

TECHNICIAN ENGINEER

JULY, 1963

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

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS — AFL-CIO



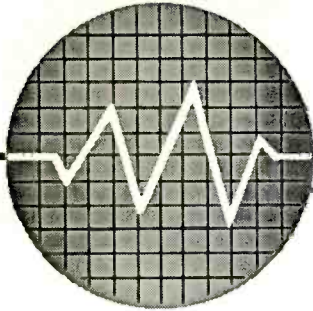
ENACTMENT OF HAWES-COOPER ACT ON INTERSTATE SHIPMENT OF CONVICT-MADE GOODS, JANUARY 19, 1929

Organized labor, and particularly the American Federation of Labor, can claim a major share of credit for favorable action on the Federal statute governing interstate shipment of prison-made goods. This Act brought to a climax agitation against shipment of convict-made items. This question, while chiefly of historical importance now, was a burning issue in the twenties.

Edgar Wallace, AFL representative, and John J. Manning, Union Label Trades Department representative, made strong appeals for passage on Capitol Hill. The AFL, General Federation of Women's Clubs and legitimate manufacturers joined in a successful effort for the adoption of the bill sponsored by Senator Harry B. Hawes, Mo., and Representative John G. Cooper, Ohio.

The issue raised was free labor versus "slave" labor of the prisons. Undercutting and underselling legitimate private manufacturers were effectively pointed out as major reasons for adopting a measure subjecting Federal prison-made goods to state laws. The new law, effective five years after passage, lifted the protection of interstate commerce from Federal prison goods and subjected them to state regulation — and many states, even then, had strong laws on convict-made goods. Thus the Act "to divest goods, wares, and merchandise manufactured, produced, or mined by convicts or prisoners of their interstate character in certain cases" (Pub. Law 669, 70th Cong., Sess. II, Ch. 79) became in its way a landmark for free labor.

The INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
 GORDON M. FREEMAN International President
 JOSEPH D. KEENAN International Secretary
 JEREMIAH P. SULLIVAN International Treasurer



TECHNICIAN ENGINEER

VOL. 12, NO. 7
 ALBERT O. HARDY, Editor

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the cover

The Federal Communications Commission, this month, amended logging and operator rules to permit the use of automatic devices for keeping radio station operating logs. (You'll find the story on Page 4.) On our July cover, Ray Shigley of WLBW-TV, Channel 10, Miami, Florida, takes transmitter log readings at his station. FCC logging rules won't affect his work, for television logging isn't covered by the recent action.

index

For the benefit of local unions needing such information in negotiations and planning, here are the latest figures for the cost-of-living index, compared with 1961 figures: May, 1963—106.2; May, 1962—105.2.

commentary

We are indebted to the *Ohio AFL-CIO News* for calling the following item to our attention:

"... We have in the country today a philosophy which seeks to impose a compulsory open shop on labor. It is punitive legislation—bad legislation. There are the so-called 'right-to-work' laws which now burden labor in some 20 states. That is legislation which hits at the right to contract. That is legislation that strikes at the basis of union security, which is, in turn, the foundation of strong, dedicated, responsible labor leadership. . . . The so-called 'right-to-work' laws ban progress in good labor relations and industrial development and, in the long run, they benefit no one."

—Alf M. Landon, former governor of Kansas and GOP candidate for President in 1936, in June 8 speech in Wichita, Kans.



Logging Rules, Operator Rules Are Amended by Commission

Automatic Devices Approved, Maintenance Log Added

ON February 20, the Federal Communications Commission issued a Report and Order which provided for permissive use of automatic devices for keeping station operating logs, required a new station maintenance log and consolidated all the technical logging requirements under certain sections of its Rules. On July 10, the Commission amended its previous Order as the result of numerous petitions for reconsideration and the rules adopted in the Report and Order of February 20 became effective on July 18, with the amended portions of the Rules effective on July 19, 1963.

In a concurrent Report and Order the Commission has changed the operator requirements for certain AM and FM broadcast stations by prohibiting routine operation by persons holding restricted radio-telephone operator permits. After February 19, 1964, such operation will be limited to persons holding Radio-Telephone Third Class or higher operating licenses. Effective August 19, 1963, AM stations with power of 10 kw or less and utilizing a non-directional antenna may, under certain conditions, employ a supervisory engineer holding a Radio-Telephone First Class Operator's license, on a contract basis in lieu of the present requirement that such supervisors be employed on a full time basis. This same provision applies to FM broadcast stations with transmitter power output of 25 kw or less. No changes have been made in prior-existing requirements concerning Radio-Telephone First Class Operators being required to be on duty during operation with a directional antenna system.

General Features of the Report and Order by the Commission are summarized as follows:

In the Matter of

Amendment of Sections 3.93, 3.265, 3.565, and 13.21 of the Commission Rules and Regulations to modify the operator requirements for standard and FM broadcast stations.

**Docket No. 14746
RM-294**

REPORT AND ORDER

1. The Commission has before it for consideration its Notice of Proposed Rule Making (FCC 62-874) released on August 2, 1962, and comments filed in response thereto by a number of licensees of standard and FM broadcast stations, broadcast operators, organizations representing broadcast engineers and technicians, and others having an interest in the broadcast industry.¹

2. As the caption indicates, this proceeding deals with modification of the Commission rules pertaining to operators requirements for standard and FM broadcast stations. More specifically, it pertains to modification of those rules as they related to non-directional standard broadcast stations with not more than 10 kilowatts power, and FM broadcast stations with no more than 25 kilowatts transmitter operating power output.

3. We shall proceed herein by setting forth in skeleton form the present contents of the sections listed in the caption, by then giving the reasons why it was thought worthwhile to invite comments on possible amendments to those sections, and finally by briefly stating the amendments proposed. Thereafter, we shall discuss the comments received and conclude with our decision based on those comments and on other relevant information.²

Present Contents of Sections 3.93, 3.265 and 3.565

4. The sections mentioned in the catch line of this paragraph pertain to operator requirements for standard, FM, and non-commercial educational FM broadcast stations respectively. Each section is divided into four paragraphs—(a), (b), (c), (d)—the contents of which are substantially identical in each section. Briefly, the provisions of these paragraphs are as follows:

(a) One or more radio operators holding a valid first-class operator license shall be in actual charge of the transmitting apparatus of such stations and shall be on duty either at the transmitter location or remote control point. However, this requirement need not be met by stations wishing to take advantage of the provisions of (b) and (c) below.

(b) Standard broadcast stations which are authorized for

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non-directional operation with a power of 10 kilowatts or less, and FM broadcast stations which are authorized transmitter power output of 10 kilowatts or less, may, with certain exceptions, be operated by persons holding operators licenses other than first class.

(c) However, stations taking advantage of (b) above (i.e., stations using other than first-class operators) are required to have one or more operators holding a first-class operator license in regular full-time employment at the station whose primary duties are to effect and insure the proper functioning of the transmitting equipment.³

(d) The licensed operator on duty and in charge of the broadcast transmitter (whether a first-class operator or otherwise) may, at the discretion of the station licensee, be employed for other duties or for the operation of another radio station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such other stations if such duties do not interfere with the proper operation of the broadcast transmitter.

Present Contents of Section 13.21

5. This section consists of a list of eight broad categories, each of which pertains to some aspect of radiotelegraphy or radiotelephony. Questions are drawn from one of more of the categories in preparing written examinations for the different kinds of operator permits or licenses. Sections 13.61 and 13.62 indicate the types of operation in which various operators may engage. Although not mentioned in the caption, the body of the Notice stated that the latter two sections would be amended editorially to reflect the changes made in other sections with which this proceeding deals.

Reasons for Proposing to Amend the Aforementioned Sections Raising Minimum Operator Requirements

6. Under the rules condensed in paragraph 4 above, certain stations are permitted to utilize the services of other than first-class operators. Consequently, many such stations employ holders of the restricted operator permit—the lowest class of operating authority issued by the Commission. As we stated in the Notice, applicants for such permits are merely required to sign a declaration to the effect that they are familiar with the regulatory provisions governing the authority granted under the requested permit and that they understand their responsibility to keep currently familiar with the provisions of the rules. They are not required to demonstrate through examination or otherwise that they do in fact possess the required knowledge. (See Section 13.22 of the rules.) As we also stated in the Notice, giving numerous examples (of serious violations) from recent inspection reports to substantiate the statements, it has become apparent that holders of restricted operator permits in many cases are not qualified for the duties that must be performed, and that the bare knowledge required of such a permit holder is not adequate for the performance of the tasks that are expected of him at a broadcast station. We ended our observations on this point by noting that it would appear that familiarity with aural broadcast regulations, sufficient skill to read meters accurately, and ability to recognize symptoms of trouble when they occur should be among the minimum requirements for any operator attending a broadcast transmitter.

7. In view of this situation, we stated that corrective action appeared necessary and invited comments on a proposal to raise the minimum operator requirement for routine operation of a transmitter from the holding of a restricted operator permit to the holding of a third-class operator permit. Together with this proposed amendment, we also suggested that a series of questions designed to determine the applicant's qualifications to perform operator duties at a broadcast station be added to the present written examination for the third-class operator permit, that such questions be given only to applicants desiring to qualify for employment at broadcast stations, and that upon successful passing of the entire examination, including the new questions, such applicants should have their permits endorsed to qualify them for broadcast station employment.⁴ This increase in the requirements for obtaining a third-class operator permit which would qualify one for employment in a broadcast station was to be reflected in an amendment of Section 13.21 which added a

ninth category, "Basic Broadcast," from which the aforementioned questions would be drawn, and in appropriate amendments to Sections 13.61 and 13.62 indicating that, to obtain the endorsement for broadcast employment, such third-class permittees must answer additional questions drawn from the ninth category of Section 13.21. In addition, it was also proposed to require stations to maintain a program of instruction of lesser-grade operators in transmitter duties.

Daily Inspection of Transmitter

8. Although we were of the opinion that the aforementioned raising of the operator requirements for certain standard and FM broadcast stations would serve to correct the serious failure of many such stations to comply with technical operation requirements, we felt that this alone would not be sufficient. For this reason, we also proposed a daily inspection of transmitters of such stations to be performed by a first-class operator, and we listed specific steps to be accomplished in such inspections.

Part-Time Services of First-Class Operators at Certain Standard and FM Broadcast Stations

9. As the Notice stated, it had been suggested that consideration be given to the possibility of permitting stations to employ first-class operators on a part-time basis so that several stations located in the same general area might be serviced by one such operator who could perform maintenance on a regular schedule and be "on call" to make essential repairs adjustments or to correct any condition of improper operation which might occur. We were of the opinion that the suggestion might have merit insofar as lesser-powered FM and non-directional standard broadcast stations were concerned if the minimum operator requirements for such stations were raised and if the inspection requirement were adopted as mentioned in paragraphs 6-8 above. Comments were invited on a proposal to permit such part-time employment.

Request for Rule Making to Permit All FM Broadcast Stations to Use Other Than First-Class Operators

10. As indicated in paragraph 4(b) above, FM broadcast stations which are authorized transmitter power output of 10 kilowatts or less may, with certain exceptions, be operated by persons holding other than first-class operator licenses. In a petition (RM-294) filed by Samuel Miller and Mark E. Fields on behalf of unspecified FM broadcast stations, it was suggested that the rules be amended to remove the 10 kilowatt ceiling and thus permit all FM broadcast stations to use other than first-class operators. However, as we pointed out in the Notice, we were willing to invite comments on a proposal to raise the ceiling for FM stations from 10 to 25 kilowatts, but we did not believe that operation of higher powered FM transmitters should be entrusted to the care of non-technical operators. Accordingly, we proposed an appropriate amendment which would permit FM stations operating with not more than 25 kilowatts transmitter output power to use other than first-class operators.

The Proposed Amendments

11. As stated previously, Sections 3.93, 3.265 and 3.565 set forth operator requirements for standard, FM, and noncommercial educational FM broadcast stations respectively, and each of these sections is divided into four sections. Paragraph (a) requires all stations except those mentioned in paragraph (b) to have on duty and in actual charge of the transmitter a first-class operator. Paragraph (b) permits non-directional standard broadcast stations with authorized transmitter power not in excess of 10 kilowatts, and FM broadcast stations with authorized transmitter power output not in excess of 10 kilowatts to use, with certain exceptions, other than first-class operators; but paragraph (c) states that in such cases there must be at least one first-class operator in regular full-time employment at the stations. Paragraph (d) permits any operator working at a station to be engaged in other duties at the station or elsewhere if this does not interfere with the proper operation of the broadcast transmitter of the station.

12. The proposals on which comments were invited with regard to these sections suggested amendment of paragraphs (b) and (c) with no changes in paragraphs (a) and (d).⁵ With re-

gard to paragraph (b), the proposal was to amend that paragraph by permitting FM stations authorized transmitter power output not in excess of 25 kilowatts (instead of 10 kilowatts) to use other than first-class operators, and by raising the minimum operator requirement for routine operation of transmitters of AM and FM stations specified in that paragraph from the holding of a restricted operator permit to the holding of a third-class permit. As for paragraph (c), the suggested amendment consisted of permitting the stations utilizing other than first-class operators in accordance with the provision of paragraph (b) to employ first-class operators on a part-time contractual basis rather than on a basis of regular full-time employment at the station. It was further proposed that paragraph (c) also be amended to require that a first-class operator employed by such a station—whether on a regular full-time or on a contractual part-time basis—make a daily inspection of the station transmitter. Moreover, it was also proposed to require stations to maintain a program of instruction of lesser-grade operators in transmitter duties.

13. Finally, it was proposed to effect amendments to Sections 13.21, 13.61 and 13.62 so as to require that third-class operators wishing to qualify for employment at broadcast stations pass an additional examination covering basic broadcast information.

Comments on the Proposals and Discussion Thereof Raising Minimum Operator Requirements for Routine Operation of Stations

14. Parties differed concerning the merits of the proposal to raise the requirement for the routine operation of certain standard and FM broadcast stations from persons holding a restricted operator permit to those holding a third-class operator permit. Those who favored the proposal urged that because of lack of knowledge and proper training, restricted permit holders cannot properly read meters, cannot detect trouble or potential trouble, and have little if any pride in their work or the technical condition of the station. They contended that most of these persons are used as announcers and for other duties (which is permitted by the rules) and perform the operator functions hurriedly as a secondary duty (which is not permitted by the rules.) In view of their very limited technical knowledge, it was averred that they cannot be aware of deficiencies or irregularities and cannot determine when it is necessary to call in the first-class operator. Among the matters which it was pointed out may need attention are voltage line fluctuations, tube deterioration, tube failures, failure of components in the cooling system, need for adjustments of the radio frequency power, standing wave ratio measurements, side-band response, modulation percentage, excitation and carrier frequency adjustments, and repair of faulty equipment.

15. Those who opposed raising the minimum operator requirement stated that there is no need for the change since anyone who is properly trained can read the necessary meters and perform the operating duties, that this is not affected by the type of operator license held, that it would be a hardship for stations to send their restricted operators a great distance to take the required written examination, and that it would not improve the standards of operation in any event. Apropos of this, one party suggested that instead of raising operator requirements, a certification be required of the Chief Engineer of the station to the effect that he has instructed and tested the operators in the Commission's regulations and the proper operation of the transmitting equipment. A few parties suggested that the new third-class operator requirement should not apply to stations which continue to employ on a full-time basis operators holding a first-class license.

16. We are inclined to believe that, in view of the numerous technical violations (cited in the Notice) at stations operated by other than first-class operators, some corrective action is essential. A reasonable start in this direction appears to be that of raising operator requirements for such stations. Although there is merit in the suggestion that a training program be instituted at stations whereby the Chief Engineer instructs operators in their duties, we view such a step not as a substitute for but as a valuable supplement to the raising of operator requirements from restricted to third-class permits and the adding of questions to written examinations for persons desiring third-class permits

which qualify them for employment at broadcast stations. It was with this idea in mind that the proposal in the Notice contained, among other things, a suggested requirement to the effect that the licensee must insure that lesser-grade operators are properly trained in their duties. Some of the specific language concerning this proposal stated that "Lesser grade operators, employed for the purpose of operating the station in his [the first-class operator's] absence, shall be thoroughly instructed in their duties and, where necessary, printed step-by-step instructions shall be posted for those transmitter adjustments which the lesser-grade operator is authorized to make."⁶

17. We are also of the opinion that such an upgrading of requirements is essential in all stations using other than first-class operators regardless of whether the stations contract for first-class operators on a part-time basis or continue to employ such operators on a full-time basis. In this connection, it may be noted that the violations referred to above occurred in stations which presently do (and must, under the present rules) have first-class operators in full-time employment. Finally, we do not view the expense incurred in traveling to take a written examination as an overwhelming obstacle, especially in view of the public interest goal of better overall broadcasting results to be obtained through stricter adherence to the Commission rules.⁷

Daily Inspection of Transmitter

18. The proposal contained a requirement of a daily inspection, six times a week, of the transmitting equipment of stations utilizing other than first-class operators. The purpose of the suggested rule was to insure conformance with the Commission rules. It spelled out the details of what constituted an inspection, stating that the term was meant to include such tests, adjustments, and repairs as might be necessary to insure operation of the transmitter in conformance with the Commission rules and the instrument of authorization, and a determination that all required indicating instruments were functioning properly. Provision was made for an appropriate entry in the station operating log to reflect the inspection activities. As an adjunct to the inspection requirement, the aforementioned proposed rule requiring that instruction be given to other than first-class operators was included (see paragraph 16 above).

19. Several parties opposed an inspection rule on the ground that it would work a hardship on many stations, especially those with transmitter sites on mountain tops. It was also asserted that inspections would serve no useful purpose, and that they would require additional help or the payment of overtime wages since most persons are employed for a 5-day week. Others asked for exemption of the inspection requirement for stations which have sites at some distances from the studio and where severe winter weather conditions prevail. Opposed to the foregoing views were those who strongly supported the daily inspection proposal on the ground that it would make for improved station operation in the accordance with Commission rules.

20. In Docket No. 14661 which deals with automatic logging, we released a Report and Order (FCC 63-184) on February 25, 1963, containing extensive rule changes which were to be effective on April 8, 1963. That date was later extended to May 10, 1963 (Order of Stay, Docket No. 14661, FCC 63-301, released March 29, 1963), then to June 17, 1963 (Order of Stay, Docket No. 14661, FCC 63-441, released May 9, 1963), and then to July 18, 1963 (Order of Stay, Docket No. 14661, FCC 63-567, released June 14, 1963). Among the new rules adopted therein were provisions requiring a daily inspection, five times per week, of transmitters of all standard and FM broadcast stations.

21. Petitions for reconsideration subsequently filed in that proceeding, among other things, directed at the inspection requirement comments which were much the same as those filed in the instant proceeding. In a Memorandum Opinion and Order in Docket No. 14661 which we are adopting today simultaneously with the instant Report and Order, we consider in detail those comments, reaffirm our belief in the necessity for inspections, and deny requests that the inspection requirement be deleted.⁸ Inasmuch as the topic is dealt with in the other proceeding, and inasmuch as the rule adopted there is requiring daily transmitter inspection of all standard of FM broadcast stations is broader than that which was proposed in the present proceeding

(which only proposed daily inspection of transmitters of lower-powered standard and FM stations), we do not herein adopt any inspection requirement.

Utilization of First-Class Operators on Part-Time Basis

Pro

22. Among the conventions advanced in favor of this proposal, especially by licensees, were the following. It was stated that it would be an economic boon to stations in small markets and those in the larger markets which operate on a marginal basis. Some believed that the attendant savings could be used to obtain, on a part-time basis, better qualified men, and to improve programming. It was also urged that because of type acceptance requirements and the fact that modern equipment is extremely stable and reliable and does not need constant supervision, regular servicing by a competent engineer would be adequate. Many stressed the shortage of first-class operators resulting from competition from the larger markets and nearby government and industry installations using engineers. Others urged that the proposal should go even further and include stations which use directional antennas, contending that the apparatus used to control directional antenna systems is stable enough to obviate constant supervision.

23. With regard to enforcement problems and the large number of violations of the rules referred to in the Notice herein, several parties argued that this is not a question of the number or class of operators required, but rather one of the quality of the persons employed. They maintained that a good and qualified man on a part-time basis would serve the Commission's purposes better than a full-time first-class operator who merely crammed to pass the written examination. They also submitted that a system of penalties for repeated infractions for both management and for individual operators would help to insure station operation in conformance with proper technical standards.

Con

24. Opponents of the proposal urged that the relaxation in the requirement for a full-time first-class operator would downgrade the technical operation and standards at broadcast stations; that it would be contrary to the objectives of the Commission to improve the operation of stations; that it would lead to greater abuse of the rules and an increase in violations; that better engineering at stations would assure a healthy future for radio; that stations which could not afford adequate engineering help are incapable of providing a reasonable service to the community;

that since part-time first-class operators could be employed by several stations and even in other fields, such operators might not be available when needed; and that even if they were available, the pressure of other work might well make them become rubber stamps with regard to maintenance and other functions at broadcast stations. It was also averred that the decrease in the high standards at broadcast stations and the lack of security and of proper instruments and tools have led to a mass removal of qualified engineers and technicians from the broadcast industry, and that relaxation of the first-class operator requirement would remove the training ground for engineers needed to man stations and to serve as a pool of engineers and technicians available in case of national emergency.

25. In addition, some parties contended that previous relaxation of the operator rules has led to increased violations of the technical rules. As evidence they cited the Public Notice (No. 87794) of the Commission issued April 29, 1960, warning stations about improper operation, and the memorandum which the National Association of Broadcasters issued to its member stations on May 6, 1960. One party cited figures from past FCC Annual Reports as follows. In 1954 a total of 533 broadcast station inspections were made and 181 discrepancies were noted. In 1961 a total of 2774 broadcast stations inspections were made and 2657 violation notices were issued. Thus the percentage of violations found by station inspections varied from a low of 34 percent in 1954 to a high of 95.7 percent in 1961.⁹ Finally, it was alleged that the violation situation is partially caused by the overload (in many cases) of the first-class operators which often makes maintenance work impossible.

Evaluation

26. We are of the opinion that if the minimum operator requirements are raised as proposed, if the written requirements for third-class operators are stiffened for such operators wishing to qualify for employment in broadcast stations, and if daily inspection of transmitters five times per week is required (see paragraphs 20 and 21 above), sufficient safeguards will exist for the proper operation of standard and FM broadcast stations. Hence, many of the fears concerning deterioration of service voiced by opponents of part-time employment of first-class operators at lesser-powered stations are not likely to materialize. The rule requiring station training of lesser-grade operators should raise their skill in reading meters and in recognizing symptoms of trouble. The new examination questions for a third-class broadcast endorsement should contribute their share toward better qualified employees who can be expected to do a better job of routine operation of a transmitter. And the requirement of a daily inspection by a first-class operator should greatly alleviate the present unhappy violation situation.

27. In this connection, it is emphasized with regard to the fear that part-time engineers might become mere rubber stamps or that they might not be available when needed, that licensees of stations will continue to be expected to observe the conditions of their instruments of authorization and the Commission rules. Contracting with first-class operators for part-time employment in no way relieves them of this responsibility. It is expected that the inspection and the logging entry reflecting such inspection will be carefully made. If it should happen that engineers are not available when needed, the station must take appropriate action, including going off the air if necessary. Such occasions of unavailability of part-time engineers seem not likely to occur frequently. Moreover, some safeguards against such occurrence could be discussed at the time of entering into part-time arrangements.

28. With regard to various other points raised by the parties, the following may be noted: (1) The suggestion that we extend the first-class operator part-time employment provision to directionalized stations is not within the scope of this proceeding. Such a proposal, however, has been made in two recently filed petitions for rule making (RM-413; RM-433) and will be dealt with in response thereto. (2) It is to be hoped that financial savings resulting from the new provision will to some extent aid stations in small markets, and stations operating marginally in larger markets, to render better service and programming to the listening public. (3) It is also hoped that the new provision will ease any situation which might exist as a result of a shortage of

Radio, TV, Recording PROGRESS MEETING

August 20, 21, 22, 1963

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Chicago, Illinois**

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first-class operators. (4) Arguments concerning training of new operators and lack of a pool of operators in case of national emergency are too tenuous to bear weight.

29. A question was raised as to whether contracts for the services of first-class operators on a part-time basis need be written. This was our intent in the Notice, and the point is clarified in the rules which we adopt herein. In addition, the proposal in the Notice required that signed copies of such contracts be on file at the station and at the transmitter or control point. In view of our concern over non-compliance with the technical requirements for station operation, we have, after further consideration, decided that enforcement will be aided if copies of such contracts are also furnished the Commission and the Engineer in Charge of the radio district in which the station is located, and the rules adopted today reflect this thought.

Request for Rule to Permit All FM Broadcast Stations To Use Other Than First-Class Operators

30. In the Notice we stated that we believe that the operation of higher-powered FM transmitters (above 25 kilowatts transmitter power output) should not be entrusted to the care of non-technical operators. However, we have in the past, with no undesirable results, waived the requirements of the FM operator rules for stations with transmitter output power greater than 10 kilowatts (the present ceiling) but not in excess of 25 kilowatts. In one case, for example, by a small modification the rated output was increased from 10 kilowatts to 15 kilowatts with little change in the stability and reliability of the transmitter. Because of such experiences, we are of the opinion that permitting FM stations with authorized transmitter power output not in excess of 25 kilowatts to use other than first-class operators will not hinder proper station operation.

Order

31. For the reasons stated above, we are of the opinion that it is in the public interest to adopt the proposals set forth in the Notice, subject to changes as mentioned in the preceding discussion and to certain editorial revisions.

32. Authority for the adoption of the amendments herein is contained in sections 4(i), 303(f), and (l) and (r) of the Communications Act of 1934, as amended.



FOOTNOTES:

¹ Detailed in the Report and Order, but summarized herein, as follows: Some 43 stations, several consultants, three broadcaster associations, a number of individuals, one college (Union Theological Seminary, Richmond, Va.), the International Brotherhood of Electrical Workers, 2 IBEW Local Unions (Local 253 and 1220), the National Association of Broadcast Employees and Technicians, and one equipment manufacturer.

² Throughout this document, unless otherwise indicated, such terms as "first-class operator," "first-class operator licensee," "third-class operator," "third-class operator permittee," "restricted operator," "restricted operator permittee," or similar operator designations refer to radiotelephone rather than radiotelegraph operators. Thus, for example, "first-class operator" means "radiotelephone first-class operator."

³ Exceptions to this requirement are: (a) If a station licensee operates both a standard and an FM broadcast station in the same community, a regular full-time first-class operator or operators employed in connection with one station may concurrently be employed to satisfy the requirement for the other station. (b) In the case of noncommercial educational FM broadcast stations, if the transmitter power output is in excess of 10 watts but not greater than 1 kw, an operator holding a second-class operator license may be on duty and perform the functions required of the first-class operator; or, if the transmitter output is 10 watts or less, a radiotelephone second-class or radiotelegraph first- or second-class operator may be on duty and perform the functions of the radiotelephone first-class operator but need not be in regular full-time employment at the station.

⁴ We stated that, if these proposals were adopted, stations presently employing restricted operators would have one year from the effective date of the new rules in which to change to third-class operators. See also footnote 7.

⁵ The Notice did suggest a change in paragraph (a) of Section 3.565 which was mainly the result of a proposal to raise certain operator requirements for noncommercial educational FM broadcast stations of transmitter power output of 10 watts or less to the level presently required of noncommercial educational FM broadcast stations of transmitter power output in excess of 10 watts but not greater than 1 kilowatt. (See footnote 3(b).) Consideration of this proposal has led us to the conclusion that such an increase in operator requirements is unnecessary. Hence, the suggested change in paragraph (a) of Section 3.565 is not adopted, and that paragraph will remain as it presently appears in the rules.

⁶ We believe that such a requirement will contribute greatly to proper station operation and therefore adopt a training proposal herein.

⁷ Written examinations will have to be taken by any person wishing to obtain a third-class operator permit endorsed for broadcast station employment, as well as by present third-class permittees wishing to take an examination for the endorsement alone. Because of the administrative action necessary to implement this requirement, there may be some delay before the broadcast endorsement examination is available in the field. The proposal in the Notice would have required all new lesser-powered AM and FM stations to use, for routine transmitter operation, the services of third-class operators with broadcast-endorsed permits as of the effective date of the new rules. The aforementioned delay in administering the necessary examinations so soon dictates a temporary amelioration of this requirement. In addition, as indicated in footnote 4 above, our original proposal was to permit all existing AM and FM stations presently authorized to employ restricted operators for routine transmitter operation to continue to do so for a period of one year after the effective date of the new rules, after which time employment of third-class operators with permits endorsed for broadcast station operation was to be required. Because of the fact that violations of the technical rules by existing stations continue to present a serious problem, we believe that a period of one year in which to convert from restricted to higher-grade operators at existing stations is too long. In view of the foregoing, the rules adopted herein require that as of 6 months after the effective date thereof, all (new or existing) lesser-powered stations designated in the new rules shall be required to use, for routine transmitter operation, operators holding not less than third-class broadcast-endorsed permits. During the 6-month interim period, as the new rules indicate, such stations may utilize the services of restricted operators, or of third-class operators without broadcast endorsements. In view of the foregoing, Sections 13.61 and 13.62 of the rules are not being amended to reflect the endorsement requirement in the present Report and Order. At such time as the broadcast endorsement examination is ready for administering in the field, a further order will issue in this proceeding amending those sections accordingly.

⁸ The Memorandum Opinion and Order retains a requirement of daily inspection five times per week, but makes some changes in the rule originally adopted as a result of the Commission's reconsideration.

⁹ It should be noted that only one violation notice is issued to a station for rule infractions discovered in the course of an inspection. Sometimes a single notice contains as many as 25 infractions. In addition, it is noted that about 90 percent of the station inspections were of different stations, the remaining 10 percent constituting re-inspections of stations previously inspected in the same year.

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The COFFEE BREAK

Strong, Weak, Sweet, Bitter, Coffee Fills Cups the World Over

THE deep-red coffee berry looks the same the world over, but anything can happen before it reaches the cup.

Egyptians like their coffee served two ways—sweet and sweeter. American cowboys demand coffee “hot, black, and strong enough to walk,” but German ladies at a *Kaffeeklatsch* prefer a brew so weak they can see the bottoms of their cups.

Originally coffee was eaten, not drunk, the National Geographic Society says. Wandering Ethiopian tribesmen ate wild coffee berries from the trees, or ground and mixed with fat. The practice continues in many African villages. Ugandans make a savory drink from coffee and bananas.

Arabians were the first to cultivate coffee trees, possibly as early as A.D. 575. They drank a decoction made by boiling coffee leaves and berries. It made a rather bitter but stimulating drink—so stimulating that Moslem religious authorities tried to ban it.

The imams were scandalized by the coffee houses that flourished in the holy city of Mecca. The houses were closed, but speakeasies sprang up, and the prohibition was lifted. Coffee drinking remains an important custom in Arabia, and no business deal is complete without a cup. The drink is flavored with cardamom, clove, cinnamon, or anise.

Coffee became more palatable and popular when the beans were roasted and pulverized. The beverage was so important in Turkey that if a Turk failed to keep his wife supplied with coffee, she had grounds for divorce.

Coffee continues as the standard drink in modern Turkey. The beans are freshly roasted and pulverized for each cup, and the mixture is heated to a froth three times in a long-handled, open brass pot.

Venetian traders took coffee to Europe early in the 17th century. The Venetians first considered it a medicine, and it was prescribed for stomach vapors, fevers, swelling of the body, and other ailments.

WHEN Italians started drinking coffee, they seemed more concerned with clarity than flavor. To settle the grounds, they added eggs, egg-shells, codfish skin, and isinglass.

Italians today relish *caffè espresso*, a dark, rich liquid concocted in a gleaming, steaming, spouting monster of a machine. *Caffè Borgia* also is popular, despite its menacing name. It is a combination of double-strength coffee and hot chocolate garnished with orange peel, shaved bittersweet chocolate, and whipped cream.

Frederick the Great limited coffee-roasting licenses to the cream of Prussian society, and warned the poor that drinking

the beverage caused sterility. Undaunted, illegal roasters thrived, and Frederick had to employ a crops of “coffee-smellers” to follow the unmistakable aroma and arrest the miscreants.

Coffee was more readily accepted in Austria. The Viennese today drink lots of coffee and are finicky about how it is served. They specify 15 precise proportions in which coffee and milk may be mixed, ranging from *Einspänner* (black) to *Schale Licht* (very light). All shades usually are topped with the omnipresent Viennese whipped cream.

A traveler once saw an elderly Viennese gentleman carry his cup from a dark coffeehouse interior to the outside to make sure it was the exact color he had ordered.

MANY French writers were ardent coffee devotees. When Voltaire was 80, he reportedly drank 50 cups a day. Balzac wrote: “When one drinks coffee, ideas come marching in like an army.”

Breakfast coffee at a French sidewalk cafe is a ritual. The waiter adroitly mixes hot milk and hot coffee to make a steaming *café au lait*. He then brings the papers and brushes the table—twice for just coffee and three times for *café complet*—coffee with a flaky *croissant* and butter.

Normans mix a half-cup of coffee with a potent apple brandy and sugar. “It tastes like a corkscrew,” one coffee connoisseur complained, “and one drink has the same effect as a crack on the head with a hammer.”

The Boston Tea Party converted Americans to coffee drinking overnight. Today, 441,000,000 cups are consumed every day in the United States, the World Coffee Information Center reports. Coffee growers, however, are depressed by a trend toward weaker coffee. In 1949, Americans brewed 46 cups per pound of coffee; the average now is 63 cups. Cowboys and shepherds, though, will have no truck with weak coffee.

Those hardy types make coffee in a huge pot in which grounds, eggs, and water simmer for days, and fresh coffee is tossed in over the old grounds. The pot is never washed—to preserve the accumulated aroma.

Since the first coffee plant was brought to Martinique in 1720, the trees have been introduced all over Latin America. There, a strong black demitasse is preferred, though coffee with milk is served at breakfast.

The Brazilian is so fond of a demitasse called *Cafezinho* that he may drink two dozen of the tiny cups a day. The brew is filtered through a funnel-shaped flannel bag and is liberally sugared—too liberally say the coffee-growers who would like to see more coffee and less sugar in the cups.

To use some of their surplus, Brazilians have experimented with coffee-bean cattle feed and a tasty lipstick made from the red berries.

*Television is a friend
in need for the lonely,
therapy for the mentally ill,
a stimulant for all.*

Broadcasting and the state of your mind



A LEADING clergyman recently expressed the belief that television and radio are wringing Americans so dry of emotion that they are becoming incapable of the strong loves and hates needed to preserve the nation.

A motivational researcher says, meanwhile, that television commercials indicate that Americans are scared of sex.

A sociologist contends that teenagers are getting too much sex, too soon, subtle or otherwise, from Madison Avenue, via the "virile vidicon."

Mental health officials tell us, however, that television receivers are a boon to institutionalized inmates of our mental hospitals.

One thing is certain: Hardly anyone has not formed an opinion on the psychological impact of today's radio and television. Television and its fare, particularly, has been one of the most cursed and discussed subjects of conversation during the past decade and a half. It has probably done more to change living standards and "educate" the mass of population than any medium before or since.

The Most Rev. Fulton J. Sheen—whose fame spread widely because of his own early television broadcasts—told participants in a communion breakfast in Washington, D. C., recently that the emotions of Americans are so "tugged at" and "pulled" by radio and television that they are sinking into "social apathy."

"Why is it," he asked, that nothing seems able to awaken "a strong love for this great country of ours?" With all its freedom and prosperity, "we are not stirred by memories of our past," he declared.

He proposed a national program which would recall to Americans their history, their rights and their heroes.

A Canadian business executive, meanwhile, feels that TV viewers are developing "a sort of mass psycho-

logical deafness" to the modern television commercial.

Many of today's television "gimmicks" are offending public taste and credulity, says Ron Todgham, president of the Chrysler Corp. of Canada. He told the National Sales Executive Club in Toronto that, if TV writers and producers of commercial advertising do not modify their techniques, the public will revolt by tuning out offending commercials.

This could become a chronic state of mind, he contends, where every time the sponsor of a program was mentioned, the viewer developed conveniently faulty hearing until the commercial was over.

Mr. Todgham feels that television is taking away the strength and vigor of the art of personal selling in America. Since the customer knows every slogan and jingle before setting out to make a purchase, the play is taken away from the salesman even before he meets the prospect.

But while the businessman worries about the selling capability of TV commercials, a motivation researcher worries about the loss of sex distinctions in the sponsor's spots.

Viemese-educated Dr. Ernest Dichter, president of the Institute for Motivational Research, thinks Americans are actually scared of sex, and not oversexed, as some people believe, and the ads on television and in print show it.

"We are so afraid of feminine flesh that we have enthroned as the national ideal the flat-chested angular bodies of immature adolescent models," he concludes.

The Dichter organization bases its findings on a study of TV and print media commercials and thinks that while "democracy and the feminist movement have made man and woman equal, advertising [has gone] one step further: It has made them identical . . . advertising, over-anxious not to offend taboos, leans backward in

denying that desire, flesh and sexual imagination have survived in the era of consumerism."

Aside from the commercials, what's wrong with the program content of the kilocycles?

Well, not long ago the British Medical Association sharply criticized the staid BBC for planning to televise a series of surgical operations. *The British Medical Journal*, official organ of the BMA, charged that the program, "Your Life in Your Hands," was an attempt to "pander to the prevalent interest in the morbid." By its efforts to "make flesh creep," the BBC was certain to increase "anxiety, hypochondria, and neurosis," the *Journal* said.

Similar attempts to televise operations in this country have drawn strong reactions, too.

The effect of television on children has also come in for a lot of discussion. Last year a subcommittee of the U. S. Senate Committee on the Judiciary heard days of testimony from civic leaders, parents, psychiatrists, social workers, etc., on the "effects on young people of violence and crime portrayed on television." The findings of this Subcommittee to Investigate Juvenile Delinquency were published only a few weeks ago.

But, while there are many moot questions as to the influence of radio and television on the sane mind, medical men seem to be in agreement that broadcasting can play an important role in helping the mentally ill.

The National Association for Mental Health, through its state and local organizations, has sponsored efforts to obtain television and radio receivers for "the forgotten people" in our mental hospitals. Wholesalers in broadcasting equipment have at times offered "at cost" prices to such organizations to aid the cause.

Some of the nation's mental hospitals are so understaffed and facilities are so inadequate that mental patients sit all day long on benches in hospital wards with nothing to do.

Carefully selected television and radio programs help them tremendously, we are told.

Closed-circuit television may be one answer to the hospital staff shortages, a group of California researchers said recently.

Many new techniques of psychotherapy have been developed, but they frequently cannot be used because of lack of trained personnel and time. Closed-circuit television offers a method of delivering these treatments

to a large number of patients at one time, while still giving the impression of personal contact, the researchers said in the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

The researchers reported the experimental use of closed-circuit television for treating patients at Agnews State Hospital, Agnew, Calif. The project was conducted under the auspices of the department of psychology, San Jose State College, San Jose, Calif.

The idea of using television as a treatment method sprang from the observation that patients' behavior improved after commercial television sets were placed on the wards. The patients—many of them withdrawn, fearful and hopeless—appeared to identify themselves with and respond to the performers on television. Many patients had developed the idea that no one cared about them, since the doctors and psychiatric technicians were



too busy to devote much time to each individual. In addition, they were afraid of attention, preferring to remain unnoticed in the group.

Television appeared to offer a means of reaching the patient, giving the impression of personal attention, and still allowing the patient to remain in a group.

Starting in August, 1954, two groups of women were observed for behavior patterns. Three months later 75 of them began a program of watching and participating in closed-circuit television programs. The other group saw only commercial television. In March, 1955, the behavior and condition of the two groups were evaluated on the basis of psychological tests and staff observations. The women who had been treated by television showed "significant" improvement in behavior, were quieter and more easily managed, the authors said.

Two types of television therapy programs were used

continuously during the study: 1) panel and group sessions in which patients met and discussed their problems, and 2) selected motion pictures. Other television programs included music and art films followed by art classes, individual therapy sessions, group question-and-answer periods, and "psychodramas" in which patients acted out their conflicts and problems.

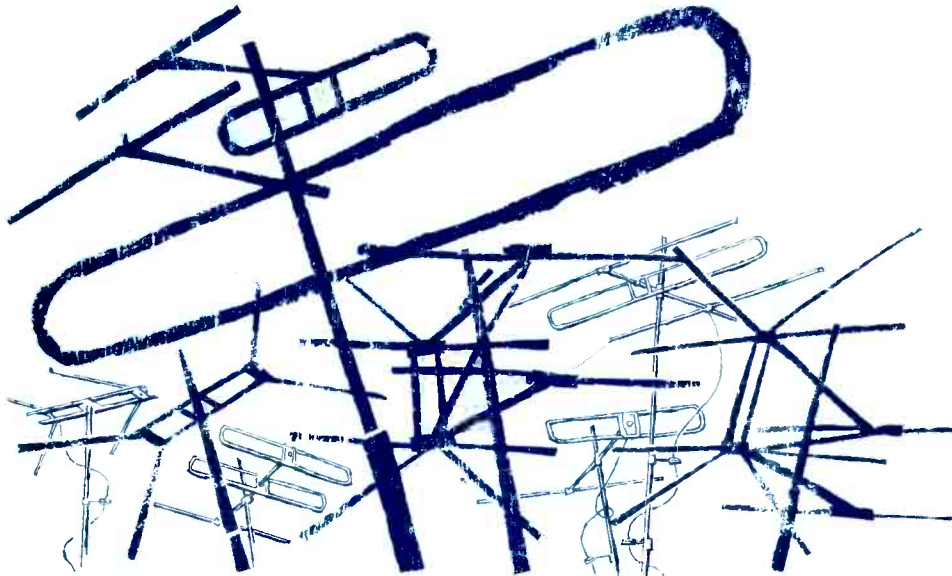
Patients' responses to the films were expressed in several ways, the authors said. After a film on grooming and posture, the patients started wearing clean dresses, getting permanent waves and manicuring their nails. After films on dressmaking, some patients planned to make their own dresses.

One patient after seeing one of the mental health films commented, "These films certainly have a lesson in them. . . . Films for entertainment are all right, but it's the

first time anyone ever thought we had enough sense to understand or learn anything."

Patients who participated in the televised group discussions and those who watched them said that the programs helped them to work out some of their own emotional problems.

The authors concluded that closed-circuit television effectively serves two purposes in a mental hospital. It is a way of repeatedly presenting general information on the basic principles of general health and mental hygiene, and of giving psychotherapy to many persons at once while still giving the impression of individual treatment. They urged that further research be carried out to learn just what types of treatment are most effective when presented by television.



CONELRAD Out, EBS In

After 11½ years of standby service, CONELRAD signs off for good about August 5, to be replaced by an Emergency Broadcasting System developed jointly by the Federal Communications Commission, the Office of Civil Defense, the Office of Emergency Planning, and the radio industry.

CONELRAD was to have expired officially on June 30, but the new system to replace it was not ready.

Under the new plan, which probably will be called EBS, all stations authorized to operate will stay on the air at their own frequencies during any attack. And they will be permitted to identify themselves geographically. But they may not use call letters, because all stations in a specified locale—a city, or in some cases several communities or an entire state—will be broadcasting the same material from a single source.

The system will be based on a series of priorities by which the President will have first call on the air; second, the local reports; third, state and regional programs; and fourth, national reports, instructions and news.

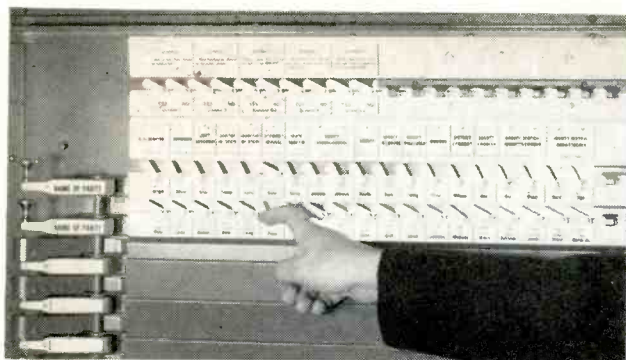
Television stations and FM stations, under present planning, will go off the air during an alert.

Conelrad—standing for control of electromagnetic radiation—was established by Presidential order on Dec. 10, 1951. It was designed to stymie enemy planes and missiles attempting to pinpoint their own locations by using commercial radio beams.

The Defense Department decided last year that ultra-modern navigational methods had made Conelrad obsolete. The wartime attacker theoretically doesn't care about radio beams because he's able to get where he wants to go in other ways.

Under Conelrad, besieged Americans, by tuning in at 640 and 1240, could keep up to date on the crisis outside their shelters. All stations, alerted by their Associated Press and United Press International wires, would go off the air.

Those holding National Defense Emergency Authorization licenses—about 1,200—would return at the two emergency frequencies and broadcast information only at those frequencies.



Key State, County, Municipal Elections Due This Year...No Time to Rest on Oars

It's 1963, an odd year sandwiched between the important congressional elections of last fall and the crucial presidential election of 1964.

It sounds like a good year to forget about politics. But politically speaking, this is no time to "go fishing." The reason for this is simple: despite the fact there are no national elections, this is just as big a political year as any.

Nine states have state-level elections scheduled, or county contests throughout the state. Municipal elections will be held in 900 cities of 10,000 population and above. Judges will be elected, city and county councils, school commissioners, state legislators.

The Meaning of a Judge

Ever hear of a labor injunction? Union members walking the bricks, carrying placards, handing out leaflets at the plant gates. A judge hands down the injunction for the company, clearing the streets. Scabs go through the gates, union members lose jobs.

Once, that was standard. In case of bad times, it could become standard again.

That puts it up to the judges. Fortunately, in a good many areas they are elected. To elect good judges, union members must vote. To vote, they must register. This is a job for all year every year. Are your members registered?

County officials are up for election in many places this year. They're all important, but consider the sheriff. Plenty of union men still remember the days of the Mohawk Valley Formula, when management threw everything it had at union members, including armed thugs.

Part of the formula was to have the sheriff deputize the goons. It could happen again, so don't forget the sheriff. We want sheriffs who will never sell their public trust to a special interest. To elect the right men for the job, union members must vote. Again, to vote, they must first be registered.

What a City Council?

This year, hundreds of cities will choose mayors, city attorneys, councilmen and candidates for other elective offices.

Don't take your eye off this ball. Think a little about picketing. The courts say union members have a constitutional right to picket. But if a city council passes an ordinance tying up handbill distribution, or making it disorderly conduct to walk more than two-and-two, it may take some time, and lots of expense, to throw it out of court.

Meanwhile, a strike can be lost. Holding the line and making gains in your home town means electing good people to public office. And that means registering union members.

What's an Education?

Some states elect state and local superintendents of public instruction this year. This election could have a lot to do with your youngster's future, for his future depends in large degree on his education.

The labor movement helped to establish the public school system in America. If we can improve it, there will be more opportunities for the children of working people to get all the schooling their talents require. A superintendent of public instruction can make or wreck a school system. So this, too, becomes a matter of votes this fall, and a question of registration now.

What's a State Legislature?

State legislatures face the voters in some states. At stake are workmen's compensation, unemployment insurance, wages and hours laws, industrial safety, education, taxation, reapportionment and other legislation.

It's good to keep a sharp eye on Congress, but don't forget the state legislatures while you're doing it. For decent state legislatures, union members must register, and they must vote.

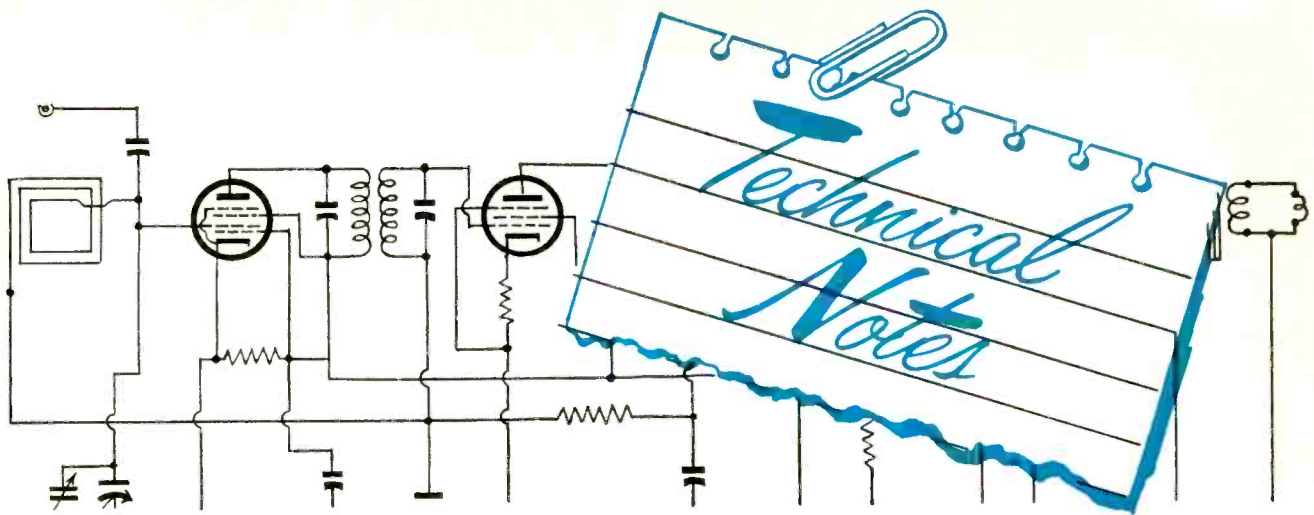
Whatever the registration requirements in your state, you should be working at it now to make sure as many union members as possible are eligible to vote. Politics at the state, county, and municipal level—just as at the national level—reaches right into your home. Protect that home by registering and voting.

Radio, TV, Recording PROGRESS MEETING

August 20, 21, 22, 1963

**Oxford House Motor Hotel
225 North Wabash Avenue
Chicago, Illinois**

**You and Your Local Union
Should be Represented**



TAPE OR DISC COMMERCIALS?

A number of advertising agency executives are disturbed by the disclosure that most radio stations are transferring their commercial messages from agency-supplied disc transcriptions to tape cartridges, the magazine *Broadcasting* reports.

The agencies were apprehensive that in the transfer from disc to tape the quality of the sound was being diluted. A survey conducted among 476 of the country's top 500 stations by D. P. Brother & Co. revealed that 406 of the stations did make transfers from disc to cartridge, and that among the other 71, there was considerable evidence that most of them used some sort of taping process for the broadcast of commercials.

Thus, the agencies felt, the careful attention they had given to quality supervision in the production and actual pressing of the records was lost in some cases by the not-so-careful transfer by the local station from disc to tape cartridge. "In one case," said an agency executive, "we found that a message had been recorded at 60 seconds, but after being transferred to tape, actually ran 64 seconds. You can imagine the loss of quality in that one."

The concern of the agencies, however, was not in the use of tape itself. ("I have heard excellent tape transfers," said one executive, "and really couldn't tell it from the original disc recording.") Their expressed aims in a current series of agency meetings—thus far held in New York—is to seek a method of maintaining quality supervision over the commercial message through the transfer from disc to cartridge. Now the agency supervision ends with the pressing and shipping of discs to the stations.

"We realize that is is not feasible for many of the stations to use the actual disc. They are in a period of transition now and have spent thousands of dollars switching over to tape," said Mel Furney, the Brother agency executive who supervised the survey. "Nor is it feasible, though, for us to supply tape cartridges instead

of disc recordings to the stations. They simply cannot be produced in the mass volume as disc recordings can."

Thus the stations are committed to tape, the agencies to disc. Out of such an impasse, the agencies hope to find an area of cooperation with the local stations by making specific technical recommendations to engineers who carry out the transfers to tape so that certain quality standards can be met.

Even here, however, the issue is clouded. The Brother survey indicated that among the 406 stations using tape cartridges for commercials, six different systems are widely used, and various others are used to a lesser degree. Thus the matter of making specific technical recommendations is complicated by the diversity of the equipment employed by the stations in making the transfers.

Hoping to reduce this diversity, representatives of various recording companies have contacted the tape manufacturers themselves seeking to bring about a greater uniformity of tape cartridges. A third phase involves an NAB study which has been going on for a year concerning such technical items as frequency response uniformity, flutter and wow and speed accuracy.

Several suggestions designed to bring stations and agencies into closer cooperation on the use of cartridges were advanced at a recent meeting in New York of several agencies who handle a large percentage of radio transcription work.

One proposal would have transcriptions labeled with instructions that the individual station contact the agency in regard to taping procedure; another would have the agency insert a test cut on each transcription to allow station engineers to check out their tape cartridge equipment against the standards of the original recording.

A LATER DEVELOPMENT

Two tape cartridge manufacturers report that a cartridge can be made on a mass basis to fit most tape equipment used by individual stations.

The companies were not identified, but an agency spokesman said: "It seems we have hurdled the problem

of tape transfers. Of course, it will still be some months before it can become practicable, but I believe it is now possible to go from the original tape to the tape cartridge, without using a tape-to-transcription-to-tape method."

SOAP AND WATER, BOY!

It seems that an NBC vice president observed the dunking of test equipment in soap and water baths at the Tektronix Corp. and pondered the possibility of such cleanup treatment for the network television cameras.

So at NBC's New York center of operations a water trough large enough to hold a full camera and more was built, and the network's equipment was dunked in a good sponsor's detergent and sprayed with a hose powered by an ordinary compressor. Then the gear was set up to dry in a specially-built cabinet heated to 140 degrees.

The whole washing and drying apparatus cost the network a reported \$300.

Network officials claim a marked improvement in the quality of picture transmission, but they warn against the use of sudsy types of detergents, particularly those of Brand X. The bubbles hide the small components.

Engineers say the dunking process makes repairs thereafter easier, because the vari-colored wires, which come out of the laundry like new, are easily identified.

STEP-UP-TO-COLOR SET

American Television Inc., Chicago, maker of the DeForest line of television receivers, plans to introduce late this month a new black-and-white set which will be a "step up" model to color later by simply plugging in Motorola's new 23-inch rectangular color tube when it becomes available in the open market.

The new DeForest step-up set line would begin at about \$400, according to U. S. Sanabria, American Television president. His firm's full color line, introduced last year, has been selling 10-to-4 over monochrome in the Chicago area, he said.

Mr. Sanabria explained that the new step-up-to-color set will include complete color circuitry but will function with a normal 23-inch monochrome picture tube. Later when the Motorola tube is available, he said, the set will promptly convert to color for the price of a new Motorola color tube—about \$70-to-\$80 he estimated—plus about \$15 labor. The set will operate in monochrome from all three color signals, he said, not just the green.

SATELLITE PREDICTION

It'll be another decade "and perhaps as much as 12-20 years" before Earth satellites will be retransmitting radio and television programs directly to home receivers, says Leonard Jaffe, director of communications

systems National Aeronautics and Space Administration.

Mr. Jaffe made the prediction in a speech July 3 to the First World Conference on World Peace Through Law, held at Athens, Greece.

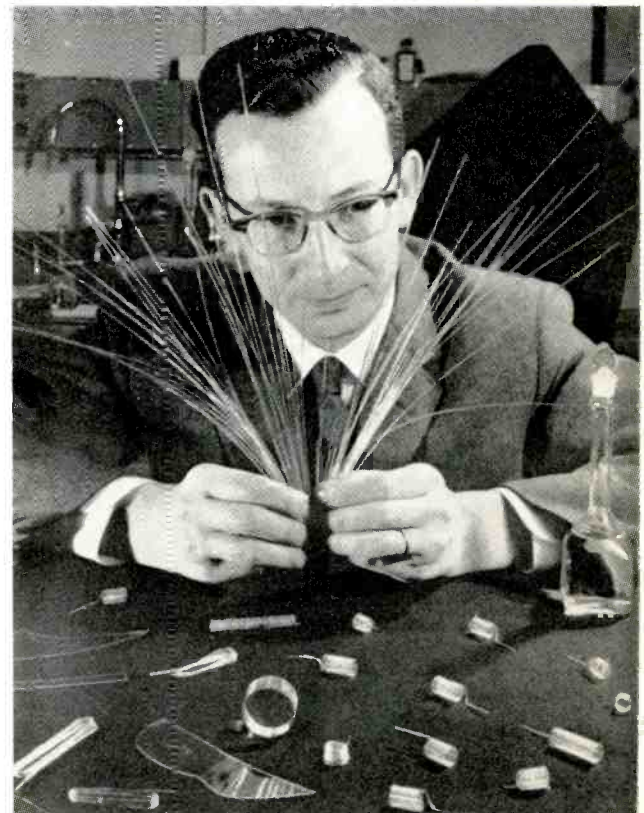
The reasons for the delay in satellite broadcasting, he said, involve power and stabilization of satellites.

"The battery-and-solar-cell type of power supply," he explained, "which we now use in the spacecraft limits the power output of the satellite transmitter to a few watts—10 watts at most. The problem of stabilizing the satellite in space limits us to moderately directional transmitting antennas on board the satellite. These two limitations dictate that our ground stations be as large, complex and costly as they are today.

"Obviously, the average home radio or TV receiver falls far short of any capability to receive usable signals from satellites as we know them today."

When the power capabilities of satellites are raised to "many kilowatts," when the satellite can be stabilized with enough precision to permit use of highly directional antennas and when such antennas can be erected in space, "only then can we begin to think seriously of a satellite to carry programs directly into individual homes," Mr. Jaffe declared.

MANY FORMS OF LASER



Dr. Nicholas E. Wolff, of RCA Laboratories in Princeton, N. J., examines a spray of newly developed plastic fibers similar to those that have produced laser action. These plastic lasers may be the forerunner of a whole new family of low-cost, mass-produced lasers. In the foreground are other shapes that future plastic lasers may take.



STATION BREAKS

ALBANY STATION GETS NEW SITE

WTEN (TV) Albany, N. Y., which employs members of Local Union 1415, was given permission by the FCC last month to go on the air with a new transmission site close to WHEC-TV Rochester, N. Y. WTEN is some 150 miles from WHEC-TV, instead of the required 170 miles, and both stations are on channel 10.

WTEN requested the move so it could better cover downtown Albany, and the "short spacing" was granted last February. Until last month's action, however, WTEN was unsure whether it would be allowed to go ahead, as the commission recently vetoed drop-ins at "short spacing."

WTEN is the first station to be granted a waiver of "short spacing" requirements.

SWEDISH SPOTS AID JOBLESS

If you really want full employment you've got to use every gimmick possible, Press Associates, Inc., reports.

Ernest Michanek, Undersecretary of Labor for Sweden, told a Senate subcommittee that television announcements are made in his country listing job vacancies just as you would see weather broadcasts here. Unemployment in Sweden varies between 1 and 2 per cent of the labor force. (It varies between 5 and 6 per cent in the U. S.)

PRESIDENT FREEMAN NAMED

Three men from labor ranks have been named by Health, Education & Welfare Secretary Anthony J. Celebrezze as members of an Advisory Council on Social Security to make a comprehensive review of the social security system.

They are IBEW Pres. Gordon M. Freeman; Vice President Leonard Woodcock, Auto Workers; and Director Nelson H. Cruikshank of the AFL-CIO Dept. of Social Security.

The 13-member council held its first meeting with Social Security Commissioner Robert M. Ball as chairman. A report of its findings with recommendations for improving the effectiveness and extending the coverage of the old age, survivors, and disability insurance program must be submitted by January 1965.

MEMORIAL CONTRIBUTIONS

The IBEW local unions in New York—LU 1212 and LU 3—have contributed to the Dag Hammarskjold Foundation "living memorial" fund—a growing fund to train young African and Asian government officials at the Hague Academy of International Law and to train young African journalists in well-known schools of journalism.

LU 1212 has a large unit of technicians employed full-time at U.N. headquarters, LU 3 are the electricians.

EMMY AWARD WINNER

Ronald G. Wright of LU 1212 has been honored for his work on WCBS-TV's "Eye on New York" by the award of an Emmy at ceremonies held May 26 by the National Academy of Television Arts and Sciences. The award was in recognition of his work as film editor on the station's weekly public service feature. It was given by the New York chapter of the Academy at ceremonies preceding the national awards.

LAST LAUGH



ALEXANDER BROWDY
1962 S STEARNS DR
LOS ANGELES 34 CALIF
45 BN