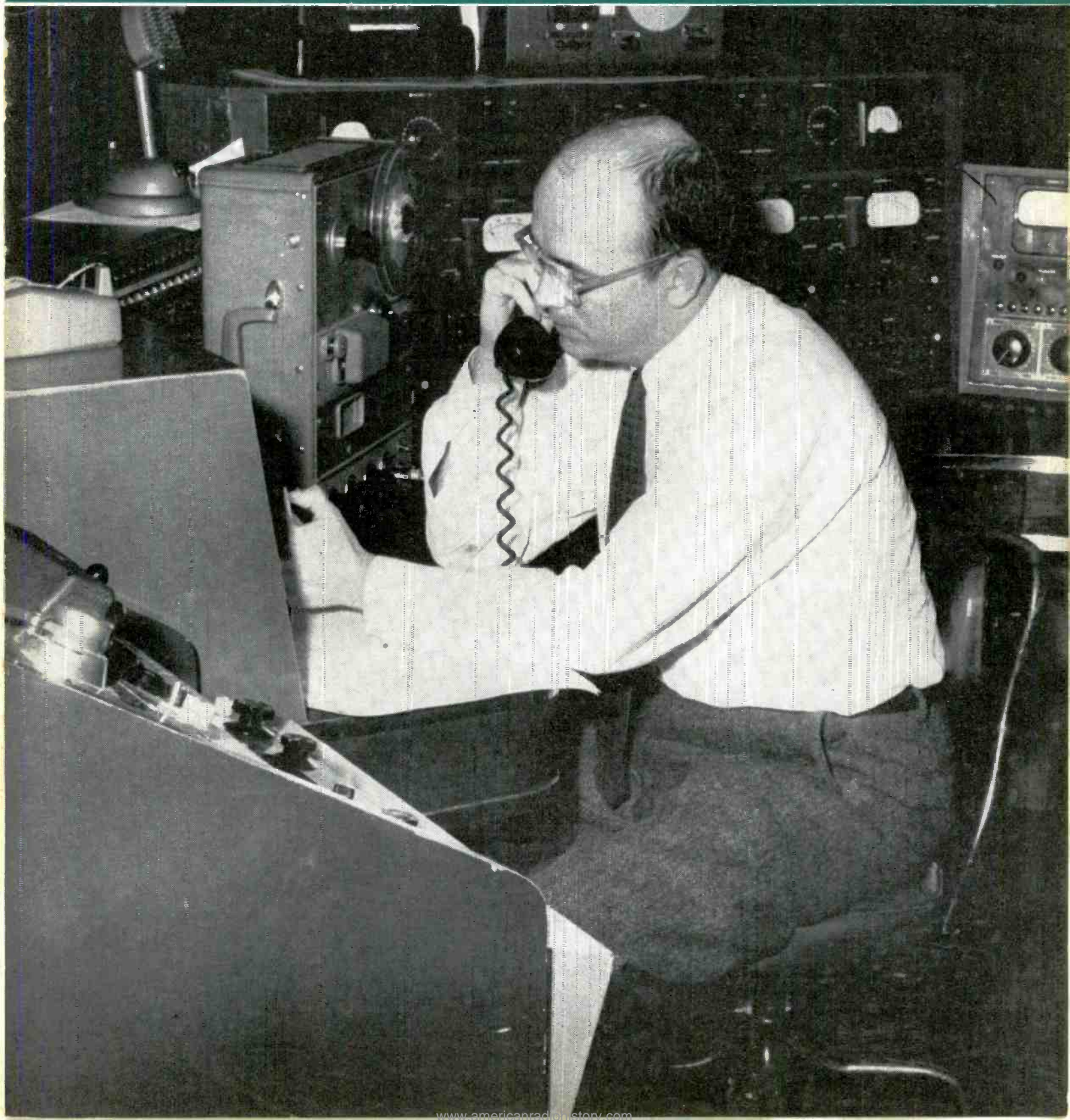


RADIO, TV and RECORDING **TECHNICIAN-ENGINEER**

MAY, 1958



RADIO, TV and RECORDING
TECHNICIAN-ENGINEER

VOLUME 7 17 NUMBER 5

PRINTED ON UNION MADE PAPER

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

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... the cover

An IBEW member on Saturday afternoon duty at Radio Station WFBR, Baltimore, Maryland. He is Fred Himes, a member of Local 1400, one of 10 Brotherhood members employed by the station (four at the transmitter and six at the studios). When we visited Fred he was almost ready to turn over the controls to Joe McCleary, shop steward, who was scheduled for the 4 p. m. to midnight operation.

WFBR is a 5,000 watt independent station. It has a new building under construction on Charles Street and expects to move into it next year.

For other pictures of a Saturday afternoon in Baltimore turn to page 13.

commentary

Speaking before a recent San Francisco Chamber of Commerce meeting, AFL-CIO General Counsel Arthur J. Goldberg proposed a three-point program to help eliminate possible abuses in the administration of health, welfare and pension plans.

Goldberg's proposals included:

- Action at the state level to eliminate the requirement for mandatory commissions where no services are performed by an agent or broker; to establish standards of reasonableness governing commissions; and to make state insurance departments more responsive to the public interest.

- Tightening and modernizing state fiduciary laws to clearly spell out the trust character of these funds, the duties of the trustees, and the rights of beneficiaries.

- Federal legislation providing for the full disclosure of the financial affairs of all plans.

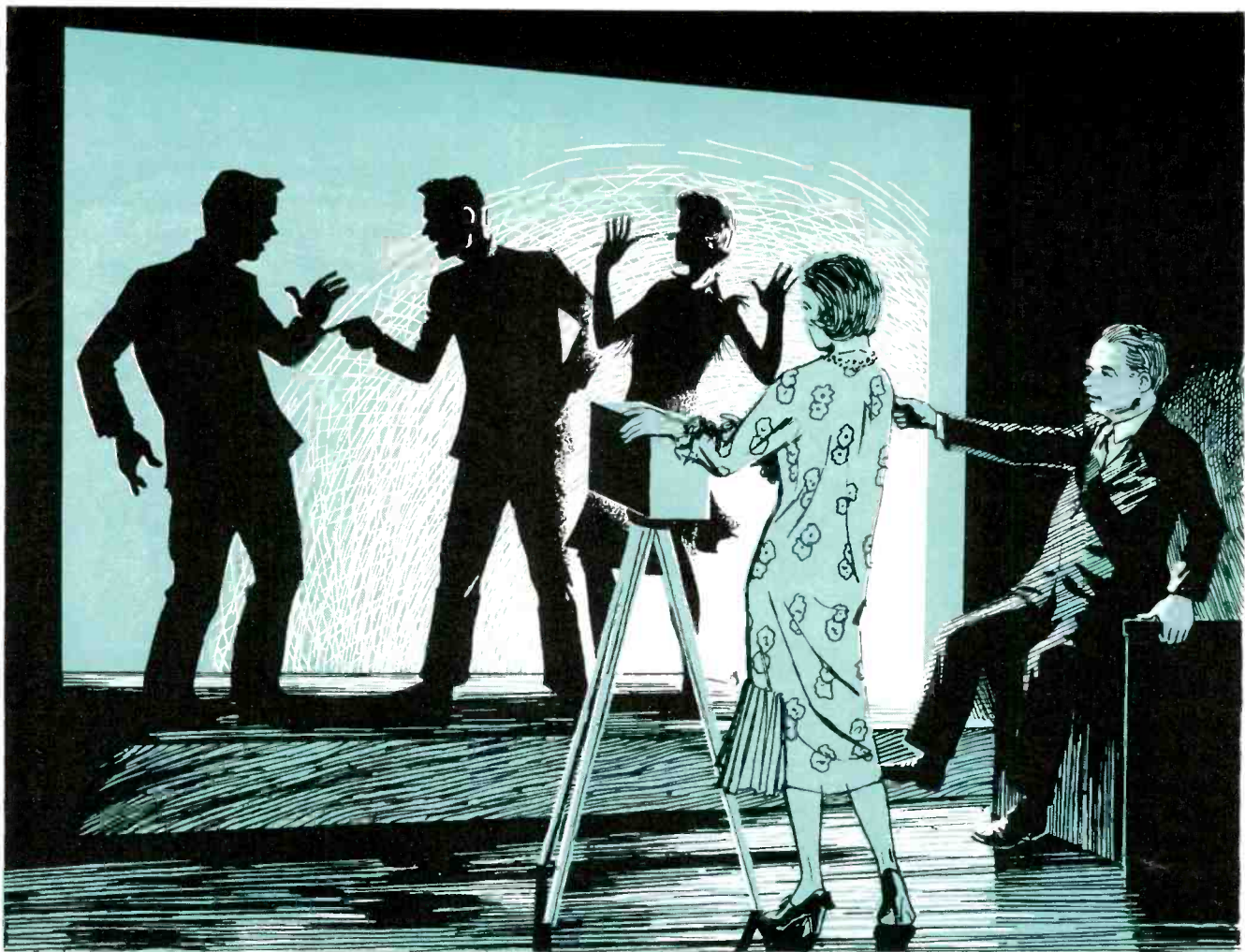
The AFL-CIO general counsel pointed out that it was important that all types of plans be covered because "legislation confined to jointly or union-administered plans would leave the overwhelming majority of workers outside its protection."

the index . . .

For the benefit of local unions needing such information in negotiations and planning, here are the latest figures for the cost-of-living index, compared with the 1957 figures:

March, 1958—123.3; March, 1957—118.9.

Published monthly by the International Brotherhood of Electrical Workers, AFL-CIO, 1200 Fifteenth St., N. W., Washington, D. C., for the men and women in the recording, radio and television industries. Entered February 20, 1952, as second-class matter at Washington, D. C., under Act of August 24, 1912. Subscription Price: U. S. and Canada, \$2 per year, in advance.



The Heyday of Do-It-Yourself Television

Station W3KX broadcast
a 'postage stamp' picture

IN 1928, the year before the stock market crash, Dr. Charles Francis Jenkins began transmitting television "programs" from the little crossroads settlement of Wheaton, Md., a community near Washington, D. C.

There was no sound, no commercials, and the picture received was not much larger than a postage stamp.

Pioneer TV viewers who built their own receivers from Doctor Jenkins' \$7.50, \$15, or \$20 kits saw the silhouette of a little girl bouncing a ball, or perhaps the tense drama of villain and hero battling for the hand of a 1928 "flapper."

Though Doctor Jenkins' little boxes were not video as we know it today, their inventor was not a crackpot faddist, either. He was, instead, an inventive tinkerer

from the Edison mold. Jenkins might be described as one of the last of the great individual inventors.

Edmund C. Wallis, who rented the white frame house in Wheaton to Doctor Jenkins as a television station for \$35 a month, remembers thumbing through a large collection of the inventors' patents, which were mostly in the radio and motion picture fields.

Unlike the story-book inventor, Jenkins did not die unrecognized and in poverty. Mr. Wallis says the inventor was paid thousands of dollars by television pioneer Lee DeForest for his TV patents and equipment. (Practical-minded Mr. Wallis wouldn't let the DeForest men haul the equipment away until the back rent was paid.)

Jenkins was born in Dayton, Ohio, August 22, 1867. He became interested in the possibilities of transmitting pictures through space about 1900. He was a government clerk in Washington, D. C., during the early 1900's, but on the side he began developing inventions in a small laboratory on 13th Street, between G and H Streets, in the nation's capital. One of his earliest developments was a method of forming round cardboard containers. He did much to perfect the motion picture projector, too. William Heine of Washington, a friend, says that Jenkins made and lost "a couple of fortunes."

In 1928 Jenkins rented the Wheaton house for television studies. Then he obtained a license from the Federal Radio Commission to operate Television Station W3XK. He probably selected Wheaton for his TV experiments because of its high elevation. (The FRC, which later became the Federation Communications Commission, kept few records, and the FCC cannot say that Jenkins' station was the first licensed TV operation. It was certainly among the first.)

The white frame house which became Station W3XK was soon flanked by two 100-foot towers, about 150 feet apart, with wire strung between. Bars were installed on the basement windows to protect the valuable equipment and data inside. Holes were drilled into the partitions dividing rooms for the maze of wiring which was installed.

Television was "booming" in the late Twenties, curiously enough. In his book, *4,000 Years of Television*, Richard W. Hubbell described the era:

Television Boomed

"All of a sudden the word 'television' glistened and sparkled. Fantastically optimistic stories were bruited about, spread through the newspapers, magazines, books. Television companies sprouted, sold stock, organized schools, issued brochures. Dozens of eminently sound and respectable corporations decided to go into television. Perhaps the television picture was not too good yet, but it might develop quickly, on a hundred million shoestrings!"

The same year that Jenkins began beaming "programs" from Wheaton, the English television pioneer, John Logie Baird, transmitted a picture from England to America. The first outdoor television picture was transmitted with the sun furnishing the light. General Electric televised New York Governor Alfred E. Smith accepting the Democratic presidential nomination. The first televised dramatic program was presented with two actors in short pantomime skits.

One of Jenkins' first accomplishments was sending a picture of President Warren G. Harding from the Naval radio station in Washington to the Evening Bulletin Building, 130 miles away in Philadelphia. (This was in 1921, before he began experiments with W3XK.)

Mechanical Scanners

All television systems of the Twenties used a mechanical scanning disc developed by a German, Paul Nipkow. A giant wheel perforated with tiny holes spun inside the camera at between 1200 and 1800 revolutions per minute to break the picture into electrical impulses. Another big perforated wheel spun inside the receiver to reassemble the transmitting impulses back into a picture.

Eventually, Jenkins replaced the disc in the receiver with a discorolla—a rotating prism—that made the picture more recognizable.

Jenkins was able to increase his picture size to about a foot square, but he had difficulty with "flickering pictures."

One of Jenkins' greatest assets was his enthusiasm for his work. In the book, *Understanding Television*, Orrin E. Dunlop quotes the inventor as describing his TV receiver in this way: "There is really no mystery in the thing after all." After he described his system in non-technical terms, he often bubbled, "Easy, isn't it?"

Jenkins experiments aroused interest. A businessman offered to pay him \$150,000 for two years' control of Jenkins Television Corporation. The inventor told the businessman to come back with a "man-sized offer."

Meanwhile, he tried to perfect scanning methods. He hired engineers "who knew a little bit more than he did about a problem," recalls his friend, Mr. Heine, and these men added their knowledge to his own.

Other inventors and companies pushed ahead with their own television experiments. By 1931 at least 15 companies were transmitting television programs.

When the Boom Burst

But the boom burst in 1932. The mechanical scanning methods were not good enough for general public acceptance, and the depression of the Thirties had come. The mechanical camera with the Nipkow disc, could not keep a satisfactory image. It flickered and strained the eyes. As soon as the novelty wore off, viewers lost interest and returned to more satisfactory fare in the motion picture theaters. Something else was needed.

(That something else—electronic scanning—didn't come to the fore until after World War II.)

Jenkins finally closed down his Wheaton station on October 31, 1932. He was then 65 years old, and he went into retirement. He died in 1934, two years after W3XK died too.

During World War II the station's towers were torn down and given to the scrap metal drive. The white frame house became a residence once more. Metropolitan Washington spread farther and farther into the suburbs, and the building, which still stands, is surrounded by housing developments. All that remains of Charles Francis Jenkins' do-it-yourself television is a sheaf of patents filed at the U. S. Patent office.

RECENT DEVELOPMENTS IN *Remote Control*

NAB Petition Asks Relief in Frequency Logging and FCC Again Relaxes Rules for Conelrad Operation



96 of the March 31 issue. If you were such a careful reader, you would have read the following in the same size type shown below.

"PETITIONS FOR RULE MAKING FILED

"National Assn. of Broadcasters, Washington, D. C.—Petition requesting institution of rule making looking toward amendment of Section 3.111 of rules so as to require entry in operating log of frequency monitor reading *only at the beginning and close of the broadcast day* instead of every thirty minutes as is now required. Petitioner proposes that present Section 3.111 be amended as follows: (a) Change present Section 3.111(b) (4) to Section 3.111(b) (5) and delete therefrom (iii); (b). Add new Section 3.111(b) (4) to read as follows: 'An entry of the frequency monitor reading at the beginning and close of the broadcast day or, in the case of continuous operation, once in each twelve-hour period'; and (c) Change present Section 3.111(b) (5) to Section 3.111(b). Announced Mar. 21."

As of the date this **TECHNICIAN-ENGINEER** went to press, the Commission had not taken any action on the most recent NAB petition. The ordinary course of procedure by the Commission is indicated, of course, although not assured. A Public Notice of Proposed Rule

REGULAR readers of the **TECHNICIAN-ENGINEER** are aware of the depth of coverage we have given to the subject of remote control from the original Petition by the NARTB in 1952 and again through the 18 months of litigation that started in February of 1956. As a reader you may have become a little weary of the subject, although as an affected Technician employed at an AM or FM transmitter the subject is no less important than your pay check.

There have been two recent developments in connection with the remote control of broadcast transmitters of which our members should be aware. On March 21, 1958, the Federal Communications Commission announced it had received a further Petition for rule making from the National Association of Broadcasters (formerly NARTB). To have had knowledge that such a petition had been filed would have required a visit to the Commission's press release desk on the day in question or in the alternative you might have learned the petition had been filed if you were a subscriber to *Broadcasting* magazine, and only then if you were a careful reader and read the fine print appearing on Page

Making is presumably under consideration—such a notice would request comments, etc. Whether—or when—such a notice may be issued is presently undeterminable.

It is interesting to compare the filing of this latest petition of the NAB with its previous petition on this subject filed with the Chairman of the FCC in February of 1956, when the event was duly noted in the trade press as a feature story, complete with a picture of a representative of the Association and the then Chairman of the Commission looking at the document. The usual procedure is to file such petitions with the office of the Secretary of the Commission, not with the Chairman personally.

This time no pictures were published of an Association representative discussing the March 21, 1958, Petition with the present Chairman of the Commission. Instead, *Broadcasting* published the announcement on Page 96 as a routine "hand-out" of the Commission.

The second development of recent date relative to remote control first appeared publicly in *Broadcasting* on Page 126 of the May 5, 1958, issue. The announcement

was only the briefest paraphrase of the Commission's latest action relative to remote control and appeared thus:

"REMOTE CONTROL RULES AMENDED"

"By order, Commission amended Sect. 3.66(c) (4) of broadcast rules relating to remote control of AM stations so that determination of necessary CONELRAD operation power can be made by CONELRAD field supervisor on case-to-case basis."

The complete text of the Commission's Order is reproduced below.

B
FCC 58-399
57262

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington 25, D. C.

In the matter of

Amendment of Section 3.66
(Broadcast Service)
of the Commission Rules
and Regulations

ORDER

At a session of the Federal Communications Commission held at its offices in Washington, D. C. on 23rd day of April, 1958.

The Commission has under consideration several requests for relief from the requirements of Section 3.66(c) (4) of its Rules and Regulations which states that: "An authorization for remote control will be issued only after satisfactory showing has been made in regard to the following, among others.

- (1)
- (2)
- (3)

- (4) The station, if authorized to operate with a directional antenna and/or with a power in excess of 10 kw will be equipped so that it can be satisfactorily operated, . . . , on a CONELRAD frequency with a power of 5 kw or not less than 50 per cent of the maximum licensed power whichever is the lesser . . . "

It appears that there are instances where the power limitation imposed by this rule would work an undue hardship upon those stations presently engaged in CONELRAD operation as well as other stations wishing to operate by remote control. A number of stations use their auxiliary transmitters for CONELRAD while other stations have purchased and installed separate CONELRAD transmitters. The transmitter power for CONELRAD use has been determined by CONELRAD Field Supervisors on a case-to-case basis and is in several cases less than 50 per cent of the authorized power. For example, the present rule would require a 5 kw directional station wishing to operate by remote control to install a 2.5 kw transmitter for CONELRAD use even though it might be authorized to operate with a CONELRAD power of 1 kw. It is believed this would work an undue hardship by requiring in many instances an extra transmitter, especially for those stations presently capable of operating with satisfactory CONELRAD power.

We believe that it would be in the public interest to amend the rule so that the determination of the necessary CONELRAD power can be made by the CONELRAD Field Supervisor on a case-to-case basis. A certified statement from the Field Supervisor would be submitted with the application for remote control. This statement would set forth the power that would provide satisfactory service under CONELRAD.

It is administratively convenient and in the public in-

terest to amend the rule and the amendment adopted herein is procedural in nature, and, therefore, prior publication of the Notice of Proposed Rule Making pursuant to the provisions of Section 4(a) of the Administrative Procedure Act is unnecessary.

The amendment adopted herein is issued pursuant to authority contained in Sections 4(i) and 303(r) of the Communications Act of 1934, as amended.

In view of the above, IT IS ORDERED, that effective May 26, 1958, Section 3.66 of the Commission's Rules and Regulations is amended by the addition of the following provision to paragraph (c) (4):

Provided, however, that the power may be less than 50 per cent upon certification by the CONELRAD Field Supervisor that such power will provide satisfactory service under CONELRAD.

Section 3.66(c) (4) as amended reads as follows:

- (4) The station, if authorized to operate with a directional antenna and/or with power in excess of 10 kw, will be equipped so that it can be satisfactorily operated in accordance with Subpart G of this part, on a CONELRAD frequency with a power of 5 kw or not less than 50 per cent of the maximum licensed power whichever is the lesser and that the necessary switching from the licensed frequency to the CONELRAD frequency can be accomplished from the remote control position, *Provided, however*, That the power may be less than 50 per cent upon certification by the CONELRAD Field Supervisor that such a power will provide satisfactory service under CONELRAD.

FEDERAL COMMUNICATIONS COMMISSION
MARY JANE MORRIS
Secretary

Released: April 25, 1958

NOTE: Rules changes herein will appear in Amendment 3-112.

You will note the Commission used very careful language to justify its administrative change of the rules without prior public notice that such action on its part was even contemplated.

On an informal basis the IBEW inquired of a responsible member of the Commission's CONELRAD staff, the total number of such requests that have been received by the Commission and asked the staff member to identify the stations making the requests. The IBEW was shown only *TWO* photostatic copies of letters requesting such relief. We were told there had been other *verbal* requests to the Commission's field staff who in turn communicated such requests in their regular reports to the Washington Offices of the Commission.

Number of Requests

These reports were not offered or available for inspection, and the IBEW was told that *perhaps* there had been a total of between 10 and 15 such requests over the past eight months but the staff member was not able to say exactly how many and was only able to produce the two letters referred to above. It was on this basis the Commission has now further relaxed their requirements which have the effect of reducing the cost of going to remote control and thus making it easier for higher power stations to go remote control with its resultant loss of employment.

The Rule Change referred to means a station authorized to operate with a directional antenna and/or with power in excess of 10 kw and contemplating going remote control will no longer be required to have a transmitter capable of either 5 kw or half its licensed power. When the IBEW raised serious questions with respect to their petition, even the NARTB in October, 1956, told the Commission the Association felt a 50 kw station should have a 5 kw standby transmitter which could be operated by remote control and in its Report and Order the Commission did *not* agree with the NARTB and such a requirement was never made a condition of going remote control, *except* in connection with CONELRAD as indicated above.

The Subcommittee of the Committee on Government Operations, House of Representatives, has held extensive hearings of the matter of Civil Defense for National Survival. During the course of these hearings, the effectiveness of low-powered stations and stations of different power operating in the CONELRAD service was discussed at great length. The Chairman of the Subcommittee, Rep. Chet Holifield of California, made the following statement with respect to CONELRAD: "There have been some places where we have had testimony that the variation was so great, it made the broadcast not understandable, particularly to a person who did not know what it was, what it was about. They would be disgusted and turn it off."

Our Position on CONELRAD

It has long been the position of the IBEW that stations operating in the CONELRAD Service should be operated at full power in order to reach the maximum number of people at the critical time when CONELRAD *must* render its greatest service. The Commission apparently is the only agency that clings to the theory that in event of imminent air attack, broadcast stations may be used as directional aids. It would appear the Commission has not yet heard about the ICBM which is not dependent upon any broadcast station large or small for its accuracy in reaching a given target.

In authorizing any broadcast station the Commission carefully takes into account the area and the total population that may expect to receive a primary signal from the transmitter having the requested power and using an antenna designed for the specific frequency requested.

In almost every case in the CONELRAD Service, the participating station is using an antenna not designed for the CONELRAD frequency with a resultant loss in efficiency of the transmitter signal. Couple this with a reduction in power now to be decided upon by a field supervisor and the result can only be a lessening of coverage when it is needed most. The broadcaster who has pledged to serve his community in "the public interest, convenience and necessity" and who receives

his revenue in part from this same community has now found it a hardship to supply his community with a CONELRAD signal at least 50% as strong as when the station is being operated commercially. This at a time when the community may desperately need instruction and information whether in advance of air attack or as a weather warning service

In its Report and Order of September 19, 1957 the Commission said:

"The IBEW filed a petition for institution of rule making to amend the remote control rules so that:

'Any station, irrespective of power, *heretofore or hereafter* authorized to operate by remote control may be so operated only if equipped so that it can be operated on the CONELRAD frequency assigned and the necessary switching from the stations assigned frequency to the CONELRAD frequency can be accomplished.'

FCC Position on Petition

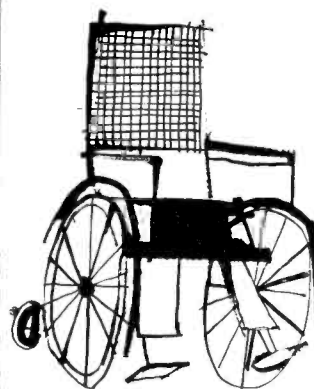
"The NARTB petition proposed that all *future* remote control authorizations whether or not now participating in the CONELRAD operating system, be conditioned upon the stations being equipped to satisfactorily operate in the system and, by remote switching of the transmitter or by using a separate transmitter, change from its normal frequency to a CONELRAD frequency. Therefore, we are treating the petition of the IBEW as a counter-proposal in this proceeding."

Later in its Report and Order the Commission explained in great detail the reason for its decision to include Section 3.66(c) (4) which would require.

"the station, if authorized to operate with a directional antenna and/or with power in excess of 10 kw will be equipped so that it can be satisfactorily operated, in accordance with subpart G of this part, *on a CONELRAD frequency with a power of 5 kw or not less than 50% of the maximum licensed power whichever is the lesser and that the necessary switching from the licensed frequency to the CONELRAD frequency can be accomplished from the remote control position.*" (Emphasis supplied)

The Commission then explained the new rule in this manner:

DON'T PRESS YOUR LUCK!



It takes 8 months to get polio-protected. Don't wait until it's too late. Start your shots NOW! Protect the whole family!



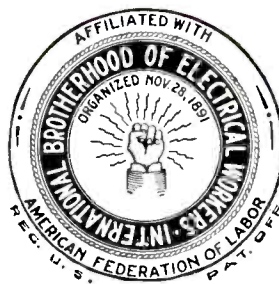
"26. In its petition, NARTB proposed that a station authorized to operate with a directional antenna and/or with a power in excess of 10 kw may operate by remote control only if equipped so that it can be operated on a CONELRAD frequency and the necessary switching from the station frequency to the CONELRAD frequency can be accomplished from the remote control position. We are of the opinion that the adoption of such a proposal would not necessarily be a departure from the concept that CONELRAD participation is on a voluntary basis. It should be noted that all stations whether or not operating by remote control must be so equipped so as to be able to follow the prescribed CONELRAD alerting procedure set forth in the CONELRAD Manual for Broadcast Stations. Therefore, CONELRAD operation is both mandatory and voluntary, i.e. participation of all broadcasting stations is mandatory to the extent that regular operation of the station must cease *after the transmission of the required Radio Alert message*, whereas stations may, upon a voluntary basis and after approval of the Commission, operate during a CONELRAD alert to maintain contact with and disseminate information to the public. Such stations participate in the CONELRAD system and operate in accordance with the CONELRAD rules. *Stations licensed to operate with higher power and/or directional antenna form the hard core of the CONELRAD system. We realize that in some cases a moderate expenditure might be required to enable these stations to continue in the CONELRAD system with remote control switching. While it is believed that no material number of stations would drop out of the plan because of the necessity of these expenditures, we feel that the public and national interest requires the continued success of the CONELRAD plan and the Emergency Broadcasting System. Therefore, we believe that we are justified in conditioning an authorization for remote control of a station operating with a directional antenna and/or a power in excess of 10 kw upon the installation of equipment that would permit the change over from the licensed operation to CONELRAD operation to be made from the remote control point. Accordingly the request of NARTB is being adopted and therefore the counter proposal submitted by IBEW must be denied.*" (Editor's Note: Emphasis supplied)

Previous Action Didn't Satisfy

After only eight months trial, two written requests, and perhaps ten (?) verbal grunblings, the Commission has unilaterally and administratively changed the rule and this time without even the NAB requesting such a change—in the form of a petition. When the new Remote Control Rules were first announced in September of 1957 giving the NARTB substantially what they had requested, even this wasn't enough. President Harold E. Fellows of the then NARTB issued a statement expressing regret that the FCC, notwithstanding liberalizing of remote control usage, "has added restrictions which will limit the effectiveness that the new procedures might have had."

In the adjoining columns will be found IBEW's Petition for Reconsideration filed with the FCC (Office of the Secretary) on May 26, 1958.

Attend Your Local Union Meeting Regularly. Be An Active Participant in All Union Affairs.



IBEW

Reconsideration of Rule C

ON May 26, 1958, the IBEW protested the recent action of the Federal Communications Commission in relaxing the requirements for CONELRAD transmitter power. The IBEW Petition refers to the legal and substantive issues involved. The complete text of the Petition is as follows:

United States of America
Before the

FEDERAL COMMUNICATIONS COMMISSION

In the Matter of:

Amendment of Sec. 3.66 (Broadcast Service) of the Commission's Rules and Regulations

Docket No.

Petition for Reconsideration

International Brotherhood of Electrical Workers, hereinafter sometimes referred to as "I.B.E.W." respectfully files with the Commission this Petition for Reconsideration and prays that, on reconsideration, the Commission vacate the Order herein, published in the *Federal Register* on May 1, 1958 (F.R. Doc. No. 58-3257) and bearing a release date of April 25, 1958, and conduct such further proceedings, in accordance with law, as the Commission deems just and appropriate.

In the proceedings, in Docket No. 11677, conducted in conformity with the provisions of the Administrative Procedure Act as to notice and opportunity for participation by interested persons, the Commission amended Sec. 3.66 to authorize remote control for stations with directional antennae and/or power in excess of 10 K.W. but only where the station is equipped for satisfactory operation in the Conelrad service with a power of 5 K.W. or not less than 50% of maximum licensed power, whichever is lesser.

The Order released April 25, 1958, further amends Sec. 3.66 to provide that the power for Conelrad operation may be less than 50% on certification by the Conelrad Field Supervisor that such lesser power will provide satisfactory service under Conelrad. The April 25, 1958 order thus eliminates the fixed minimum power requirement and replaces it with a provision permitting adjustment, downward only, of the power to be required for Conelrad operation.

The notice and procedures requirements of Sec. 4 of the Administrative Procedure Act have not been followed by the Federal Communications Commission. The Order of April 25, 1958 effects a substantive change in the conditions under which remote control is authorized. It is not a mere procedural matter. The change has two aspects: 1) establishment of a certification procedure 2) the lowering of the minimum power requirement. The second aspect is substantive.

Furthermore, it may be convenient for the Commission to omit the normal procedures in this case. This does not justify the omission. The Administrative Procedure Act (Sec. 4 (a)) authorizes such omission only where the administrative agency

AGAIN OPPOSES FCC ACTION

Change Asked on Legal Grounds

"for good cause finds (and incorporates the finding and a brief statement of the reasons therefor in rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest." (Emphasis supplied). No such finding has been made in this case.

Wherefore, I.B.E.W. respectfully prays that the order released April 25, 1958 be vacated and that any further proceedings be conducted in accordance with law.

Respectfully submitted,

LOUIS SHERMAN
WILLIAM J. BROWN
Attorneys for I.B.E.W.
1200 15th St., N. W.
Washington 5, D. C.

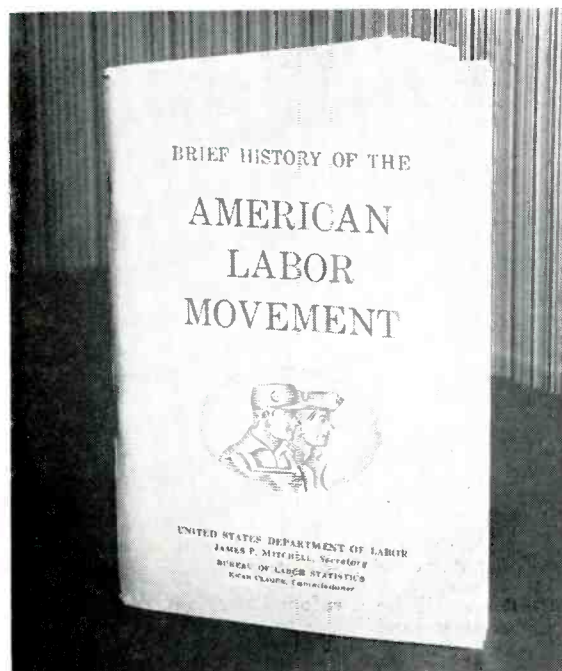
ALBERT O. HARDY
Director, Radio, TV & Re-
cording Division, I.B.E.W.
KENNETH D. COX
International Representative,
I.B.E.W.

Two-Year Reference

For more than two years the IBEW has been fighting to protect the jobs of technicians and engineers threatened by unjustified extensions of remote control operations at radio and television stations. Background information on this issue and official statements of the Brotherhood, the FCC, and other interested parties can be found in the following back issues of the **TECHNICIAN-ENGINEER**:

- "NARTB Asks FCC for Further Rule Relaxation," March 1956 edition, Page 3.
- "FCC Issues Public Notice," April 1956, Page 5.
- "IBEW Petitions for Delay," May 1956, Page 3.
- "IBEW Files Comments on Proposed Rule Relaxation," July 1956, Page 3.
- "How Remote Can You Get?," August 1956, Page 4.
- "The Remote Control Record Is Growing," September 1956, Page 3.
- "NARTB Files 'Reply Comments' . . . Largely New Material," November 1956, Page 8.
- "NARTB Files Final Pleadings," December 1956, Page 10.
- General Counsel Louis Sherman's speech to the Division Meeting, Pages 14 and 15 of the July-August issue, 1957.
- "FCC Decision Issued," October 1957, Page 3.
- "Fires of Remote Control Issue Still Rage," December 1957, Page 3.
- "FCC Denies Our Petition," January 1958, Page 7.

May, 1958



Paperback Bargain

An 85-page booklet which Uncle Sam is selling for 35c is a real bargain for the union member who wants to understand and appreciate his heritage as an American worker.

Entitled *Brief History of the American Labor Movement*, more than a century of colorful history is packed into the small, well-illustrated volume.

This edition of a booklet first issued several years ago by the U. S. Dept. of Labor is up to the minute. A chronology of important labor union highlights concludes with the convention of the AFL-CIO in Atlantic City, six months ago.

It is a publication which would fit readily into the educational program of a local union and would supplement the history teachings of public schools.

Orders for copies should be sent to the U. S. Government Printing Office, Washington 25, D. C. Ask for Bulletin No. 1000, *Brief History of the American Labor Movement* by U. S. Department of Labor. 35c.

The Union Shop:

Two Revealing Views

Questionnaire

"RIGHT-TO-WORK" LAWS

1. Name the industrial northern state which passed a "right-to-work" bill this year.
2. Name the state that, in the past two years, repealed its "right-to-work" law.
3. There will be a referendum vote in 1958 on a "right-to-work" law in
☐ Maryland ☐ Kansas ☐ California
4. "Right-to-work" laws have now been passed in
☐ 30 states ☐ 18 states ☐ 2 states
5. "Right-to-work" laws make it illegal to have any kind of clause in the union contract which says that workers must join the union or must stay members once they have joined.
☐ True ☐ False
6. Do you have a clause in your union contract like the one described in question 5?
☐ No ☐ Yes
Do you have ☐ closed shop
☐ union shop
☐ maintenance of membership
☐ modified union shop
☐ no union security clause
7. The Taft-Hartley law makes the closed shop and the union shop illegal.
☐ True ☐ False
8. Do you think that a majority of workers in your local would vote in favor of the union shop?
☐ No ☐ Yes
9. Is it fair to make a worker join a union to keep the job?
☐ No ☐ Yes
10. "Right-to-work" laws have been useful in attracting industry to the states which passed them, and thus in creating more jobs for workers in those states.
☐ True ☐ False
11. "Right-to-work" laws only affect unions and union members, so the general public doesn't have to worry about them.
☐ True ☐ False

(See page 15 for answers)

Company attorneys say 'right to work' law does not protect individual worker's rights

TWO leading legal minds representing the employers' viewpoint have recently, on separate occasions, come out against the principles of the compulsory open shop advocated by backers of so-called "right-to-work" laws.

Speaking before the National Industrial Conference Board in New York, Walter Gordon Merritt, partner in the firm of McLanahan, Merritt & Ingraham and known as the "employer lawyer's lawyer," indicated that he does not favor outlawing the type of union security permitted by the Taft-Hartley Act.

A national "right-to-work" law, he said, would not protect significantly the rights of individual employees and still would leave the non-union man disenfranchised.

In a long article entitled, *Unionism—Past, Present and Future*, appearing in the March-April issue of the *Harvard Business Review*, Leland Hazard, vice president and general counsel of the Pittsburgh Plate Glass Co., traces the background of the union shop concept and concludes:

"When a concept like the 'right-to-work' is meticulously applied to all levels of thought and behavior, its original meaning is perverted. In one sense, requiring a worker to pay dues to a union which he does not belong to is unfair. In another, more practical, sense it is fair. It is simply one of those work-a-day compromises that we ask him to make so that we can run the organization as smoothly as possible."

Pointing out that the law does not permit a union to bargain only for its members but requires it to bargain for all of the employees, even non-union workers, in the bargaining unit, Hazard declared that the term "free rider" was quick to emerge.

"Employers have all kinds of necessary rules which govern the employee's access to a job. Some of the rules, such as those requiring special clothing, do cost

the employe money. I see no difference between such rules and one requiring an employe to keep peace in the shop by paying to an organization, empowered by law to represent him, certain sums of money bearing a reasonable relationship to his pay. . . .

"Is this a violation of individual rights? It depends on your viewpoint. Conceivably nudists might claim the right to come to work unclothed, or food-processing girls might object to maintaining washed and manicured hands. . . . Many others, for many reasons, might scream to high heaven about invaded liberties and denial of their right to work. No one would feel obligated to pay any serious attention to such complaints, even though a case could be made for each of them—a case as doctrinaire as the right-to-work case."

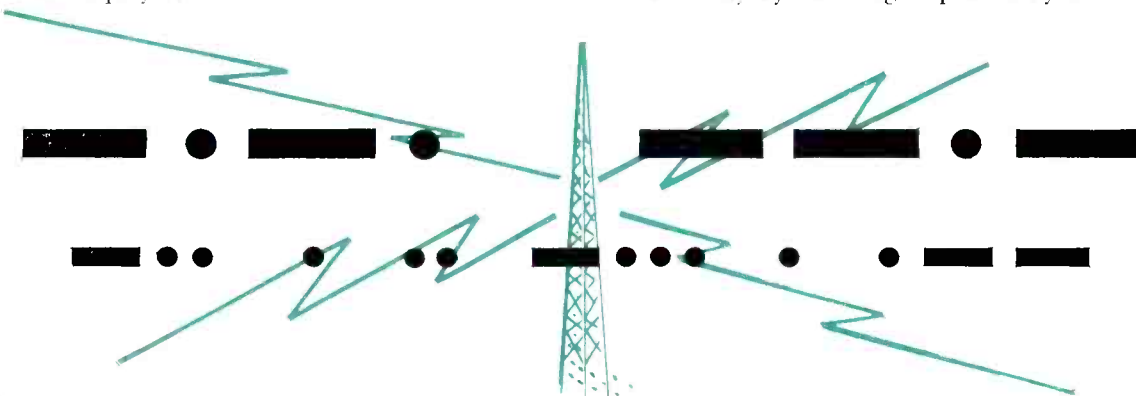
Merritt contended that it is not the union shop that undermines the rights of individuals but the requirements of the Taft-Hartley Act that a majority union act for all employes.

"If non-union men wish to escape the humiliation of being second-class citizens and wards and to participate in electing their representatives and in deciding matters which so largely affect their fate as employes, they must pay union dues," he said.

"The point which I wish to emphasize is the insubstantiality of the argument that the Taft-Hartley form of union shop destroys the liberty of the non-union workers. These non-conformists have already lost their rights. This loss exists even in an open shop where a majority union exists.

"If the majority can vote to reduce the wages of non-union fellow-employes without consulting them, why should it be denied the power to require a deduction from wages to pay the cost of their over-all bargaining agency and thus to encourage them to play their part in the existing scheme of affairs?

"Should men enjoy a financial advantage of financial immunity by shunning responsibility in such matters?"



FROM time to time inquiry has been made of the International Office for a list of our members who are also radio amateurs in order that they might be recognized when their calls are heard on the air. No attempt in recent years has been made to produce such a list. To do so will require the help of each active member-ham. How about sending your QSL to the IBEW, 1200 15th Street, N. W., Washington, D. C., indicating the band upon which you usually operate and the call letters of the station where you are employed? When received, the information will be published in the **TECHNICIAN-ENGINEER**.

A few of our member-hams are already known to us. Ed Ruggles, W6IH, works in CBS Radio MC in Los Angeles and can usually be found about 28.6 MC. Armand Humburg, W6BON, is employed by CBS at San Francisco and also works the 10 meter band.

Two of our Local Union business managers are hams. Ralph Barnett, W0FMK, of L. U. 1217 in St. Louis devotes all of his radio operating time to amateur teletype on 20 meters. Business Manager Dick McNutt, W8CAT, of L. U. 1218 in Detroit works 40 meter SSB.

We have many hams at WTOP in Washington,

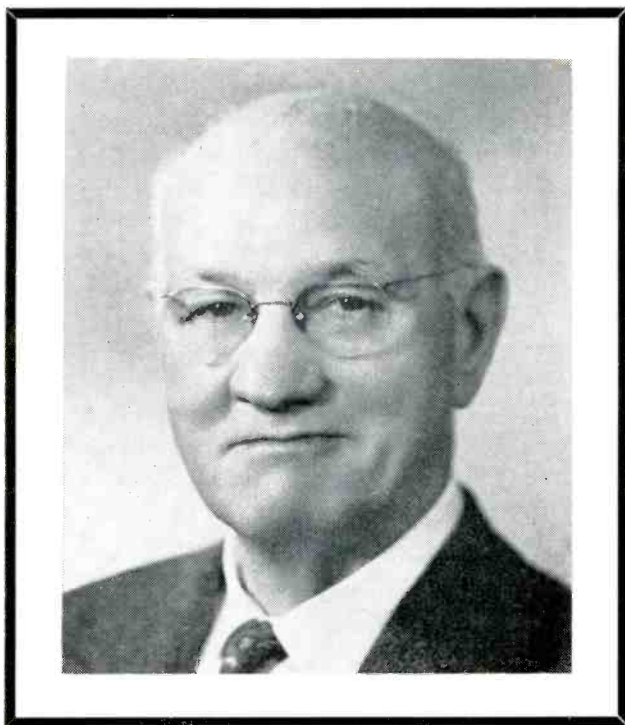


***QSL cards are
sought from all
hams among us.***

some of whom are quite active. The degree of their interest may be judged by the fact they have their own club station located atop the WTOP studios. The club call is K3CSH. The station is operated daily on 20 and 40 meters.

At the I. O. we have only one active ham, International Representative Ken Cox, W3VNF. Ken works all bands and can usually be found on the low end of 10 on weekends.

If all active IBEW hams QSL, the International Office should qualify for W.A.S. in no time at all. How about your card O. M.?



Vice President Mike Boyle Dies

Michael J. Boyle, Sixth District Vice President of the International Brotherhood of Electrical Workers died of a heart attack in Miami, Florida, on Saturday May 17. He was 79 years old. His passing brings to an end a union career dedicated to bettering the life of the working men and women of this nation.

Many articles have been written about Mike Boyle in the course of his long and colorful career. Few of them have given the full and true account of the courage and strength he displayed in organizing the unorganized and fighting to win collective bargaining rights and fair living standards for the working people he represented. Mike Boyle pioneered the union cause more than 60 years ago. His fellow IBEW members and union members everywhere knew him and respected him for his devotion to that union cause for nearly 65 years.

Michael J. Boyle was born June 11, 1879 on a farm in Wright County, Minnesota. He joined the International Brotherhood of Electrical Workers at the age of 16 when he was initiated into Local Union 24 of St. Paul, Minnesota.

He was elected business manager of Local Union 134 in Chicago in 1908, a post he held intermittently until 1919. From that year until his death he served Local 134 in that capacity. Brother Boyle became a member of the IBEW International Executive Council in 1914, and served in that position until May 1930, when he became an International Vice President with jurisdiction over District Six—States of Illinois, Indiana, Michigan, Minnesota and Wisconsin.

Screen Actors Suggest Meany Settle Dispute

The Screen Actors Guild has proposed that its dispute with the American Federation of Television-Radio Artists over jurisdiction in video tape commercials be arbitrated by George Meany, president of the AFL-CIO.

SAG airmailed a letter to AFTRA, this month, outlining the proposal. It stipulated that both unions agree in advance to be bound by Mr. Meany's decision.

The SAG letter stated in part: "At this moment we two actors' unions are faced with a division of opinion as to how to divide our negotiating activities in the video tape television commercial field.

"SAG has proposed that AFTRA cover all such work done at television stations and networks and that SAG cover all such work done outside television stations and networks.

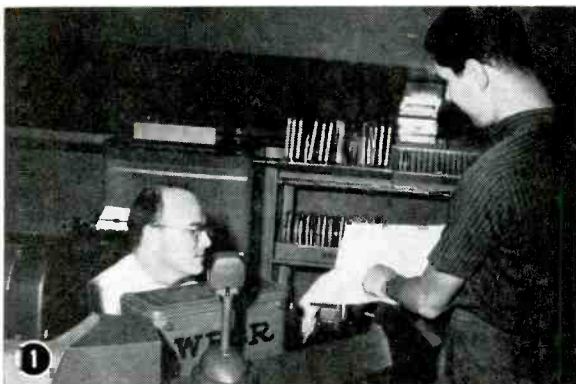
"You disagree. However, the area of our disagreement, as we see it, is not great. In recent informal discussions between us you have recognized that the guild should cover all video tape television commercials produced by motion picture studios as we have recognized that AFTRA cover all such commercials produced by television network and station broadcasting studios.

"We propose that this division be mutually confirmed. This leaves as the only area in dispute between us the following: taped commercials produced by studios devoted to this purpose and not engaged in production in either of the above excluded areas. . . .

"We therefore wish to propose that in lieu of a long, expensive and possibly bitter fight before the NLRB, the question of whether AFTRA or the Guild should have jurisdiction over work done in the disputed area above described be determined by arbitration, and we hereby offer to arbitrate the matter and propose that the president of the AFL-CIO, Mr. George Meany, be the sole arbitrator, both sides agreeing to abide by his decision."

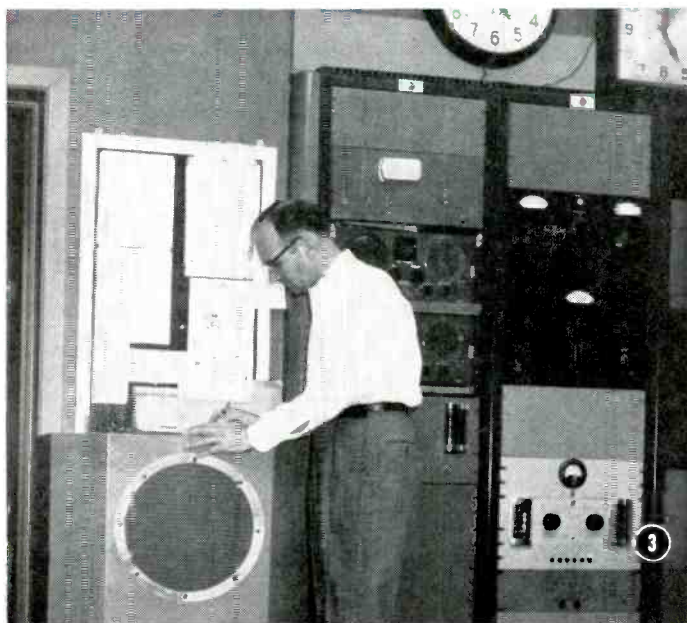
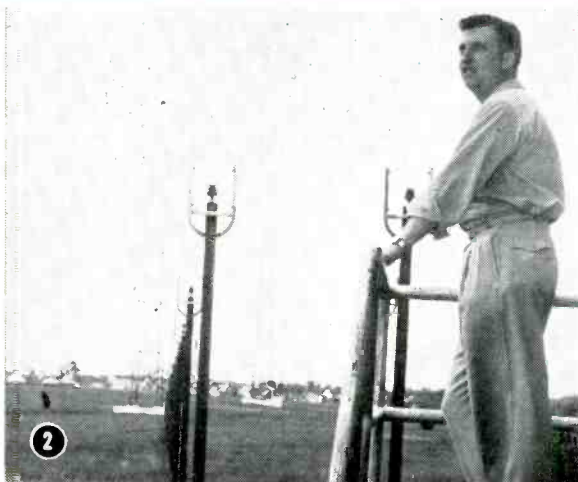
Educational TV Agreement Approved

International approval has recently been given to a new agreement between the Greater Cincinnati TV Educational Foundation, owner and operator of Educational TV Station WCET and Local Union 1224. Educational television operation, being non-commercial and because of the very nature of its operation, often poses many problems for our local unions. We congratulate Local Union 1224 for exercising exemplary judgment in organizing the station and facing the problems attendant thereto. Business Manager Frank Atwood, Jr., and Representative W. A. Smith negotiated the agreement which provides for a top wage of \$146.40 per week. The WCET Agreement is an excellent first agreement and is deserving of special notice by the membership of the Brotherhood.



Saturday Afternoon In BALTIMORE

*Pictures of Local 1400 Members
On Duty at Three Stations*



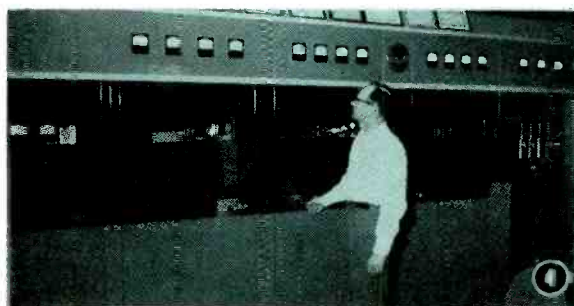
1 Weekend duty at a radio station has its moments of fast activity and its moment of melancholy. Here, Fred Himes of WFBR checks the program schedule with Announcer Dave Robinson.

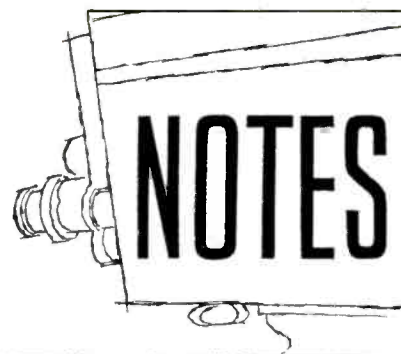
2 Six towers send WCAO's signal from Pikesville, just outside Baltimore. George Heiber makes sure they're still there.

3 Before a bulletin board filled with operational data, Jesse Myers of WCBM, fills out a report at the station transmitter.

4 Myers checks the dials before being relieved by John Ingraham at midnight.

5 With an eye on the clock, George Heiber goes over his log in the transmitter control room. Joe Sporney was to relieve him at 8.





VHF Helical Antenna

The General Electric Company recently took the wraps off its new television broadcast antenna test site with announcement of a new low-channel, VHF helical antenna that wraps around antenna supporting towers rather than being constructed on a separate mast atop the tower.

The new antenna test site, located atop a 1,350-foot-high hill at Caxenovia, N. Y., is said to be the only such commercial site approaching "free space," or having completely unobstructed test facilities. Thus, more precise measurements of high-gain antenna patterns may be obtained.

The new antenna is designed for use on channels 2 - 6.

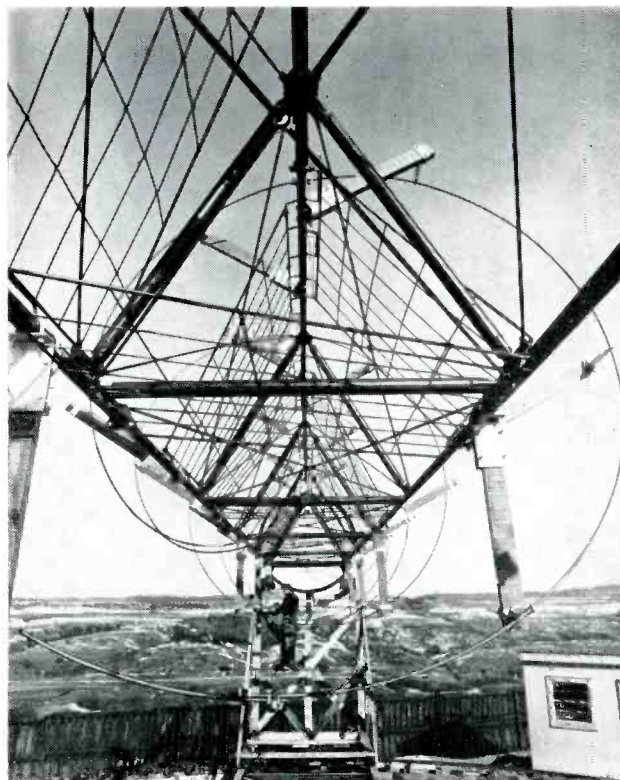
The new wrap-around helical antenna consists merely of a heavy copper-clad steel rod, or helix, coiled around a section of the steel antenna tower. The helix is the antenna itself. No separate mast is required.

Comparable batwing antennas now in widespread use comprise a 100-foot-long 18,000-pound mast and many radiators. High-channel VHF helical antennas, developed three years ago by G-E broadcast engineers, consist of a 53-foot-long, 5,500-pound mast entwined in a heavy copper-clad steel rod. The rod, or helix, is three-eighths-of-an-inch in diameter.

Principal advantage of the new wrap-around helical antenna is its simplified design. It requires but one feed point, as against 16 feed points needed for a comparable batwing.

At the GE test site, a 65-foot-long section of a steel, triangular-shaped tower lies on its side. The helix, or antenna, is coiled around the tower according to precise engineering specifications. The tower and antenna are then mounted on special supports and revolved on a 70-foot circular monorail turntable.

Signals are transmitted to the antenna under test from another site, two miles distant on a neighboring hill. As test signals cross a 500-foot-deep valley, they are received on the antenna and automatically recorded and plotted. Adjustments are then made on the antenna to assure that patterns fit a predetermined shape.



A new low-channel VHF helical antenna that wraps around an antenna tower rather than a conventional mast atop a tower has been developed by GE.

Single-Sideband Tests

Several 50 kw stations have installed compatible single-sideband transmission equipment in recent months and, along with several manufacturers, have been conducting tests to test its limits. Results to date find engineers still undecided as to the overall advantages of compatible single-sideband over conventional AM methods.

Involved in the tests, conducted in the 540-1600 kc broadcasting bands, are interference reduction factors and, in the longer range, the theoretical potential of more channels beyond the present spacing of one every 10 kc. Data supplied by an RCA research engineer indicated that CSSB is perhaps less susceptible to distortion and fading but that there are "very broad limits" to the performance estimate.

Stereophonic Cartridges

Electro-Voice Inc. and Fairchild Recording Equipment Co. have announced cartridges to play new Westrex 45-45 stereophonic disc recordings. Electro-Voice said it is now producing Model 21-D ceramic pickup with 0.7 mil diamond needle to sell at \$19.50 and comparable Model 26-DST which features in addition turnover 3.0 mil sapphire needle for playing regular 78 rpm records. Latter sells for \$22.50. Fairchild will start delivery this month of its XP-4 coil pickup based on its original Model 603 stereo cartridge. XP-4 will sell for \$79.50 with Model 282 stereo arm listed at \$42.50. All pickups will play regular monaural discs as well. Fairchild also is producing Model 248 stereo preamplifier at \$239.50.

Magnecord Items

Magnecord Division of Midwestern Instruments Inc. announces two new instruments, Stereo Magnecordette and P-75 Editor II, both with recording and playback features. Magnecordette has tape speeds of $3\frac{3}{4}$ and $7\frac{1}{2}$ inches per second. Among its special features are playback and record amplifier controls consisting or 2-gain channel, master volume, controls. The unit retails for \$395. P-75 Editor II unit provides tape speeds of $7\frac{1}{2}$ and 15 inches per second (no retail price given).

Microwave Amplifiers

Hallicrafters Co., Chicago, announces four new microwave amplifier models with "periodically focused" traveling wave tubes for "minimum size and maximum performance." Models (HMA 1-2-3-4) cover 1,000-11,000 mc range and are designed to meet high gain microwave amplifier needs. Among special features are self-contained video detectors, separate inputs and outputs for greater operational versatility, regulated power supplies and parallel input jacks, plus protection against crystal burnout of wide band crystal video receivers.

Standard Phosphors

Phosphors, those luminescent materials used so widely in research, on radar screens, in picture tubes, and in radioactivity counters and detectors, must have a variety of different properties. In the case of a TV tube, the luminescence must not persist longer than 1/30th of a second; otherwise, the picture appears to drag across the screen, followed by a slowly disappearing ghost image. In contrast, if a satisfactory image is to be maintained on a radar screen, the duration of the phosphor's luminescence must be consistent with the scanning antenna's period of rotation. At the other extreme is the phosphor used in a radioactivity counter; here the decay

time often must not exceed approximately 1/100 microsecond, so that each particle emitted by the radioactive source may register separately on the counter.

In color television applications not only the purely physical properties (excitation wavelength, emitted wavelengths, decay time) but also color, a psychological factor, must be considered. Hence, in some instances, the tri-stimulus coordinates or chromaticity of phosphors must be known. Even the ordinary fluorescent lamp poses a color problem. It is aesthetically unpleasant to view an array of lamp fixtures when the colors match poorly.

Because of these different phosphor requirements, the National Bureau of Standards has established 14 basic samples of phosphors, and researchers and manufacturers can now standardize phosphor usage to a greater degree than heretofore.

ANSWERS TO QUESTIONNAIRE ON "RIGHT-TO-WORK" LAWS

See Page 10

1. Indiana.
2. Louisiana.
3. Kansas.
4. Eighteen states now have "right-to-work" laws. Nineteen states had such laws but in June, 1956, Louisiana repealed its "right-to-work" law.
5. True. "Right-to-work" laws forbid union security provisions in the union contract.
6. Depends on your contract.
7. False. The Taft-Hartley Act makes the closed shop illegal but it does not outlaw the union shop. It permits the states to outlaw the union shop and other types of union security clauses if they want to. This provision, Section 14(b), opens the door for state "right-to-work" laws.
8. The answer depends on your opinion. However, at one time the Taft-Hartley Act required that a majority of the workers in a plant must vote for the union shop in a secret ballot election before the union could negotiate for it. In 97 per cent of the elections conducted by the National Labor Relations Board at that time the workers voted overwhelmingly for the union shop. This provision of Taft-Hartley has been repealed since.
9. Yes. Democracy works by majority rule and people in our country must pay taxes, are required by law to drive on the right side of the road, whether they are personally in favor of those things or not. What's more, it's not fair for a worker to get all the benefits of the union—grievance procedure, seniority, wage increases, etc.—and not carry his share of the load in supporting the union. Under the law the union must bargain for all workers in the bargaining unit, whether they are members or not.
10. False.
11. False. Everyone is hurt by laws that weaken unions and endanger prosperity for all.

Station

Breaks

Plea to Advertisers

WKRG, Inc., Mobile, Alabama, cancelled its contract with Local 1264 more than a year ago, offering a substitute agreement which called for wages and working conditions much lower than those for technicians at other Mobile stations. If Local 1264 had signed, WKRG would have had unfair competitive advantage over other local stations. This fact was pointed out to national advertisers in a recent letter sent out by the local union asking advertisers to cooperate with the bargaining effort by placing their advertising at "a union station or stations."

WEFM Founder Dies

Commander E. F. McDonald, Jr., founder-president and more recently board chairman of Zenith Radio Corp. died May 15 in Chicago. During his many-faceted career Commander McDonald established the nation's oldest FM station, WEFM in Chicago, which has operated continuously since 1940 without the sale of advertising. Technicians of WEFM are members of IBEW Local 1220, and they are covered by a standard agreement.

In 1923 McDonald established one of the nation's first broadcast stations, WJAZ at the Edgewater Beach Hotel in Chicago. He pioneered the development of commercial sponsorship as a means of financing broadcast station operation.

In 1939 he established the nation's first all-electronic television station built to current standards.

Tribute to Elmer Davis

Many tributes have been paid to Newscaster Elmer Davis, who died this month. One from the *Minneapolis Labor Review* drew our attention. It is reprinted in part below:

"Elmer Davis is dead. Perhaps the world will never duly appreciate the service he rendered as head of the Office of War Information. Few perhaps appreciate how that organization kept our government informed of what the public was thinking and how valuable this information was.

"Had all the suggestions OWI had made, like for instance the handling of airplane traffic and the ownership

of airports, been adopted throughout the world, it would be a much safer world for all the people today.

"Elmer Davis gave up a broadcasting job that brought him more than \$50,000 a year to take up the direction of OWI.

"This son of the richest man in an Indiana city became a most useful citizen. As a fearless broadcaster, as a fearless public official and as a courageous opponent of the ideas of the late Senator McCarthy.

"It is to be regretted that Elmer Davis was not appointed Secretary of State. It will be a long time before anyone so wise and unafraid will be ready to serve the people."

10-Minute Talkdown

An El Al (Israeli) turboprop airliner was coming into New York's Idlewild Airport recently when the pilot discovered that its nose wheel was bent and could not be lowered. When the plane was 10 minutes out its "May-day" signal was picked up by a local ham operator who relayed the information to WINS, an NYC station manned by members of Local 1212. The station could not send a reporter to the airport in time, so it successfully tried something else! It moved an announcer into the newsroom, placed a mike before a shortwave receiver to pick up the conversation between the plane and N. Y. Fire Department men, and let its listeners hear the successful 10-minute "talkdown."



Technician-Engineer

ALEXANDER BROWDY
1962 S STEARNS DR
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45 BN