

RADIO, TV and RECORDING



DECEMBER, 1955

TECHNICIAN- ENGINEER



RADIO TV and RECORDING

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... the cover

No visions of sugar plums crowd the thoughts of our junior Americans this Christmas season. The little wheels are spinning, instead, about midget broadcasting sets, two-way radio, super-hi-fi intercoms, and interplanetary rockets. Round many a Christmas tree are assembled small helicopters which actually fly, dolls which shed real tears, plastic blocks which can be assembled into roadside fruit stands, and little black caps with mouse ears. It all adds up to a joyful Yuletide for many an IBEW member and his family this December... and may they have many, many more.

The INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS

GORDON M. FREEMAN International President
JOSEPH D. KEENAN International Secretary
FRED B. IRWIN International Treasurer

ALBERT O. HARDY

Editor, Technician-Engineer

commentary

Once again we enter the holiday season when men of good will reaffirm their faith in each other and their belief in the brotherhood of man. This year, the Christmas season was preceded by a more tangible demonstration of those faiths in the form of a united convention in the labor movement.

The constitution of the new federation, in just three of its sentences, expresses a wholly appropriate thought:

"The establishment of this federation through the merger of the American Federation of Labor and the Congress of Industrial Organizations is an expression of the hopes and aspirations of the working people of America.

"We seek the fulfillment of these hopes and aspirations through democratic processes within the framework of our Constitutional Government and consistent with our institutions and traditions.

"At the bargaining table, in the community, in the exercise of the rights and responsibilities of citizenship, we shall responsibly serve the interests of all the American people."

We can add but little to such nobly expressed sentiment, except:

From all of us in the service of the IBEW
to all of the members, families and friends
of the Brotherhood and the new federation—

A Very Merry Christmas
and
A Happy, Peaceful and Prosperous
New Year
GORDON M. FREEMAN.



We Two Are One

*AFL-CIO Formally Founded by
Convention Action December 5-9, 1955*

PRECEDED by the two separate conventions of the organizations, a four-day convention of the AFL-CIO began on December 5, 1955, in New York City. The convention hall was jammed with delegates, guests and visitors as the first session started. The first session was opened by the temporary chairman, Walter Reuther.

Following the invocation and welcoming speeches, Mr. Reuther delivered an inspiring address to the convention and his speech was often interrupted by applause. At its conclusion, the enthusiasm of the delegates was well demonstrated by prolonged applause and cheering.

A part of Mr. Reuther's remarks are especially inspiring:

"We say frankly we have not achieved perfection, because no work of man is perfect. There will be problems, but I believe with all of my heart that the same good will, the same common sense and the same good faith that brought us from where we were to where we are today, the same good sense and good faith will solve the new problems that may lie ahead in working out the final mechanics of labor unity."

"I say to George Meany and our many friends who



THE IBEW DELEGATION TABLE at the AFL Convention, which preceded the Merger Convention. President Freeman and Secretary Keenan, foreground.

make up the leadership of the former American Federation of Labor Unions, and I say this in behalf of myself and my colleagues and for the millions of workers back home whom we have the privilege of representing—I say, George, to you and your colleagues we extend the hand of friendship and the hand of fellowship, and I say, together united in the solidarity of human brotherhood we shall go forward to build a labor movement and a better America for all people in this great and wonderful country of ours."

Following Mr. Reuther's address, the Credentials Committee rendered its report and concluded that there were 1,487 delegates accredited to the convention. The Rules and the Order of Business were read and the Report of Joint AFL-CIO Unity Committee were rendered and the convention then turned to the election of officers.

As has been well-reported by the press, George Meany was elected president of the new organization and 27 vice presidents and Secretary-Treasurer Schnitzler were elected to their respective offices.

Upon his election, President Meany delivered an address in which he ably demonstrated his feelings about the new organization and his belief in the new labor movement. He said, (in part):

"I feel that this is the most important trade union development of our time. Whether we deserve the attention or not, I am quite sure that surely the eyes of workers all over the world are on this meeting this morning. Millions of workers, millions of ordinary people behind the Iron Curtain of despotism and degradation are looking towards us this morning with eyes of hope. Many millions more who live in the shadow of that curtain of inequity are, I am sure, praying for the success of this organization which we are bringing into being today.

"I can readily understand the feeling of elation which

I sense present here today among the delegates and surely among the officers over the end of these years of division and of the inauguration of this new united movement. I, too, share that feeling of elation that we have come this far along the road to unity for all labor in America. But when I think of the opportunities that lie ahead and of the tremendous responsibilities that go with those opportunities I give way to some sober thought as to our obligation to meet the test, not only of grasping these opportunities for moving forward, but also of removing the obstacles and solving the problems that will lie in our path of meeting the test of great responsibility that goes with an organization of 15,000,000 citizens in a nation of 160,000,000 people.

"I think in approaching this task we should take a serious and good look at ourselves to make sure that we know just what our obligations are and to make sure that we have the type of organization that can meet these obstacles and grasp these opportunities to better the day both in the life and work of the great mass of the workers of this nation. We must think in terms of the true meaning of a trade union movement, a movement that has for its sole, definite and single purpose the advancement of the welfare and interest of the great mass of workers who are part of this movement.

"That must be the motivating influence and manner in which we move forward. Let all of our actions be keyed into that simple, plain principle that a trade union has no other reason for existence than the job of carrying out and carrying forward and advancing the interests and welfare of its members.

"In building and advancing the cause of our Union let us not think in terms of personal prestige, of having a big union for the sake of having a big union. Let us not think in terms of a great big financial structure and of great power. Let us think in terms of the simple philosophy of those who founded this movement of advancing the cause of workers.

"As we go forward together in this movement, let us stop thinking in terms of prior labels. Let us make up our minds that from this moment on there is just one label on all the organizations and all of the membership of this great organization, and that label is AFL-CIO and nothing else. Let us apply this philosophy in terms of good faith, determination to live together, to work together, and to think together for one united organization."

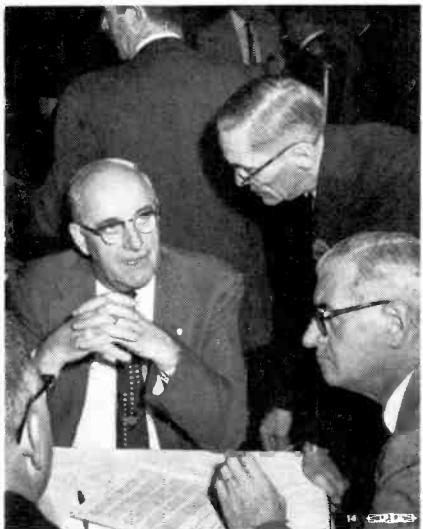
The convention met on the afternoon of the first day in anticipation of a speech by President Eisenhower, who spoke from Gettysburg. His address developed to be particularly interesting because of the indication of his thinking as to labor unions' roles in political action. He said that he felt workers want to be recognized as human beings and as individuals—before

Continued on Page 13

*Candid
Sidelights
on a Busy
Convention*



ABOVE: Technicians at work beside the speakers' platform. Sound equipment, tape recorders, and wires for floor mikes form a busy maze.



ABOVE: IBEW President Gordon Freeman, standing, in a huddle on the convention floor with Peter T. Schaeffer, General President of the Plumbers and Pipe Fitters.

RIGHT: Morris Novik, AFL-CIO Radio Director; Harry Flannery, an AFL-CIO radio staffer; and Bert Gruen of Indo-O-Pro Recording (NABET) handling the official convention recording.



LEFT: Charles Smith, a reporter for Station WWCA, Gary, Ind., interviews William Schnitzler, AFL-CIO Secretary-Treasurer.

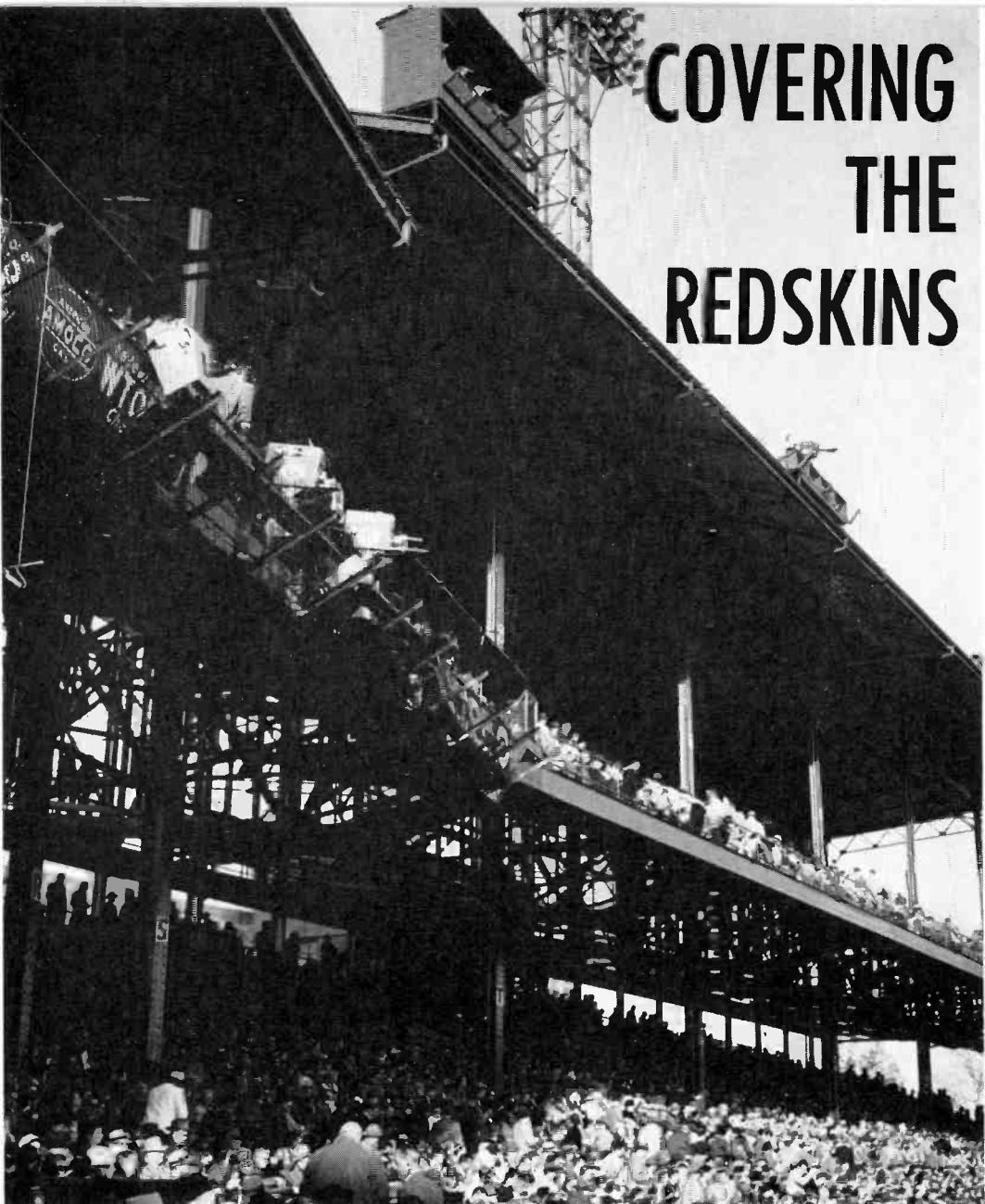


BELLOW: A. Philip Randolph and Willard Townsend, AFL-CIO Council members, seated at rear, are interviewed for the Voice of America.



LEFT: International Officers Keenan and Freeman with a well-known candidate.



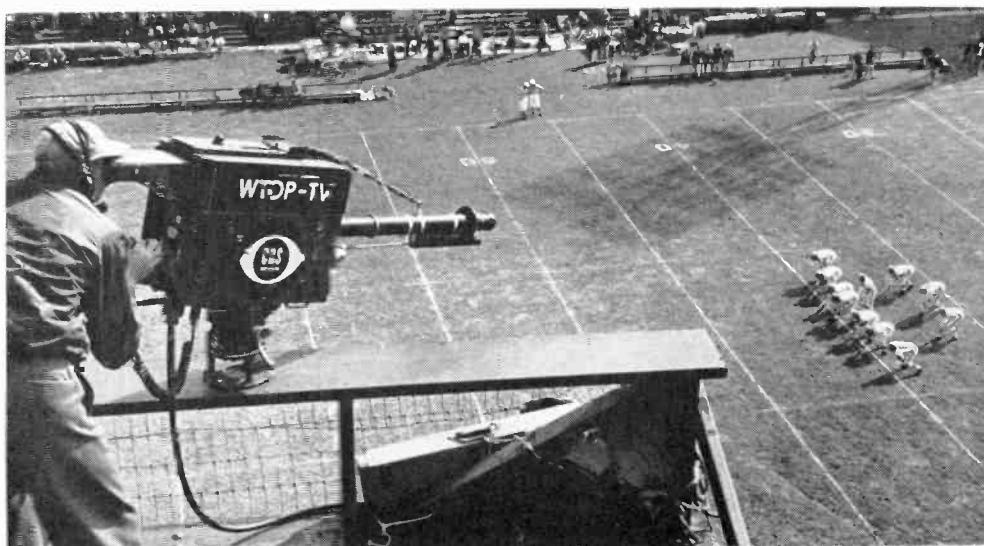


COVERING THE REDSKINS



THE SET-UP for covering a 'Skin game included cameras on the first tier of the grandstand, cameras on the roof of the grandstand, Audio controls in the press box, and a mike suspended by cable and rope, far left, for the crowd noises.

A hard-working crew of IBEW technicians and cameramen goes on the road to bring football to the hometown fans.



IN A PRE-GAME WARM UP, Jack Waldron, of Local 1215, checks his camera, as the hometown team runs through a scrimmage.



PERCHED high atop the grandstand roof at Griffith Stadium in Washington, TV and Movie cameras zoom to the gridiron.

THIS month, the Washington Redskins closed out their most successful season of professional football in 10 years of play. With a 28-17 victory over the Pittsburgh Steelers, they chalked up their eighth triumph in 12 National Football League starts . . . and they did it the hard way, coming from behind in the third quarter in freezing weather.

Covering this climax from many vantage points were the technicians and cameramen of Station WTOP-TV,

Washington, D. C., who, working as a crew, covered every Redskin game of 1955, at home and away.

In the course of the season, the TOP football crew went to Cleveland, Philadelphia, Baltimore, New York, Chicago, and Pittsburgh, in a successful effort to bring the Redskin games to fans in the Nation's Capitol. Sending trucks ahead to make cable installations and prepare for the Sunday games, the TOP mobile crew worked fully equipped. They moved

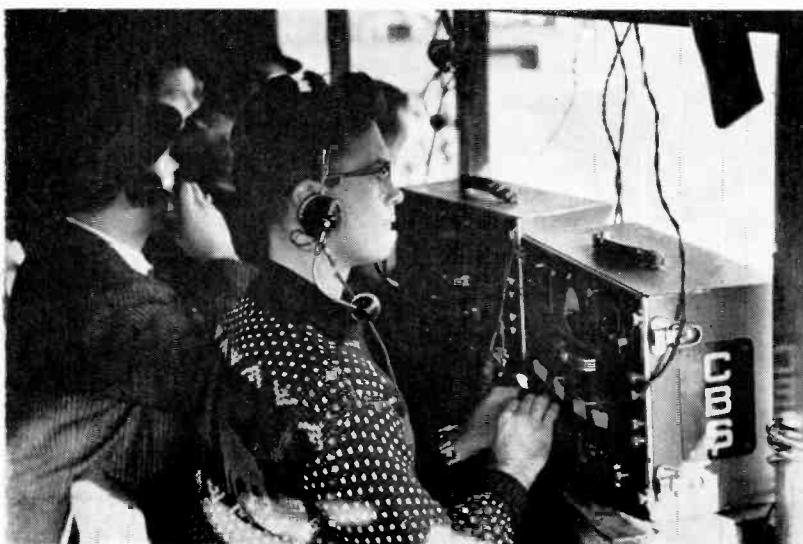
their own cameras and monitors from city to city, and the announcing staff covered every gridfest.

Brother Harry Remmers supervised the pick-ups, and in the mobile truck were D. J. Crane and John Mercer, audio men. Cameramen included Jack Waldron, Harold Ray Bloom, and Bud Kerrick.

At Griffith Stadium in Washington, where the Senators bat a baseball around the league cellar in spring and summer, the Redskins work on a converted field. Bleachers are set up behind the second and third base line, and a 100-yard gridiron is marked off.

To cover the home games, cameras work from two levels. TV cameras work from a long platform on the second tier of the grandstand, where the announcing staff and an audio man is set up. A mike is suspended over the crowd below from this level, so that crowd noises can be worked into the audio. Also on this second tier is the set-up for commercials, which are handled completely at the field.

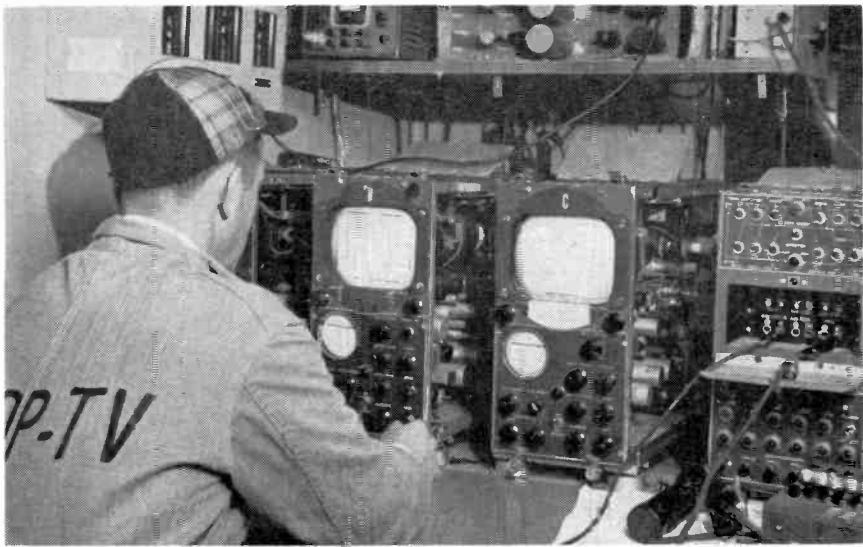
In what may be a unique operation for sportscasts, the TOP crew cuts in a filmed commercial right at the field. A projector housed in a wooden crate is lodged on the grandstand platform beside a working camera. Manning it is Norman Bailey. When it comes



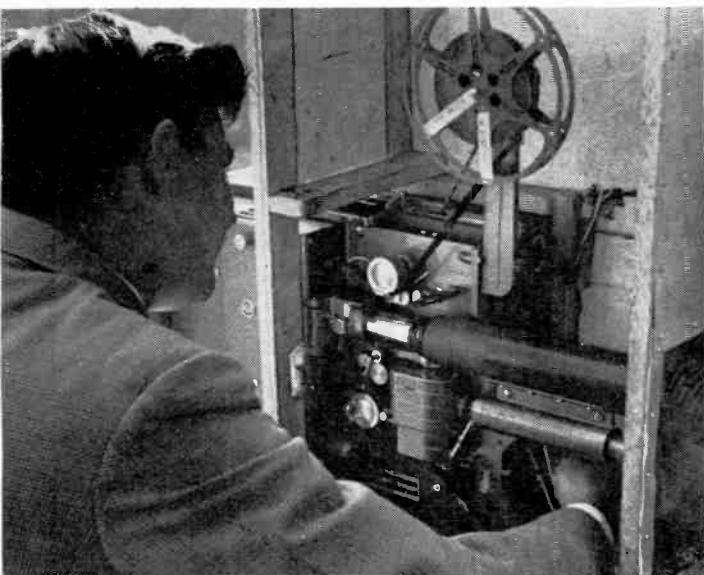
HANDLING AUDIO in the announcers' box is Technician Gene Hanna, a member of IBEW Local 1215.



ON THE JOB are Bob Wolff, announcer; "Choo-Choo" Justice, commentator; and Cameraman Harold Ray Bloom.



IN THE MOBILE TRUCK parked beside the stadium, D. J. Crane adjusts the camera controls before the game goes on the air.



NORMAN BAILEY warms up the projector, installed in the grandstand for on-the-spot commercials.



ANOTHER VIEW of the set-up for on-the-spot commercials. Bud Kerrick is on the camera; Norm Bailey checks audio.



THE GAME IS ON, and an IBEW Technician mans the switches and monitors the cameras in a darkened mobile unit.

time for a commercial, the camera is swung round to the projector, and a direct image is picked up.

High atop the stadium is another camera position. A fenced-in platform plays host to a live camera and to the movie cameras for newsreels and the official game record. This is a cold perch when winter winds roar down from the north, and cameramen and technicians working this post bundle up in Arctic gear.

The Redskins wound up in second place in the Eastern Division of the National Football League, a high spot after many seasons of slump. Hopes are for a good season in 1956.

When that time comes, the WTOP-TV crew expects to be on the job again, working like the postmen in every kind of weather.

All of the Redskins' games were fed to a network of stations in the trading area of the sponsor, the American Oil Company. Commitments have been made for similar pick-ups during the 1956 season, feeding a heavy schedule of rough-and-tumble pro football to the fans in the seven cities served.

Board Decision Confirms IBEW Position

• •

Film Inserts, Sequences, Openings, Etc., Declared to Be in Local Union 1212's Jurisdiction

PRIOR to 1953, CBS purchased most of its newsfilm from another company and assigned only a relatively small amount of newsreel work to its own employes in New York. At the time, these employes were members of Local Union 1212 and were a part of the Film Service Operations Department. In 1953, the company discontinued its purchase of newsfilm and began to shoot its own news pictures. In order to do so, it set up a newsfilm section in the News and Public Affairs Department and the six newsreel cameramen were transferred to that department.

On April 28, 1954, the IATSE filed a representation petition which sought severance of the motion picture cameramen from the existing technicians' unit represented by the IBEW. After hearing, the Board issued a decision on December 22, 1954, which severed the cameramen from the technicians' unit and the IATSE subsequently entered into a contract with the company which covered the men and the work.

In March, 1955, the company assigned a short film insert to the newsfilm section. This film was developed, printed and returned to the production supervisor, who then took the film to an IBEW projectionist for run-off and checking. The projectionist refused to run the film and evidence was developed at an NLRB hearing which resulted from his refusal that his refusal stemmed from orders from Local Union 1212.

UNFAIR PRACTICE CHARGE

CBS promptly filed an unfair labor practice charge against the IBEW and Local Union 1212, under Section 10 (k) of the National Labor Relations Act, as amended. A hearing was held in New York City, as a result of the charge, on June 24, 1955. The hearing officer permitted the IATSE to intervene in the case on its claim to jurisdiction over the work involved and its contract with CBS. The hearing duly noted that the parties were not in dispute as to newsreel work and that the charge being investigated was limited to the work which had previously been performed by technicians who were employed in the Film Service Operations Department.

The company asserted that an employer's assignment of work can be limited only by a Board certification or by a contract provision and that, in the case involved,

neither type of limitation existed in favor of the IBEW. The IATSE contended that it was entitled to the disputed work under the terms of its contract with CBS and that the Board may not set aside or diminish the scope of its contractual work jurisdiction. The IBEW took the position that its members were entitled to the work in dispute because the Board certification of the IATSE specifically excluded technicians and the work the technicians perform in the Film Service Operations Department.

The regional director of the NLRB was satisfied, as the result of an investigation of the charge brought by the company, that there was reasonable cause to believe that a violation of Section 8 (b) 4 (d) of the NLRA had been committed. However, the decision of the Board which has now issued notes that ". . . a labor organization does not violate . . . the Act by engaging in activity otherwise proscribed, if an employer's assignment of work is in derogation of a Board order or certification or of a collective bargaining contract which assigns particular work to the striking labor organization."

AGREEMENT CALLED CONCLUSIVE

The Board decision in the (previous) cameramen's case noted that none of the nine individuals in the Film Service Department was affected by its decision of that time. However, it remained for the instant case, which resulted from the filing of the charge by CBS, to resolve —by NLRB decision—the dispute over motion picture camera work on subjects other than news films.

The Board now finds that ". . . it is manifest that the 1954 representation proceeding had no effect on the work of any other CBS employee . . ." and that "the most recent understanding of the parties did not withdraw from IBEW's jurisdiction . . ." the sporadic non-newsreel photography performed by the technicians who remained in the employer's Film Service Section. The Board continues, "Thus, reference to the 1954 agreement between IBEW and CBS establishes that it provided, in unambiguous terms, for coverage of the work which is the subject of the dispute in this case. Indeed, the employer's argument that it was under no contractual obligation to assign the disputed work to IBEW is based upon a bare, unsupported assertion that no provision in the 1954 contract reserved to IBEW jurisdiction over

camera shooting work." The Board disposed of the argument of the IATSE (that its 1955 agreement gave the IATSE the disputed work jurisdiction) by saying, "Such a contractual arrangement is immaterial to the issue of this case because it was entered into by CBS after it executed the 1954 agreement with IBEW and at a time when the IBEW agreement was valid and effective. To the extent material herein, the IATSE contract infringed upon the IBEW 1954 agreement with CBS."

DISPOSITION OF THE CASE

Pursuant to Section 10 (k) of the National Labor Relations Act, as amended, the Board found that the IBEW's work stoppage was justified and "not unlawful." The decision notes that the assignment of the film shooting of the clip involved was in derogation of the IBEW's

contractual work jurisdiction. The Board's final word is:

"The film shooting of the 'Mama' clip and other such motion picture film shooting work is covered by the agreement in existence between Columbia Broadcasting System, Inc., and Radio & Television Broadcast Engineers Union, Local 1212, International Brotherhood of Electrical Workers, AFL-CIO; and the agreement between Columbia Broadcasting System, Inc., and Local 644, International Photographers of the Motion Picture Industries and its parent organization, International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of United States and Canada, AFL-CIO, has not divested Radio & Television Broadcast Engineers Union, Local 1212, International Brotherhood of Electrical Workers, AFL-CIO, of the right to such work."

Two International Vacancies Are Filled



FRED B. IRWIN

Brother Fred B. Irwin has been appointed to the office of International Treasurer of the IBEW and his succession to the post has been approved by the International Executive Council. The position has been vacant since the death of Brother William Hogan on November 15th.

International Treasurer Irwin was initiated by Local Union No. 48, Portland, Oregon in June of 1924 as an apprentice wireman. He later transferred to Local Union 125 and for some time served on the Negotiating Committee and, later, as Assistant Business Manager of



GEORGE P. PATTERSON

that Local Union. He also served as the Business Manager of Local Union 125, for approximately three years.

He was appointed to the International Office Staff in 1947 by the late President Tracy.

In another action, the IBEW Executive Council selected George Patterson, a member of Railroad Local 409, Winnipeg, Manitoba, since May, 1937, to succeed the late Keith Cockburn as Canadian representative on the Council. At the time of his appointment, Patterson was general chairman of the Western Region, Canadian National Railroad.

TECHNICAL BOOKS



Electronic Transformers and Circuits, Second Edition, by Reuben Lee, John Wiley and Sons, Inc., 440 Fourth Avenue, New York 16, N. Y. 360 pp. \$7.50.

The second edition of "Electronic Transformers and Circuits" by Reuben Lee was published in November. A basic work on the design of transformers for electronic apparatus, the book also furnishes information on the effects of transformer characteristics on electronic circuits, a subject often overlooked in technical literature.

The additions made by Mr. Lee were guided by the advances in the field made since the book's original publication in 1947. In the new chapter on magnetic amplifiers, the author covers the more common components and circuits and aims to introduce the subject to circuit and transformer designers alike. Another new chapter on pulse circuits contains material on line-type radar pulsers, false echoes after main pulse, charging reactors, and related details.

The other chapters cover transformer construction, materials, and ratings; rectifier transformers and reactors; rectifier performance; amplifier transformers; amplifier circuits; higher-frequency transformers; electronic control transformers; and pulse and video transformers. Entirely new sections now appear on reactor surges, toroid curves, r-f power supplies, wide-band transformers, and charging chokes. Mr. Lee has also reworked his earlier discussions of transformer theory, core material, reactor theory and design, Class B transformers, audio filter inductors, rectifier regulation, leakage, and other points.

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Mr. Lee has been affiliated with the Westinghouse Electric Corporation for over thirty years and is now advisory engineer there. He holds 24 patents on transformers and similar devices, and is the author of numerous papers that have been published in *Electronics*, *Tele-Tech*, *Electrical Manufacturing*, *Proceedings of the I. R. E.*, and other journals.

Transistor Electronics by Arthur W. Lo, Richard O. Endres, Jakob Zawels, Fred D. Waldhauer, and Chung-Chih Cheng. Prentice-Hall, Inc., 70 Fifth Avenue, New York 11, N. Y., \$12.00.

In the few years since its invention, the transistor has become firmly established as a most important member of the rapidly increasing family of electronic devices. As the authors point out in their preface to this book, the transistor is already competitive and promises to surpass the vacuum tubes in many applications in the electronics industry.

The authors, all RCA researchers, state, for example, that the large signal characteristics of the transistor approach those of a perfect switching device. Switching circuits utilizing transistors may, therefore, be simpler in design and structure than vacuum tube circuits which perform the same function.

Recognizing that there is still much to be learned about the complexity of transistor circuits, the authors show transistors' present limitations as compared to those of the vacuum tube on several occasions.

The book is written for advanced undergraduate or graduate students in electrical engineering and associated fields, and as a reference work for the electronics engineer. The book carries the reader from a basic working understanding of transistor operation and circuit analysis to practical circuit design technique.

Chapter headings include: Physical Concepts; Characteristics, Parameters, Equivalent Circuits; Basic Amplifier Configurations; Direct-Current-Bias Circuits; Low-Frequency Amplifiers; Power Amplifiers; High-Frequency Operation; Physical Interpretation of Transistor Parameters; High-Frequency Amplifiers; Oscillators; Modulation and Demodulation; and Pulse Circuits.

Servicing TV Sweep Systems, by Jesse Dines, Catalog No. SSD-1, Howard W. Sams and Co., Inc., 2201 East 46th Street, Indianapolis 5, Ind., 212 pages, 5½ x 8½", paper bound. \$2.75.

Here, at last, is a thorough book explaining the operation of television-receiver sweep system, and providing step-by-step methods for trouble-shooting and servicing them.

Broken down into six easy-to-read chapters, this book covers, in the greatest detail, the following categories:

Fundamentals of Sweep System Operation, Sweep System Circuit Function, Horizontal and Vertical Sweep Circuit Variations, Construction of Sweep Component Parts, Trouble Shooting, Service Hints.

With an average of more than 26 illustrations per chapter, the entire book contains a total of 158 illustrations.

Modern Oscilloscopes and Their Uses, Revised Edition, by Jacob H. Ruiter, Jr. Rinehart and Company, Inc., 232 Madison Avenue, New York 16, N. Y. 346 pp. \$6.50.

Long an outstanding book in its field, *Modern Oscilloscopes and Their Uses*, has now been revised to give student, technician, and researcher alike the latest information on this indispensable instrument. There are 20 extra illustrations and 50 additional pages.

Of particular importance to our readers is the new chapter on Quantitative Measurements. With the development of the oscilloscope as a precision instrument, quantitative measurements in color television as well as black and white, in the broad field of industrial electronics and in atomic energy installations have been greatly simplified. It is essential for many engineers to learn these new techniques.

Here is a book which starts by asking the question, "What is an oscilloscope?" and continues through to an explanation of the Notch Sweep in the chapter on Quantitative Measurements. A Chapter entitled, "Use at the Transmitter" should be particularly valuable to IBEW members.

Says the author: "In addition to its use as a modulation monitor, the oscilloscope is a valuable aid in adjusting the tuning circuits of the transmitter to resonance, neutralizing the r-f amplifiers, and trouble shooting the complete transmitter."

Each of these uses is explained and step-by-step procedures for performing each function is given.

Audio Amplifiers and Associated Equipment, Catalog No. AA-6, 352 pages, 8½" x 11" paper bound. Price, \$3.95.

This sixth in the series of bound volumes of Photofact Folders covers 36 amplifiers, 18 pre-amplifiers, and 13 AM-FM tuners produced in the years 1953 and 1954.

Each unit is thoroughly covered by photos, parts lists, standard notation schematics, voltage and resistance data and servicing information.

This manual is valuable not only to the technician specializing in audio but also the experimenter and hobbyist who wants to have the complete data on many different pieces of equipment.

Keeping A Picture



ARTIST'S CONCEPTION of the new Capitol Records Building in Los Angeles. The structure replaces the former Capitol plant in Hollywood, which employs many members of IBEW Local 45. Capitol plans to move in during January.



THE STRIKE at Radio Station WAPI and TV Station WABT, Birmingham, Ala., moves into another month, still unsettled. The contract expired last July. A few weeks ago "The St. Louis Globe-Democrat" and associated interests bought the two stations, as well as newspapers in Birmingham and Huntsville.

We Two Are One

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everything else. He pointed out that the prosperity of employer and employee is wrapped up in a mutual economic interest and that workers are citizens who have an interest and a share in the public business.

He emphasized the need for democracy in the operation of the meetings of labor and the need to help other people. He also said:

"So in your new national organization, as well as in your many constituent organizations, you have a great opportunity of making your meetings the world's most effective exhibit of democratic processes. In those meetings the rights of minorities holding different social, economic and political views must be scrupulously protected and their views accurately reflected. In this way, as American citizens, you will help the public correct the faulty, fortify the good, build stoutly for the future, and reinforce the most cherished freedoms of each individual citizen."

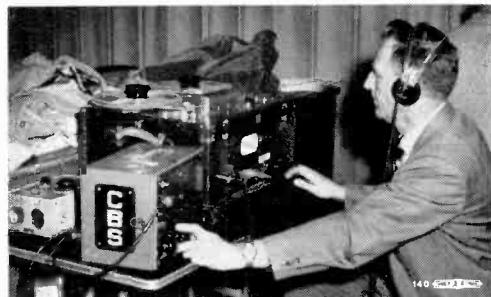
"This country has long understood that by helping other peoples to a better understanding and practice of representative government, we strengthen both them and ourselves. The same truth applies to the economic field. We strengthen other free people and ourselves when we help them to understand the workings of a free economy, to improve their own standards of living, and to join with us in world trade that serves to strengthen and unite us all."

Other Distinguished Speakers

Among other speakers at the Convention were Secretary of Labor James Mitchell, Mrs. Eleanor Roosevelt (who was introduced as "the First Lady of the World"), New York Governor Averell Harriman and Mr. Adlai Stevenson. Secretary Mitchell warmly praised the AFL-CIO merger and predicted that it will be a great force for good in the land. He went on to point out that those leaders who worked out the merger agreement are the very ones "characterized in Communist propaganda as tools of Wall Street," yet they are the same ones "who have used free and uncoerced negotiations to immeasurably advance the interest of workers." The Secretary added, "The forces which today stand athwart the advance of Communism and barbarism in the world have achieved a victory."

Mrs. Roosevelt reminded the Convention that: "You have responsibilities, because of your greater strength, for conditions in our country as a whole. You have to understand what the relationship is between the problems of your own country and the problems of the world because our strong Nation has become a leader in the free world and, therefore, has taken on responsibilities for the peoples of the world."

She concluded her remarks by saying, "I have come



Harold Bridges, a member of IBEW Local 1212, records the convention for CBS.

today to congratulate you—to congratulate you on achieving a difficult task. You will have difficulties and you will have problems and you will work them out because your leaders have intelligence and a desire to work them out. This same thing can, I think, eventually come about in the world. . . . Actually, you have started a great change which will bring about a better life to all our people and a better life and greater hope—because many people will have to live on hope for some time to come—to all the peoples of the world."

Governor Harriman sharply criticized the domestic and foreign policies of the current Federal Administration and warned the delegates that no relaxation of their efforts should be contemplated. He spoke at some length of the Geneva Conference and the attitude of the leaders of Soviet Russia. He added, "The new group in the Kremlin has carried out with great shrewdness the tactics of 'peaceful co-existence' and at Geneva and since Geneva, has achieved a major political break-through."

Mr. Stevenson sprinkled his speech with flashes of wit which characterized his 1952 campaign but in a serious vein called for a Federal Government that "finds it mandates in concern for the general welfare." "The issue between Communism and Democracy," he said, "will be settled finally in the minds and hearts—and yes, the stomachs, of the multitudes of working people in Asia, Africa, Europe and the Americas. The voice of America which can speak most clearly is the voice of American labor—of the AFL-CIO."

A subject taken up by the Convention which is of particular interest to employees in the broadcasting industry during the Thursday (December 8th) session was a resolution—in which the Convention concurred. The essence of the resolution was that the AFL-CIO oppose the granting of licenses by the FCC which would permit "pay television." The resolution included a provision to have this sentiment registered with the members of the Federal Communications Commission and the members of the Congress of the United States. By its passage, the Convention indicated that the resolution, following consideration, judged that pay television would constitute and become an infringement on the property right now enjoyed by the general public and that it would be

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an intrusion into and a violation of the privacy of the American home.

The Industrial Union Department of the AFL-CIO met on Wednesday, December 7th. Under the Constitution of the AFL-CIO this Department is opened to all affiliates which are organized in whole or in part on an industrial basis.

The Department elected Mr. Walter Reuther to be President and Mr. James B. Carey as its Secretary-Treasurer.

The IBEW has a direct interest in this Department as is shown by 275,000 members who were formally affiliated with it at the Convention. These IBEW members who work for public utilities, in manufacturing and in similar industries will thus be represented.

The foregoing constitutes a good portion of the highlights of the Convention which will be of interest to our membership. Only the future will show the real advantages of labor unity but those in attendance in New York left the City with high hopes of great accomplishment. Twenty years of division in the ranks of labor has come to an end—we two are one.



Hi-Fi Theater Sound

Press, public and electronics experts are complimenting the high fidelity characteristics of "Oklahoma!" sound at the Rivoli Theater, Broadway, New York. Credit for this result generally is attributed not only to the source recordings, but to the careful use of Altec Lansing sound equipment throughout the theater.

The Todd-AO organization, responsible for the wide-screen process featuring the "Oklahoma!" presentation, called upon Altec sound engineers to install five giant A-2X "Voice of the Theater" speakers back of the screen, 15 duplex-type Altec 604C speakers under the lower-floor overhang, and four A7 two-way speakers, originally designed for stage use in smaller capacity houses, in opposite walls upstairs.

Discussing the high-fidelity effects achieved, Ralph Kautzky, Altec northeastern division manager, and Fred Hall, branch manager, responsible for technical supervision of the Rivoli Theater sound equipment, pointed out that the system meets the requirements of extended frequency range, and extended dynamic range, the latter being the difference between the lowest audible and the highest tolerable sound. A "whispered" rendition of "The Surrey with the Fringe on Top" is completely audible and understandable in all parts of the Rivoli.

To insure true high-fidelity sound, the five Altec stage speaker channels each are fed with up to 120 watts of audio power, sufficient to handle extremely loud sound passages without any trace of distortion. The Rivoli

theater system is adjusted for uniform frequency response between 40 and 12,000 cycles.

VoltOhmyst

Addition of the Model WV-98A Senior VoltOhmyst to the line of RCA test equipment was recently announced by Lee F. Holleran, General Marketing Manager, RCA Tube Division.

"The RCA WV-98A," Mr. Holleran said, "is an ultramodern vacuum tube voltmeter for all-round testing of TV, FM, AM, and high-fidelity sets. In the hands of service dealers, TV-receiver manufacturers, and industrial laboratory technicians this instrument is one of the most practical, easy-to-use and accurate vacuum-tube voltmeters on the market. Its features include all those incorporated in the earlier Senior VoltOhmysts, including peak-to-peak measurements of complex waveforms. In addition, the new WV-98A has an extra large (6½ inches wide) full-vision meter face with easy-to-read scales. Unlike conventional vacuum-tube voltmeters of the half-wave rectifier types, the Senior VoltOhmyst measures peak-to-peak voltages directly, an advantage appreciated particularly in checking TV receiver circuits."

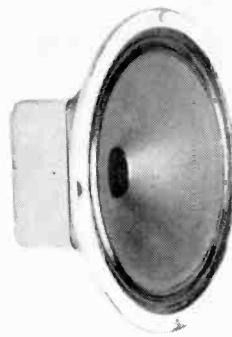
Another feature of the WV-98A is a new single-unit ac/dc-ohms probe that has a handy, built-in switch for instant selection of dc, ac, or resistance functions. Overall accuracy on both ac and dc voltage scales is plus-or-minus 3 per cent of full-scale values. DC voltages from

0.02 volt to 1,500 volts are read on only two scales in seven overlapping "3-to-1" ranges. By the use of a high-voltage accessory probe, the voltage range may be increased to 50,000 volts.

For ac measurements, seven overlapping scales extend to 4,200 volts, peak-to-peak. The WV-98A measures resistance from 0.2 ohm to 1.000 megohms on a single scale in seven continuous ranges.

The WV-98A is enclosed in a rugged, fully enclosed die-cast aluminum case that effectively shields the interior circuits from radio-frequency fields. It measures only 7½ inches high, 5¾ inches wide, 4½ inches deep, and weighs 6 pounds.

New All-Range Speaker



Altec Lansing's new Model 401A speaker is an 8" industrial all-range speaker of high quality performance, designed particularly to meet the requirements of Public Address and various types of commercial sound systems. The 401A has a power capacity of 14 watts, impedance of 8 ohms, with resonance 75 cps. The voice coil diameter is 1", and the depth 3½". Consumer net price: \$13.20.

Storm Warnings

Dr. Allen B. DuMont is a yachting enthusiast. His boats have been virtual floating TV laboratories. In addressing participants in the scatter seminar in Washington recently, he reported that TV can be an effective storm warning device.

"I have found," he said, "that abnormal tropospheric transmissions are a most effective storm warning. Invariably, when exceptionally strong [TV] signals are received from stations more than 75 miles distant, a storm or general fog condition can be expected within eight hours."

Complete Color Line

The first complete line of 21-inch color television receivers soon will be presented to the public by RCA.

Details of the merchandise—which will include a table model, a consolette and three console instruments—were disclosed at the annual midwinter sales meetings of RCA's consumer products divisions.

The sets, all featuring RCA's simplified 26 tube circuits and the 21-inch tricolor picture tube, will carry nationally advertised list prices ranging from \$695 to \$995.

In addition to the color receivers, the RCA Victor

line for the first half of 1956 will consist of 24 basic models of black-and-white sets, 23 of which were introduced to the public last June.

Only addition to the black-and-white merchandise will be a new clock-timer console—the "Teletimer 21"—which will carry a nationally advertised list price of \$289.95. This set will automatically turn on at a predetermined time to a pretuned channel and will continue operation on that channel in multiples of 15 minutes up to six hours of operation, automatically turning the set off at the end of the desired period of operation.

The color receiver line will consist of a 21-inch table model at \$695, a 21-inch consolette at \$795, a 21-inch open-face console at \$895, a traditional door console at \$995, and a provincial door console at \$995.

All of these color receivers utilize virtually the same 26-tube simplified circuits developed by RCA and proven in exhaustive field tests, plus the use thousands of color sets—using the same circuitry—have received in dealers' showrooms, consumers' homes, and public places across the nation.

However, the two-door console instruments will feature "Panoramic Sound"—a sound system which uses one 8-inch speaker and two 3½-inch speakers—designed to distribute tonal balance over a wide area. The three other color sets have 8-inch speakers—two each in the "Director 21" model and one each in the "Seville 21" and the "Haviland 21."

Twin Triode Tube

A new tube type, designated the 4BC8, a miniature twin triode, has been announced by the Electronic Products Sales Department of Sylvania Electric Products Inc.



The new type, designed by Sylvania engineers, is a miniature medium mu, semi-remote cutoff twin triode, which offers more satisfactory performance in AGC systems. It is intended for application as a VHF cascode amplifier in series string television receivers and features a 600 Ma., 4.2 volt heater, with controlled heater warm-up time.

Objectionable cross modulation effects are minimized under both strong and weak signal conditions—important for the design of more effective AGC operation.

