinness of the Martian atmosphere, which has been likened to the partial pressure of the earth’s atmosphere at 80,000 feet. Moorestown engineers who designed Viking’s antennas were not content until their equipment functioned satisfactorily enclosed in a glass bell from which most of the air had been extracted. Hightstown engineers were similarly concerned with building transmitters to

operate under low-pressure conditions.

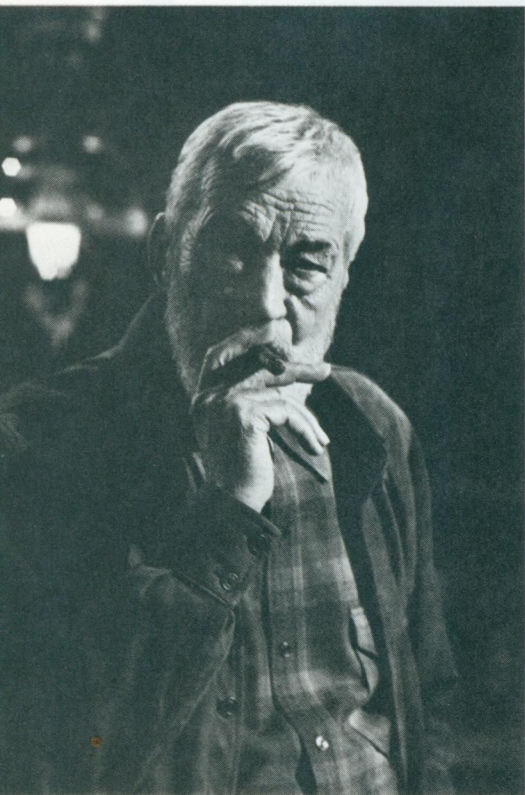
“It’s no exaggeration to say that RCA technology and craftsmanship play a central role in this mission,” says Herb Zelen, formerly RCA’s Viking Lander Program Equipment Manager and now Manager, Aerosat Payload Systems. “Even though most of our work on Viking was completed and delivered back in 1974, I don’t think any of us ever forgot how big a part it played in our lives.”

The AED personnel most intimately involved in the Viking project were Systems Engineer Max Feryszka, Jack Frohbieter, who worked closely with developing communications and control equipment, and engineers Paul Holtzman, Bob Schuster, Bob McCann, Val Monshaw (Reliability and Product Assurance), Tony Pontoriero (Administration), and for Program Management, Larry Yermack, Frank Boyer and George

Baker. At Moorestown, O. M. Woodward developed a UHF antenna that would function despite punishing changes in air pressure; Wayne Harmening designed an S-Band high-gain antenna that would withstand battering by Martian winds while locking on and tracking the earth. Other key MSRD employees included engineers Don Keyes, Jerry Wunderlich, Bill Mulqueen, Ted Markiewicz, Ted Schilsky (Reliability), Bob Forringer (Quality Assurance), Bill Petracci (Administration) and Fran Clark, for Program Management.

“These people gave everything they had every inch of the way,” says Moorestown’s Art Plumer. “We all lost a lot of sleep during the two years we worked together on the project, what with middle-of-the-night crises and tests scheduled for four in the morning, but I don’t think there’s one of us who has a single regret.”

Taking their ease between takes are former jockey Eddie Arcaro, film director John Huston, and actress Samantha Eggar.



THE FRESH LOOK

An Inside View Of RCA's New Commercials For ColorTrak TV

Beginning this month, actress Samantha Eggar, director John Huston, and former jockey Eddie Arcaro are telling Americans that RCA is "making television better and better." The new ad campaign, intended to build consumer awareness and acceptance of the RCA ColorTrak line, reflects the fresh look being developed for RCA's Consumer Electronics Division by Leo Burnett Co., one of America's leading advertising agencies.

The 30-second commercials, scheduled for prime time, late night TV, and major sports telecasts including the World Series (to name some highlights of the media schedule), were filmed at Screen Gems Studios in Burbank under the supervision of Joseph Curran, Vice President, Marketing, for RCA Electronics and Diversified Businesses, and William Beres, Consumer Electronics' Manager of National Advertis-

ing. Print ads underscoring the same theme are scheduled for national magazines.

"We chose these personalities for our advertising program's fresh look because they're big names who have never appeared in national advertising," says Beres. Samantha Eggar came to attention in her role as a kidnap victim in "The Collector" and has been active in movies and TV. Eddie Arcaro, one of racing's winningest jockeys, has become a TV personality in New York with his appearances in commercials for OTB, the city's legalized off-track betting program. John Huston, an Academy Award winner, directed such memorable films as "The Maltese Falcon" and "The Treasure of Sierra Madre" and was seen recently as the villain in "Chinatown." Here's how one of the commercials goes:

Standing next to a ColorTrak set, Miss

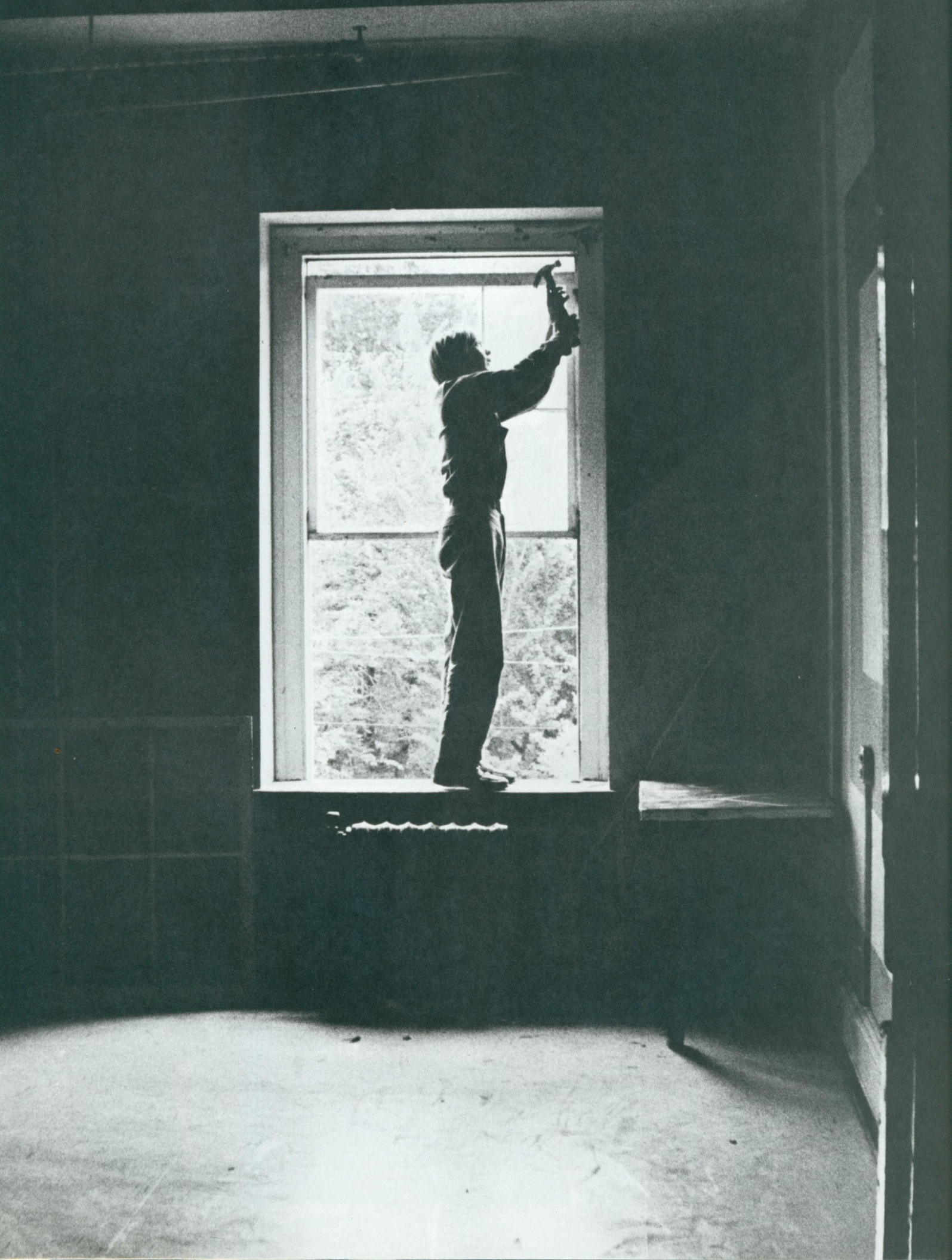
Eggar tells the audience, "My eyes are green. My hair is auburn. And my dress is vivid red. RCA wanted me to tell you the right colors, because getting the color right is what their exclusive ColorTrak system is all about. It's a remarkable development that actually adjusts color and keeps it on track."

Then ribbons of colors appear on a black background. They enter a box shaped in the form of RCA's logo and emerge as stripes. In turn, the stripes hit a picture tube showing Miss Eggar's face. While this action goes on, the announcer's voice says, "Before you see the color, the ColorTrak system grabs it, aligns it, defines it, sharpens it, tones it, and locks the color on track."

Finally, as the camera pulls back from the picture tube showing Miss Eggar's face to display several RCA sets, she speaks the closing line, hitting the ad campaign's theme: "RCA is making television better and better." ■

RCA's Joseph Curran (right, with hand to chest) and William Beres (to his right) chat with the film production crew during a break in the action at Burbank.





A VERY HUMAN ENTERPRISE

That's How RCA Sees Its Assignment As A Job Corps Contractor

Al Androlewicz stood in a second-floor dormitory of what once was a Jesuit seminary. It was early March, and a draft whistled down the corridor. "Peeling paint, a half-dead furnace, six broken windows, and four decrepit bathrooms," he dictated to a young man in carpenter's coveralls who was taking notes. "And we need closets in all the corpsmen's rooms."

The former seminary, on 64 choice acres of Woodstock, Md., 13 miles from Baltimore, in 1971 became the Maryland Job Corps Center, operated for the Department of Labor by various contractors who, in Androlewicz's view, were not equal to the demanding task of giving 250 young men without skill or direction the wherewithal to lead productive lives. Now RCA had the contract to operate the Center, and Androlewicz, a 44-year-old ex-linebacker and marine officer, was itching to show just how



A top priority job was the refurbishing of Woodstock's living quarters. A corpsman (left) reinforces a window frame in the former Jesuit seminary. Al Androlewicz with a Woodstock corpsman (right) shortly after RCA took over the Maryland Job Corps Center.

Well-Run Centers And Up-To-Date Courses Prepare Young People

Job Corps training includes (from left to right) auto repair, bricklaying, electrical work, carpentry, and welding. A female masonry student at Keystone (far right) demonstrates that Job Corps doesn't limit women's horizons.

soon and how well RCA would turn the situation around.

From that March day until June, Androlewicz, as acting Center Director, supervised a general rehabilitation of corpsmen's living quarters, saw to the repair of the Center's vehicles, dealt with nagging discipline problems, established a rapport with the wary Woodstock community, and added such amenities as a pay telephone system, a canteen for corpsmen, and an expanded recreation program. "That was only for starters," says Androlewicz, who on June 1 became Manager, Educational Programs, turning the helm at Woodstock over to Bob Bowman. "Lots more has to be done to bring Woodstock up to RCA's and the Job Corps' standards and keep it there."

- Woodstock brings to five the number of Job Corps Centers currently operated



by the RCA Service Company, which has been a Job Corps contractor since 1966, a year after the program's inception. The other RCA-operated Centers are Keystone, at Drums, Pa. (which RCA has operated for ten years); Blue Ridge, at Marion, Va.; Tulsa, Okla.; and Tongue Point, at Astoria, Ore.

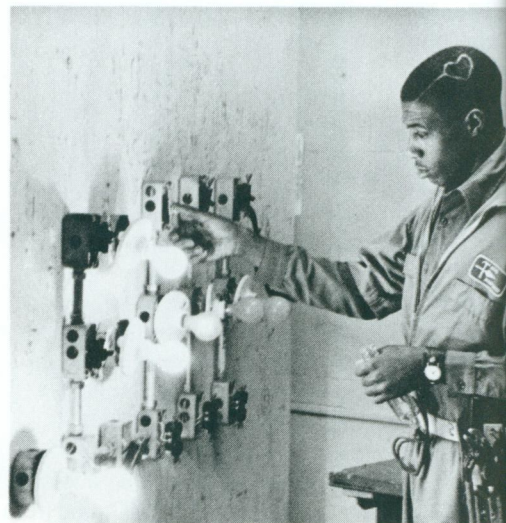
"I'm pleased to say the Job Corps operation has been good business for RCA," says Joseph Murray, RCA Service Company Vice President of Government Services. "If it weren't, we wouldn't have stayed with it as long as we have. Job Corps wouldn't have stayed with us that long either, if we weren't doing an outstanding job. With more man-years running Job Corps Centers than any other contractor, it's no wonder we are among the program's three largest contractors."

Woodstock, a male Center, offers construction trades courses, made available by the National Association of Home Builders, and instruction in auto repair, welding, and other skills for which there is a demand. Emphasis on work habits and self-discipline helps students to become productive as well as skilled. Compensation at a Job Corps Center begins at \$30 per month, which is increased to \$50 after nine months. The longest a resident can stay is two years. The average stay at RCA-operated Centers is six months. After satisfactorily completing a course, the corpsmember returns to the agency that referred

him and with its help is placed in a job. As a Job Corps contractor, RCA has a goal of making job offers to ten per cent of the graduates.

The Job Corps program is unique in several ways. It is the only federal anti-poverty program of the 1960s that is still running. In no sense is it a giveaway. The 50,000 young people between the ages of 16-22 who will be trained this year are without exception below the poverty line, often representing the prevailing minority in the Center's area.

Donald Naffziger, Director of Educa-



tion Services and another veteran of a decade of manpower training and Job Corps assignments, has the full-time job of overseeing RCA's Job Corps Centers in what he describes as "all its gritty detail." "Young men and women are recruited through State Employment Services, manpower offices, labor union councils, and any number of community agencies," says Naffziger in a crisp, precise way. "All candidates are initially screened for entry into the Job Corps program by criteria established by the Department of Labor Employment and Training Administration. Once a student reaches a Job Corps Center, he is tested and put into a program that usually includes vocational, and, because so many



For The World Of Work

of our residents are school dropouts, academic training."

The day-to-day operation of a Job Corps Center is indeed gritty. "It's a very human enterprise," Androlewicz told a visitor driving through the rolling horse country toward Woodstock recently. "A Center Director and his resident staff have to be committed to running an effective Center. That means being absolutely honest and sincere in every dealing with the corpsmembers. If we make a promise, we must keep it. If we say we're going to bring discipline, we must bring it. These young men and women have survived the streets a long time and can read people very quickly and very well. They detect insincerity instantly."

At the Center gate, Androlewicz was handed an envelope, which he opened as soon as he parked. "The morning report," he said, perusing a few scribbled lines. "If there has been the least little disturbance, particularly off the Center grounds, I want to know about it before I hit the office. I learned when I was Center Director at Keystone (in Drums, Pa.) that the phone could ring with a complaint about a Center resident that would catch you completely unprepared. The morning report signals me for what's to come."

Discipline and relations with surrounding communities are, in fact,



continuing considerations at Job Corps Centers. "A Center comes into a community under a cloud of suspicion," says Naffziger, "especially as in the case of Woodstock, where community relations had been at a low ebb before RCA assumed responsibility and established a close liaison with the residents of the area."

By and large, though, RCA's Job Corps Centers have gotten on well with surrounding communities, and have even earned kudos from them. Young women from the Keystone Center were cited for assisting Wilkes-Barre flood victims after the disastrous storms of June, 1972. More recently, members of the Keystone corps helped refurbish a baseball field at nearby Butler. Woodstock corpsmembers have volunteered the manpower to repair park benches and ballfields at nearby Patapsco State Park. And George Moore, Center Director at Tongue Point, Ore., was lauded by local businessmen and press for tightening discipline among his charges.

The point that is made time and again by RCA Service Company Vice President Joe Murray, Don Naffziger, Al Androlewicz, and all the other instructors and

counselors around the RCA-operated Job Corps Centers is that these young men and women are, in their own way, a special breed. They have none of the refinement of conventional high school or college students their age, and, in fact, are as tough as nails. "No one denies that for many of the students Job Corps training is the last chance they'll ever have," says Murray.

Two recent Keystone graduates, Venoreen Browne and Rachel Patterson, are working on their masters' degrees. Three men who graduated from Woodstock in May, John Brown, Randy Johnson, and Reginald Parker, are awaiting admission to area colleges. "When they arrived at Woodstock," says Androlewicz, "they were tenth grade dropouts facing a dreary life on the streets of the Baltimore ghetto."

Achievements like these, repeated year after year, are evidence of RCA's success in a program that, like its participants, came up the hard way. ■





Prudy Frazier with her memorabilia.

Prudy Frazier, Super Sailor/History Buff

Over the objections of her parents and four sisters, Prudence Frazier joined the Navy in 1944. "They were all against it," recalls the RCA Burlington secretary, "but I enlisted anyway and I've never been sorry." In July, after 12 years' active duty and 30 years as a member of the Naval Reserve, Prudy was promoted to the highest enlisted rank in the U. S. Navy—E-9—and became the only Naval Reservist in the nation to be appointed Master Chief Yeoman.

Prudy's work as a Reserve Career Counselor to a squadron of 130 *men* at the Naval Air Station in South Weymouth, Mass., involves two weeks' active duty annually and one weekend a month during which time she acquaints

reservists with Navy policy and benefits of the Naval reserve program.

Prudy's interest in matters military is reflected in a museum of Civil War memorabilia that she and her husband Peter, a retired Army officer, have set up in the basement of their Wenham, Mass., home. "We became interested in Civil War artifacts during a visit to Gettysburg in 1959," she explains. "Ever since then we've haunted antique shops, auctions and gun shows looking for additions." Two prize exhibits at the Frazier museum: a 103-year-old hard-tack wafer from the mess kit of a Union infantryman, and a five-inch tree stump embedded with both Confederate shrapnel and a Union cannon ball.

**'Paymaster, This Is
Big Spender'**

As any CB (for Citizens' Band) radio operator knows, code names, or "handles," are often weighted with hidden—or obvious—meanings. Among RCA CB'ers, some handles are unusually inventive:

Mel Sanders, Purchasing Manager at RCA Labs in Princeton, N.J., is known, appropriately, as "Big Spender," while paymaster Bob Bruner, of Bloomington, Ind., calls himself—ready?—"Paymaster" . . . Perry Ausman, also of Bloomington, calls himself "Divided Acres" because his farm is bisected by a county highway.

At the Solid State plant in Somerville, N.J., Technician Glynn Gillette's handle is, not surprisingly, "Little Shaver" . . . Curt Hyde, of Lancaster, Pa., signs on and off with "Greenhouse" because he raises orchids and banana trees under glass . . . Broadcast Systems' Bob Morford is "Top Round" to his fellow CB'ers in and around Camden, N.J. As Bob explains it, "I wear a size seven and a half hat and my hair is just about an eighth of an inch long. 'Top Round' fits perfectly" . . . Circleville, Ohio, furnace operator Paul Murphy's household is host to a dog, three cats, nine rabbits, three chickens, and assorted gerbils and hamsters. His handle: "Zoo Keeper."

Also at Circleville, materials handler Ruth Strawser calls herself "Dirty Sally." "My husband Bob gave me that name," she says. "In the Army he picked up the nickname 'Pigpen,' and he figures what else should the wife of a 'Pigpen' be called—the Queen of Sheba?"

Since RCA introduced its Co-Pilot CB radios in the spring, a new name, "Silver Fox," has been plying the South Jersey air waves. His real handle—Paul Garver, Vice President and General Manager of Distributor and Special Products, which markets the RCA line.

Ten-Four?

Ten-Four, good buddy.



Inches above, centimeters below.

Moving Into Metrics

Quick—how many centimeters are there in an inch?

If you don't know, don't panic. The nation's eventual conversion to the metric system is still a few years off, and adapting to it, according to Harry Kleinberg, Manager, Corporate Standards Engineering, won't be the herculean task for RCA some people fear it is.

"Ever since Congress passed the Metric Conversion Act, in late 1975," says Kleinberg, who is responsible for easing RCA into metric measurements, "American industry has been gearing up for the Big Change. For RCA, the conversion will be consistent with the rest of industry. Some things, like the hole in the middle of the record (9/32 of an inch, or about 7mm) or the width of magnetic tape (quarter of an inch or 6mm) won't change." But metrication will turn present methods of measuring gasoline fuel consumption upside down. "Instead of miles per gallon," Kleinberg says, "we'll deal in liters per 100 kilometers."

What would a changeover at RCA entail? "Altering our machinery, primarily," says Kleinberg. "Lathes and milling machines would have to be modified, but that's no big deal, since all equipment purchased these days is designed with conversion in mind."

Kleinberg is quick to point out, however, that RCA is taking only its first step in metrics. "But remember," he says, "the journey of 10,000 kilometers starts as a matter of millimeters."

**The Puppets Who Came In
Out Of The Flood**

The latest thriller to come out of RCA Alascom has Allie Alascom and his pet wolf, along with 25 friends and a singing satellite, escaping from Bethel barely five minutes before a spring flood hits town. "It was a close one," growls the wolf, who talks. "I believe that the show must go on," says Allie, "but not under water."

Lest anyone get the idea that our Alascom correspondents have been out in the bush too long, some clarification is in order. Allie, his wolf and friends are puppets created by Alascom public affairs staffers Pat Petraske and Susan Koslosky, who were joined by RCA Alascom Public Relations Manager Lou Custrini in writing and producing a 40-minute show to acquaint elementary school children in rural Alaska with the uses and importance of the state's expanding telephone system. "We've brought our troupe to more than a dozen villages since mid-spring," says Pat, "where we've been well-received by the kids, if not by the weather."

Pat Petraske (left) and Susan Koslosky with friends.

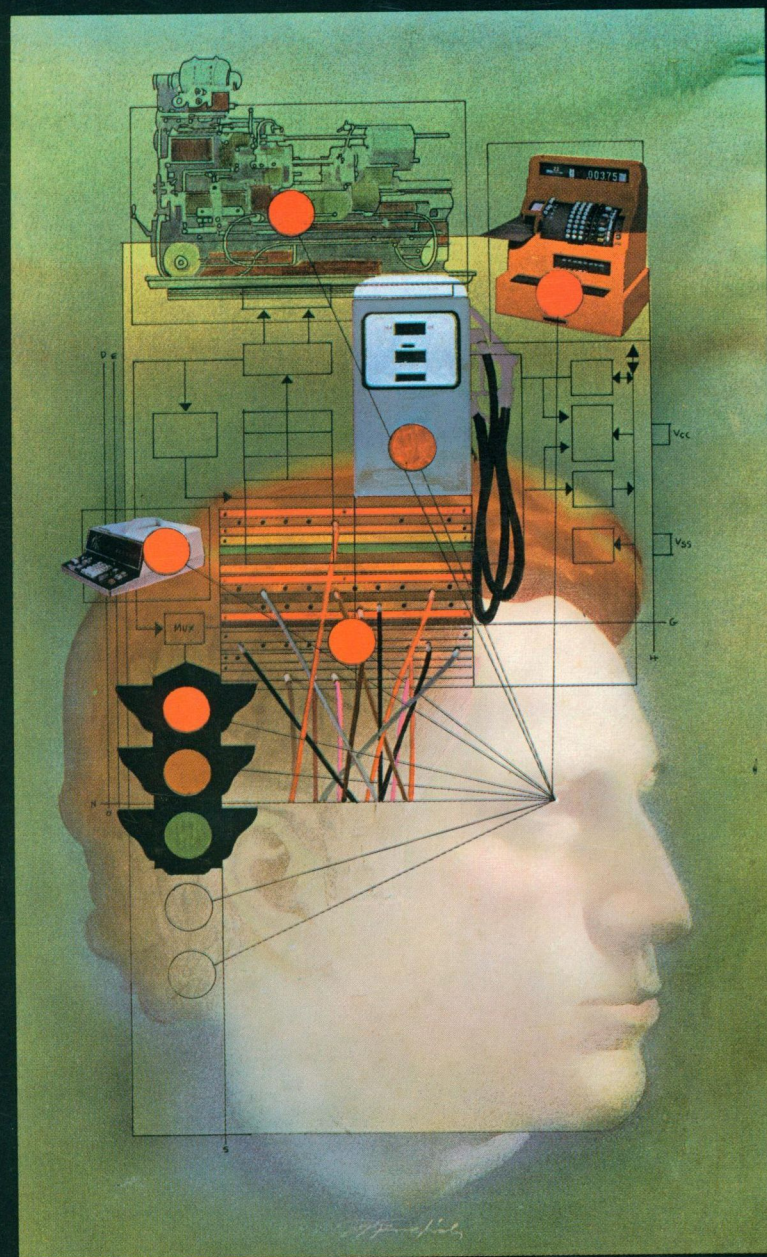


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