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... the cover

Ray Jacobs, program director for KTVU, Channel 2, San Francisco, checks his work sheets during a run-through of a special remote broadcast handled recently by the station. A story on the program—a requiem mass for the late Pope Pius XII—will be found in this issue of the *Technician-Engineer*. In our cover picture you see a portion of the inside of a completely-equipped remote truck used by KTVU, with a two-way communications system, two sync generators, and facilities for four cameras.

commentary

TV is a bum a lot of the time . . . but on frequently increasing occasions it is a whopping entertainment value.

Two or three hours a week I find something entertaining or stimulating on my 17-inch screen and that makes the set a bargain.

The kid who is allowed to watch TV five or six hours a day is flirting with permanent idiocy, but the parent who okays such a schedule already has achieved that stature. "But it's so pernicious," says one lady of my acquaintance. "It makes children watchers rather than do-ers."

Baloney. Three of my kids play the piano with considerable affection. A fourth has her head in a book several hours a day. . . .

A TV set presumably can ruin a child. But so can too much oatmeal or an overdose of Euclid.
—ANDREW TULLY, *Scripps-Howard writer*.

the index . . .

For the benefit of local unions needing such information in negotiations and planning, here are the latest figures for the cost-of-living index, compared with 1957 figures: November, 1958—123.9; November, 1957—121.6. The annual average for 1957, incidentally, was 120.2.

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San Francisco's Civic Auditorium was filled for the special mass. To the left of the altar is Archbishop Mitty of San Francisco, celebrant. Seated to the right of the altar are members of the Church hierarchy. Note the KTVU cameraman at the lower left of the picture.



KTVU, San Francisco, covers a
REQUIEM MASS
for Pope Pius XII

AT 3:52 a. m. on October 9, 1958, as the little village of Castel Gandolfo lay enveloped in the hushed Italian night, a rasping groan from the thin lips of a tired old man breathed out the soul of Pope Pius XII, temporal head of the Catholic Church for more than 19 years.

The attention of the world was directed to Castel Gandolfo, and, for the first time, Catholics everywhere

were able to witness the last days and final rites for their Pontiff, thanks to the growth of television.

His Holiness was buried near the tomb of St. Peter on October 13. There were nine daily funeral masses, ending on October 19 in St. Peter's Basilica.

The major American radio and television networks, as well as those of Europe, gave unprecedented coverage to the activity in Rome, stringing cables and setting



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2

up remote equipment throughout the Vatican.

On October 13, the day Pius XII was buried, Sister Marcella of Catholic Social Service, Vallejo, Calif., stopped by the home of a friend, Guy Welch of Television Station KTVU, San Francisco, and casually asked whether the Holy Father's funeral would be telecast. Welch told her that he assumed the networks would carry news films.

But then he wondered aloud why some tribute couldn't be paid to the late Pontiff right in the San Francisco area, via TV. . . . There was a Pontifical Requiem Mass scheduled for Thursday . . . not much time to plan and execute a remote . . .

Nevertheless, it was worth consideration. The Catholic engineers at KTVU put their heads together and checked out their idea with General Manager William Pabst. Instead of objecting that time was too short, that facilities, equipment, and air time are expensive, Mr. Pabst gave his men the go-ahead, and he donated the facilities, equipment, and air time.

"With that, the project went full speed ahead," it

4 The KTVU truck and crew—from left, Ray Jacobs, director; Bob Leach, technical director; Mark Johnson, cameraman, and son, Kevin; Jim Martinez, transmitter engineer; Guy Welch, cameraman; Pete Felice, remote supervisor and audio; Dan Cervelli, cameraman; Father William Mullen, technical advisor for the requiem mass.

5 Three KTVU staffers who clocked many hours for the special telecast—Engineer Pete Felice, remote supervisor, left, worked 36 hours without sleep. Engineer Guy Welch, engineering and production coordinator, center, helped to "field the team." Ray Jacobs produced and directed the complex telecast.

6 Bob Leach, with many years of experience as a TD, assured Channel 2 of a perfect picture throughout the mass.

was reported later by Val King, AFTRA member who writes a weekly column for the San Francisco archdiocesan newspaper. "Shifts were swapped to cut loose Pete Felice and Guy Welch to team up with Director Ray Jacobs and lay out a survey of the auditorium for camera positions, cable runs, and mike replacements. When a shortage of special lenses and mikes developed, Harry Jacobs, chief engineer of KGO-TV, was kind enough to lend spare gear."

Preparation time was cut critically by a special telecast on Tuesday night of an address by Vice President Richard Nixon, who was then touring the state during the general elections campaign.

After that, there were only about 30 hours left to get things ready to go in the Civic Auditorium, site of the special mass.

By that time everybody at the station was working at top speed: Ian Zellich, art director; and Dick Weiss, graphics artist; plus the publicity department. The

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Technician-Engineer

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camera crews were reviewing the Missals (the prayer book for the Mass), refreshing their memories on procedures for camera coverage.

By 5 o'clock Thursday morning, the whole Catholic crew was at the back door of the auditorium, wrestling with the jam-packed cables, cameras, and remote truck gear. Things were in relatively good order by 9 a. m., and the crew had coffee and doughnuts while they reviewed their plans with Ray Jacobs.

Technical Director Bob Leach is a Baptist, but he insisted on being part of the project, donating his time for the benefit of his fellow members of Local 202.

The cameramen were Dan Cervelli, Mark Johnson, and Guy Welch. Elected supervisor was Pete Felice, who hadn't slept for two days. Audio man was Jim Martinez. Ken Fredericks was floor director. Every bit of time on this job was donated by the men involved. The two unions involved, IBEW Local 202 and the local AFTRA union, cooperated in the project.

1 Throngs of the faithful from West Coast dioceses await admittance to San Francisco's big Civic Auditorium. Police were on hand to handle traffic on the Plaza and the overflowing crowd of thousands.

2 A group of nuns—part of a 1,000-voice choir—hurries toward the auditorium entrance.

3 School children from the Bay area joined in the special service. Here girls from a parochial school line up with their teacher.



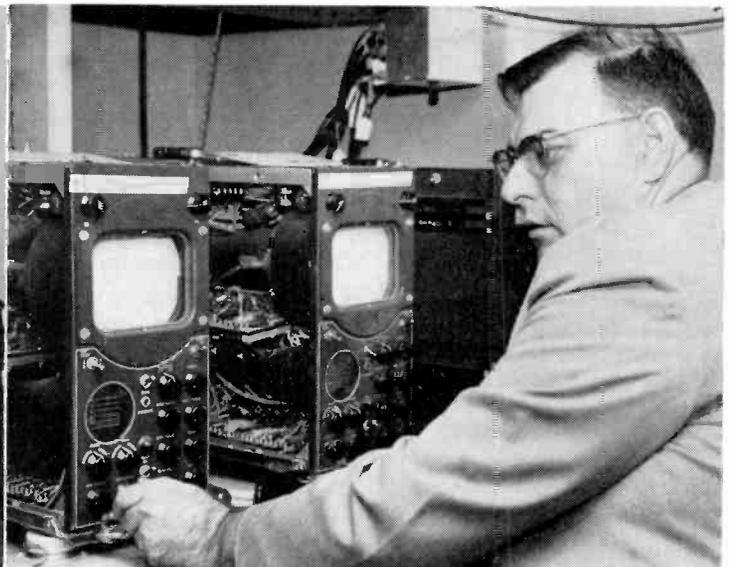
Bob Arne, KTVU chief engineer, and William Pabst, general manager, left and right, respectively, guided the arrangements for the special telecast.

A total of 1800 feet of cable was used for the three cameras, along with five microphones, which used 2,200 feet of mike cable. All the cable was strung overhead to avoid crushing and tangling.

More than 15,000 people jammed the San Francisco Civic Auditorium for the Requiem Mass. Hundreds of thousands more witnessed the memorial services in front of their home television sets, thanks to the hard and dedicated work of trade unionists in San Francisco.

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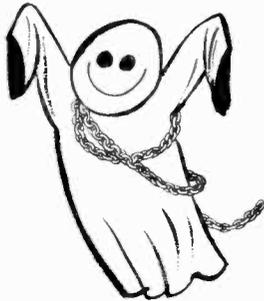
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January, 1959

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The GHOSTS of Good Intentions



Are they found in your union hall?

YEARS ago union members used to know each other a lot better than they do today. Union meetings were social occasions, when a bunch of the boys would whoop it up out in the lobby for a while and then go into the hall for the serious business of organizing and planning contract strategy. Labor temples were pointed to with pride. Labor Day was an occasion for parades and speeches.

About all a union member could afford for entertainment in those days was a bucket of beer and a nickel cigar. There were no V-8's with overdrive, no television or no hobby kits.

The union was a fraternity of men . . . and sometimes women . . . with mutual working problems and goals.

Today, largely because of this same union, we can afford many more activities than the old timers could. The wife's out with the Cub Scouts. The big fights on TV. Or maybe Sophia Loren is floating around in her houseboat at the local movie house.

The union—bless its hard-working business agent and the checkoff system—is something which need only be supported next time it starts knocking heads with the boss over a new contract. In some big electronic installations you're not apt to know any union brothers outside your own department.

When you attend a union meeting, the empty chairs and echoing rafters of the hall make you wonder why you bothered. The ghosts of good intentions rise up to haunt you. This big hall which was built with the hard-earned dues money of every member was dedicated to a greater labor movement in your city and to a better life for every member and his family. Here is a wonderful meeting place, well lighted by IBEW-label fixtures, well aired by heating and air conditioning equipment installed by union plumbers. Capable union officers whom you helped to elect—either by voting or failing to vote—are conducting the vital business of the

organization. And where are all your union brothers?

Every union has faced the problem of poor turn-outs at union meetings. It's a problem that's common to every type of organization—business meetings of the church, PTA meetings, even political rallies.

Why don't members come to the meetings?

- A lot of members either never got the habit or got out of the habit of attending meetings.

- Those who attend regularly do most of the talking at any meeting, because they know what is going on. The newcomer isn't familiar with the business before the meeting, doesn't know many of the members, and, as a result, loses interest.

- Some meeting halls are drab and unattractive in spite of what we said above. (This fact never discouraged the old timers, by the way.)

- Thirty years ago union members were apt to live within easy trolley ride of the union hall. Today many live 10, 20 or even 30 miles from the meeting place.

Whatever the reasons, few of us get to union meetings as often as we should. We know less about the union and its program, and the union is handicapped in what it can accomplish.

What can be done to rebuild attendance? Should we look for other ways to conduct our business and spread the word?

This is a serious problem, and, as we face another year of activity, we should resolve to do something about it. The best way to start is to attend the next one yourself . . . and take a brother with you.

EDITOR'S NOTE: *We'd like to hear from our readers on this subject. Tell us why you think more people don't go to meetings. Give us some ideas which have increased attendance in your local which we might pass on to others. Write: The Editor, TECHNICIAN-ENGINEER, International Brotherhood of Electrical Workers, 1200 15th Street, N. W., Washington, D. C.*



ABOVE: Beside a permanent waterhole in Australia's Outback, the homestead and outbuildings of Nicholson Station provide an oasis upon the wide plains.

BELOW: At a remote sheep station Donald Holt, 6½, writes in his exercise book while his brother Malcolm, 5, speaks to the teacher over the radio.



Her Schoolroom Covers Ten Thousand Square Miles

of Adelaide. And that schoolroom spreads across more than ten thousand square miles or more of central Australia.

Southern railhead for the wide cattlelands of the Northern Territory, social and business center for miners, drovers, stockmen and pastoralists, "the Alice" is set picturesquely amid the red and sunsteeped mountains of the MacDonnell Ranges.

Then through the static came the shrill voices of half-a-dozen children, difficult to single out. But Miss Ferguson knew them all at once.

School was in.

They came in with their call songs—"Nine Love Victor . . . Double X-Ray . . . Eight Able George . . . Yoke Peter Portable . . ."—all the code signals used by transceivers in homesteads, mission stations and outcamps on the Flying Doctor network.

"Let's see," Miss Ferguson said, "We'll start with you, Miriam. You had a problem in your algebra yesterday." Miriam was one of three girls up at Muckatty cattle station, 400 miles away.

"x and y are two different terms," the teacher said. "They have to be kept separate." She went on to describe the problem, then set another question, this time in arithmetic.

"Now I'd like you to answer that one, Peter Staines. Come in Double X-Ray. What numbers have you in your unit box? Over . . ."

Young Peter, down below the great sanded channels of the Finke River, 100 miles away, came in straight away. The boy had the right answer.

THE YOUNG school teacher switched on her microphone in the air-cooled studio, opened an exercise book before her on the piano, waited for the voice to introduce her from the radio base a mile away.

"This is VJD-3, Flying Doctor Medical Station," came the Operator's voice through a speaker. "The time is ten-thirty. We're now ready for the morning School of the Air."

Medical calls and telegrams to and from outpost radios had been cleared some time before.

"Now let's hear who's listening," said Molly Ferguson, looking up at the microphone above the piano. "Over to you . . ."

She touched a switch on the control panel at her elbow, and static flooded the room. The crackling, singing noises were suggestive of the vast distances of plains, mountains and desert the network covered.

It was a pleasant little sound-proof studio, part of the Higher Primary School, Alice Springs, almost in the geographical center of the continent, 1,000 miles north

The teacher set another problem and switched over. Several voices came in excitedly at the same time. "All right, Lois, I'll take you. Nine Love Victor . . ."

When she called Jock Calmers at MacDonald Downs, out near the Plenty River, a girl's voice answered instead. She said Jock was not at the radio.

"Oh, I see," Molly Ferguson said. "We've got a truant this morning, Heather."

Even the School of the Air has its absentees, and Heather had to solve the problem instead!

The odd thing about the lesson was that the whole session flowed along like an ordinary schoolroom class. It was the modern primary school technique in action—and the people of the outback, mothers especially, agreed that it worked.

Molly Ferguson herself was enthusiastic about the results. Born in South Australia, she had volunteered to exchange her job teaching in the city for one at Alice Springs. When the School of the Air began late in 1950—it was only experimental then—she had been one of several teachers assigned to the work. In June 1951 it was officially opened, and later she took charge.

In the beginning programs had been made as simple as possible; only three sessions a week. There were stories, nursery rhymes and children's poems for the little ones; word-building, reading and language for the lower grades; for the older children social studies as well, about their own Territory, talks on industries, explorers and the big cities down at the other end of the drover's track.

Then an educational conference was held in Adelaide (the South Australian Government also looks after education in the Northern Territory), and a proper syllabus was arranged.

Children were to be grouped according to age and grade, roll calls conducted over the air, pupils encouraged to comment and ask questions, and sessions eventually became daily, morning and afternoon. Though there is no official link, the School of the Air has become a valuable adjunct to the regular correspondence courses run by the South Australian Government for all children in remote areas unable to reach normal schools.

The invisible classroom of six that answered the roll back in 1951 across mountain and shimmering plain has now grown to more than 50. There are missionaries' children from the Lutheran Mission for aborigines, 100 miles west of Alice Springs, the children of mica miners out in the rough Hart's Range, cattlemen's children, the children of sheepmen, prospectors, well-sinkers—all expected to tune in, listen and speak.

The remarkable fact is that they do; even the youngest, most self-conscious of children.

"At first it wasn't easy," Miss Ferguson said. "They were a bit overawed by the radio. I couldn't get 'boo'

out of them. Sometimes, perhaps, a yes or no. But gradually I got their confidence. I got them reciting and singing in unison when I played the piano. Now most of them are very self-assured. Even the tinies tune in for themselves. And after the broadcast is over, some of them talk to each other through the network, talking about their lessons."

One of the things that touched her deeply happened at the time of a concert to celebrate the School's third birthday last June. Over their radios the scattered children decided to buy her a bouquet. The order was sent by radio-telegram to Alice Springs.

Several highly ambitious programs going beyond the syllabus have been broadcast. Around Christmas, 1953, the School produced a Nativity play, each youthful actor and actress picking up cues hundreds of miles apart. Mary was played by a mica miner's daughter from a shack on the Plenty River. Joseph by the son of a bookkeeper at the Hermannsburg Lutheran Mission, 250 miles from each other.

Nineteen stations were involved.

"Nobody missed a cue," said the teacher-producer. "We rehearsed the play four or five times, but only after it was over did I realize just how big a job I had taken on."

Another play dealt with Charles Sturt the explorer, the first man to attempt to penetrate the vast and sometimes arid regions of Central Australia where today children so nonchalantly work out problems of arithmetic and spelling over the air.

These youngsters are hardly aware—except when Molly Ferguson explains it through their radios—of just how much life has changed in their circumscribed world. Modern aircraft, motor transport, power generators, home refrigeration, the radio itself have swept aside within a generation the incredible isolation and loneliness their fathers knew. You might say their mothers as well, except that there were few women in the Northern Territory 30 years ago.

What the Flying Doctor has done to help to settle families in the remotest sector of Australia's inland, the School of the Air is carrying on by its work for the youngsters.

The Alice Springs network has pioneered this new form of education. Others may soon follow. Already the New South Wales Government has a similar scheme in hand, to be carried out through the Flying Doctor Service at Broken Hill.

If sooner or later the outback children—as children do—come to take their School of the Air for granted, it will still retain a profound influence over their lives. It will bring them closer to one another—children who seldom, if ever, meet—and place them on the same educational level as their counterparts in the cities.

Do Radio and Television Betray Their Public Duty?



BILL COSTELLO



EDWARD R. MURROW

THE way the Federal Communications Commission hands out television station licenses ignores the really big thing that's wrong with the radio-television industry, two well-known commentators suggested recently.

Congressional probers have focussed on the TV license scandals. But the biggest thing wrong, according to Edward R. Murrow and William Costello, is the way radio and television skimp on news and informative programs in favor of a barrage of ads and entertainment.

Under the law the FCC is supposed to require balanced programming on radio and TV in the public interest. But the FCC has failed to do this, the two men charged. And so, they said, the big interests are enabled to turn the airwaves chiefly to money-making instead of public service.

Murrow is perhaps the best-known news and public affairs broadcaster of the Columbia Broadcasting System. Costello is a news commentator for the Mutual Broadcasting System. Murrow expressed his views in a speech, while Costello wrote in the *New Republic*.

'Distract, Delude, Amuse'

Murrow denounced the fact that "television in the main is being used to distract, delude, amuse and insulate us . . . I invite your attention to the television schedules of all networks between the hours of 8 and 11 p. m. Eastern Time. Here you will find only fleeting

and spasmodic reference to the fact that this nation is in mortal danger.

"I do not advocate," said Murrow, "that we turn television into a 27-inch wailing wall. But I would just like to see it reflect occasionally the hard, unyielding realities of the world in which we live."

Citing his own experience with several highly-praised presentations of public issues, Murrow said: "I am entirely persuaded that the American public is more reasonable, restrained and more mature than most of our industry's program planners believe. Their fear of controversy is not warranted by the evidence."

As for radio, said Murrow, "in order to progress it need only go backwards—to the time when singing commercials were not allowed on news reports, when there was no middle commercial in a 15-minute news report; when radio was rather proud, alert and fast. . . . If radio news is to be regarded as a commodity, only acceptable when salable, and only when packaged to fit the advertising appropriations of a sponsor, then I don't care what you call it—I say it isn't news."

Assessing the blame, Murrow recalled that "every licensee who applies for a grant to operate in the public interest, convenience and necessity makes certain promises as to what he will do in terms of program content. Many recipients of licenses have, in blunt language, wretched on those promises. The money-making machine somehow blunts their memories.

FCC Failure Hit

"The only remedy for this," Murrow continued, "is closer inspection and punitive action by the FCC." However, he said, "the FCC cannot or will not discipline those who abuse the facilities that belong to the public."

He therefore sounded a challenge to "each of the 20 or 30 big corporations which dominate radio and television" to give up one or two of their regularly scheduled programs each year, and turn them over to the networks to be devoted to the "importance of ideas."

The responsibility for the concentration on entertainment, Murrow insisted "rests on big business, and on big television, and it rests at the top."

No Real Regulation

Costello analyzed the FCC's increasing failure to enforce the law requiring radio and TV stations to de-

vote a substantial amount of time to public service programs, citing a number of cases. "The tendency, starting under Truman," said Costello, "was accentuated when the Eisenhower Administration took office. Since 1953, almost all pretense of regulation has been abandoned, and the ancient and discredited doctrine of laissez-faire embraced."

"The really sinister product of official negligence," Costello added, "is that in the course of time, broadcast licenses which were originally intended to issue only temporarily on evidence of good faith and meritorious public service, are now assuming more and more the stature of private property."

"Little by little, their possessors regard them as they would a parcel of land—as a freehold in fee simple, a vested right. The congressional doctrine that the airwaves belong to the people is being slowly smothered. And Congress has been willing to acquiesce in this."

Who Smold the Reet?

By JANE GOODSELL

If a couple of mouses are mice,
And more than one louse is lice,
Then two houses should surely be hice.

If goose in the plural is geese,
Then why aren't two mooses, meese?
And a batch of papooses, papeese?

If freeze, in the past tense, is froze,
Then the past tense of ease should be oze,
And sneeze, in the past tense, snoze.

If more than one ox is oxen,
Then why aren't two boxes, boxen?
And three little foxes, foxen?

If the past tense of think is thought,
Then the past tense of blink should be blought,
And fink should be present tense fought.

If bought is the past tense of buy,
Then frought should be past tense of fry,
And crought should be past tense of cry.

Of maybe it ought to be crew,
For the past tense of fly is flew.
I find it confusing, don't you?

If the plural of tooth is teeth,
Then a couple of booths should be beeth,
And a bevy of youths should be yeeth.

A toy that is smashed is broken;
A word that's been uttered is spoken,
So a ham that's been smoked should be smoken.

If the past tense of tell is told,
Then the past tense of yell should be yold,
And the past tense of smell should be smold.

If someone who's pale has pallor,
Then a masculine male should have mallor,
And a person who's frail should have frallor.

Add a foot to a foot, you've feet,
So a couple of boots should be beet,
And more than one root should be reet.

The English language seems to me
A maze of inconsistency,
And I'm glad I was teached—I mean taught—it
when young
Or I'd never have raught—I mean reached—my
present state of fluency in my native tongue.

Post Mortem | On the 1958 'Right to Work' Debacle

WHEN they lifted the hood of the Ohio "Right to Work" vehicle recently, they didn't find spark plugs from a rank-and-file discount house firing the engine, as was claimed.

They found more than \$600,000 worth of chromium-plated parts courtesy of the state chamber of commerce and a national bank.

The innards of the anti-union effort in Ohio came to light in Columbus last month, when the Ohio Right-to-Work Committee filed its report of activities with Secretary of State Ted Brown. This committee is the supposed citizens' group which spearheaded the anti-union-shop drive.

It was found posthumously that only \$72,923 of the total \$762,543 spent by the Right-to-Workers came from individual donors. When newsmen asked who made up the difference, they were told that the committee had received a loan of \$261,500 from the Ohio Chamber of Commerce and another loan of \$392,000 from the Huntington National Bank of Columbus.

Reporters tried to find out who put up the collateral for this bank loan. They got a run-around. Then Nathaniel Looker, district director of the U. S. Internal Revenue, began to ask questions. Finally, Secretary of State Brown asked the committee who put up its collateral.

He was told that the \$392,000 bank loan was secured with \$258,000 in bonds from the Ohio Chamber of Commerce plus \$50,000 in bonds from the Ohio Manufacturers Association.

In other words, this supposed citizens group for "right to work" got nearly all its money from the state chamber of commerce, with an assist from the manufacturers. Newsmen then asked Herschel Atkinson, executive vice president of the C. of C., where he found \$619,500 to throw into the anti-union-shop fight.

Atkinson said the money represented the state chamber's reserve fund, built up over the years and never before used. Even Ohio businessmen were surprised to hear of this huge reserve fund. Now, said Atkinson, the whole \$619,500 is being written off as a bad debt. "We decided to take a risk and shot the works," he confided.

Tax agent Looker explained his interest in the subject by noting that business firms normally report their dues payments to the Chamber of Commerce as tax-exempt gifts. An Internal Revenue Service spokesman in Washington further explained that such dues are tax-exempt only if "no large proportion of the money is spent for political activities."

Incidentally, Ohio voters in November swept the "right to work" proposition into the ash heap by a

margin of nearly a million votes. This defeat came even though many giant corporations spent vast sums, in addition to the Right-to-Work Committee's campaign. **On the labor side, the united labor committee reported spending about \$800,000 to fight the measure, but this was done openly, through contributions from a million or more union members.**

The defeat of "right to work" efforts in Ohio and four other states last November 4 brought some interesting post-election repercussions in another state: North Carolina has had a "right to work" law since 1947. Factory workers in North Carolina have the right to work for an average wage of \$1.45 an hour, compared to the national average of \$2.12 an hour.

After the November wreck law shellacking, Jonathan Daniels, editor of the widely read *News and Observer* of Raleigh, N. C., ran an editorial entitled "Work Laws Meet Deserved Fate." The editorial pointed out:

"The name of the law is a misnomer and many of its most active supporters have been hypocritical. They pretend to be interested only in employes, when their real interest is in employers. What the law actually does is to prevent employers and a union representing a majority of the employes from negotiating a contract binding upon all employes."

The editorial said that voters in other states "properly rejected 'right to work' laws" and added: "The need of the law in this state has never been shown and the 1959 General Assembly should re-examine the law."

This editorial drew a bitter front-page blast from the weekly *Bulletin* put out by the Carolinas branch of the Associated General Contractors of America. The contractors' organ said it was "sickening" to see such an editorial in "one of North Carolina's most respected and influential newspapers."

The business journal then sought to contrast the stand of Jonathan Daniels with that of his father, the late Josephus Daniels, one of the Tarheel state's most famed statesmen who also edited the *News and Observer*. "The ghost of Josephus Daniels has cause for concern," trumpeted the contractors' mouthpiece.

But Jonathan Daniels, a noted liberal himself, had a ready answer to that one. He pointed out that his father was still editing the *News and Observer* in 1947 and "he opposed the (right to work) laws with his customary vigor and forthrightness. . . ."

"Even before the laws were passed, Josephus Daniels recognized them as anti-union laws which would not give any person the 'right to work' but would weaken the usefulness and power of unions," young Daniels pointed out.

Technical

NOTES

Technicians from the Army Pictorial Center, Long Island City, New York, run through color telecasting rehearsals at the General Electric Company's Technical Products Department, Syracuse, N. Y.

Color TV For The Army



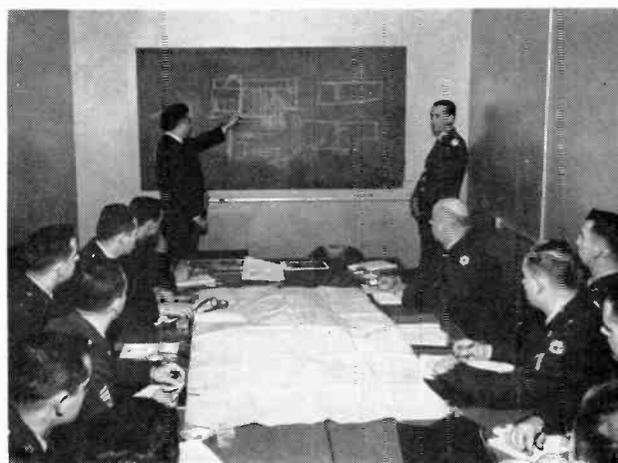
The Army Signal Corps is planning to use color television for on-the-spot coverage of "various training and operational activities."

This was disclosed November 24, when the Army's first completely-equipped color TV studio-on-wheels rolled into Washington, D. C., for a two-day demonstration for top military and television officials. The mobile color TV studio is a 35-foot-long, 18-ton aluminum trailer utilizing "partly transistorized" TV equipment.

The TV studio-on-wheels was designed and developed for the Army Pictorial Center, Long Island City, New York, by the General Electric Company's Technical Products Department, Syracuse, New York.

The trailer will be used primarily for determining the value of color TV in military applications.

Some eight tons of color TV equipment have been fitted into the trailer. Color TV equipment under normal studio conditions usually require four or five times more space than the eight by thirty-five foot trailer, according to William J. Morlock, a G-E general manager.



W. R. MacNeilly, left, G-E broadcast engineer, discusses trailer layout with the Signal-Corps crew, under direction of Captain R. E. Vaughn. Transistor application engineers of the company's Semiconductor Products Dept. are also participating in the training program.

TV Missile Training

In addition to studio control equipment, the trailer has special compartments for three color cameras, and complete audio gear for recording, taping and transcribing Army training programs. It is the first time that a complete color TV system has been fitted to a studio on wheels.

The Army Signal Corps has been using monochrome TV in mobile studios for some time.

The new transistorized color TV cameras used weigh but 215 pounds each; 75 pounds less than non-transistorized models. Dimensions are 34 by 18 inches. Overall size is 10 inches shorter, three inches narrower and about an inch lower than non-transistorized models.

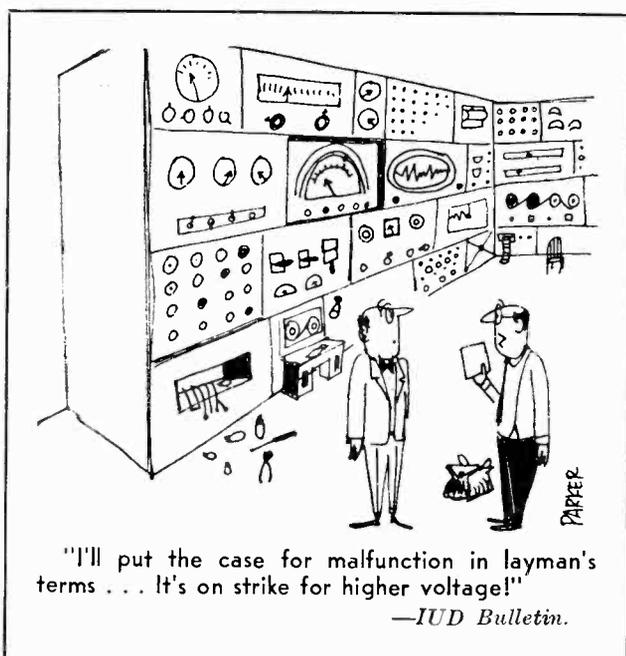
It is expected a 12 or 14 man crew will operate the color TV unit. Twelve Army Signal Corps electronic technicians have attended a two-week school, conducted by General Electric's Technical Products Department at Syracuse, where they received intensive training on maintenance and operation of the color television equipment.

In addition to the television equipment, the trailer includes a nine-ton air-conditioning and heating unit. It also features a regulating power system for automatically adjusting incoming power to assure optimum operation of the equipment.

The trailer does not have its own power plant. For operation of the equipment, it will tap into existing power lines, or will be supplied from separate mobile power facilities.

A deck atop the trailer permits cameramen to operate from that level. Equipment is designed to raise and lower cameras with a minimum of effort.

The new Army trailer is designed for on-the-air telecasting. However, it is expected to be used primarily for closed-circuit operations at this time.



"I'll put the case for malfunction in layman's terms . . . It's on strike for higher voltage!"

—IUD Bulletin.

The United States Army has opened a new chapter in space age education by teaching officers the ABC's of guided missile maintenance over a Radio Corporation of America closed circuit television system that may be extended eventually to installations across the nation.

Nerve center of the military educational TV hookup is the Ordnance Guided Missile School (OGMS), at Redstone Arsenal, Huntsville, Ala., where this country's first successful earth satellite was developed.

Missile instruction programs are being carried now over the closed TV circuit to the Army's Armor School at Fort Knox, Ky., 280 miles to the north, for large screen TV viewing in 26 classrooms.

Army authorities have indicated the TV instruction network may be expanded gradually to encompass centers in as many as 46 states.

The Redstone Arsenal School was chosen as the point of origin for the closed circuit TV program because it is the only Army school devoted exclusively to guided missile training. Colonel H. S. Newhall, OGMS commandant, obtained permission from the Secretary of the Army to carry out the TV plan on the grounds it was far cheaper than to attempt to transport equipment and personnel to Fort Knox or other centers.

TelePrompTer Corporation of New York was granted the prime contract for the Redstone project with creative control over the program material and the professional TV personnel involved.

The OGMS system includes a central studio at the Missile School equipped with a pair of RCA TK-31 image orthicon TV cameras, film and slide equipment. Fifteen other RCA TK-31 and TK-15 vidicon cameras with associated terminal equipment are installed in five mobile units. These consist of standard Army "six-by-six" trucks with specially designed aluminum bodies to house the TV gear.

Scattered over the sprawling OGMS "campus" are 19 TV pickup locations, each with coaxial cable plug-ins and weather-proof housings. The 19 locations are arranged to enable the TV crews to provide remote or mobile coverage of missile operations, both inside various buildings and at outdoor missile sites.

The present programming schedule calls for a two-hour "space-age spectacular" to be transmitted three times a month through next June. Work is under way also to present certain subjects within the confines of the Missile School itself.

Of the 150 persons engaged in the preparation and presentation of these shows—"starring" the Nike-Ajax, Nike-Hercules, Corporal, Redstone, Hawk and LaCrosse missiles—only 23 were professionals. The remainder were trained on the spot.

Station

Breaks

Secretary Keenan to India



International Secretary Joseph D. Keenan left National Airport in Washington, D. C., December 22, for New Delhi, India, where he will be received as official representative of the American labor movement at an Indian trade fair. Seeing him off on his journey were International President Gordon Freeman and Administrative Assistant Robert Noonan.

NAB Enters VTR Dispute

The National Association of Broadcasters (recapped name of the former National Association of Radio and Television Broadcasters) wants to have its say about who should man the videotape machines. It has asked the National Labor Relations Board for an opportunity to state its views in the jurisdictional dispute between the American Federation of Television and Radio Artists and the Screen Actors Guild over persons making VTR commercials.

Charles H. Tower, NAB broadcast personnel-economics manager, has asked the NLRB for permission to enter the VTR proceedings as an intervenor to protect the interests of TV stations. NAB contends that AFTRA is asking blanket power which could upset long-established bargaining patterns based on local single-employer negotiations rather than national multi-employer bargaining as requested by AFTRA.

IBEW Wins Election

The International Brotherhood of Electrical Workers has been certified by the National Labor Relations Board as bargaining agent for 1,900 Radio Corp. of America employes at Lancaster, Pa.

Certification was made after the RCA plant employes overwhelmingly rejected an attempt by the independent United Electrical workers to "raid" the plant in an NLRB representation election. The IBEW won by a better than two-to-one margin.

The Lancaster plant manufactures color TV tubes. The Electrical Workers have represented its employes for the past eight years.

Marion H. Hedges Dies

Marion H. Hedges, 70, former research director and editor for the Brotherhood, died January 6 in a Washington hospital after a heart attack.

He had served as a labor consultant to several government agencies and helped set up the collective bargaining procedures of the Tennessee Valley Authority. After 25 years on the IBEW staff, he retired in 1954 and became labor adviser to what is now the Intl. Cooperation Administration.

An author, reporter and college professor at various stages in his career, he was a founding member of the National Planning Association and the Sigma Delta Chi professional journalism fraternity.

Economic Sales Up

Electronic manufacturers emerged from the 1958 recession as one of the few industries to establish a new sales record (\$7.7 billion in factory sales).

During 1959 factory sales are expected to reach \$8.3 billion.

Though consumer sales were down in 1958, military and industrial electronic sales during the year pushed total gross to a new record.

These facts were brought out in a year-end review released by the Electronic Industries Association. The Association said that there was a clear indication that "the industry has the capacity and the know-how to serve both an expanding national economy and an adequate defense program."

New Station Equipment

A television broadcast-equipment manufacturer has predicted that the new year will bring a leveling off in a six-year decline in industry sales of new TV station equipment.

William J. Morlock, general manager of the General Electric Company's Technical Products Department, says industry sales of broadcast equipment for new TV stations will hold steady at the 1958 level. At the same time, he predicted sales of new and modern equipment, to replace obsolete and worn-out equipment, would increase approximately 10 per cent over the 1958 volume.

Well-Guided Missile

A big electronic brain made split-second adjustments in the course of the Atlas missile to bring it accurately into orbit after it left its launching pad at Cape Canaveral December 18.

The Atlas ground guidance computer, capable of making 10,000 arithmetical calculations in a second, was described by officials of the Burroughs Corp. which built it at a research laboratory at Paoli, Pa.

The computer gave the missile its course, point of engine cut-offs and other instructions during the count-down. In the early stages of flight, the missile sent back statistics on actual performance to the computer at the control center. The computer compared this information with the pre-selected course and in seconds flashed back any necessary adjustments.

Congress Begins Work

In 1958 the second session of the 85th Congress began an intensive investigation of alleged broadcasting irregularities, station allocations, TV ratings, corrective FCC legislation, community television translator-boosters, and other industry matters. This year the members of the 86th Congress begin their investigations anew. A majority of the industry hearings will be concentrated in Sen. Warren Magnuson's Senate Interstate and Foreign Commerce Committee, although there will be much work done by Rep. Oren Harris's Legislative Oversight Committee.



MAGNUSON

A protest against so-called "network tyranny" has gone to Sen. Magnuson's committee and he has promised to look into the matter during the new Congress. Sen. Mike Monroney, another committee member, did not indicate he is in favor of FCC regulation of the networks but charged the networks are encroaching more and more on local station time. This, he said, confines local advertisers to station breaks in telling their sales stories and results in a "tyranny of national over local

interests. This results in sterile programs which reflect only the time-worn script ideas which originate in Hollywood and New York," Sen. Monroney stated.

Sen. Magnuson said he expects the committee to receive several bills against pay TV and "I suppose we will have hearings." Sen. Strom Thurmond (D-S. C.), committee member, was one of the chief Senate pay TV foes in the past Congress and introduced both a bill and resolution banning this method.

Another major broadcast item facing the committee will be the formation of a special commission to make a spectrum study—a controversial issue in the latter stages of the 85th Congress. The Commerce Committee last August approved a White House-amended version of the Senate-passed Potter bill which immediately ran into stiff opposition from broadcasters. The bill was scheduled for full House consideration the last week of the 85th Congress but was withdrawn when the unexpected opposition arose.

Like Sen. Magnuson, Rep. Harris has stated that such a study is necessary. However, the first move during the new Congress probably will be made by the Senate. Rep. William Bray (R-Ind.), author of a spectrum study measure in the past Congress, said recently he was undecided on whether he would re-introduce the measure.

A one-day session on ratings was held last spring with presidents of five ratings services testifying. At hearings in New York, network presidents and others such as former NBC president Pat Weaver will be witnesses. "We can't legislate against TV ratings but we owe it to the public to point out the effect of ratings on programming," Sen. Magnuson said. The public should know just how the ratings are used in determining programming and the size and accuracy of samples, he stated.

New Studios for KMOX

For the first time in 20 years CBS is constructing a building to exclusively accommodate one of its radio outlets, Robert Hyland, general manager of KMOX St. Louis, announced recently.

Work is scheduled to begin shortly on the new KMOX studio and office plant. Plans for the two-story structure call for three studios and control rooms equipped for stereophonic broadcasting and recording. The building is expected to be ready next summer. It is estimated the new establishment will cost in the neighborhood of \$750,000, including technical equipment.

Meanwhile, CBS' St. Louis TV station has added a mobile transmitter unit, now in operation at KMOX-TV. The station spent \$100,000 to build the 30-ft.-long unit, including facilities for five cameras, two turntables, four incoming remote lines, a tape recorder and an audio console equipped to handle 14 microphones. A camera platform on the vehicle's roof is also used for the microwave transmitter.

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Maintain good conditions
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IN FACT—YOU NEED THE I.B.E.W.

The International Brotherhood of Electrical Workers is the foremost and largest union in electricity-electronics.

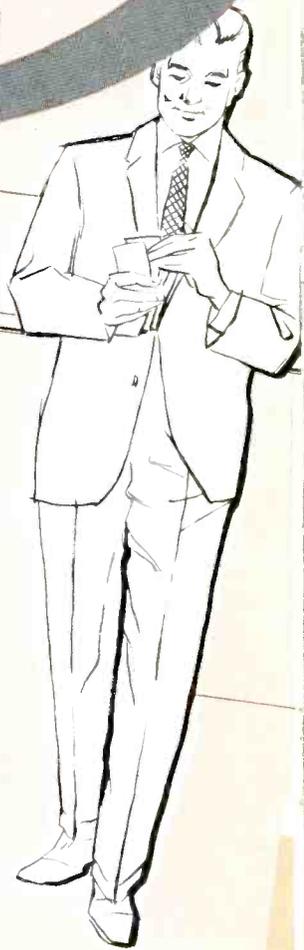


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