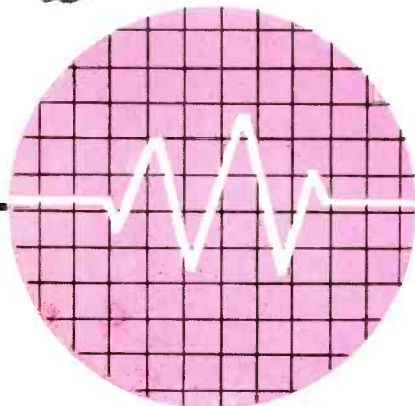
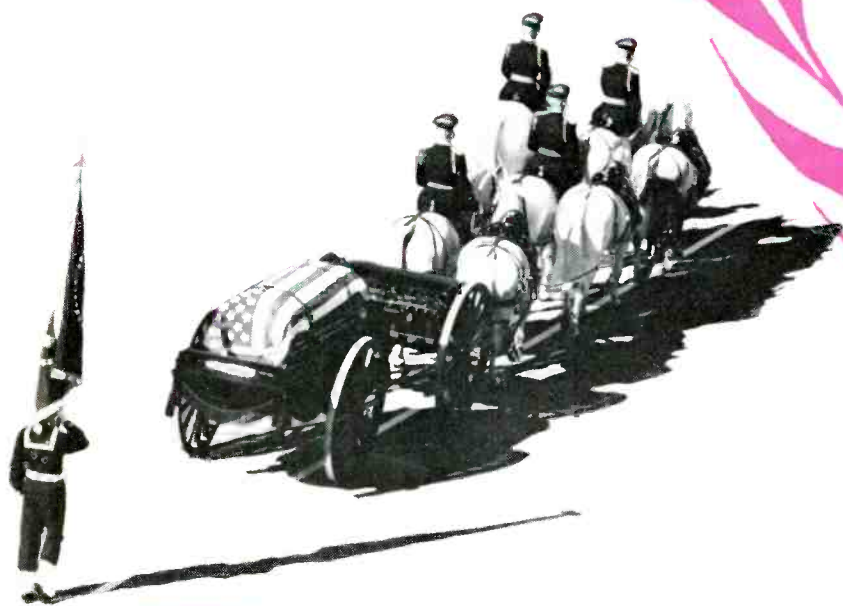


*"Be strong and of a good  
courage; be not afraid,  
neither be thou dismayed . . ."*

*Joshua 1:9*



# TECHNICIAN ENGINEER

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

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS — AFL-CIO

# Passage of the WAGNER ACT Creating the NATIONAL LABOR RELATIONS BOARD

JULY 5, 1935

On July 5, 1935 President Franklin D. Roosevelt signed into law a bill establishing a National Labor Relations Board. The statute known popularly as the "Wagner Act" broke new legal ground in the area of labor relations.

The Blue Eagle, symbol of the National Recovery Administration, was shot dead on May 27, 1935 by a Supreme Court decision in the now famous "sick chicken" case. With the labor bargaining jeopardized, agitation was intense in the spring of 1935 for congressional action. Supporting the Wagner proposal was the bulk of organized labor and AFL President William Green said that "... the spirit of the workers in America has been aroused. They are going to find a way to bargain effectively ... We cannot and will not continue to urge workers to have patience, unless the Wagner bill is made law and unless it is enforced, once it becomes law."

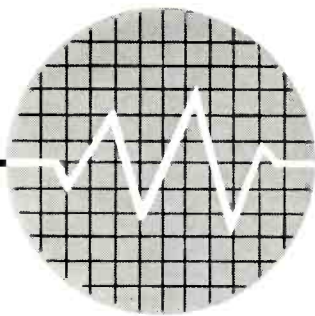
Under the new law the right of workers to organize and bargain collectively was upheld and employer interference was expressly forbidden. Company-dominated unions were outlawed and the law was designed to advance bona fide unionism. A National Labor Relations Board of three members was established — the law was called the National Labor Relations Act.

The purpose of the law was best put by the President when he signed the measure and said, "A better relationship between labor and management is the high purpose of this Act. By assuring the employees of the right of collective bargaining it fosters the development of the employment contract on a sound and equitable basis. By providing an orderly procedure for determining who is entitled to represent the employees, it aims to remove one of the chief causes of wasteful economic strife. By preventing practices which tend to destroy the independence of labor, it seeks for every worker within its scope, that freedom of choice and action which is justly his."

The Wagner Act has been called "Labor's Magna Carta" and is most certainly one of the great landmarks of labor of our time.



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The INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS  
GORDON M. FREEMAN International President  
JOSEPH D. KEENAN International Secretary  
JEREMIAH P. SULLIVAN International Treasurer  
ALBERT O. HARDY Editor, Technician-Engineer



# TECHNICIAN ENGINEER

VOL. 12, NO. 12  
ALBERT O. HARDY, Editor

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*the cover*      Unquestionably, the largest radio and television audiences in history watched and listened during the fourth weekend in November, and on November 25th. As John Fitzgerald Kennedy was moved from the Capitol Rotunda to the White House, and then to St. Matthew's Cathedral and Arlington National Cemetery, a nation—and the world—grieved and mourned and, at the same time, admired the courage, and the pride and the dignity of the young widow.

The Eternal Flame she ignited on the Arlington hillside serves to remind those he left behind of the departed leader, of the work unfinished and the courage and dedication of the late President. His acceptance of the Democratic party's nomination included his quotation from the Bible: "Be strong and of good courage; be not afraid, neither be thou dismayed."

*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 1962 figures: October, 1963—107.2; October, 1962—106.1.

*commentary*      We cannot maintain our way of life if we pay attention only to those who cut coupons, those who manage and are paid to manage, those who invest. We have no quarrel with the system itself. We have no quarrel with the system which gives investors a return for risk capital. We have no quarrel with the overall system of profit.

But we say that into that system goes the labor of mind and of heart and of hand of those at the bottom of the economic ladder. We say that those at the bottom of the economic ladder have a right to a fair share of whatever wealth is produced under this democratic society, under this so-called profit system or investment system or anything else that you want to call it—capitalistic or not.

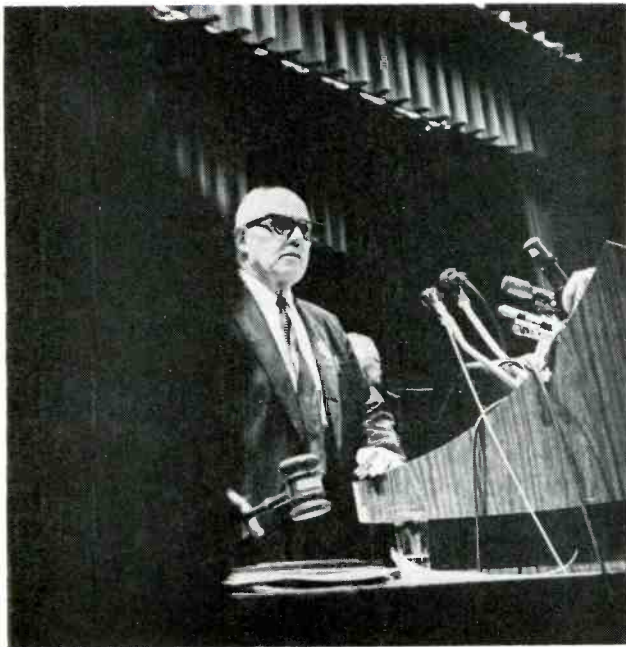
Excerpted from a speech by AFL-CIO Pres. George Meany to an annual safety awards dinner of the Brotherhood of Locomotive Firemen & Enginemen.



**PRESIDENT KENNEDY** delivers his last major address to a labor group at the AFL-CIO Convention in New York City, exactly a week before his assassination in Dallas. Seated at the table, from left, are AFL-CIO Secretary-Treasurer William Schnitzler, AFL-CIO President George Meany, Railway Clerks President George Harrison, and U.N. Delegate Adlai Stevenson. Among the labor leaders in the background, many readers will recognize Harry Van Arsdale, business manager of IBEW Local Union 3, who served as temporary convention chairman.

## NEW YORK IS SCENE OF AFL-CIO CONVENTION

### *President Kennedy, Secretary Wirtz Address Labor Delegates During Deliberations*



**GEORGE MEANY** sounds the gavel, opening the convention.

**I**N the midst of a period which produced many encouraging statistics of business growth and improvement, the fifth Convention of the American Federation of Labor and Council of Industrial Organizations took place in New York City, November 14th through 20th.

Unquestionably, one of the highlights of the Convention was the address, on November 15th, by the President of the United States. Mr. Kennedy spoke at some length on his proposed tax-cut bill and went on to say that "powerful and articulate enemies" of his program campaign on a platform of so-called individual initiative . . . But they do not have a single, constructive job-creating program of their own and they oppose the efforts that we are making."

The late President said that the 4 million unemployed represent "intolerable waste" and emphasized that last year's loss of man-hours because of unemployment was "equivalent to shutting down the entire country for three weeks, with no pay." He commented on the civil rights issue, and stated, "No one gains from a fair employment program if there is no employment to be had."

**Technician-Engineer**

Mr. Kennedy said that "we can take real pride" in our job capacity and our economic activity "only when they are underwriting, to the fullest extent, the programs to improve our schools, to rebuild our cities, to counsel our youth, to assure our health, and to care for our aged and infirm."

Immediately following the President's address, AFL-CIO President Meany said that the convention was deeply grateful for his message and added that Mr. Kennedy had "said what needed to be said, about the problems as we see them."

**T**HE Secretary of Labor, the Hon. W. Willard Wirtz, told the Convention that half-measures are not going to work, that "an all-out" commitment to full employment is a first order of business and praised the AFL-CIO for having been instrumental in bringing a new sense of urgency to the problem. He spoke of juvenile delinquency being "in large part the fallout from unemployment" and added, "Boys are not worse than they used to be; it is just that more of them haven't anything to do." He spoke of the resolutions before the Convention, medical protection for the aged, unemployment insurance improvements, the extension of minimum wage coverage, and so on, and referred to them as "a proud and magnificent statement of the authentic American purpose—not just for labor, but for America." He lauded the Convention's proclamation that "it considers freedom's residence as not this country alone, but all the world."

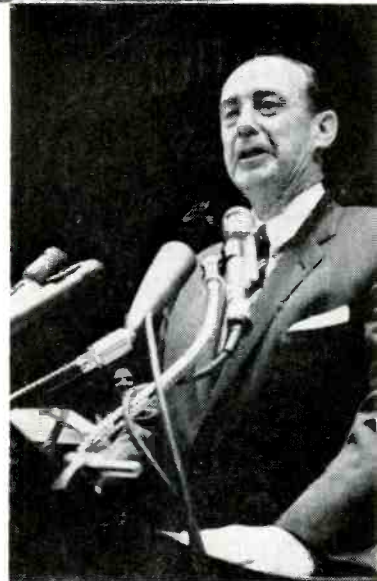
The Convention also passed resolutions on civil rights, the guarantee to teachers and other public employees to join unions of their choice, so-called "right-to-work" laws, aid to education, strengthening the alliances of Western nations, organizing the unorganized workers of the United States, malapportioned state legislatures and Congressional districts, and many others.

The Director of the Federal Mediation and Conciliation Service, William E. Simkin, told the Convention that collective bargaining, thanks to enlightened and responsible leadership by the AFL-CIO is "doing a better job today than would be performed by most of its critics," if the latter had the power to decide rather than to criticize. He went on to say that the needs for "sophisticated and mature collective bargaining" has never been greater.

Mr. Simkin pointed out that the negotiation of agreements, with emphasis on wage increases was relatively simple when wage increases could be passed on to the consumer. Today, he said, the picture has grown to be quite different—general wage increases are usually secondary to other issues. The relative values of alternate benefits, especially those involved in national interests, have to be and are taken into account.

He said that union leadership is not flawless, but that the institution of collective bargaining "has potentials

**ADLAI STEVENSON** thanked AFL-CIO unions for their support of the Eleanor Roosevelt Memorial Foundation, which he heads. In view of the national tragedy a week later, other words he spoke were ironic. He told delegates: "I want you to know that it is good for me to be among old friends, among dear friends, among friends in fair weather and foul, especially after my recent experience in Dallas."



**W. WILLARD WIRTZ**, U. S. Secretary of Labor, told delegates that "collective bargaining is working with a record minimum of lost time from strikes. If the next six weeks proceed as appears likely, there will have been fewer work stoppages in these past three years than in any previous three-year period since the 1930's."



**WILLIAM SIMKIN**, Director of the Federal Mediation and Conciliation Service, told the convention that "the need for labor unions and for enlightened union leadership is as great today as it ever has been." Later in his address, he said, "The need for industrial democracy in the form of really sophisticated collective bargaining has never been greater."



**GORDON FREEMAN**, President of the International Brotherhood of Electrical Workers, in addition to heading a group of 12 IBEW delegates, also served as secretary of the Committee on Constitution. In the latter capacity, he made the committee's official report to the convention.



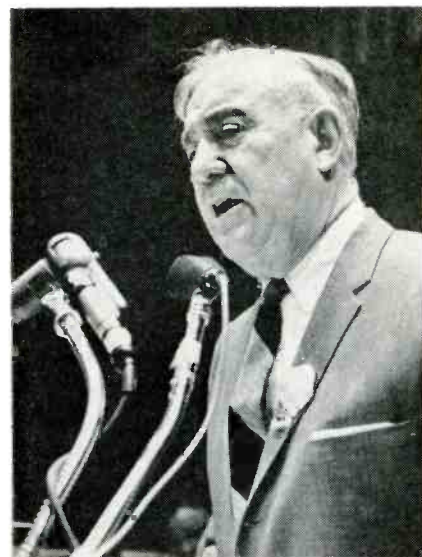
that can result in achievements more realistically significant than any achievements of the past."

U. N. Ambassador Adlai Stevenson spoke briefly to the Convention, expressing gratitude to the AFL-CIO members for their support of the Eleanor Roosevelt Memorial Foundation. He, as Chairman of the Founda-

tion, said he was grateful to President Meany and the other labor leaders who are helping carry on, through the Foundation, "the work of that good, great and glorious woman," especially in the field of the humanities. He aptly described Mrs. Roosevelt as "the most beloved and perhaps the most widely-respected woman of this century."



**AS PRESIDENT KENNEDY** reached the platform of the AFL-CIO Convention, a young woman brushed past guards and photographers in an effort to reach the Chief Executive for a handshake. AFL-CIO President Meany restrained her breach of decorum, but Mr. Kennedy laughingly greeted her with an extended hand.



**JOSEPH D. KEENAN**, International Secretary, served the convention in several capacities—as a member of the escort committee for the Assistant Secretary of the International Affairs Organization, as a member of other committees, and as a delegate to departmental meetings.

**A WIDE-RANGING** civil rights resolution rededicating the trade union movement "to the cause of freedom and equality for all Americans" was adopted unanimously by the convention in a special order of business. President Hank Brown of the Texas Federation of Labor, shown at right, was one of the floor speakers.



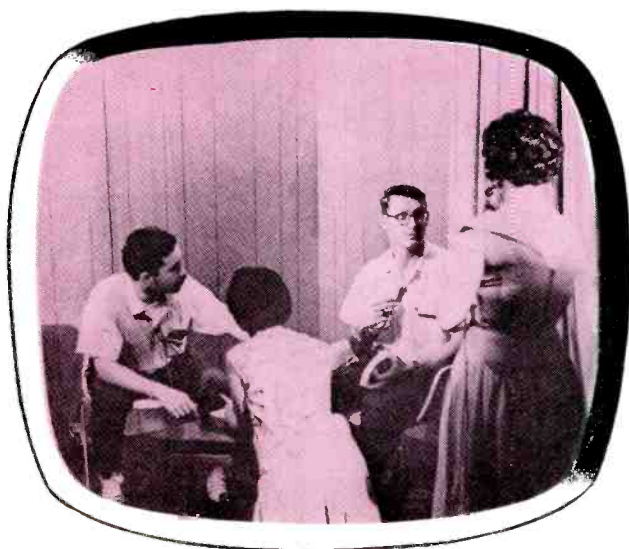
**SOME 300 TRADE UNIONISTS** from all over the world attended the convention, including the delegate from a Turkish trade union being introduced at right. One invited foreign visitor failed to show, and for a good reason. George Meany read the foreign labor leader's cable of apology, which said, "Still in jail. Stop. If liberated, will arrive the 14th. If not, sorry.

Alphonse Kithima." Meany explained that Kithima is general secretary of the National Union of Workers of Leopoldville, Congo, and that he was jailed for union activities.

There were 110 visitors from Latin America, plus another 40 students from the American Institute for Free Labor Development. Trade unionists came from 16 other countries as well. Special programs set up for the visitors were made possible by \$5,000 in contributions from AFL-CIO affiliates.



## PEACE CORPS LAUNCHES TV PROJECT IN COLOMBIA



**I**N the two years and 10 months since President John F. Kennedy set up the Peace Corps thousands of young and vigorous Americans—most of them just out of college—have been sent to scores of nations to tackle varied but vital projects which will help the people of these nation's to better their standards of living.

Corpsmen are showing natives of Kenya and Tanganyika how to build roads and bridges. In Pakistan they are demonstrating methods of sanitation and irrigation for farming. In Nigeria, the Philippines, and other nations they are teaching children. Some are engineers, carpenters, plasterers, and bricklayers.

This month, for the first time, they are becoming broadcasters. They are establishing an educational television project in a South American nation which promises to show the way for similar projects of enlightenment in scores of other countries.

In the city of Bogota, Colombia, more than 8,000 feet up the slopes of the terminal ranges of the Andes, 90 Peace Corpsmen and an almost equal number of native Colombians are setting up production units to bring education on a broad scale to the almost 14 million people of this old South American country, via a government-operated nationwide network.

Colombia is an old and proud American republic, discovered and settled only a few years after Christopher Columbus first sighted land in the New World. And yet it is, like many other Latin American nations, low in literacy. It is estimated that more than half of the people of Colombia—who are, for the most part, Indians, Negro and Spanish—cannot read or write. The average school teacher in Colombia has a fifth-grade education.

Colombia was one of the first nations to receive Peace Corpsmen. Today it has the largest contingent of Peace



**COLOMBIA** is one of the oldest nations in the Americas. Warren W. Wiggins, associate director of the Peace Corps, indicates its location on a wall map in the board room of the Corps Washington headquarters.

**IN THE PHOTO** at the top of the page, Peace Corps and native Colombian trainees stage an educational interview program while in training at KUON-TV, Lincoln, Nebraska.

Corpsmen overseas. By next spring there will be 650 PC volunteers working there, mostly in community development, public health, urban community action, and university teaching.

This total will now include four varieties of Corpsmen trained in educational television. Some will be continuity writers; others will be technicians; others teachers; and 18 will be in production. A few of the volunteers had ETV experience before joining the Corps. All of them received training at two ETV stations in the United States—KNME-TV, operated by the University of New Mexico at Albuquerque, and KUON-TV, oper-



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**LARRY McMULLEN** of Yanceyville, N. C., was one of the first Peace Corps trainees to prepare for the big ETV job in South America. He was one of 18 PCTs, as they're called, to receive an intensive course in television production at the studios of KUON-TV, Lincoln, Nebraska, and additional sessions in programming at KNME-TV, Albuquerque, New Mexico, for the Colombian assignment. The pictures above show some of the elements of this training: 1. He learned video shading from a KUON-TV engineer. Although PCTs will function mainly as production teams, all of the trainees were briefed on the operations performed by engineers, so that they would understand the interrelationships of the various specialized jobs. 2. KUON staffers taught the trainees the work of the director, technical director, and audio in its own control rooms. Directing this

ated by the University of Nebraska at Lincoln, Nebraska.

Heading the production crew, which began work this month at Bogota, is a 42-year-old veteran of 11 years in various broadcasting posts, John McGhee of Encino, California.

Colombia is uniquely prepared for what a Peace Corps official calls "a large dose of assistance." It has South America's largest television network, ready for ETV adaptation, thanks to the efforts of Rojas Pinilla, president of the nation until he was deposed in 1958. Emulating General Batista of Cuba, Pinilla established a government-operated net under his Ministers of Education and Communications, and, working through an inter-agency commission, he saw to it that both government-sponsored and commercial shows reached the most remote provinces of the republic. There are eight VHF stations on U. S. standards, and eight translators, which

are able to cover 85 per cent of the population and 94 per cent of the schools. The network boasts what is probably the world's longest microwave jump—a relay of 240 miles between two peaks of the snow-covered Andes.

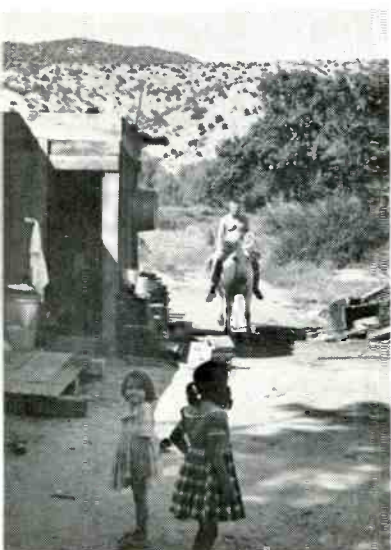
In addition to all of this, there are approximately 150 radio stations, all privately owned, and there is a church educational effort via radio being conducted by Monsignor Jose Salcedo, native Catholic cleric, which is supported by overseas church and charity groups.

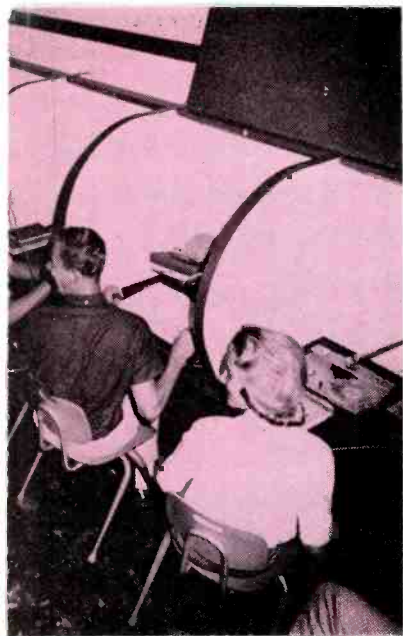
The existing TV network is on the air eight hours a day, from 3 to 11 p. m. The U. S. Information Agency supplies much material for broadcasting, but the net obtains its revenue and is practically self-supporting, thanks to a regular schedule of commercial broadcasters.

The plan now is to gradually change over the existing network to an all-ETV, government-operated, net and, at the same time, authorize private commercial stations, with revenue gained from commercial franchises going to support the ETV net. As commercial programming exits from the existing net, the government will lease channels to private investors in the manner of our own FCC.

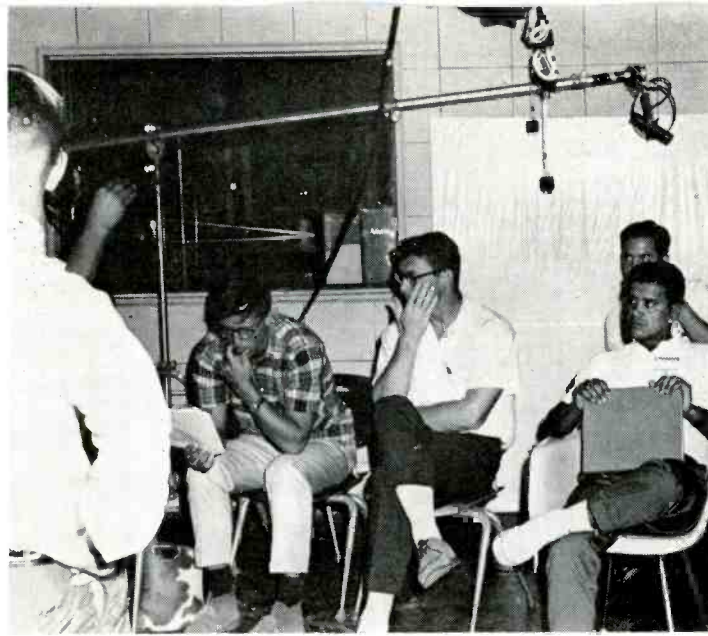
The Ministries of Education and Communications anticipate an upsurge in broadcasting, once the change-over begins. Because of this, broadcasting unions in Colombia have supported the Peace Corps project and permitted their members to go to the United States to train with Peace Corpsmen in the new work. The government network is manned by union technicians now, and additional technicians are being trained at the Colombian Institute for Training Technical Apprentices

**BASIC TRAINING** for all Peace Corps trainees consists of an exposure to "the rudiments of community development." Trainees spend several days at a time working in the small Spanish-American hamlets around Taos, New Mexico. Here a trainee for Colombia rides to his job, back-country style.





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evening workout was PCT Peter Gyfteas. TD was a Colombian named Rafael Puentes, and Larry McMullen handled the audio board. 3. Each day at Lincoln began with a Spanish language class. Modern language teaching methods, with tapes, were used. Students worked with earphones and mikes. 4. The trainees had informal critiques following each program. Some of the more advanced shows, produced during the last phase of four-week training, were video-taped and played back. 5. Larry McMullen, who entered the University of North Carolina on a football scholarship and earned an MA degree in drama, found TV production to his liking, but here he handled a studio camera. Trainees also received the regular Peace Corps physical fitness training and general briefings on the purposes of the Corps.

(SENA), a school co-sponsored by government and industry.

Several participants in the PC project have been trained in the maintenance and repair of receivers, and these people will assist 50 Americans and 50 Colombians trained to work "in the field" with local school teachers, who will adapt the ETV programs to their classroom instruction. Most of this latter group completes its special training at KNME-TV, Albuquerque, this month.

The Colombian network is hiring a complete second shift of personnel, for the Peace Corps pilot project will be aired during the morning hours, from 8 a. m. to noon, starting next February.

The teams will beam supplementary educational material of a general nature and will offer full courses in 5th grade natural science and 6th grade music at the start. Other courses will be added to the ETC curriculum, as the program becomes more proficient. Eventually there will be evening programs for the adult population.

Tedson Meyer, former assistant to Newton Minow and now special consultant to the Peace Corps for the broadcasting project, states firmly: "The mission of the Colombian program is specific and simple. It is not to elevate the educational level of 14 million people in two years, but to train a cadre of Colombians to 'go it alone' and develop the program beyond what the pilot project can do."

The project is designed on a "one to one basis"—one American for every Colombian. The hope is that the project will "build a TV arm into a national educational system."

The program has some competent leaders. Dr. John Winnie, former ETV Center director at the University of Iowa, now holds the project together in Bogota. The chief engineer of the government net, who will lend his experience to the venture, is a German engineer formerly with Radio Liberation in Europe.

The project comes well equipped, too. Thanks to a \$575,000 grant by the Alliance for Progress, the U. S. General Services Administration has purchased 1,500 23-inch Admiral receivers. The first 400 of these reach Colombia this month and will be installed in schools clustered around the major cities. (There are, at the present time, approximately 200,000 receivers in Colombia, of which an estimated 125,000 are in working condition.)

An Ampex video tape recorder has been purchased, and two Colombian technicians have been trained at the manufacturer's Redwood City, California, plant in its operation.

By the end of 1964, most of the school children of Colombia will have received their first big glimpse of the outside world and its new horizons, thanks to the Peace Corps and a team of good Colombia neighbors to the south.

**CREDITS:** Pictures of the Peace Corps trainees at Station KUON-TV, Lincoln, Nebraska, were taken by a fellow trainee, Charles Marden Fitch, who is now on duty in Colombia. The picture of Associate Peace Corps Director Wiggins is by Merkle Press Inc. All others are official Peace Corps photos. Our thanks to Tedson Meyer, Peace Corp consultant; William M. Shimer, assistant program manager, KNME-TV, Albuquerque, N. Mex.; Ron Hull, program director, KUON-TV, Lincoln, Nebr.; and Patricia Hughes of NET Information Services, New York City, for assistance in preparing the story.

# What's a 'Good Union'?

*Reprinted from "The Hands That Build America," a recent, special AFL-CIO Supplement in The New York Times.*

**W**HAT is the definition of a "good union"? What are the basic qualities involved? There are a number of answers, depending on where the question is asked. Some management quarters still hold to the concept of the western pioneers, "the only good Indian is a dead Indian." To them the only good union is a dead union. But there are sounder standards.

Is it simply a matter of longevity? Can it be assumed that a union is good because it has lasted for generations?

Obviously, age is one indication that a union is serving a useful purpose, but it is not decisive. All established institutions—including unions—tend to be self-perpetuating. So age is not an adequate test.

Then there is the matter of size. Size is clearly not a way to measure quality. There are good small unions and good large unions in the AFL-CIO. And there is one very large union outside the AFL-CIO which cannot be described without great controversy.

Then there is the question of power, the power to win economic battles; the power to sustain strikes until they are won. There is no doubt that a good union needs to be a strong union. But here again, power alone is not enough. There are strong unions which are not good unions. Union power must be viewed in the context of "power for what?" And this makes it clear that strength, though necessary, does not necessarily result in a good union.

What about the exercise of power? What about the strikes or the lack of strikes?

The newspaper editorial writers would have the public believe that a good union never gets involved in a strike. It is true that some good unions have long records of industrial peace. This is commendable—as long as the interests of the members have been protected and advanced during the periods of peace. But that is possible only when employers, too, sincerely want a fair agreement, one that will give workers what they properly should receive.

Some good unions have a great many strikes. They are found in those industries where management as a whole has never become reconciled to collective bargaining; where its aim is not only to force the hardest economic bargain, but to hamper in every possible way effective functioning of the union itself.

The strike record of a union is not a good measuring rod. And neither is the opinion of the newspapers.

Having ruled out these factors, what about the posi-

tive side? What qualities need to be present in a good union?

First and foremost, a good union must be able to protect its members and win a reasonable measure of economic justice for them.

Since power was ruled out as the ultimate test of a good union, this may seem contradictory. Actually, it is not. Unions need to be strong. But they need to be strong in terms of how well they can meet the needs and fulfill the proper aspirations of their members. A good union looks upon power as a means, not an end.

Second, a good union must be run by the members and for the members. It must be a representative democracy of the highest type. There must be leaders—strong leaders, able and willing to stand firm for what they believe is right, and to fight for it against what might appear at times to be a popular position. But they must always be subject to the support or the rejection of the general membership of the union.

Third, a good union must be an honest union. This goes beyond finances; just being "money honest" is not enough. The integrity of a good union is all-inclusive. It extends to its relationships with employers; to what it says to its own members; to the formulation of its policies and the evaluation of its own performances.

Fourth and last, but by no means the least, a union must look beyond its own horizons. It must recognize and fulfill its proper role in the life of the nation and the community in which it lives.

A good union is concerned with politics and with legislation at every level. It lends its support to community projects and services, such as the United Fund and the American Red Cross. It is dedicated to the proposition that the ultimate objective of a union in improving the lot of its members, is to improve and strengthen the nation as a whole.

For example, a union can very easily avoid a strike by agreeing to its own destruction at the hands of an intransigent employer. But avoiding a strike on these terms does not serve the national interest; it weakens it. Under those circumstances, the interests of the members are identical with the national interest, and a good union is aware of that fact.

The protection and betterment of the membership; unflagging adherence to democratic practices; total integrity; broad civic spirit. These are what make a good union.

—George Meany



## READING TIME

### Review of Current Books on Labor, Broadcasting & Recording

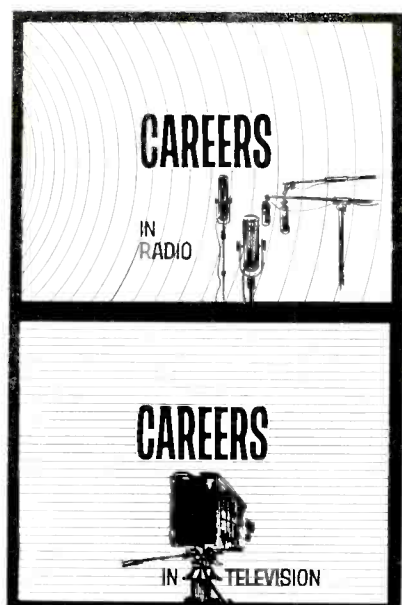
**Careers in Television**, National Association of Broadcasters, 1771 N Street, N. W., Washington, D. C. 20036. Single copies free.

**Careers in Radio**, National Association of Broadcasters, 1771 N Street, N. W., Washington, D. C. 20036. Single copies free.

Broadcasting is an exciting industry for the average layman . . . and, hopefully, for those of us at the controls as well. Here are two booklets recently published by a management association to interest young people in broadcasting jobs.

Under a heading "Finding a Job in Television," NAB advises the young hopeful, "Television holds many rewards for the talented, the persistent and the lucky—but competition for jobs is stiff when you are after them, and often stiffer when you get them. Security depends on ability, not seniority . . ."

Under "A Word About Education," the reader is told: "A high school graduate may be able to get a job as a salesman, for example, and he may be talented enough to progress to management ranks without a college degree, but his opportunities are much greater if he has one. This is also true of the technician. Minimum technical training will enable a man to operate cameras, sound booms, and turntables, but more advanced knowledge is required to determine which equipment the station should buy, to ensure that the station is technically complying with the requirements of the FCC, or to supervise a large department."



**THE RADIO BOOK**  
outlines vocations  
and opportunities  
in 20 pages of  
text and pictures.

**THE TV BOOK**  
is an up-to-date  
summary of the  
division of labor  
in the television  
industry.

Station engineering gets its kudos in a special section, wherein the NAB booklet states: "The engineering department is the vital link between the television station and the public. All of the work of the program and sales departments, as well as all of the other employees of the station, depends on the strength, clarity, and reliability of the signal which is sent out from the station's transmitter. The transmitter must be periodically inspected and adjusted to assure proper operation, and studio equipment must be maintained at peak performance."

The latter statement is reassuring in view of the NAB's recent position regarding operator rules for broadcasting stations.

Note the following statement also:

"To progress to the top technical ranks in broadcasting, a first class Radiotelephone Operator's license is essential."

The companion to the television booklet, called *Careers in Radio*, uses almost identical language to describe the role of the radio technician. The engineering department of a radio station is also "the vital link."

"Minimum technical training will enable a man to operate microphones and turntables, but more advanced knowledge is required to determine which equipment a station should buy, . . ." etc.

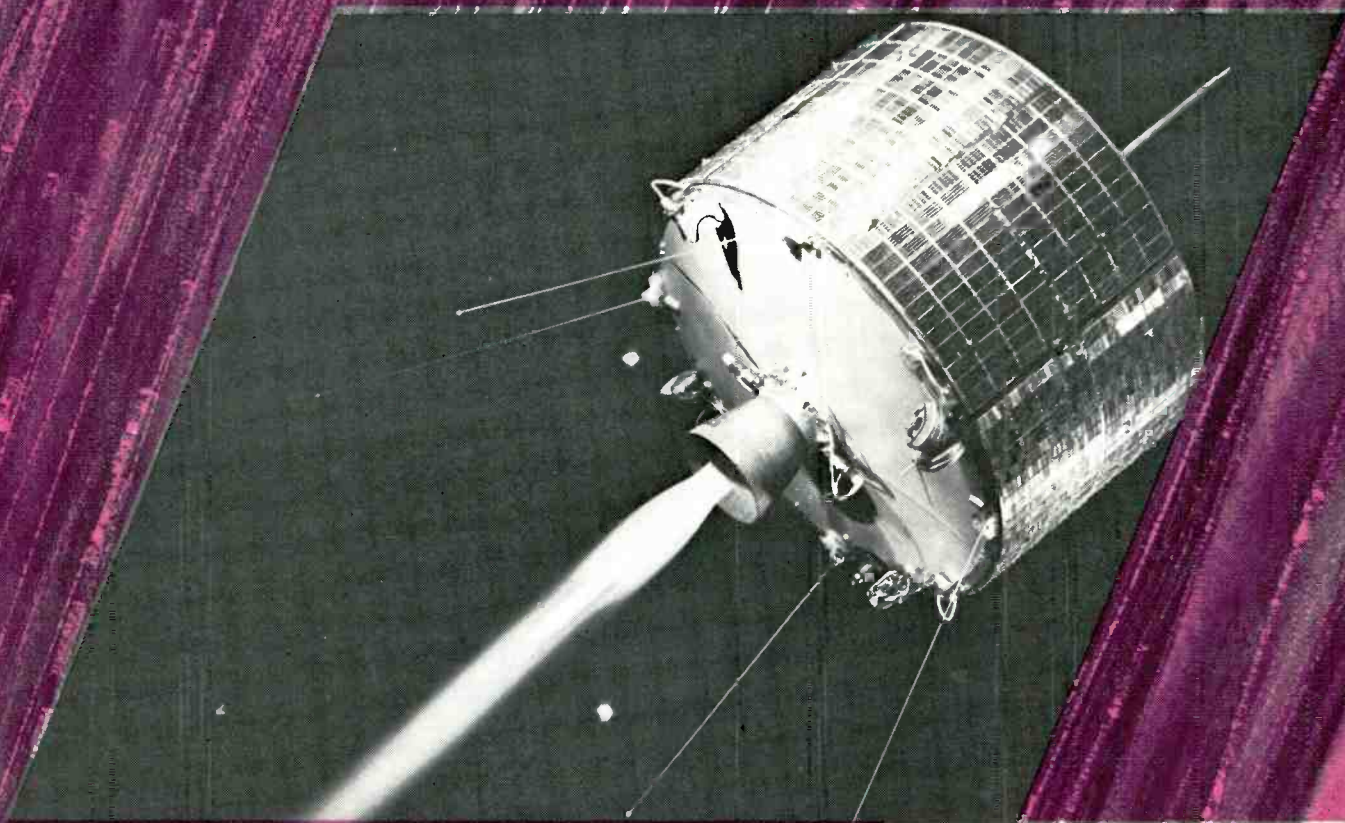
However, there is one significant addition to the radio booklet. Here the NAB calls attention to the inroads of automation:

"In the last few years, automatic equipment which is reliable and accurate has been developed for both studio and transmitter use. Such technological advances as remotely controlled transmitters and automatic programming equipment have tended to reduce the number of technical jobs in the individual station. This has resulted in a decrease in the size of the typical engineering department and a shift in emphasis from operations to maintenance work which requires a higher degree of technical background."

The two booklets are only brief descriptions of the opportunities available in television. They are intended for students and the general public. As such, they are concise and well-prepared, probably fulfilling their intended purpose.

**Superheterodyne Converters and I.F. Amplifiers**, Revised Edition, by Alexander Schure, Hayden Book Companies, 116 West 14th Street, New York 11, N. Y., 101 pp., \$2.25.

Completely up to date and expanded by four chapters from an earlier edition, this volume offers an understanding of the theory and operation of superheterodyne converters and I-F amplifiers, with emphasis on the descriptive treatment and analyses. Specific attention is given to the essential theory of mixers and converters, basic superheterodyne operation, arithmetic selectivity, double conversion, oscillator tracking, functions and design factors of I-F amplifiers, and much more.



In a spectacular American space feat, history's first synchronous satellite was "parked," last summer, 22,300 miles above the mouth of the Amazon River, where it can see 40% of the Earth and can be used 24 hours a day for continuous communication with over one billion people in North and South America, Western Europe and Africa. In Syncom's first month of operation it logged more operating time than all other communications satellites combined up to that time.

1 This view of a technician attaching solar-cell paneling indicates the size of the Hughes Aircraft Company's satellite.

2 The components of the new spacecraft—the antenna, the electronic gear, and the jets.

3 A closeup of one of two communications transponders carried in Syncom. Circuits are mounted on gold-coated aluminum boards, then impregnated with polyurethane foam. At left is the master oscillator; at right, the power amplifier.

4 After rocket launching from Cape Canaveral, the satellite separated from its carrier 150 miles up, and attitude control jets began moving the craft into position above the Equator.

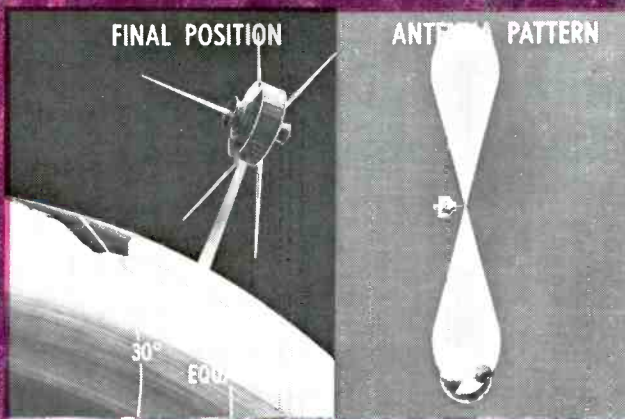
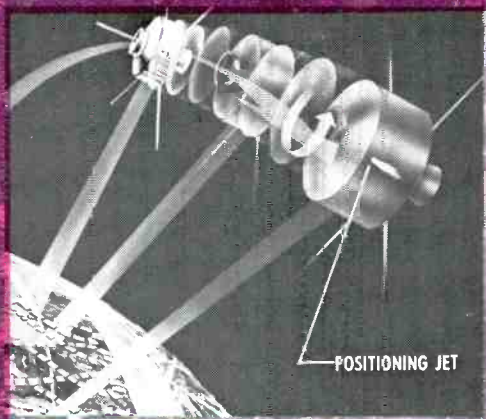
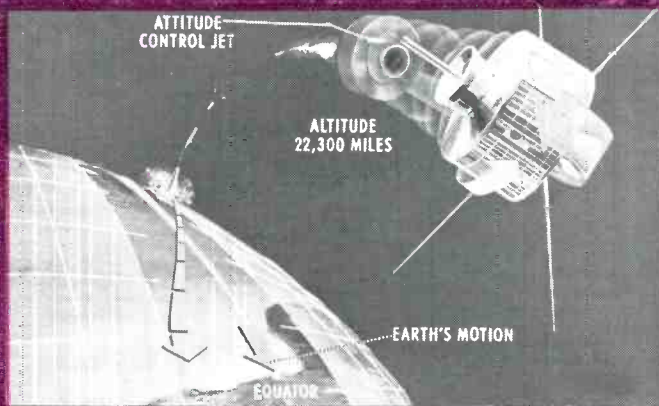
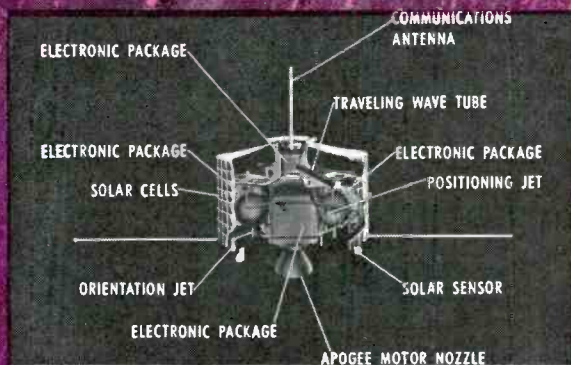
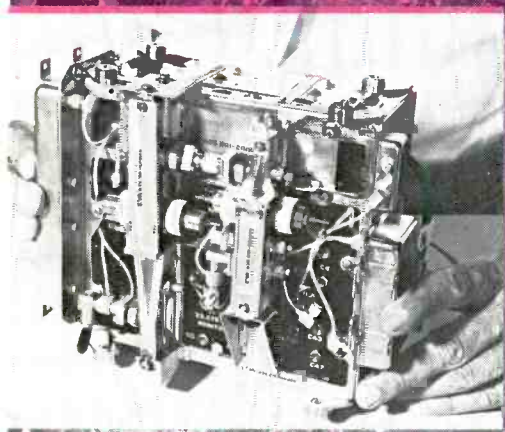
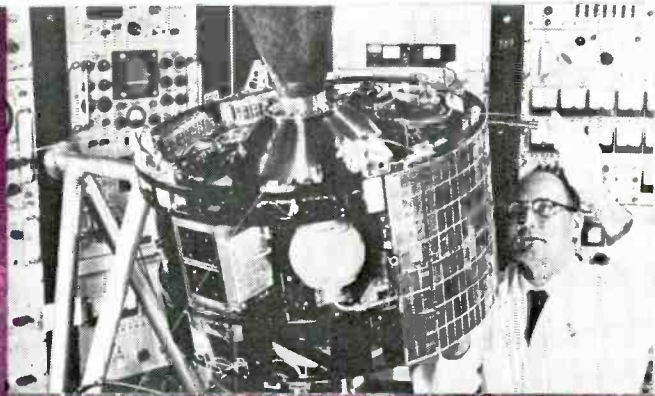
5 Launched in the direction of the Earth's rotation, Syncom was positioned by small jets so that its rocket motor eventually counteracted this motion and placed it in a standstill position.

6 Syncom, meanwhile, traced a figure-8 pattern on the Earth's surface, as it attempted to reach its final position.

7 Ten days after its launch, Syncom was oriented to provide communications among its three ground stations, shown here.

8 Only three Syncom satellites will be needed to offer world-wide coverage. NASA researchers are now pushing toward this goal.

# SYNCOM IS THE FIRST TO STAND STILL



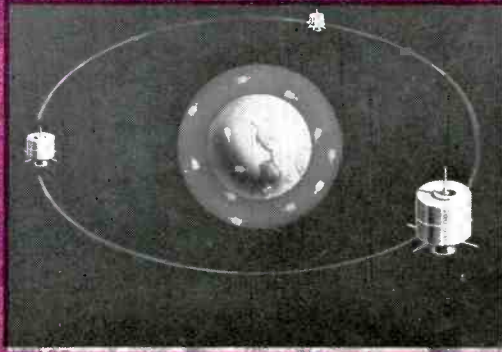
LAKEHURST

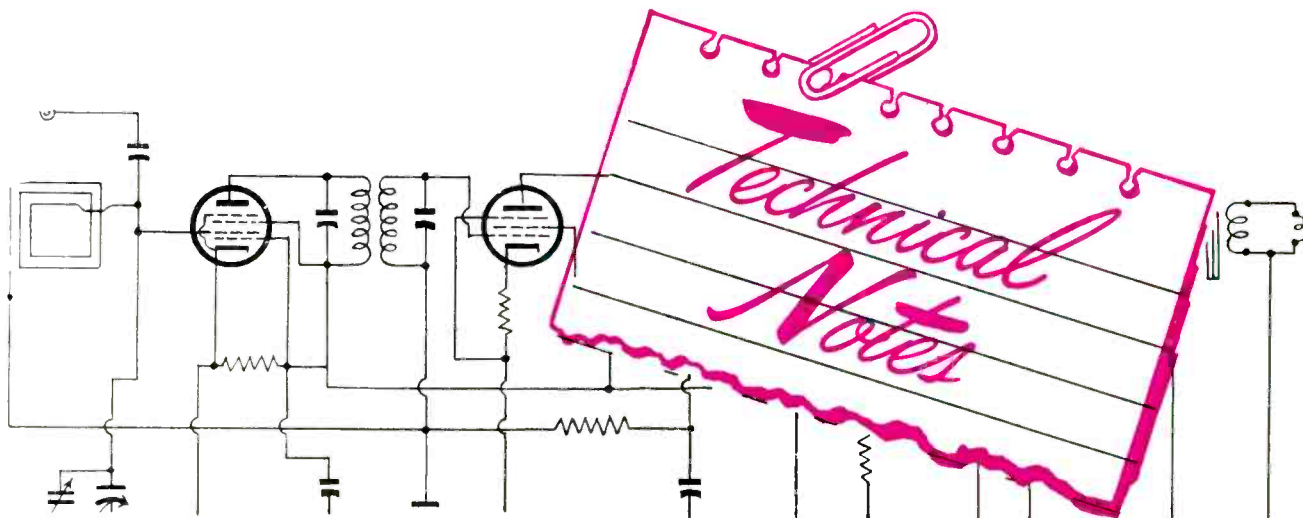


FORT DIX

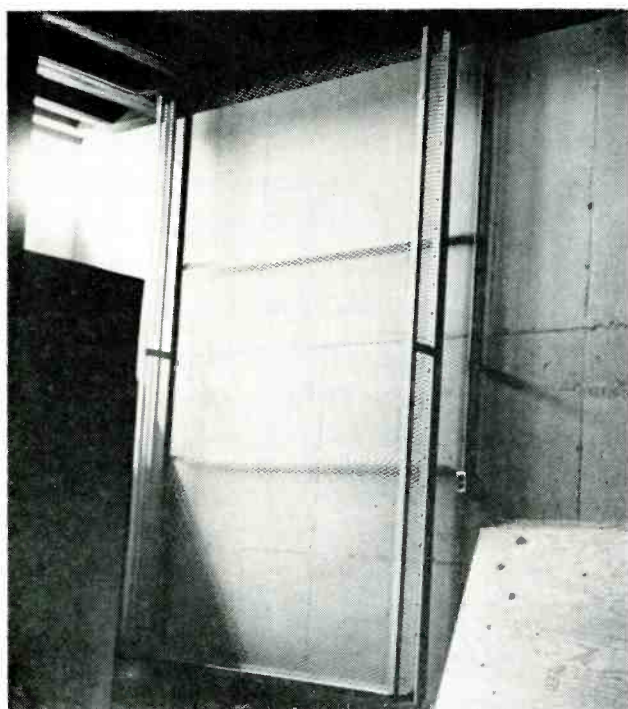


USNS KINGSPORT





## LIFT FOR TV PROPS



"Flats" and prop settings can be sent directly from storage in the basement to first-floor studios via the conveyor, shown above, at WMAR-TV studios in Baltimore, Maryland. The press of a button at right operates the elevator, sending studio items through the slot in the floor above.

## PRE-TRIAL TV LIMITS

FCC Chairman E. William Henry has been handed a request from the Solicitor General's office that it ask broadcasters to avoid interviews with persons who have been arrested but not yet brought to trial. The Justice Department is concerned about the effect of such interviews because of Supreme Court action in sending back for a new trial the case of a man who had been convicted of bank robbery and murder in Lake Charles, La. Television in the area had covered sheriff's interrogation of prisoner, during which the defendant admitted guilt. The Supreme Court said this had made fair

trial in Lake Charles impossible and that the lower court should grant defendant's plea for change of venue. Matter is now under study by Commission's general counsel.

## UHF RADIATION EXTENSION

The Electronic Industries Association will ask the Federal Communications Commission to extend the temporary 1,000-microvolt-per-meter limitation on radiation from UHF television receivers to give the industry time to test the widely held belief that the use of transistor tuners will cut radiation to the level sought by the FCC.

The decision was made November 14 by the EIA Engineering Department's R-4.9 Subcommittee on TV Tuners, a group of engineering representatives of nine TV receiver manufacturers and three tuner producers, which has been studying radiation control.

EIA, through its Consumer Products Division, will seek a one-year extension of the 1,000-microvolt allowable radiation level. The limitation is scheduled to be returned to the 500-microvolt level on April 30, 1964, the date on which the all-channel television law becomes effective.

Subcommittee Chairman Fred W. Edwards said laboratory data collected by the group strongly indicates that use of transistors instead of tubes in UHF tuners, which generate most of the radiation, will bring radiation levels well within the desired 500-microvolt limit.

But, he said, the industry has not had time to confirm the radiation-reducing benefits of transistor tuners by tests on production models.

Tests have confirmed, however, that "we simply can't meet the 500-microvolt radiation limit with tube tuners," said Mr. Edwards, who is vice president, engineering, Standard Kollsman Industries Inc.

Industry tests of 253 receivers with tube tuners in 1962 showed only 141 sets with radiation under 500 microvolts, and in similar tests this year only 110 of 242 receivers were within the limit, according to Mr. Edwards.

However, he said, one report of tests of 11 sets using transistor tuners showed five to be under the radiation limit.

## BIGGEST CLOSED CIRCUIT HOOKUP

RCA's exhibit at the 1964-65 New York World's Fair will be highlighted by the largest closed-circuit TV network in history, the company has announced. The RCA hookup is expected to provide more than 2,000 hours of programing for about 250 color sets located throughout the fair grounds.

The fair's opening April 22 will be telecast in color by NBC-TV in a three-hour show that will include a preview of events and a look at more than 50 exhibits.

## NEW INDUSTRIAL TV TUBE

RCA announced recently that it has developed a new high-resolution, one-inch diameter vidicon television pickup tube to be used primarily for industrial black-and-white television purposes.

The new RCA-8507 can be used for live and film pickups and can provide color TV broadcast service. It is a high-resolution version of the high-sensitivity RCA-7735A vidicon.

Resolution capability of the new tube ranges from about 1,000 TV lines in the center of the picture to about 700 lines at the corners. The vidicon should be operated with a grid-No. 4 voltage of 750 volts and a grid-No. 3 voltage of 450 volts. The new design includes separate connections for mesh and wall electrodes to insure a more uniform signal output.

## VOTER REGISTRARS SOUGHT

The position of voter registrar was made a Constitutional office of the Brotherhood at the last IBEW Convention, in an effort to promote year-round political programs at the local union level.

Since then, more than 800 local unions have selected active registrars, representing more than half the Brotherhood membership. The registrars maintain registration and voting records and provide members with information on candidates and legislation.

Establishment of the registrar program marks a new, forward step in Labor's efforts to get legislative action for the working man. The Brotherhood's efforts so impressed the AFL-CIO's Committee on Political Education that COPE proposed to delegates attending the recent AFL-CIO Convention that all AFL-CIO affiliates select or appoint local registrars, too.

## ATTENTION, FISHERMEN

We have a good faith report that the Sheik of Bahrain has a closed-circuit television system on his yacht which permits his observation of his fishing lines while resting in his stateroom. This comes pretty close to the height of luxury. No report yet from the fish of a complaint about automation.



## ARE YOU USING THE TAPE LABELS?

A gummed label on a recording disc, audio tape, or video tape which shows in bold letters "IBEW . . . UNION MADE" tells the scores of people who handle the recordings later that the disc or the tape was produced by skilled technicians. It reminds other technicians and engineers that there is an organization which can and will represent *them* in negotiations for wages, hours, and fair working conditions.

A union label is a recognizable "trademark" to members of other unions. If your local union does not have union label agreements with its employers, the Radio, TV and Recording Division of the Brotherhood can give you information on how to go about negotiating them. A sample agreement is shown below.

### AMENDMENT

*The following provision agreed to upon the day of \_\_\_\_\_, 19\_\_\_\_ between the undersigned and Local Union No. \_\_\_\_\_ of the International Brotherhood of Electrical Workers is hereby made a part of the agreement dated \_\_\_\_\_, 19\_\_\_\_ as fully as though set forth therein:*

*"Having complied with all of the provisions of this agreement on its part to be performed, the Employer is herewith accorded permission to display the appropriate IBEW Union Label on all items of service, or production, produced exclusively under the terms of this agreement. The Employer may or may not avail itself of this permission but where the IBEW Union Label is applied it shall be applied in a manner approved by the Union. All such labels as are not affixed to an item of service or production in accord with the foregoing shall remain the property of or be redeemable by the Union."*  
*Signed for the Company      Signed for the Union*



# STATION BREAKS

## SURVEY OF RIGHT WING

A "nationwide program to insure fairness" by radio and television stations toward labor is planned by the AFL-CIO national headquarters in Washington. As the first step in the campaign, AFL-CIO President George Meany has asked locals across the nation to survey stations to determine whether they are carrying conservative-type programming which might contain statements considered unfair to organized labor.

In a letter to the local unions, Mr. Meany said organized labor's story is not always being told by radio-TV. He included a copy of the FCC's July 26 statement on fairness, which the union president said "clarifies" the broadcasters' responsibilities to present all sides on controversial issues.

Mr. Meany asked the locals to report to their state organizations which in turn are reporting to the national AFL-CIO headquarters on conservative programming. He asked that programs by the following specifically be checked to see if they were being carried by local stations: Manion Forum, Christian Crusade (Billy James Hargis), America's Future (R. K. Scott), Human Events, 20th Century Reformation Hour (Dr. Carl McIntyre), National Right-to-Work Committee, Life Line, National Education Program (Harding College) and Dan Smoot.

## EQUAL TIME FOR STRIKERS

Members of the American Federation of Radio and Television Artists employed at Station WJW-AM-TV, Cleveland, O., went on strike last month. Three days after the walkout, the major issue unsettled involved fees paid for commercials on participating programs.

In a unique move, the station allowed AFRTA representatives "equal time" on the air to answer a management presentation on the strike.

## WOOD-TV WAS READY

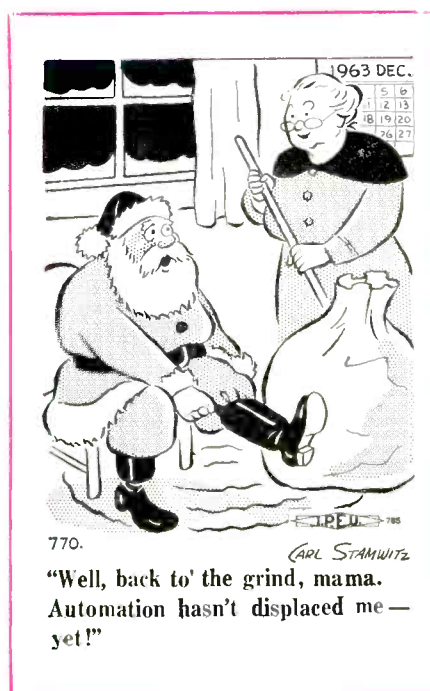
Last summer two Time-Life station news directors—Dick Cheverton of WOOD-TV (Local Union 1295 station), Grand Rapids, Mich., and Pat Higgins of KOGO-TV, San Diego, Calif.—shot film in Baghdad, Iraq, in anticipation of a day when some news development

there would enable them to bring the footage out and dust it off with commentary for a newscast. A few weeks ago the opportunity came to use the film: A triple coup in the Middle East nation caused the men to rush to their files and produce *Mischief in the Land*—a documentary which all Time-Life stations subsequently used to advantage.

## ERRATA DEPARTMENT

Brother Ross Hansch of Madison, Wisconsin, a member of Local Union 715, has called our attention to an error in the October issue. In the text of the report of FCC action on Operator Rules, we said, "The particular issue cited by the IBEW was based upon the fact that there is a shortage of holders of first class operator licenses . . ." Obviously, the petition to the Commission pointed out "that there is *no* shortage of holders of first class licenses." We regret the reportorial error. And our thanks to Brother Hansch for calling our attention to it.

## LAST LAUGH



ALEXANDER BROWDY  
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45 BH