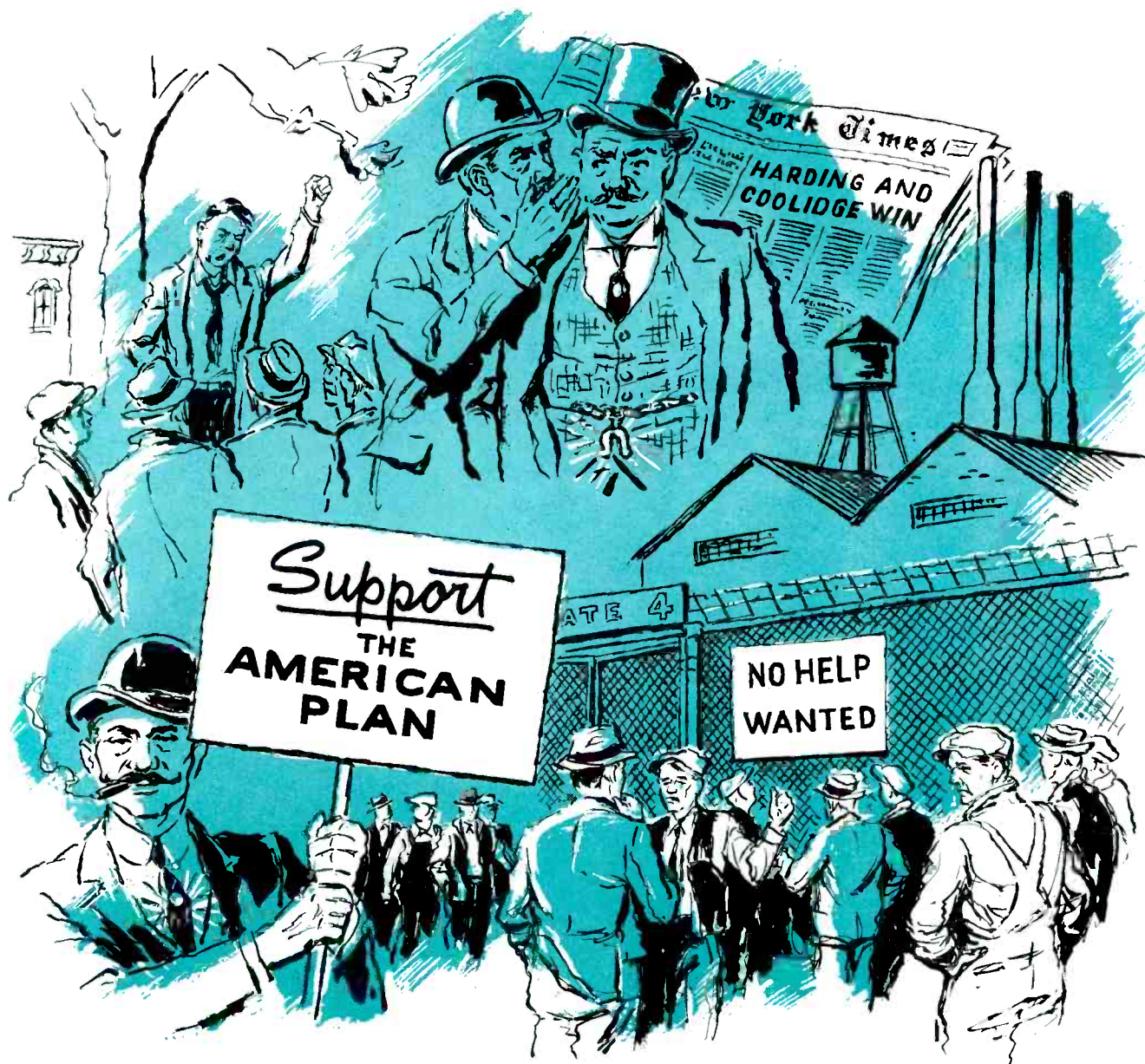


TECHNICIAN ENGINEER

MAY, 1963

Published for the Employees of the Broadcasting, Recording and Related Industries

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS — AFL-CIO



LABOR FIGHTS THE OPEN SHOP DRIVE AND THE "AMERICAN PLAN," 1920-21

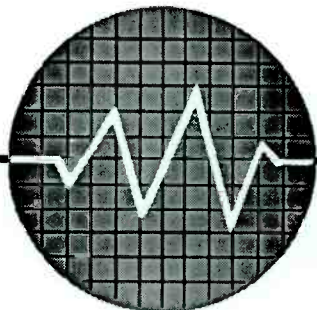
The open shop drive of 1920-21 is one of the dark chapters in modern American labor history. This campaign, culminating in a campaign dressed up as the "American Plan," took advantage of post-war developments sparked by the economic setback.

Industry sought to sell, through vigorous and greatly improved propaganda efforts, the right of the individual not to belong to a union—a forerunner of the "right-to-work" efforts of the 50's. Attacks were made on collective bargaining, work protections, wages, hours and conditions, largely through open shop associations.

Manufacturers' and employers' associations led the drive for the formation of open shop associations—Illinois had 46 such associations; Ohio 17; two dozen were in Michigan and many were

organized in other states and in the South. Irregularities in some labor unions were magnified and blown up in the press in order to damn all labor, a technique which was to prove effective in the late 50's.

Every man had the "right to work out his own salvation and not to be bound by the shackles of organization to his own detriment," said the Plan's advocates. Organized labor fought back; some unions had success, some faced bitter defeat. The American Federation of Labor Executive Council under Samuel Gompers' leadership led the fight against the open shop drive and resisted the efforts to tear down labor's standards. The open shop drive emphasized the necessity for labor unity and courage and the resistance to the infamous campaign is a landmark of labor.



TECHNICIAN ENGINEER



VOL. 12, NO. 5

ALBERT O. HARDY, Editor

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the cover

Local Union 4, St. Louis, Mo., is not going to the dogs, but it might sign up Frenchie Poodle (shown manipulating a VRF 400 camera on our cover) if he gets any more adept at the craft. Harry Eidleman, owner of Station KCFM, where Poodle plies his trade, says the canny canine is "the most attentive camera technician" on his staff. (This figures, since KCFM is an FM-only station.) If the union insists, however, the station may only employ the tailwagger on a standby basis.

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 1961 figures: March, 1963—106.2; March, 1962—105.1.

commentary

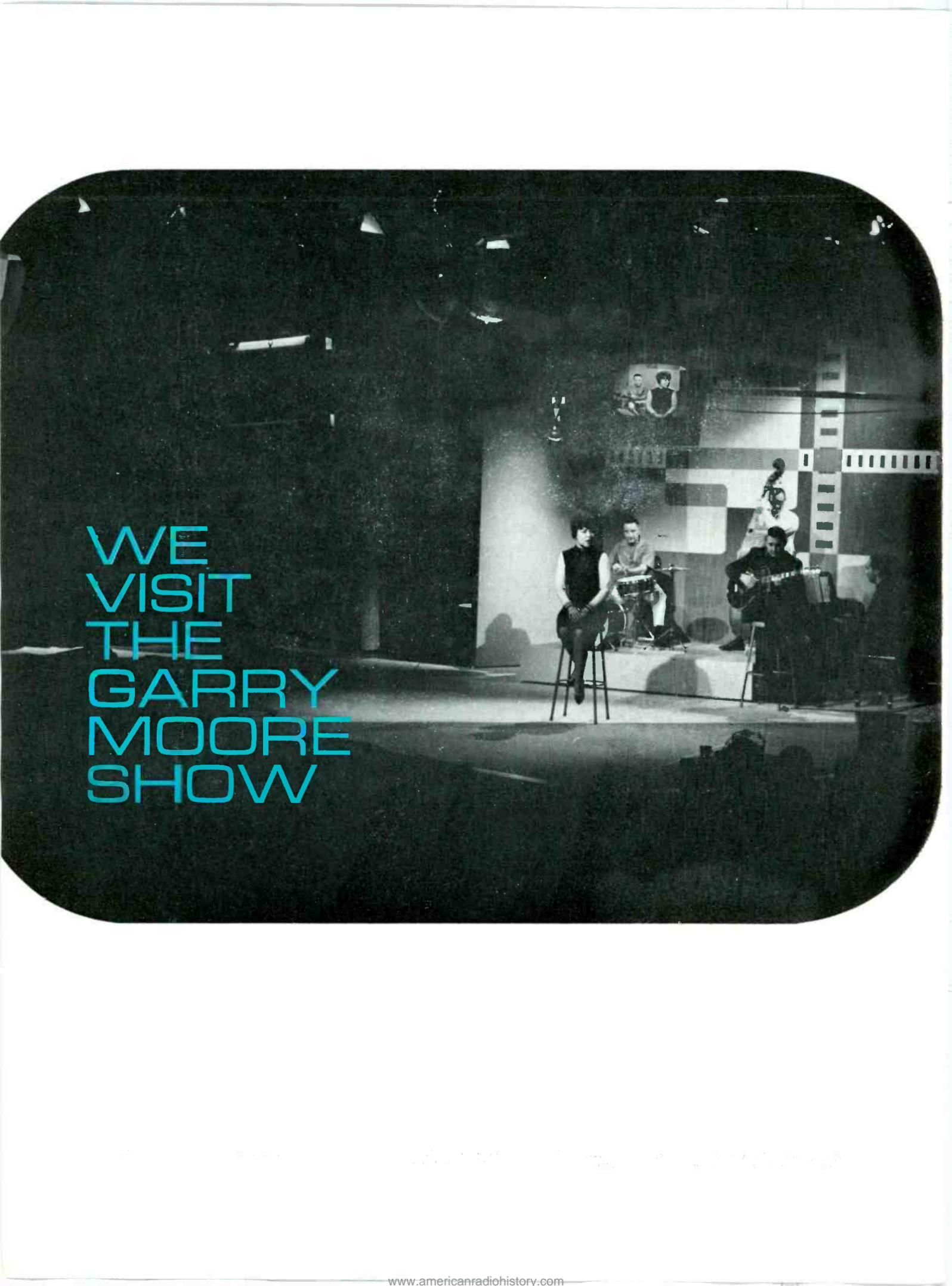
The National Association of Broadcasters, at its recent convention, presented to Comedian Bob Hope its Distinguished Service Award. Mr. Hope accepted the award with a series of quips and a closing tribute to the industry. It's good to look at the lighter side of the industry, now and then. Hence, the following excerpts from Mr. Hope's talk:

"I know that it is the highest award in broadcasting and I realize the importance of it but I feel if you were really serious that you would have given it to me in prime time . . .

"Broadcasting is a potent business. Imagine Congress taking time to investigate TV ratings. No wonder Khrushchev is so confident. And it all started when *Huckleberry Hound* topped the President's State of the Union message. . .

"You gentlemen really have a great responsibility. In case of war you will be the ones to alert the country, even if you have to break into a commercial. No, seriously, you do because you are responsible for the most amazing instrument of mass communication known to man—a 21-inch looking glass that shows the world full length. Just spin the dial—instant history.

"Broadcasting is the vital link in the chain between demand and supply—the supersalesman of American industry. Broadcasting is the dynamic force which helps turn the gross national product into that proud thing we call the American standard of living. Broadcasting is something far greater than that—it is the heart-beat of the nation, that pumps out the stuff which keeps the human spirit alive and alert."



WE
VISIT
THE
GARRY
MOORE
SHOW

1



1 Roy Allen, Garry Moore assistant director; Dave Geisel, Garry Moore director; and Robert Stone, CBS Hollywood technical director.

2



2 Leard Davis, CBS Hollywood lighting director, checks a rehearsal.

3



3 Billy Taylor, CBS New York audio man, beyond partition; and Robert Stone, foreground.

4



4 Neil Weinstein, CBS Hollywood cameraman, on duty.

5 Norman Dewes, CBS Hollywood audio man, checks his program schedule.

6 Another view of Billy Taylor of CBS at the controls.

7 Harry Tatarian, CBS Hollywood cameraman, keeps his picture.



5

Garry Moore is a man of many talents, not the least of which is his ability to attract skilled technicians and capable artists to keep his weekly "Garry Moore Show" among the top-rated networks programs today. Before his show went off the a'r for the summer, we visited a rehearsal at Television City, Hollywood, to see IBEW members in action and to s't back quietly and enjoy the singing of Dorothy Loudon and the drum work of Maestro Moore (opposite page). When the present hiatus is over, Garry Moore will be bac'k September 24 in his regular Tuesday night CBS slot with an (estimated) \$146,000 hour-long show for another collection of happy sponsors. Moore was recently reported to be one of the highest-paid artists in television. Here's a man who earns the money . . . He is handling two network shows (including "I've Got a Secret") and works closely with all phases of production from script to completed show.

6



7





A general view, from near the back of the hall, of the labor editors attending the Secretary of Labor's Conference. More than an equal number are seated behind and beside the mirrored posts, impossible to picture.

LABOR EDITORS MEET



Secretary Ken Fiestler of the ILPA briefly addressed the conferees and made a few announcements relating to the Association's activities.



President Kennedy is surrounded by Labor Press Editors and nearly inundated by questions at the reception he hosted at the White House. Al Hardy, editor of the *TECHNICIAN-ENGINEER*, is in back row, center.

Secretary of Labor Holds Conference For Editors of Labor Publications

THE Secretary of Labor, the Hon. W. Willard Wirtz, sponsored a two-day conference of editors in Washington on May 20th and 21st, to afford them an opportunity to meet those officials of the government who are responsible for programs of the Federal government which affect the welfare of the members of organized labor. Actually a joint project of the Secretary and the International Labor Press Association, the conference attracted editors from International unions, local unions and central body publications—about 125, in all.

Chaired by Mr. John W. Leslie, Director of Information, U. S. Department of Labor, the conference covered the state of the nation's economy, tax programs, unemployment, utilization of manpower, government information—in short, the gamut of interests of the labor movement.

The various speakers delivered prepared material and then subjected themselves to questions from the floor. While some such questions implied criticism of their remarks—and even criticism of some governmental programs, the speakers' replies were impressive for their comprehension and their candor.

Mr. Wirtz spoke on "Labor Relations Today,"

Technician-Engineer

Dr. Gardner Ackley on "The State and Outlook of the Economy," Mr. Robert J. Myers presented many charts to illustrate his subject, "The Unemployment Problem," Mr. Pierre Salinger addressed a luncheon meeting with "Government Information" as his subject, and the Secretary of the Treasury, the Hon. Douglas Dillon, spoke on "The Tax Program."

The Under Secretary of Labor, Mr. John Henning, had "How Are We Combatting Unemployment?" as his topic, and Mr. Samuel Merrick, the Special Assistant for Legislative Affairs in the Department of Labor spoke at length on the Youth Conservation Corps, proposed by the Administration as a means of basic skill training.

The Conference was concluded with a panel discussion embracing the general theme "Manpower," and many of the experts on this subject from the Department of Labor were present to answer questions. Under Secretary Henning moderated the meeting, and he was flanked by the Deputy Director of the Office of Manpower, Automation and Training, Dr. John Walsh; Mr. Samuel Ganz, Assistant Director of that office; Mr. William Norwood of the Bureau of Employment Security; Mr. Edward Goshen, Administrator of the Bureau



Secretary Wirtz, during his major address to the Conference. He was speaking, at this time, of the general experience of recent labor-management problems and the convictions of the Labor Department and the Administration that a development of compulsory arbitration would be detrimental to the general welfare of the U. S. He went on to say that compulsory arbitration is thought by some to be a substitute for strikes and that he believes it to be an unsatisfactory substitute for collective bargaining.

of Apprenticeship and Training; and Mr. Louis Levine, Director of the United States Employment Service.



The array of panelists for the discussion of "Manpower," on Tuesday, May 21st.



Mr. Stanley Ballard, International Secretary of the A.F. of M., poses a question to Treasury Secretary Dillon. Bro. Ballard is also Treasurer of the Inter-American Entertainment Workers' Federation.

CHALLENGES AND OPPORTUNITIES

"Almost all of the publicity, the general publicity about the Department of Labor, about the labor problems in this country, is about labor disputes, and we sometimes get just almost discouraged about really trying to get across the facts of the manpower problem which we face. You have perhaps seen, because we have been using it a good deal, a figure which suggests that we lost more time and more potential production in this country last year from unemployment than we have lost in the last 35 years from strikes. Yet, as far as the public's interest goes, the public's knowledge, it centers entirely upon the strike-loss production.

"I have said that if we could get the public interested in the loss of production from unemployment, as we do in the loss of production from strikes, then we can hope to do something about this situation. I am saying to you as directly as I can that I rather suspect that meeting the unemployment problem and the manpower problem in the broader sense, is very dependent upon what is done by the labor press. You can do much more on this subject than we can. We know that we have an extremely serious problem of getting across the implications of what too often has to be expressed in statistical terms and that is the reason we ask you to come here and why we are so grateful for your being here."

—The Secretary of Labor

"In a slack economy, to be sure, automation threatens layoffs and hardship. In a static economy a rapidly growing labor force promises only increased involuntary idleness, particularly of the new entrants to the labor force, growing juvenile delinquency, a sharpening of union—non-union and white-Negro and similar conflicts for the limited availability of jobs, but we don't have to treat technical change and automation on the one hand or labor force growth on the other as threats. They are the very things that have made ours the greatest economy in the world. For the future, they pose for us challenges and opportunities, not threats; challenges to develop economic policies that will make them a blessing instead of a curse, and opportunities to restore the country's economy to its leadership as the most productive, the most progressive and the most rewarding in the world."

—Dr. Gardner Ackley

**John W. Leslie,
Director of Information
for the U. S. Department
of Labor, who handled
arrangements for
the conference.**



"There will never be total unanimity on a major policy. The fact that you read in the press that there is a controversy on a particular point is a positive sign, rather than an unhealthy sign. It shows that the issues are being debated. The only point I have ever made, as far as people working for the Administration is concerned, is that up to the decision I think everybody should examine and express themselves freely. Once the policy is approved, it is our responsibility in the Administration to see that the policy is carried out. . . . We will continue to look for the best possible way we can get our information out. We will always be ready to cooperate with you and we hope our policy will be continued to be aimed as the President indicated it should be aimed, from the beginning, to the widest dissemination of news."

—Press Secretary Pierre Salinger

"I want to start out with a look at the employment picture and I might say that it is a fairly bright one right now because employment has been going up substantially. We find about 1.3 million more workers employed than there were at this time a year ago and a good deal



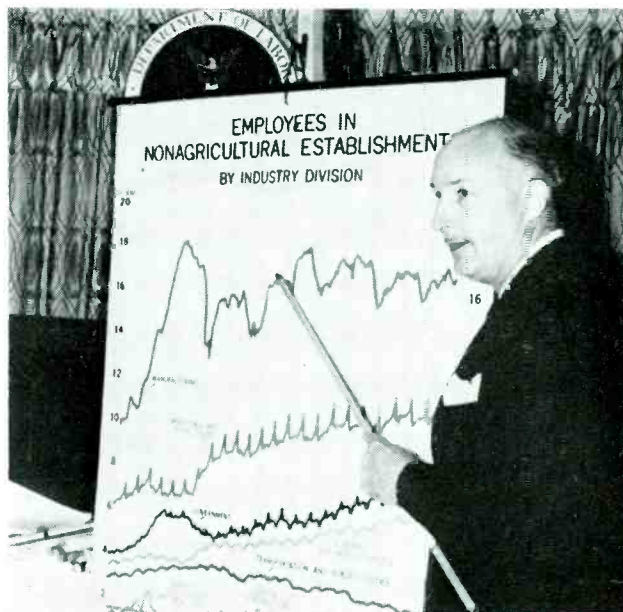
As President of the ILPA, Bro. Barney Mullady of the IBEW made a few welcoming remarks to those assembled at the Secretary's Conference.

of strength in many parts of the economy. We don't have a great improvement in the unemployment picture, however, because the labor force has been increasing about as rapidly as employment. Furthermore, we find there is a rather spotty picture with regard to employment—meaning that we have some parts of the economy showing strength and some that are not. . . . The long-term unemployed certainly account for another major problem as, not only a matter of national importance in terms of loss of an important economic resource but, in very many cases, it means a great deal of privation and suffering. If you take our 4.1 million in April who were unemployed, we find about 1.4 million of these had been unemployed for 15 weeks or more and about half of these had been unemployed for 27 weeks or more.”

—Mr. Robert J. Myers

“At the very outset of my remarks about President Kennedy's tax proposals, I want to say that the Administration is deeply concerned with lagging economic growth, idle plant capacity and unemployment. But we are even more deeply concerned with the impact that these have upon the lives of the men, women and children of America. . . . That is why he has clearly labelled the tax program the most important business before the Congress this year. All Americans will benefit ultimately but immediate help will go to the poor, the elderly and those with special problems. The proposed minimum standard deduction, for instance, will help low-income people, particularly those with large families, providing a minimum deduction of \$300 for an individual, \$400 for a couple and an additional \$100 for each dependent—to grant more than \$300 million in tax relief to low-income families. . . . To reach the goal of full employment and a fair share in our prosperity for all Americans, we need the continued expansion in production, service and consumption, which only greater investment can generate. We need a long-range approach to the causes of our unsatisfactory rate of economic growth—a program which will foster investments in new plants, new products and the wide variety of economic activity which maintains income and consumption at high levels.”

—The Secretary of the Treasury



Mr. Robert Myers, Deputy Commissioner of the Bureau of Labor Statistics, U.S. Dept. of Labor, spoke at some length on employment and unemployment, production statistics, price trends, the C.P.I., and predictions of things to come in the next 12 or 13 years.



Pierre Salinger addressed a luncheon session of ILPA editors and discussed the press relationship at the White House. A lively question-and-answer session followed Mr. Salinger's remarks. To his right, Barney Mullady of the IBEW is chuckling at one of Mr. Salinger's quips.

Mammals of the World, Arise!

Scientists are still seeking ways of eliminating not only human labor but even automation which in itself has eliminated thousands of jobs. The objective is to train animals to do the work of both men and machines. For example, geese have been trained to replace agricultural workers in the American southwest by gobbling up the weeds, and only the weeds, in cotton fields. In San Francisco, Dr. Thom Verhave has trained pigeons to inspect drug capsules and eliminate the capsules that are dented or off-

color. Even more impressive, Dr. William Cummings, of Columbia University, has been able to train pigeons to inspect transistors for radio and TV sets, and industrialists are debating whether to try his system. In Malaya monkeys have been trained to skinny up palm trees, pick coconuts and toss them accurately into a truck. And in Key West, Florida, Professor Lawson Englewood is convinced he can train dolphins—reputedly the brainiest of beasts—to tow huge fishing nets which would eliminate trawlers and fishermen.

READING TIME

A REVIEW OF RECENT BOOKS

AM-FM Broadcast Operations (Volume 2, *Broadcast Engineering Notebooks*), Howard W. Sams & Co., Inc., Indianapolis, Ind., 240 pp., \$5.95.

There have been few comprehensive texts of practical value for broadcast-communications personnel. The second volume of the "Broadcast Engineering Notebooks" series, *AM-FM BROADCAST OPERATIONS*, contains a wealth of information pertinent to day-to-day radio broadcast operations.

Written by noted authority Harold Ennes, maintenance supervisor for Television City, Inc. (WTAE-TV), Pittsburgh, where members of Local 1987 are employed, this new volume is a ready reference for broadcast station personnel, as well as a text for home-study or classroom use.

Planned to serve as a broadcast operator's handbook, *AM-FM BROADCAST OPERATIONS* completely describes every phase of AM and FM broadcasting, including theory, studio equipment and procedures, remote pickups, as well as transmitting equipment. Included are control room and studio layouts, acoustics, microphones and sound pickup techniques, recording, remotes, transmitter operator duties, monitor facilities, SCA multiplex, and numerous other subjects.

Presented in 4 Sections, the content includes: What the Operator Should Know About Theory; Operations at the Studio; Operating Outside the Studio; Operating the Transmitter.

Solving TV Tough-Dogs by Robert G. Middleton, Howard W. Sams & Co., Inc., Indianapolis 6, Ind.; 128 pp., \$2.50.

What is a tough-dog? Almost any TV service technician will agree certain circuit troubles he encounters pose real problems when it comes to solving them. *Solving TV Tough Dogs*, written for both experienced and beginning service technicians, explains the easiest methods for coping with these problems.

Drawing on his background in practical electronics work, author Robert G. Middleton tells the reader what to look for, how to understand what he sees, and the general principles for solving even the most misleading and difficult troubles. All the defects and troubles discussed are universal to present-day TV designs.

Beginning with some of the basic principles, such as how to properly interpret test-instrument indications, and "tricks of the trade," the content is arranged by trouble symptoms for use as a daily reference source. Each chapter is devoted to explaining the best techniques for locating the cause of specific troubles in

general symptom categories such as no picture, poor picture, sync troubles, raster problems, and video-sound circuit defects.

All service technicians will find the exceptionally large number of schematics and drawings and the easy-to-follow and authoritative text a helpful guide in analyzing all types of TV circuit defects.

Diagnostic aids, such as transistor demodulator probes, small diode modulators, etc., which can be easily built at home or in the shop, are described in the text. Diagrams and other aids to their construction and use are also given.

IBEW Members in Film On Jobs for Handicapped

"All the handicapped worker asks is a fair chance" and labor will do its "utmost" to see that he gets it, AFL-CIO Pres. George Meany declares in a new film produced by the federation in cooperation with the President's Committee on Employment of the Handicapped.

The film, which deals with "the how of hiring the handicapped," is titled "They've Got What It Takes" and is scheduled for release soon.

The production features scenes of handicapped members of Local 1783, Intl. Brotherhood of Electrical Workers, on the job at the Pleasantville Instrument Corp., Pleasantville, N. Y. It also contains messages from Meany and IBEW Pres. Gordon M. Freeman, who is vice chairman of the President's committee and whose union contributed to the film's production costs.

In his message, Meany notes the part the labor movement has played in helping to expand rehabilitation and training services for the handicapped, but emphasizes that "this is only the first step."

"The decisive point," he states, "is that handicapped workers must have a chance to use the skills they have," and as the film shows, "the opportunities can be found if both labor and management have the will to find them."

He said that the AFL-CIO "is deeply committed to the principle of equal opportunity. We believe that every worker has a right to the kind of job he can adequately fill."

The handicapped worker, Meany declares, "has the same right to be judged solely on the grounds of what he can do."

"His ability, not his disability, is what counts," he adds.

As top AFL-CIO representative on the President's committee, President Freeman calls on all the 60,000 AFL-CIO local unions to cooperate with the committee's program and encourage the formation at the plant level of more union-management committees for the employment of the handicapped.



Telephone Is Handy Jack-of-All-Aids

The modern telephone is more than just a conversation piece.

Doctors can use the versatile device to transmit brain waves. Professors teach by phone, and musicians in Berlin can tune their instruments to the correct pitch by dialing a special number.

Dr. Alexander Graham Bell's remarkable invention has come a long way since his first call to Mr. Watson in 1877, the National Geographic Society says.

Doctors at the University of Louisville are experimenting with the transmission of impulses from the brain, heart, and muscles via the telephone. The technique would allow doctors in remote places to consult immediately with specialists in distant cities.

At Sweden's University of Gothenburg, English is taught systematically by intensive, 20-minute drills between teacher and student subscribers.

In Washington, D. C., a "Bellboy" personal paging system is being field-tested. The pocket-sized transistor receiver will "beep" to tell a person on the move that an important message awaits him at home or office.

Automation makes it possible to dial special numbers for a host of services from prayers to fairy tales in many cities throughout the world.

Vienna's telephone service is a lazy man's dream. He can be awakened or lulled to sleep. If the children are bored with father's bedtime stories, Aunt Fairytale steps soothingly into the breach via telephone.

Taped recordings suggest to Viennese what to cook for dinner, where to go for the weekend, even how to act: "Before presenting flowers to a lady, remove the paper wrapping. . . . Opera glasses are meant for looking at the stage, not scrutinizing other members of the audience. . . ."

Paris's famous S.V.P. (*S'il Vous Plait*) will dispatch a plumber or a dog walker, yoga instructor or electrician. Its cycling department delivers theater tickets, flowers, food, wine, and *billets-doux*.

Tourists in Holland use special telephones to obtain sightseeing information in English, French, German,

and Dutch. With each call, a drawer at the base of the instrument pops open to dispense folders and maps.

Recorded system in Bonn and Cologne feature movie and theater listings, recipes, stock quotations, and the names of doctors and druggists.

The Japanese telephone company, for a small fee, gives anxious parents regular reports on the whereabouts and welfare of children on organized overnight school excursions.

The telephone company at Hull, England, provides tales for tots, schedules of city events, and, at Christmas, the voice of Santa Claus.

Because the American telephone industry has grown so huge, it has not been feasible to develop the automatic services found in Europe. Americans own more than half the world's 142,000,000 phones.

But time and weather forecasts are common. In Washington, D. C., 477,000 persons dialed WEather 6-1212 one snowy January day in 1961.

Some cities have shopping hints, news reports, and prayers-for-the-day. Bird-conscious Boston has a recorded "Voice of Audubon" that tells which feathery friends are to be seen in the Common, on Jamaica Pond, and at Arnold Arboretum, then asks, "And what birds do you have to report?"





DISCUSSION—Joseph E. Taylor, right, Director of Skill Improvement Training, makes a point in the discussion, as other international representatives listen. Clockwise around the table, from left, they include: O. E. Johnson, Walter Reif, Russell D. Lighty, Albert O. Hardy, Taylor L. Blair, Jr., Kenneth D. Cox, Henry M. Conover and Freeman L. Hurd.

International Staff Confers

On May 13, 14 and 15, a meeting of some of the International Field Staff was held at the International Office in Washington.

This was an effort in a continuing series, to improve communications with each other and with the local unions all over the country, and to coordinate IBEW activities and policies.

Among the many subjects examined in detail was closed-circuit TV, functional music operations, common-ownership stations and their common problems, retirement programs, automation and its present effects, training and apprenticeships. A considerable amount of time was also spent on national agreements, present and proposed, on jurisdiction and jurisdictional conflicts, gov-

ernment operations, and the trend of bargaining, as well as new bargaining goals.

President Freeman came into the meeting and was involved in a question-and-answer period immediately following his general remarks to the group. On the legal side, Lou Sherman and Tom Dunn took time from their usual busy schedule to fill in gaps of knowledge, a session much appreciated by all. IBEW Training Director J. E. Taylor also made some helpful suggestions and answered questions at some length.

Those attending were International Representatives Henry Conover, Taylor Blair, Freeman Hurd, O. E. Johnson, Russell Lighty, Walter Reif, Joe Taylor, Ken Cox and Al Hardy.

How Can We Help Jobless Youth?

"Underlying all efforts to help youth," says the report of the President's Committee on Youth Employment, "is the need for expansion of the economy." That need is indicated in the figures cited by President Kennedy in his recent first annual Manpower Report prepared for Congress by the Department of Labor. During the 1947-1957 period nonfarm employment increased an average of 1.9 per cent, or 900,000 new jobs annually. But since 1957 the average has slowed to .9 per cent, or only 500,000 new jobs, not nearly enough for a growing work force. Youth, especially school dropouts and those with no special training skill, is hard put to snare a first job. And the number is rising rapidly as the wartime "baby boom" comes to adulthood.

A major area of need is the improvement of education among youth. Only half of our top third of high school graduates is going on to finish college but it is the college graduate who is in demand today. The Youth Employment Committee makes several of its 14 recommendations in the area of education. "The

link between job opportunities and better preparation is very close," says the report.

Among several specific steps recommended to local school boards is the proposal to "make available, for all youth capable of benefitting from it, an additional two years of school beyond high school." These years would provide "more adequate preparation for sub-professional and technical occupations" and improve the basic education of those who don't go on to college. Although in the last 10 years the proportion of workers with at least high school education has gone up by a fourth, from 42.3 to 53.8 per cent, we still have a third of high school students dropping out before graduation. Improving the system of vocational education, which is far below what is needed both in quantity and quality, is also high on the list of measures for meeting the youth employment problem.

—Rev. Clair M. Cook, TH.D.



Playback from YESTERYEAR

Last month we began a new feature in the TECHNICIAN-ENGINEER called "Playback from Yesteryear." This is the second edition. We'd like for our readers to send in contributions—old pictures, old tales, what-have-you—to make this the best of reading.

"Last night I got Kansas City!"

"Aaw, ya couldn't o'!"

But you *could* in the early 1920's. Amazing contraptions, built in barns and attics and basements across America, brought voices and music out of the air.

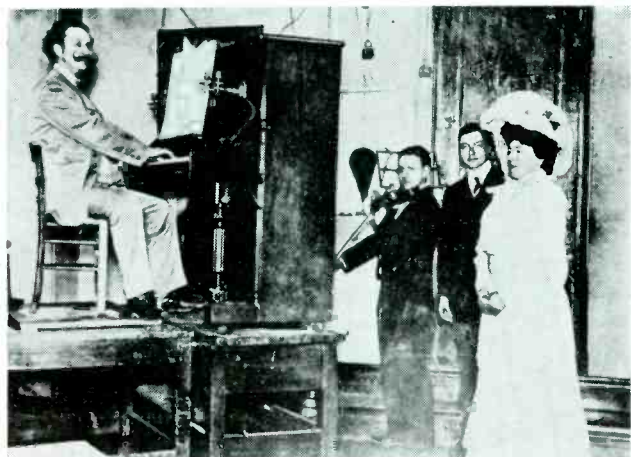
Early headphone-wearing listeners heard requests like, "If you're receiving this program, please drop us a card and acknowledge" . . . or "please stand by while we move the piano!"

Billy Jones and Ernie Hare greeted audiences with their famous "How do you do, everybody, how do you do?" The Happiness Boys were to early radio as Milton Berle was to early TV!

In those days, a microphone was called an "enunciator" and the first stations were housed in one room, studio, transmitter, and a.l.

In 1921, 300,000 receiving sets tuned in to the Dempsey-Carpentier fight, broadcast from Boyles' Thirty Acres in Jersey City. Pittsburgh's KDKA, pioneer radio station of the world, used a "Greek Courier Plan" to give its listeners up-to-the-minute baseball results.

A staffer sat in the top row of the bleachers at Forbes Field. At the end of each inning, he wrote results on a piece of paper, tied it to a rock, and threw the report over the fence. A "courier," stationed on the street below, ran with the message to the nearest pay-phone



THIS PICTURE of an early-day recording session, courtesy of RCA Records, shows the makeshift recording studios in the era of razz-ma-tazz.



IN 1924 American families with radio sets did their morning exercises under the instruction of John B. Gambling, whose physical fitness program was broadcast over WOR. Mr. Gambling is still broadcasting from the New York City station—no exercise, though.

and called the information into the studio.

On May 19, 1921, the first government market reports were broadcast, laying the groundwork for all future farm programs. Prices announced on that day: potatoes, \$1.75 a bushel; butter, 37½ cents a pound; eggs, 30 cents a dozen!

A radio performer's trademark was his theme song. Remember who came into your home to the tune of "Shine on Harvest Moon" . . . "Carolina Moon" . . . "When the Moon Comes Over the Mountain" . . . "My Time Is Your Time"? None other than Ruth Etting, Morton Downey, Kate Smith and Rudy Vallee.

Fake news flashes were outlawed in 1938 after the Orson Welles martian invasion hoax sent listeners screaming into the streets on Hallowe'en eve.

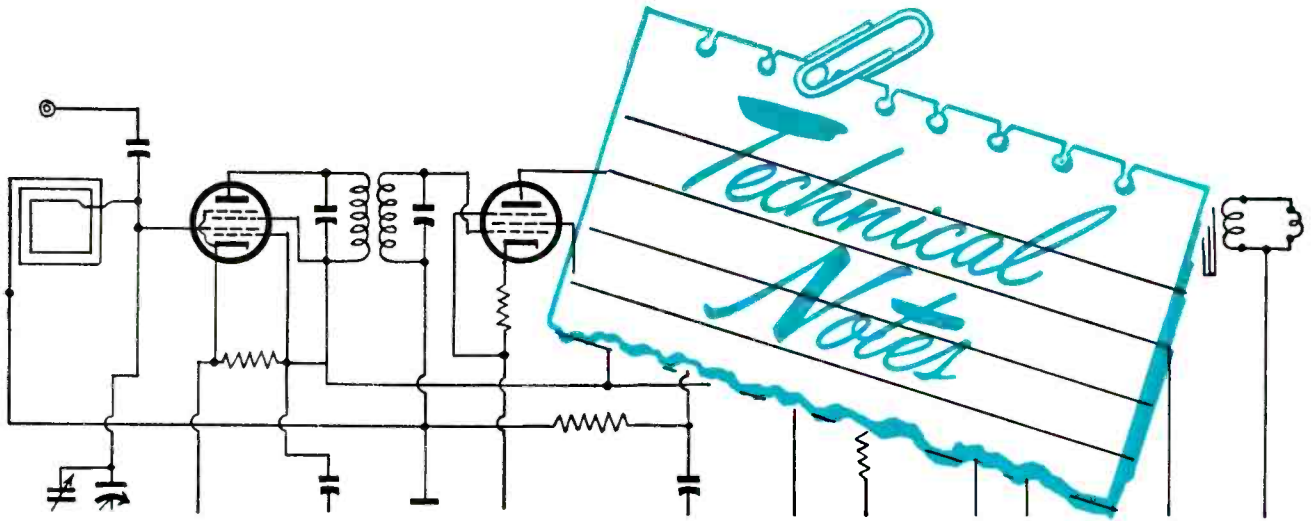
Thus it was in the heyday of radio.

Only Two Cents A Week

Two cents a week isn't a lot of money. But it adds up to a dollar a year (if money is entitled to a two-week vacation). In turn, that one dollar a year, if it's a dollar you give to COPE, adds up to better government and better laws for all our people.

The two cents a week pays big dividends. With it, you can get the best insurance available to safeguard gains made at the bargaining table. That insurance is a good Congress—made up of men and women who are concerned about the welfare and security of working people.

The annual Buck-for-COPE drive is on now. The voluntary dollars help elect good candidates—union members can't afford not to contribute.



FM STEREO MOVING UP

FM-stereo reception capability was contained in just a shade under 50 per cent of all radio-television combinations and radio-phonograph combinations produced during the first quarter of this year, the Electronic Industries Association's Marketing Services Department disclosed this month in a special quarterly report.

During the first quarter 1963, production of radio-TV and radio-phono combinations totaled 411,252, of which 205,217 had FM-stereo capability. A total of 24,465 radio-TV combinations out of the 62,816 produced could receive FM-stereo broadcasts. Of 348,436 radio-phonos produced, 180,752 were equipped to receive the signals.

As previously reported by the department, nearly 46 per cent (767,539) of the 1,677,385 combinations produced during the entire year of 1962 were capable of receiving FM-stereo transmissions.

IONOSPHERE COMPOSITION

Using the earth as part of a giant analyzing machine, Stanford University radio engineers are probing the electrified upper atmosphere, known as the "ionosphere," to discover precisely what kind of matter is up there.

For years radar has been used to find out how much ionization exists and where it lies in the upper regions, but the Stanford group is the first to use radar successfully to find out what compounds and elements are present.

So far they have identified ionized nitric oxide as the main component of the "E" layer, about 60 miles up. They believe nitrogen and oxygen also were present, but can't prove it yet.

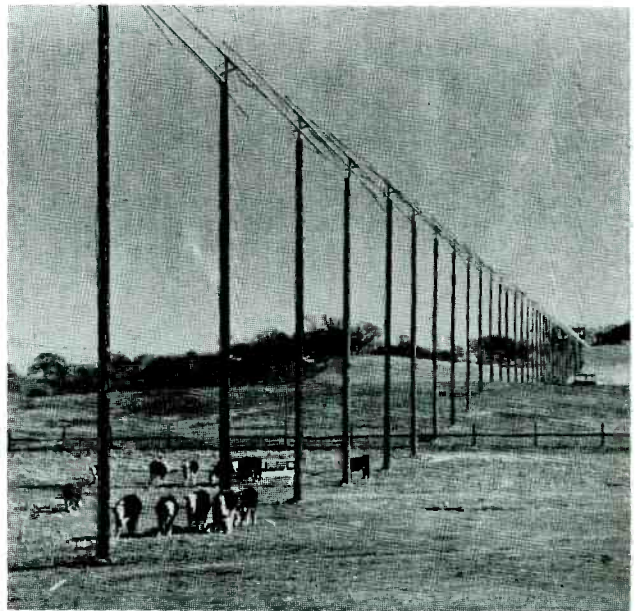
Their new technique is based on the principle of the mass spectrometer, an instrument long used to analyze compounds by ionizing small amounts of them. Ionized particles moving through the spectrometer's magnetic field are deflected from their paths at different angles, depending on their mass and velocity. And since different compounds have different masses, the machine sep-

arates them into identifiable groups. The analysis can then be shown on photographic plates, graphs, or gauges.

The Stanford group uses ground-based radar to read the analysis direct from the sky. The ionosphere itself provides—and consists of—the ionized particles of matter moving through a magnetic field (the earth's).

Analysis of the ionosphere is shown by fluctuations of reflected radar signals seen on 'scopes and graphs charted by the Stanford researchers' instruments. Their findings agree with those of spectrometers carried aloft by rockets.

The new technique is being developed by electrical engineering graduate students Lawrence Colin and Alan A. Burns, working under the direction of Prof. Von R. Eshleman of the Stanford Radioscience Laboratory. The Air Force Cambridge Research Laboratories support the research, which was discussed at a recent meeting of



SKY ANALYZER—Using this 2,000-foot Yagi antenna array on Stanford University's "antenna farm," radio engineers have made the first successful analysis of material contained in the Earth's electrified ionosphere, using ground-based radar.

the International Scientific Radio Union (URSI) in Washington, D. C.

A 40,000-watt transmitter and a 48-element Yagi antenna array on Stanford's "antenna farm" are being used in the experiments. The 2,000-foot-long array sends a narrow beam perpendicularly toward the invisible magnetic lines of force surrounding the earth.

At this particular angle, and at certain times when disturbances in the ionosphere cause concentrated "blobs" of ionization to appear, the Stanford engineers received strong radar echoes in a recurring pattern of fluctuations. Theory indicates the pattern is that of nitric oxide ions.

But the Stanford investigators are puzzled that they have been able to obtain these echo patterns only from the "E" layer. For various reasons they had expected best results from the "F" layer, about 180 miles up. Inexplicably, however, echoes from this region have so far failed to show an identifiable pattern.

Bigger, more powerful radar also has been tried by the National Bureau of Standards, using a huge 22-acre dipole antenna array near Lima, Peru. But NBS radio scientists at the same Washington meeting reported negative results in their search for similar patterns with the Peruvian antenna. These scientists have not yet concentrated on the special periods of "E" layer ionospheric disturbance during which the Stanford group obtained results, however.

The Stanford radio scientists are considering use of a 400,000-watt beam from the antenna farm's big 150-foot radar telescope dish in future experiments. In the meantime they are continuing the study with present equipment.

TV SCANS THE STARS

Should one visit Northwestern University's Dearborn Observatory one night and see the astronomers watching television, he should not accuse them of laziness. For astronomers and engineers at the Illinois facility are using electronic (TV) means instead of photographs to record the precious light from the stars, planets and moon.

Electronics is far more efficient in capturing and recording the photons of light from distant stars than is film, they report.

A TV camera is now mounted at the eyepiece end of Dearborn's century-old 18½-inch refracting telescope. For many purposes, this makes it as powerful as a 185-inch telescope using film.

Northwestern's Organ Pass, N. Mex., observatory is now using an image orthicon tube on its 12½-inch telescope to search the sky for "supernovae." These are the explosive deaths of some large stars. A supernova is often as bright as the light from all the millions of other stars in its galaxy.

But despite its brightness, a supernova is rare and

very far distant; so is ordinarily missed, except by luck. Therefore, Organ Pass is using the high speed of its TV-telescope to scan 400 galaxies each night, should spot about for supernovae a year. The idea is to spot them early in their critical 12-hour "rise time," then quickly notify other observatories with larger telescopes, who then can make detailed analyses of these most dramatic of celestial events.


IONOSPHERE SYMPOSIUM

A Symposium on the Ionospheric Propagation of VLF Electromagnetic Waves will be held at the Central Radio Propagation Laboratory, National Bureau of Standards, Boulder, Colo., on August 12 through 14, 1963. This will be a continuation of an earlier symposium on the Propagation of VLF Radio Waves held in 1957 at Boulder.

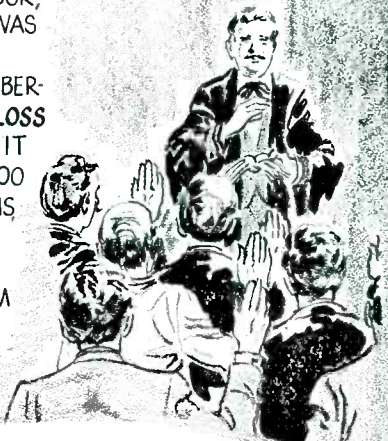
The Symposium will be devoted to subjects of current importance in terrestrial VLF propagation, with emphasis on the effects of the ionosphere. Subjects will include mode theory, theory of formation and physical characteristics of the lower ionosphere, and observations of VLF propagation under normal and disturbed conditions. Most of the papers will be invited from leading workers in these fields but some short contributed papers will be given.

Further information about the Symposium is available from Mrs. D. Belsher, Secretary, VLF Symposium, National Bureau of Standards, Boulder, Colo.

"LABOR FACTS"



THE NOBLE ORDER OF THE KNIGHTS OF LABOR, ORGANIZED IN 1869, WAS A **SECRET SOCIETY** BECAUSE UNION MEMBERSHIP OFTEN MEANT **LOSS OF A MAN'S JOB!** IT GAINED OVER 700,000 MEMBERS! THE SIGNS, RITUALS AND PASS-WORDS PROTECTED THE MEMBERS FROM EXPOSURE AND POSSIBLE IMPRISONMENT!



TODAY, THERE ARE OVER 17,000,000 AMERICANS WHO ARE UNION MEMBERS AND THEIR UNIONS HAVE BECOME A BASIC PART OF OUR WAY OF LIFE!



STATION BREAKS

OUR CANDID CAMERA



IBEW Counsels Laurence J. Cohen and Louis Sherman were conferring on a broadcasting problem when the all-seeing eye of our camera came by the Law Library at the International Office.

JOB-CREATION PRIORITY

Retraining of workers is highly important in the battle against unemployment, in the opinion of a University of Michigan economist, but job creation is of even greater importance.

Initiation of a nationally sponsored retraining program, Professor William Haber said recently, is a forward step but it would be a serious error if too much reliance is placed on it as a solution to the entire problem of unemployment.

Retraining may be the only way for long-term technologically unemployed workers to get a new start, but Haber branded as "exaggerated" any expectation that even half of the million long-term jobless could be retrained and placed in jobs over the next three years.

Haber, chairman of the department of economics at Michigan and a widely known authority on manpower, spoke at a conference on Unemployment and the American Economy presented by the Institute of Industrial Relations at the University of California, under Ford Foundation sponsorship. (PAI)

PRODUCTIVITY VIEWPOINT

President Claude Jodoin of the Canadian Congress of Labor recently made this observation on productivity:

"Some people seem to regard this as a magic word that holds the answer to all our problems. I am absolutely sure our national productivity suffers very greatly from unemployment. Men and women lined up outside employment offices are not producing. How can they be?"

"If measures to increase productivity are to result in major shifts in employment, then they must be preceded by action to protect the employees concerned."

MEMBER LOST ON THRESHER

The Brotherhood lost one of its members in the sinking of the submarine Thresher which went down with 129 men off the New England coast.

He was George J. Dineen, 40 years old, a member of IBEW Local 2071 at the Portsmouth, N. H., Naval Shipyard. Dineen was a civilian who went on the submarine's test trip as a master electrician.

He is survived by a wife and three children.

LAST LAUGH



693.

CARL STAMMWITZ

"The best remedy for your type of inferiority complex, Mr. Moody, is a union card!"

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