THE FREE RIDER'S CREED

The dues-paying member is my shepherd; I shall not want.

He provideth me with paid holidays and vacation, so I may continue to lie down idle in green pastures beside the still waters.

He restoreth my back pay.

He guideth my welfare without cost to me.

Yea, though I alibi and pay no dues from year to year, I fear no evil, for he pays my way and protecteth me.

The working conditions he provideth, they comfort me.

He anointeth my head with the oil of seniority.

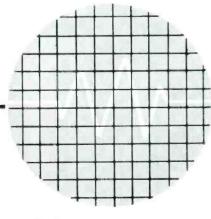
He fighteth my battle for pay raises.

Yea, my cup runneth over with benefits.

- Surely, his goodness and union spirit will follow me all the days of my life, free of cost.
- And I shall dwell in the union house that he hath built forever, and allow him to pay the bill.



FEBRUARY, 1960

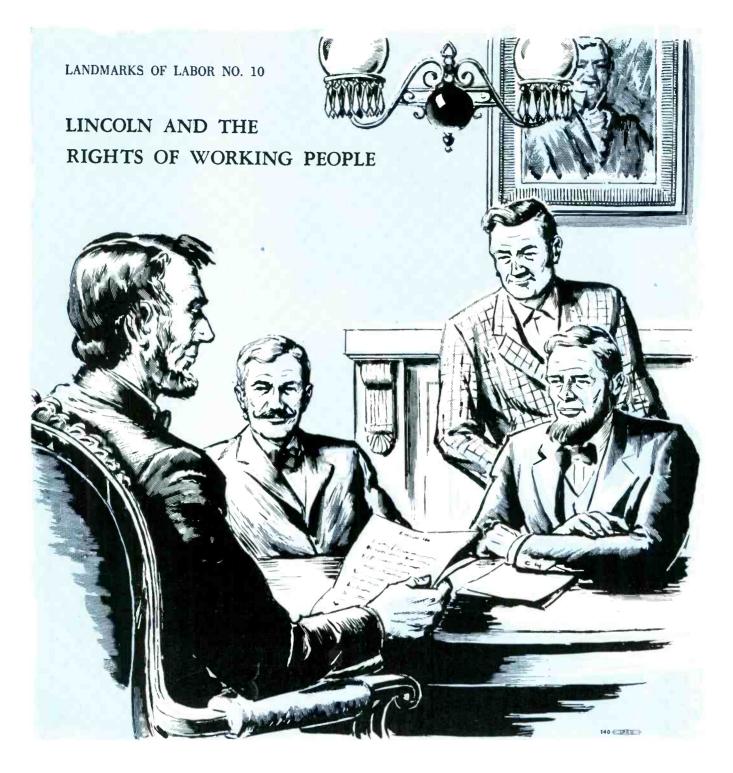


TECHNICIAN

ENGINEER

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

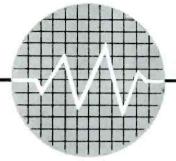
INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS - AFL-CIO



The working people of the nation had a friend in the White House in Abraham Lincoln in the dark days of the Civil War. President Lincoln in his first message to Congress said that labor was prior to and independent of capital and capital could not be created without labor's first existing. When profits skyrocketed during the war, working people through their unions, sought upward adjustments. Lincoln refused to be a strikebreaker. He had said, "Thank God we have a system of labor where there can be a strike." He was consistently a friend of working people and in 1864 told a delegation that "Labor is the superior of capital and deserves much the higher consideration." Mr. Lincoln's views on labor and the rights of working men and women deserve a high place in the many landmarks of labor during our long history.

Reprinted from THE LABORER; official publication of the International Hod Carriers', Building and Common Laborers' Union of America

The INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
GORDON M. FREEMANJOSEPH D. KEENANInternational PresidentJOSEPH D. KEENANInternational SecretaryJEREMIAH P. SULLIVANInternational Treasurer



TECHNICIAN

ENGINEER

VOL. 9 NO. 2

ALBERT O. HARDY, Editor

in this issue general advice from general counsel 4 Local union directory 8 F.C.C. annual report Plea filed for stay order Washington spent bleak birthday Reading time technical notes Station breaks

the cover Among the items of labor lore which are re-published from time to time in the labor press is "The Free Rider's Creed," which appears this month on our jront cover. This rewording of the Twenty-third Psalm in order to express the viewpoint of the non-union worker who prefers to remain a freeloader is a timely reminder to those members who see no need to make their local operation a union shop. Read the creed again and ask yourselj how many monkeys on your back YOU can stand.

index For the benefit of local unions needing such information in negotiations and bargaining, here are the latest figures for the cost-of-living index, compared with 1958 figures: December, 1958—125.5; December, 1959—124.0.

COMMENTARY

We were all set to rant and rave this month about the deplorable state of the art of broadcasting, a la the Legislative Oversight Committee, etc. By the time we got on our soapbox, however, we needed a great deal more space than that provided on this page. "Commentary" this month will thus be limited to an invitation to watch for "the coming attraction" of next month.

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GENERAL ADVICE From Our **GENERAL COUNSEL**

Louis Sherman Discusses Significant Portions of Latest Federal Legislation

The General Counsel of the IBEW recently prepared a speech for progress and association meetings and found that such interest was aroused by his remarks as to demand general printed distribution. Only small portions of his original remarks have been deleted-where he made specific references of interest only to specialized branches of the electrical industry. While the scope of this discussion is relatively broad, it appears that his advice offers many opportunities for application to questions arising in specific cases. For members of the Brotherhood, here is advice which emanates directly from the legal department and which can be relied upon with a greater degree of assurance than that received from reporting and analysis services or even from governmental agents.

A T the outset of this statement I wish to express my deep appreciation for having the opportunity and privilege of expressing my views to you. I have always valued opportunities to exchange views with members, officers and other delegates to conferences, on current legal questions. All the work which is done in the Law Library, in the courts and in administrative agencies has little meaning if it is not translated into understandable terms upon which a local union can act. It is in this spirit that I wish to discuss the question of how to perform the work of adjusting the new law which is known as THE LABOR-MANAGEMENT REPORTING AND DISCLOSURE ACT OF 1959.

This is not the first time that the IBEW and the labor movement have been faced with the problem of adjusting to extensive Federal legal regulation. Twelve years ago the Taft-Hartley Act was written into the law books of the Nation. A confusion arose in the labor movement. Some wished to expend their time solely in denouncing the law. Others wrapped themselves in cloaks of gloom and proceeded upon the assumption that it was the death of the labor movement.

The IBEW took the position that the proper way to deal with the law was by following two simple courses of action.

First, the IBEW favored political action to secure the election of congressmen and senators who would aid in amending the law.

Second, the IBEW considered it of great importance to recognize that there was a day-by-day problem of living under the law in pursuing that second objective that is day-to-day living under the law; the IBEW sought to circulate authoritative information as to what the law required and to develop ways and means of maintaining itself under the law. Therefore, the approach taken was similar to that of corporations dealing with questions of tax law or of anti-trust law. In other words, it was a problem of finding out what you could not do and also what you could do to maintain the institution.

It is my considered opinion that the same approach should be applied to the problems raised by the Labor-Management Reporting and Disclosure Act of 1959. As the dust settles, it will undoubtedly become clear that there are certain provisions of this law which must be changed if a spirit of equity and fairness is to prevail. Until these changes are made, it is necessary to develop the ways and means of maintaining ourselves under the existing law. If we retire from the field in a spirit of defeatism and fear we will only be accomplishing the objective of those who wish to destroy the trade unions.

Let us therefore turn to the Act and seek to ascertain what our problems will be and what we should do about them. I will try to select the most important problems for discussion and will follow the form of the Act in doing so.

and will follow the form of the Act in doing so. Title I of the Act is headed "Bill of Rights of Members of Labor Organizations." Among the substantive rights granted are those of equal rights to nominate candidates, to vote in elections, to attend and to participate in membership meetings. The right of free speech and assembly is also recognized by Section 101(a) (2). In addition, there is a protection of the right of a member to sue and also there are safeguards against improper disciplinary action.

As you know, the first version of this Bill of Rights was in the form of the McClellan Amendment. This Amendment which passed the Senate by a narrow vote granted absolute and unqualified rights. The difficulties that would have resulted from the McClellan Amendment in terms of creating dissension and discord in local unions was recognized, and the Senate revised the McClellan Amendment in the form of the Kuchel Substitute to limit the scope of the original provisions.

I had some small part in the effort to limit the McClellan Amendment and I would therefore like to emphasize certain provisions of the final Act which are similar to the Kuchel Substitute. Senator Kuchel's proposal tends to restore the power of the local union in governing itself as a responsible institution. Both the equal rights section and the freedom of speech and assembly section are subject to the *reasonable rules* and regulations contained in the labor organization's constitution and bylaws.

In addition, the exercise of the right of free speech at a meeting is subject to the organization's established and reasonable rules pertaining to the conduct of a meeting. In this connection you will be interested to follow the problem of what to do about a disorderly person at a union meeting. An examination of "Robert's Rules of Order" will show that it is an established and traditional right of a parliamentary body such as a local union to eject a member who is disorderly, provided, of course, only a mininum amount of force is used. It would be my view that if this problem is handled in accordance with "Roberts' Rules of Order," the action taken by the local union

will not conflict with the statutory provisions of the new Act.

Furthermore, it should be recognized that the equal rights section applies only to members in good standing of the organization. A person who is seeking to acquire membership does not come within the scope of the equal rights section. The socalled equal rights provided by the Act are limited to the right to nominate candidates, to vote in elections, to attend membership meetings and to participate in the business of such meetings. There is no general guarantee of equal rights as such. Although a union member has a right to sue and to appear as a witness in any judicial, administrative or legislative proceeding, the fact is that the federal law does not end the doctrine of exhaustion of internal hearing procedures. If the organization has reasonable hearing procedures the member must exhaust such procedures, up to a period of four months, before going into court. If he does go into court prior to the end of this four-month period the union may apply a reasonable sanction to his conduct.

It should also be noted that the protection of the right to sue does not apply if the employer directly or indirectly finances, encourages or participates in the member's litigation.

The subjects of dues, initiation fees and assessments are covered by Section 101(a) (3) of the Act. In this Section it is provided that the rates of dues and initiation fees payable by members of any labor organization in effect on the date of enactment of the law, that is, September 14, 1959, shall not be increased and no general or special assessment shall be levied unless there is a majority vote by secret ballot of the members in good standing, voting at a membership meeting after reasonable notice of the intention to vote upon the question, or by a majority vote of the members in good standing voting in a membership referendum conducted by secret ballot. This Section must be carefully followed when any action is taken to increase the rates of dues and initiation fees. Please take into account that a reasonable notice must be given of the fact that the issue of a raise in dues will be taken up at a general or special membership meeting.

Also, a clear cut election should be given between leaving the dues in the position they are when the meeting is held or increasing them. The provision of alternatives in terms of one increase rather than another increase would probably not meet the requirements of the statute.

There is another section which should be taken into account and that is, the requirement that no member of a labor organization may be disciplined except for nonpayment of dues unless such member has been served with written specific charges, given a reasonable time to prepare his defense and afforded a full and fair hearing.

Conduct of Hearings

It would be my recommendation that in connection with any such disciplinary proceedings, care should be given to the formulation of the charges. It would be advisable to specify not only the sections of the constitution and bylaws violated but also to give a short factual statement of the acts which are considered to be in violation of the constitution. The hearing should be conducted in an orderly manner and the defendant should be given an opportunity not only to bring in witnesses but also to cross examine witnesses. I do not consider that the requirements of a full and fair hearing include the right to bring in a professional attorney. It is my view that the present provisions of the Constitution authorizing a member to be defended by another member is an adequate satisfaction of the requirement to give the accused a full and fair hearing. A member may, however, select another member as counsel, even though such other member is an attorney.

The method of enforcing the bill of rights is through a private suit brought by the member in a District Court of the United States. The Secretary of Labor has no power in civil matters to take any action whatsoever; in fact, the Act specifically forbids him from investigating an alleged violation of the bill of rights. The situation is different, however, if the member is deprived of his rights through, and I quote from Section 610 of the Act, "The use of force or violence or threat of the use of force or violence." In such circumstances, a deprivation of a right may subject the party to criminal proceeding; it is therefore important in connection with this whole area of rights of members to avoid violence or threats of violence.

This is advice which I am sure is not necessary for me to offer members of the Brotherhood. And it is, of course, a rule by which the IBEW has been governed long before the Labor-Management Reporting and Disclosure Act of 1959 was even thought of. It must be recognized, however, that in the event a member can establish that he has been deprived, or that there has been an attempt to deprive him of a right under the Act and if there is proof of force or violence or threat thereof, a federal criminal case would arise.

I also wish to mention the fact that long before this Act was adopted the member had rights which he could prosecute in the state courts. The Federal Act does not deprive him of such rights. Therefore, all rights that a member has had in the state courts can still be maintained even though this new law has been adopted.

Copies of the Agreement

Section 104 provides that it is the duty of the Secretary or corresponding principal officer of the local union to forward a copy of any collective bargaining agreement to any employee who requests a copy and whose rights are directly affected by the agreement. This section should create no problems since it has been uniform practice to make copies of collective bargaining agreements available to members of the IBEW. It is important to recognize, however, that this provision of the statute also gives a non-member employee the same right to a copy of the collective bargaining agreement.

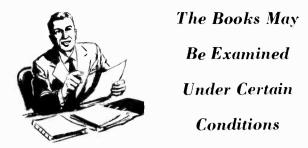
Section 105 of the Act provides that every labor organization shall inform its members concerning the provisions of this Act. The IBEW has satisfied this requirement by printing a paraphrase of the Act, prepared by the Senate Labor Committee, in a recent issue of THE ELECTRICAL WORKERS' JOURNAL. It is therefore not necessary for the local unions to take any further action with respect to this matter except in the case of new members who should have made available to them the same information.

I would suggest that if you have the opportunity you may wish to read once again the discussion of Title One in the Section-by-Section Analysis of the Act prepared for the Subcommittee on Labor which was transmitted in Labor Law Letter Number One by President Freeman. I trust that the comments which I have made on Title One will assist in developing a better understanding of the implications of the Bill of Rights Section of the Act.

Title II of the Act covers the matter of reports of labor organizations. The first report required by Section 201(a) of the Act, otherwise known as the Labor Organization Information Report, became due December 14, 1959. A specific recommendation was sent to you on November 27, 1959 entitled "Labor Law Letter Number Three" which was intended to furnish you with information which would aid and assist in the preparation of this Labor Organization Information Report. I assume that all of you have filed such reports, except government locals not covered by the Act. If any local union has failed to do so, it might be well to effect compliance at the earliest possible opportunity. And I think you will find the necessary information in Labor Law Letter Number Three.

The financial information report is specified by Section 201 (b). It is similar to the reports many of you have filed under the Taft-Hartley Act in connection with qualifying for NLRB procedures. It does require additional information. The Secretary of Labor has been conducting proceedings which are intended to result in a definite information report. These proceedings have now been completed and the Secretary of Labor is mailing the forms in a booklet directly to the local labor organizations.

Such financial information reports are required to be filed within a period of 90 days from the end of the local union's fiscal year. Therefore, local unions which have fiscal years ending December 31 will have to file their financial information reports within a period of 90 days from that date. If any local union has a fiscal year which ended after September 14 but prior to December 31 a special regulation applies. I would



suggest that such local union communicate with the Vice President's office who can assist in advising as to the proper method for submitting the necessary information. The International Office is issuing Labor Law Letter Number Five which is intended to aid you in handling Forms LM-2 and LM-3.

In connection with these reports it should be recognized that the supporting documents from which the reports are prepared must be retained for a period of five years. Furthermore, the labor organizing filing such report may find that in a particular case a member may seek to examine the books, records and accounts necessary to verify such report. It should be recognized that such member cannot secure these books, records and accounts by making a simple request to the local union. Of course, if the local union wishes to make such information available there is no objection. On the other hand, if the local union does not wish to subject itself to a "fishing expedition" it has every right to deny access to these books, records and Under these circumstances, the member seeking accounts. books, records and accounts would have to maintain a proceeding in an appropriate court and show that he has "Just Cause" for the examination of such books, records and accounts.

Section 202(a) will also require officers and employees to file special reports if they are in conflict of interest situation. An examination of this Section, that is Section 202(a) either in the Act or in the section by section analysis of the Senate Labor Committee should furnish the necessary information as to whether there is any need for any particular officer to concern himself with such report. The filing date for such individual reports of officers (that is, in conflict of interest situations) is also ninety days from the end of such officer's fiscal year.

Reports of Employers

Section 203(a) requires reports of employers. In general, this section would require an employer and his labor relations consultant to furnish certain information to the Department of Labor if they are engaged in activities which are intended directly or indirectly to persuade employees to exercise or not to exercise or persuade employees as to the manner of exercising the right to organize and bargain collectively. If you are in a situation where you think this section may apply you may find it useful to inquire as to whether the requirements of the statute have been fulfilled.

At the present time, the only section dealing with reports of employers which is in effect is the first sentence of Section 203 (b). This requires the so-called labor relations consultant to file information with the Secretary of Labor thirty days after making an agreement or arrangement which includes the persuasion of employees to exercise or not to exercise their rights of collective bargaining and also if it is an arrangement under which he is securing information for the employer concerning the activities of a labor organization in connection with a labor dispute.

The remaining sections of the reports required of employers will go into effect ninety days after the end of their fiscal year. To sum up with respect to reports:

1. The Labor Organization Report required under Section 201 (b) of the Act, otherwise known as the LM-1 Form, should have been filed by December 14.

2. Most local unions will not have any duty as of yet to file the financial information report. Labor Law Letter Number Five should help you in doing the work on Forms LM-2 or LM-3. Please note that the Secretary of Labor estimates that 70 per cent of the local unions will be eligible to use the short form report LM-3.

3. The section on the Act requiring reports from employers and labor relations consultants may be of use in future disputes. Typically, however, this information will not be required by the Department of Labor until 90 days after the expiration of the employer's fiscal year. The Department of Labor should make available on request after that time the information set forth in such reports.

4. As is the case with other reports filed with the Federal Government, there are criminal penalties for false statements and the like.

Title III on Trusteeships presents questions which are primarily of concern to the International Union. You should know that the IBEW has filed all the necessary reports with the Secretary of Labor under this title of the Act.

Title IV deals with Elections. The Secretary of Labor has issued his interpretations of the provisions of the Act dealing with elections. They will serve as a guide to him in the enforcement of the Act. I shall not try to duplicate in this statement various statements on problems which the Secretary has covered in his interpretations. A printed copy of the Secretary's interpretations has been sent to each local union and system council or joint board.

Enforcement of Elections

I wish to direct your attention to the enforcement procedures with respect to elections. Here, unlike the Bill of Rights Section, the Secretary of Labor is the enforcing officer. If a member or defeated candidate wishes to challenge an election he must first utilize the remedies available under the constitution and bylaws. If his protest under the bylaws or his appeal under the International Constitution does not result in a favorable decision he may then complain to the Secretary of Labor provided that he files his complaint within one calendar month after obtaining such unfavorable decision. In other words, if the unfavorable decision is rendered at the end of the third month he must then file his complaint with the Secretary of Labor, (assuming he wishes to carry the matter that far) within the fourth calendar month; at this point the Secretary of Labor will take over the case and investigate it. If he finds probable cause to believe that a violation has occurred he will seek to effect compliance with his interpretation of the situation. If compliance is not effected he is then directed to bring, within sixty days after the complaint has been filed, a civil action against the labor organization in a federal district court.

You will note that under this procedure a complaining party has it within his power, without the expenditure of his own funds, to initiate governmental machinery which will bring into issue the validity of the election.

Under these circumstances it appears to me that it would be wise to safeguard the technical procedures of the election so as to make them as invulnerable as possible to such complaint. The reason why I make this recommendation is that in many cases the most careful procedure will produce the same result that a careless procedure would produce. In other words, if the winning candidate has a majority he will win regardless of procedure. Now, however, such a winning candidate (although he may have a substantial majority) nevertheless may find his election put in issue. A great controversy would be aroused if the procedures are not worked out in accordance with the Act and the Secretary of Labor's interpretations.

It is true that the powers of the Secretary of Labor under this title are limited to cases where the error "may have affected the outcome of an election" but I believe that it can readily be seen that such a limitation is not a substantial safeguard upon which reliance can be placed. It is obvious that there will be differences of opinion as to whether a particular technicality may or may not have affected an election. I should think that those who are establishing the election procedures would want to see them put forth on a basis under which a challenge could not be successfully maintained once the election has been completed. Until we have received clarifying decisions by the courts it would seem advisable to me that a conservative approach be taken with respect to these election procedures.

A careful review of the Act and the Secretary's interpretation

on the subject of elections is therefore in order. I would like to select certain of the most important requirements, with the understanding that there are others that I shall not discuss at this time. Reasonable notice must be given of the nomination procedures. According to the Secretary of Labor, this notice should indicate the time, place and proper form of submitting nominations. The procedure for notice should be reasonably calculated to inform the membership so as to give them an effective opportunity to make nomination of candidates of their choice.

Campaigning is permitted under the language of the statute. Funds of the union cannot be used to promote the candidacy of any particular person. A bonafide candidate for office has a right, once within thirty days prior to any election in which he is a candidate, to inspect a list of the names and last known addresses of all members of the union who are subject to a collective bargaining agreement which has a union security clause in it. This right of inspection does not include a right to copy unless there is discrimination with respect to the copying privilege.

Notice of the election must be mailed to each member at his last known address, not less than fifteen days prior to the election. Eligibility rules with respect to voting and with respect to candidacy for office must be reasonable. The election of local union officers must be by secret ballot and delegates elected to so-called intermediate bodies must be elected by secret ballot. Delegates to a convention or to an intermediate body who have been elected by secret ballot may, in turn, cast their vote on the basis of an open ballot.

Title V is headed "Safeguards for Labor Organizations." Section 501(a) establishes the fiduciary responsibility of officers, agents, shop stewards and other representatives of the union. It is important to note in this connection that the expenditures of the union must be made in accordance with the constitution and bylaws and any resolutions of the governing bodies adopted thereunder. It may, therefore, be desirable to formulate resolutions of the local union or its executive board clarifying the authorization for the various expenditures of the local union. Of course, this same authorization can be set forth in the bylaws of the union.

The Bonding Provisions

Section 502 deals with Bonding. The Secretary of Labor has also issued interpretations with respect to this matter which have been made available to you. A committee of the AFL-CIO has been discussing this matter with the Department of Labor and has also taken it up with the association of the various bonding companies. It is hoped that this committee will produce further information. In the meantime, the International has sent out a request for information from the local unions and other constituent bodies of the International which will assist in the formulation of a proper bond. I would suggest that the request for information which has been sent to you be honored on as early a date as possible.

Section 503 prohibits a union from making a direct or indirect loan to any officer or employee of the union which results in a total indebtedness on the part of such officer or employee in excess of \$2,000.

Section 504 prohibits persons convicted of particular crimes from holding office. It should be noted that the crimes listed in Section 504 refer to specific types of violation of criminal statutes and are not intended to be considered as elements of crimes. In other words, the crime of embezzlement, for an example, means the specific offense under a state or federal statute rather than the element of some other crime which may include embezzlement. If any person thinks he has a problem under this Section I would suggest that a careful review be undertaken of the specific provisions of Section 504(a).

Although I have covered a number of subjects in titles one to six of the Act it is obvious that there are a great many subjects which have not been covered. It has been my purpose only to select such matters on which advice can be given at this time. It is obvious that the task of adjustment to this law will be of continuing nature just as the task of adjustment to

February, 1960

the Taft-Hartley Act was of continuing nature. As decisions are rendered and as rulings are made it will be necessary to take further action on the part of the local union or system council or joint board.

Title VII headed "Amendments of the Labor Management Relations Act of 1947" deals with labor relations issues. Section 701(a) of the new Act prohibits the Board from declining jurisdiction beyond the area which it has previously recognized as coming under its jurisdiction. In other words, current rules applicable to the assertion of jurisdiction of the Board cases are now fixed by statute.

Section 701(b) of the Act is intended to give the Board power to expedite its election procedures by making appropriate delegations of authority to its Regional Directors. Thus far, the Board has used this only for the purpose of limiting the time during which organizational picketing may be maintained. There are many moves afoot, however, to expedite the Board's procedures. I think this is of particular importance in this industry because of the problems we have been facing resulting from the undue delays of the Board.

Improvements Are Sought

I may mention in this connection that the American Bar Association Committee on Practice and Procedure, of which I am a member, has been asserting the need for corrective action on the part of the Board. Also, this subject has been under study by the Advisory Panel of the Senate Labor Committee, of which I am also a member. I think that recommendations will be issuing from this Advisory Panel in the near future which may serve to help produce an improvement in this regard.

Section 702 gives employees engaged in an economic strike the right to vote in elections but the exact nature of this right has not been determined since it is dependent upon Board regulations which have not as yet been issued.

New and complex procedures have been established with respect to the right of organizational picketing. In general, such picketing can be maintained only for a period which is reasonable and not exceeding thirty days from the commencement of such picketing if the employer or another interested person should file an unfair labor practice charge. In the event such charge is filed, the picketing union is required to participate in a representation election. If the election is lost, the picketing can be restrained. Informational picketing or other publicity which is used for the purpose of advising the public truthfully that the employer does not employ members of or have a contract with a labor organization continues to be permissible, provided that the picketing or other publicity does not have the effect of stopping the performance of services or the delivery of goods.

In conclusion, I wish to draw a distinction between the difficulties of adjusting to any Federal Law and the objections we may have to unwise provisions of law. It is apparent that any Federal Law with its consequent information forms, complex rulings, shifting decisions creates difficulties which are not easy to master. You must also recognize that the law is not an encyclopedia or a dictionary or a Univac machine. It is not possible merely by following the alphabet to find the answer. There are administrative agencies which shift their rulings, many hundreds of State and Federal Courts which are in conflict at various times, and as you well know, even the Supreme Court of the United States changes its mind. This is our system of law and it has worked successfully for a very long time. You also know even large corporate enterprises with extensive staffs of lawyers, accountants and the like have difficulties in adjusting to law.

We cannot wish the law away. We have a choice of running from the field or doing the best we can to maintain the union which is so vital and necessary to the welfare of the membership and their families. The IBEW has a successful record of handling problems of Federal Law during the last twelve years in which the Taft-Hartley Act has been on the books. I am sure that our record of success will be maintained and advanced. You may also be sure that the International will do everything it can within the limit of its available facilities to render assistance to you in this important problem of adjusting to the new Federal Law.



LOCAL UNIONS Having Broadcasting-Recording Members

Revised as of February 1, 1960

	Local and City	Officer (Business Manager unless noted) Address and Telephone
4	St. Louis, Mo Ralph Barnett, H Volunteer 3-2	Carton Building, 200 So. Bemiston, Clayton 5, Mo. Phone: 060.
12	Pueblo, Colo	l, 1903 Lakeview Ave., Pueblo, Colo. Phone: Lincoln 2-1417.
31	Duluth, Minn Clyde J. Giles, 203	B Labor Temple, Duluth 2, Minn. Phone: Randolph 2-2671.
45	wood 3-2317.	, 7265 Santa Monica Blvd., Hollywood 46, Calif. Phone: Holly-
49	Portland, Oreg E. W. Gayle, 1417	S. W. Third Ave., Portland 1, Oreg. Phone: Capitol 8-7683.
65	Butte, Mont Francis A. Crowle	ey, 3566 Hartford, Butte, Mont. Phone: 7467.
77	Seattle, Wash Arthur B. Kenny,	1718 Melrose Ave., Seattle 22, Wash. Phone: East 3-4505.
108	Tampa, Fla A. W. Schmidt, 17	00 Franklin St., Tampa 1, Fla. Phone: 2-0268.
124	Kansas City, Mo Andrew F. Harve	r, 104 W. 40th St., Kansas City 11, Mo. Phone: Jefferson 7711.
135	La Crosse, Wis O. R. Neisius, 423	King St., La Crosse, Wis. Phone: 4-5759.
202	1-7786.	450 17th St., Rm. 302, San Francisco 10, Calif. Phone: Market
202	win 7-3286.	g, A.B.M., 1260 West San Ramon, Fresno, Calif. Phone: Bald-
231	Sioux City, Iowa	, 321 Fifth St., Sioux City, Iowa. Phone: 5-8138.
253	Birmingham, Ala O. H. Graham, P.	O. Box 612, Birmingham, Ala. Phone: Fairfax 2-6284.
271	Wichita, Kans Perry L. Baker, 10	40 South Broadway, Wichita 11, Kans. Phone Amherst 7-8255.
292	Minneapolis, MinnJoseph F. Krech, 2	43 Foshay Tower, Minneapolis 2, Minn. Phone: Federal 9-0091.
338	5-5323.	Temple, 511 ¹ / ₂ West Main St., Dension, Tex. Phone: HO.
347	Des Moines, Iowa Harold A. Baker,	1129 Sixth Ave., Des Moines 14, Iowa. Phone: Cherry 3-1924.
349	Miami, Fla Wm. C. Johnson,	1657 N. W. 17th Ave., Miami 35, Fla. Phone: Newton 5-4546.
417	Coffeyville, Kans E. W. Maggard, I	311 South Maple, Coffeyville, Kans. Phone: 4571-J.
437	Fall River, Mass George H. Cottell,	5 Anawan St., Fall River, Mass. Phone: Osborne 4-2432.
453	Springfield, Mo Jack F. Moore, 40	8½ W. Walnut St., Springfield 3, Mo. Phone: UN. 4-7252.
479	Beaumont, Tex Dana E. Wolfe, 1	065 Park St., Beaumont, Tex. Phone: 3-8252.
504	Meadville, Pa William Ferry, 88	7½ Water St., Meadville, Pa. Phone: 4-0475.
530	Sarnia, Ont., Canada David T. Butt, 70	3 Grove Ave., Sarnia, Ont., Can. Phone: DI. 4-1276.
640	Phoenix, Ariz Paul A. Scruggs,	816 E. Camelback, Phoenix, Ariz. Phone: CR. 9-6201.
662	Chattanooga Tenn	803 Underwood St., Dalton, Ga. Phone: Broadway 8-4654.
676	Hemlock 2-69	
715	Hilltop 5-1664	
768	Kalispell, Mont Arthur Baril, Rm	9-10, Ford Bldg., Kalispell, Mont. Phone: Sky 6-5232.
816	Paducah, KyJohn W. Gilliam,	1025 Kentucky Ave., Paducah, Ky. Phone: 5-7263.
969	2-3432.	Rm. 210, Electric Bldg., Grand Junction, Colo. Phone: CH.
995	3-6350.	405 St. Ferdinand St., Baton Rouge 10, La. Phone: Dickens
1077	Bogalusa, La Eugene F. Readlin	nger, 715 Superior Ave., Bogalusa, La. Phone: RE. 5-5064.
1139	New Orleans, La	berg, P. O. Box 4034, New Orleans, La. Phone: Tulane 4371.
1141	Oklahoma City, Okla Raymond G. Duke 6-5449.	, 1141 N. W. 1st St., Oklahoma City 4, Okla. Phone: Regent
1173	Harrisburg, Pa Chester F. Lentz, wood 5-5918.	Pres., R. F. D. No. 1, Box 32, Linglestown, Pa. Phone: Kings-
1193	Atlanta, Ga George Magdich, 3	014 Hollywood Dr., Decatur, Ga. Phone: Melrose 4-5977.
1200	Washington, D. C Frank X. Green, 1 (& Baltimore, Md.)	0513 Bucknell Dr., Silver Spring, Md. Phone: Lockwood 5-3050.
1212	New York, N. Y Charles A. Calame	, 1780 Broadway, New York 19, N. Y. Phone: Columbus 5-3650.

Technician-Engineer

8

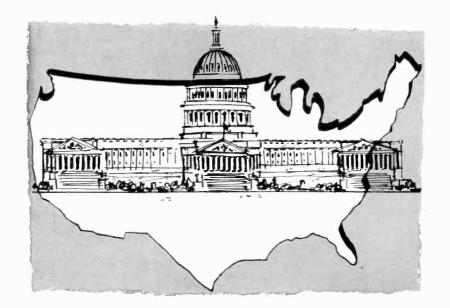
	Local and City	Officer (Business Manager unless noted) Address and Telephone
1213	Champaign, Ill Donald R. Wil 7-7913.	liams, Pres., 702 S. McCullough, Urbana, Ill. Phone: Empire
1214	Bismarck, N. Dak George A. McC	lary, 1023 No. 15th St., Bismarck, N. Dak.
1218	Detroit, Mich Richard L. Mci 6-5307.	Nutt, 29601 Ravenscroft Rd., Farmington, Mich. Phone: Mayfair
1219	Youngstown, Ohio Gerald Jones, F	Pres., 851 Cambridge Ave., Youngstown 2, Ohio.
1220		ousek, Pres., 400 N. Michigan Ave., Room 514, Chicago 11, Ill. perior 7-5244.
1221	Omaha, NebrJohn A. Bruna,	Pres., 7710 Keystone Dr., Omaha 14, Nebr. Phone: Terrace 2171.
1223		Pres., R. F. D. No. 2, Cumberland Center, Me. Phone: VA. 9-3031.
1224		d, Jr., 3297 Diehl Rd., Cincinnati 11, Ohio. Phone: Humbolt 1-6197.
1225	Indianapolis, Ind Hobert Autters Fleetwood	on, 3518 E. Michigan St., Room 209, Indianapolis 1, Ind. Phone: 9-3584.
122 8	Boston, Mass George T. Cain Copley 7-52	ns, 236 Huntington Ave., Room 402, Boston 15, Mass. Phone: 21.
1229	Winston-Salem, N. CJ. M. Weavil, F	Route No. 3, Kernersville, N. C.
1234	Fort Worth, Tex Homer J. Venso	, Pres., 1812 Junis St., Fort Worth, Tex. Phone: JE. 5-0530.
1240	Fargo, N. Dak William Stedler	, Pres., Box 1633, Fargo, N. Dak.
1241	Philadelphia, Pa Raymond Freed 7-6931.	lman, 1817 Ashurst Rd., Philadelphia 31, Pa. Phone: Greenwood
1257	Dallas, Tex Hudson Hamme	ond, 1837 Piedmont, Irving, Tex. Phone: EL: 3-6786.
1259	Kansas City, Mo Walter L. Reed 1-5054.	l, 1017 Washington St., Kansas City 5, Mo. Phone: Baltimore
1260	Honolulu, Hawaii Francis J. Kenn	nedy, 2305 So. Beretania, Honolulu 14, Hawaii. Phone: 9-3445.
1264	Mobile, AlaJohn D. Rabon,	1008 Cloverdale Dr., Mobile, Ala. Phone: GR. 7-3319.
1266	Dayton, OhioRobert L. Chees	sman, Pres., 301 Briarcliff, Dayton 15, Ohio. Phone: CR-7-5192.
1275		son, 3610 Bowen Ave., Memphis, Tenn. Phone: MU. 3-6786.
$\frac{1281}{1282}$		rce, 327 Parkside Dr., Edgewood, R. I. Phone: Hopkins 1-7233. Pres., Harkness Rd., Pelham RFD, Amherst, Mass. Phone: AL.
1286		Pres., 600 Seneca Ave., Louisville 9, Ky. Phone: Emerson 3-5648.
1287		Route 14, Box 369, Tulsa, Okla. Phone: FI. 5-4487.
1292	Peoria, Ill	
1294		res., 12 Crestview Rd., Tariffville, Conn. Phone: Oldfield 8-9336.
1295		, Pres., 2080 Woodcliff Ave., S. E., Grand Rapids, Mich. Phone:
1299		Pres., P. O. Box 2635, Montgomery, Ala. Phone: 4-6762.
1300		g, Pres., 1687 S. High St., Columbus 1, Ohio. Phone: HI. 4-1300.
1304		809 S. Harrison St., Little Rock, Ark. Phone: Mohawk 6-8555.
1318		erton, Pres., 118 Willow St., Halifax, Nova Scotia. Phone: 4-3837.
1343		p, Pres., 904 Riverside Ave., Trenton 8, N. J. Phone: EX. 2-8532.
1348		son, Pres., 118 E. Huisache, San Antonio 12, Tex. Phone: PE.
1349		n, 1520 44th St., Rock Island, Ill. Phone: 6-4351.
1374		a, Pres., 217 10th St., N. W., Cedar Rapids, Iowa. Phone: EM.
1405		, 2 Boundary Ave., Flin Flon, Man., Can. Phone: 4149.
1415		h, 17 Mary Hodge Dr., Schenectady 9, N. Y. Phone: Union 9-7540.
1481	Pittsburgh, Pa Rocco Catalfam	o, 115 Holly Hill Dr., Pittsburgh 37, Pa. Phone: Forest 4-0612.
1564		nerbee, P. O. Box 2, Gadsden, Ala. Phone: 6-6408.
1823		, 901 E. 17th Ave., Denver 18, Colo. Phone: Tabor 5-1311.
2000	Yuma, ArizCurtis Bridgem	an, 1743 Madison Ave., Yuma, Ariz. Phone: Sunset 2-2925.

INTERNATIONAL REPRESENTATIVES

District 2 Walter Reif, 82 Kohary Dr., Devon, Conn. Phone: Trinity 4-2124.
District 3
District 5
District 6 Freeman L. Hurd, 135 No. Harvey Ave., Oak Park, Ill. Phone: Euclid 6-0389.
District 7
District 8 R. H. Wooden, 2965 So. Clayton St., Denver 10, Colo. Phone: Skyline 6-1639.
District 11
District 12

February, 1960

1



FCC Annual Report Issued

Fiscal Year 1959 Covered in Usual Form

THE Silver Anniversary Annual Report to the Congress has been made by the Federal Communications Commission and is now available from the Government Printing Office. As is usual, the report covers the *fiscal* vear—from July 1, 1958 to June 30, 1959.

The letter of transmittal accompanying the report to the Congress is signed by Chairman John C. Doerfer and states (in part):

⁶That radio is no longer earthbound is evinced by the start of communication with objects in outer space and a move for international agreement to provide and protect frequencies for this and other scientific developments.

"The mushrooming of transmitters and the increasing use of electronic devices have brought added interference problems. From less than 3,800 cases in 1934, the number of interference complaints requiring FCC field investigation now exceeds 24.000 a year, not counting routine cases handled by local and regional cooperating groups."

While the IBEW's interest in the Report is primarily centered in the Broadcast services, it is interesting to note that more than 1,700,000 transmitters are reported, involving more than 570,000 licensees, in more than 50 categories of service other than broadcasting. The largest number of such transmitters are in "Industrial" service and number approximately 538,000. In order of decreasing numbers, 445,000 are shown in "Land Transportation" services, 332,000 in "Public Safety," 125,000 in "Aviation," 95,000 in "Marine," and so on.

Under the heading of "Programs," the Report quite concisely states the position of the Commission (at least, as of the end of the year), as follows:

"Probably the most misunderstood phase of Commission regulation is that pertaining to broadcast programing. There is a popular but erroneous impression that the Commission has jurisdiction over individual programs. This misconception is reflected in letters it receives complaining about certain programs or urging that favorite programs not be dropped. But the fact is that, in general, the Commission cannot put any individual program on or off the air.

'The reason is that the Commission is given less control of broadcasting than of telephone and telegraph services. While its regulation of common carriers extends to rates, practices, and even to bookkeeping, its authority over broadcasting is more limited.

"Section 3(h) of the Communications Act, which governs the Commission, stipulates that a person engaged in broadcasting shall not 'be deemed a common carrier.' Consequently, Commission powers with respect to broadcast operation differ from those relating to telephone and telegraph services."

Some of the statistics shown in the Report are: outstanding broadcast (station) authorizations totaled 10,120, a gain of 1,083 for the year. These figures include 3,500 commercial AM, 667 commercial television and 769 commercial FM. Of the television authorizations, 436 VHF stations and 74 UHF stations were on the air, 35 VHF's and 117 UHF's were not on the air.

As to commercial operators' licenses, there were 18,033 radiotelegraph (all classes) outstanding as of June 30, 1959. In the radiotelephone category, there were 65,196 first class (an increase of 3,457 during the year); 48,932 second class (an increase of 3,716); and 48,193 third class (an increase of 7,166) licenses outstanding. The number of "restricted permits," issued for the lifetime of the operator, increased by 204,114 during the year and accumulated to a total of 1,525,558.

Copies of the report are available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at a cost of 65 cents per copy; Cat. No. CC 1.1:959.

Plea Filed for Stay Order

Company Asks State Supreme Court For Order Restraining Arbitration Sought by IBEW

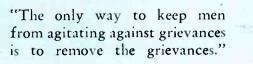
CBS, Inc. has filed a petition with the Supreme Court of the State of New York for "an order staying and restraining the arbitration sought to be had" by the JBEW in its dispute with the company over video tape jurisdiction. The petition names Gordon M. Freeman, International President and Milton Greenwald, President of Local Union No. 1212 as respondents, as representatives of the labor organizations involved in transacting business in the City, County and State of New York. An attached affidavit shows William C. Fitts, Jr. as deponent for the corporation, in his capacity of Vice President.

The long and technical statement of the case discusses the Agreement between the parties, the demand (of the IBEW) for arbitration, the background of the dispute, the Company's interpretation of the IBEW's territorial jurisdiction and a summation of the matters in issue. Generalties, allegations and some particularities are touched upon but the whole of this voluminous material does not indicate a direct answer to the question, "What we are afraid of."

The firm of McGoldrick, Dannet, Horowitz and Golub, acting for the company, indicate that it will move the Court at 10:00 A. M. on the 15th day of February (or as soon thereafter as counsel can be heard) for the order sought—and for such other and further relief as may be just and proper. This matter has been referred to Counsel for the 1BEW and will subsequently be reported herein in more detail.

As we go to press, counsel for the company asked for, and received, continuance of the case until March 15, 1960.

WOODROW WILSON said:





For Safe Winter Driving

With old-man Winter plaguing us now, the National Safety Council recommends that you follow these tips for safe winter driving:

1.-Have Good Tires and Tire Chains

You should make sure you have good tires, preferably snow tires; and use adequate tire chains for severe icy or snowy road conditions. Remember worn tires or worn chains are not as effective as they should be. An ounce of prevention in this regard may help save your life or avoid a serious accident.

2.—Keep Your Windshield and Windows Clear

Be sure that your wiper blades, your heater and defroster are working properly. Clean the snow and ice thoroughly from your windshield and all windows of your car. Keep the inside of your car ventilated while driving so the inside of your windows won't fog up.

3.-Get the "Feel" of the Road

To avoid unexpected sliding or spinning of your wheels, occasionally try your brakes or gently press your accelerator while driving slowly and as traffic and highway conditions permit. Then adjust your speed to road and weather conditions. Slower than normal speeds are a *must* on snow or ice.

4.—Follow At a Safe Distance

Keep well in back of the car ahead of you so that you'll have plenty of room to stop, if necessary. It takes from three to twelve times more distance to stop on snow and ice as it does on dry pavement. You may find it a bit embarassing to explain why you couldn't stop when the other fellow did.

5.—Pnmp Your Brakes

Pump your brakes to maintain the best steering control when braking on ice or slippery snow. "Pumping," as you know, is a fast application and release of the brakes one, two or more times per second. This gives you short intervals of maximum braking separated by short intervals of effective steering while your wheels are rolling.

6.-It's Up to You

You know from experience that driving conditions are hazardous and less favorable during the winter. It's up to you to winterize your car, to winterize your driving techniques—and to winterize your determination to avoid accidents.



The stark existence of Valley Forge is shown in this painting by A. Chappel. As soldiers huddle round a fire, Washington and Lafayette confer.

GEORGE WASHINGTON spent his 46th and probably bleakest birthday in the snow-covered fields of Valley Forge, Pennsylvania.

Today, Valley Forge is a pleasant state park, where snow creates a serene setting for the replicas of log huts that housed Washington's army, the National Geographic Society says.

But on February 22, 1778, the snow was stained with the bloody footprints of soldiers who were suffering incredible privation in bitter cold. The men had scant, ragged clothing and few blankets. They slept on damp earth floors in their huts. Food was meager. Smallpox and dysentery spread through the camp.

Letters Relate Suffering

A picture of this winter of suffering emerges from original Washington papers in the Library of Congress. The ink on the letters is now a dim brown, but the story told in the spidery, sometimes illegible, handwriting has not faded.

Washington's army of 11,000 men arrived in Valley Forge on December 19, 1777, after a 19-mile march from the outskirts of Philadelphia. In a letter to Lafayette 12 days later, Washington was optimistic in spite of the dismal prospect before him:

"I have no doubt but that every thing happens for the best; that we shall triumph over all our misfortunes, and shall, in the end, be ultimately happy; when, My Dear Marquis, if you will give me your company in Virginia, we will laugh at our past difficulties and the folly of others."

As the winter wore on, Washington's optimism changed to worry, but never despair. A thread of constant concern for his men runs through his letters. On February 19, 1778, he wrote to Patrick Henry for help in getting supplies:

"... for several days past, we have experienced little less than a famine in camp." In another letter, he said,

Washington Spent Bleak Birthday at Valley Forge

(If YOU think you've got it tough)

"The distress of this Army for want of provisions is perhaps beyond anything you can conceive."

On his 46th birthday, Washington issued a general order requiring that the sick be well-supplied with rice or "if rice cannot be had, Indian meal . . ."

Many of the letters attempt to get more clothing for the soldiers. On one occasion, Washington wrote, "We have . . . this day . . . no less than 2,873 men in camp unfit for duty because they are barefooted and otherwise naked . . . Numbers . . . are still obliged to sit all Night by fires . . ."

Deserter Needed Shoes

Washington tells of seeing a man wrapped in only a thin blanket run from one hut to another. Soldiers who left their quarters for duty borrowed clothes from others who remained inside. One soldier was courtmartialed for threatening to desert just as soon as he got shoes.

In a letter urging Brigadier General John Glover not to resign, Washington commented, "The spirit of resigning, which is now become almost epidemical, is truly painful and alarming." Washington feared a "general mutiny and dispersion."

Although 3,000 men died during the winter, the army did not disintegrate. Under the Prussian training of Baron von Steuben, it was molded into a well-disciplined fighting force that marched away from Valley Forge on June 19, 1778, and went on to eventual victory.



General George Washington kneeling in prayer at Valley Forge—from a painting by Henry Brueckner.

Reading Time

Handbook of Basic Circuits by Matthew Mandl, The Macmillan Company, 60 Fifth Ave., New York 11, N. Y. Price \$7.50.

Virtually every type of TV, FM, AM, industrial and commercial electronic circuit, including hi-fi and PA systems, is represented in this brand new . . . first of its kind . . . reference book.

If you are the type of man who hates to waste time searching texts and articles for information, this handy



reference is for you. The index is complete and the book is arranged for utmost convenience. There are 136 carefully selected circuits, representing all types, treated as units and illustrated by schematics.

The descriptions in "Handbook of Basic Circuits" are written for quick understanding. Yet each circuit is so fully described that you will be able to recognize any design variation you come across in your daily work.

For each of the many circuits described in the book, there is: 1. a schematic diagram, 2. a description of the place the circuit occupies in electronic equipment, 3. a discussion of the purpose of the circuit, and 4. a description of its characteristics and function. Nonessential information has been held to a minimum.

101 Ways to Use Your Audio Test Equip-

ment, Howard W. Sams & Co., Inc., Indianapolis 6, Ind., Catalog number TEM-5. 144 pages, $5\frac{1}{2}'' \times 8\frac{1}{2}''$. \$2.00.

This is a new addition to the "101 Ways Test Equipment Library" published by Sams. It is by noted authority, Robert G. Middleton.

This book answers the need for a practical book on test equipment usage in the audio field. Much of the information it contains is new. It describes many uses for special instruments such 'as harmonic-distortion analyzers, audio watt meters, audio VTVM's, and toneburst generators, etc.

Printed Circuit Diagnosis Made Easy (PC-1), Howard W. Sams & Co., Inc., Indianapolis 6, Ind. Catalog number PC-1. 64 pages, 5½" x 8½". \$1.00.

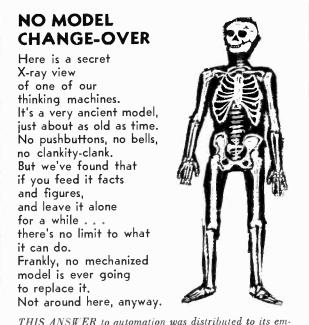
Written specifically to help solve the many problems service technicians face when they service printed circuits in television and radio chassis, this book stresses the diagnosing process. It tells how to pinpoint the trouble area and discover the defective component quickly. In addition, it describes the best procedures to follow when only a schematic diagram is available, and it tells the correct way to interpret and use the various styles of service literature available. Sample problems illustrate each phase of the television and radio troubleshooting process. This book will help the technician to service all types of printed board chassis in all types of equipment faster and more efficiently.

Do They Understand You? by Wesley Wiksell, The Macmillan Co., 60 Fifth Avenue, New York 11, N. Y. \$4.95.

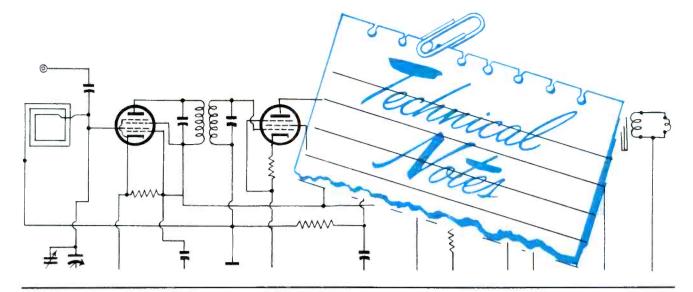
This 200-page volume is called "a guide to effective oral communication." It'll have its biggest sales among employee relations and personnel people . . . perhaps even among station managers. In any case, it points out that the key to good oral communications lies in understanding one's own attitude and its effect on the listener. It has value for technicians who get fouled up in audio intercom and for members seeking better stations in life.

Another IBEW Station

Just minutes prior to press time, word was received that Local Union 1281 in Providence won an election at WPRO, WPRO-TV. A bargaining unit will now be certified by the NLRB, covering the engineering and production department employees of Capitol Cities Television Corp. in Providence. Capitol Cities also owns WROW, WTEN in Albany, N. Y., and WTVD in Durham, N. C.



THIS ANSWER to automation was distributed to its employes by the Roosevelt Savings Bank of Brooklyn, N. Y.



Thermoplastic Recorder

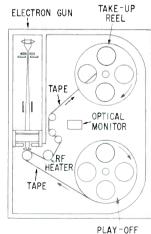
Last month the General Electric Company introduced its thermoplastic recording system—a new electronic process for recording images. TPR's inventor, Dr. William E. Glenn of GE, demonstrated the system to 200 observers in New York City.

Using the principles of the system, he recorded a TV sequence in an off-the-air pickup and then used an 8mm projector to play back the images on a screen. The effect was to gain an apparent quality of an early-history kinescope, according to one trade publication.

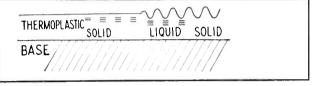
The system is still in an experimental stage and must be developed further for commercial value. Audio was not recorded in the demonstration, but Dr. Glenn said sound and video could be recorded simultaneously.

Engineers admit that the recording process has potential as a TV technique that conceivably could facilitate important improvements and changes, but from information available, the thought is that a TV debut is some years off, with its first application being more likely in telemetry and computer equipment. A considerable technical problem involved in the recording method is posed by the fact that it must be done in a relatively high vacuum.

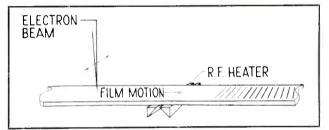
RECORDER — Here's schematic of the thermoplastic recorder, showing tape running under electron gun where picture is etched as wrinkles in tape, then "cooked" by a radio-frequency heater. Tape also can be unwrinkled or erased, then re-recorded.



PLAY-OF REEL



This cross section of a strip of thermoplastic shows how the wrinkling affects the structure of the special coating over the base.



TAPE—This is roughly what happens to the plastic film "tape" as it passes from electron gun over rf heater for wrinkle "cooking." Tape can be played back either electronically or optically immediately after recording.

More Thermoplastics

Ampex Corporation has announced that it, too, has been doing research into thermoplastics for several years. The organization said that when Ampex processes in the field become practical, they will be adjuncts to the present tape systems, and not replacements for them.

Ampex reaffirmed any earlier statement that thermoplastics would not hurt Videotape even in the long run. Magnetic recording still offers best bet, said the company.

Nuclear-Test Noise

The National Bureau of Standards recorded the changes in radio noise that occurred when two highaltitude atomic explosions were set off over Johnston Island in the Pacific Ocean in August 1958. The explosions appear to have had a pronounced effect on the radio noise as recorded at Kekaha, Hawaii. This

recording station, located on the southwest coast of the island of Kauai, about 700 miles northeast of Johnston Island, is part of a world-wide chain of noise recording stations supervised by the Bureau's Boulder (Colo.) Laboratories.

Two bomb bursts occurred shortly after midnight on August 1 and August 12 at elevations estimated to be from 25 to 100 miles. Recordings were made of the received atmospheric radio noise power for a period before and after the first explosion. The usual diurnal pattern is evident on the graphs during the three days prior to the blast, with the highest noise levels recorded at night and a rapid decrease in level between 0400 and 0800 local time. In the hour following the blast, however, the noise decreased by as much as 32 db (at some frequencies) at a time of day when it would normally be rising or holding steady. Recovery apparently occurred in a matter of hours at 13 kc and 5 Mc. but from 51 kc through 2.5 Mc a changed pattern is evident for several days, and records for August 5-11 indicate that a disturbed condition persisted until the second test on August 12. The after-blast effects on this date were similar to those on August 1, with abnormal noise conditions continuing on some frequencies until about September 1.

Because of the very low incidence of thunderstorms in Hawaii, most of the received radio noise is believed to be propagated from storms at a considerable distance. Thus, changes in propagation conditions are reflected more clearly on the Kekaha noise records than at stations situated on large land masses, where local and short-distance storm effects tend to mask changes in propagation.

It would appear likely that a highly ionized region was formed by the bomb explosions over Johnston Island and that this ionized region persisted for a period of at least several days after each test, causing greatly increased ionospheric absorption.



Radio noise recording station and antenna array at Kekaha, Hawaii. This station is one of a number of worldwide noise recording stations maintained by the National Eureau of Standards.

Near Miss for Bell

Alexander Graham Bell, inventor of the telephone, almost invented the phonograph, too, according to a recent newspaper article.

Thomas A. Edison unveiled his phonograph in 1877. A year later, Dr. Bell commented in a letter: "It is most astonishing to me that I could possibly have let this invention slip through my fingers when I consider how my thoughts have been directed to this subject for so many years past. So nearly did I come to the idea that I had stated again and again in my public lectures the principles of the phonograph...."

Dr. Bell thought of himself primarily as a teacher, and he was keenly interested in the perfection of the phonograph as a teaching tool. In the same letter, he predicted: "I believe the phonograph will be enormously improved. I am having made an apparatus that will give still better results even than those produced by Edison."

In 1881, Dr. Bell established in Washington, D. C., the Volta Laboratory Association, with Chichester A. Bell, a cousin, and Charles Summer Tainter as associates. The story of how they perfected Edison's machine is told in notebooks and papers preserved by the National Geographic Society.

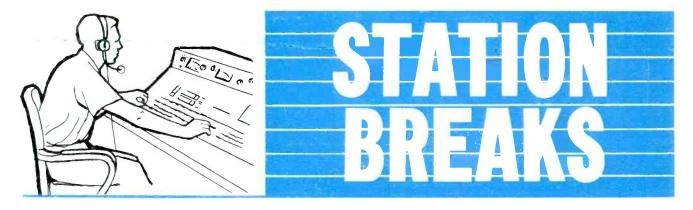
A recent Smithsonian Institution paper credits Dr. Bell and his colleagues with making the phonograph practical. The author, Leslie J. Newville, recalls that Dr. Bell suggested the basic lines of research, furnished the money, and made sure that the others got credit for many inventions that came out of the Volta Laboratory.

The original Edison phonograph indented sound waves on tinfoil. Sounds were badly distorted, the tinfoil tore easily, and the cylinder lasted for only a few playbacks. The Volta Associates engraved sound on wax cylinders with a sharp stylus. The basic patent was granted in 1886, and the engraving principle still is used today in making phonograph records.

Chichester Bell on November 27, 1882, described the "marvelous sensitivity of a water-fed jet to sound vibrations." The group also experimented with jets of wax, air, and molten metal to reproduce sound. These proved impractical, but the Associates anticipated such modern developments as the disc, magnetic recording, and sound tape.

Dr. Bell said the goal was "to perfect a flat form of record from which we can print. Printing or multiplying records is the chief object I have in view." An early disc was of cardboard coated with paraffin.

In one device, magnetic ink traced sound patterns on a paper-covered cylinder. A magnet reproduced the sound. The early tape recording consisted of a strip of waxed paper in which sound waves were engraved by a sharp stylus and played back by a dull one. Several records could be cut on the same strip—foreshadowing the present two- and four-track tapes.



Hospital Care



Members of the IBEW employed in Hawaii are covered by a hospitalization plan which gives them care at the new Kaiser Foundation Hospital in Honolulu. Every patient's room opens upon an outdoor lanai (balcony), diagonally set, giving a breathtaking view across the boat harbor and azure sea.

Darkened Pickup

A crew from WDSU-TV made a pickup recently at the new Moisant International Airport with one of the cameras located in the completely-darkened radar room. The only light in the room came from the instruments not too good for people. By using one of the new and still-experimental GE Z-5351 super-sensitive orths, more than adequate light was supplied by the tally lights minus the red jewels.

Wandering Suitcase

IN SIDNEY, AUSTRALIA, President F. H. Campbell, of the Electric Trades Union, reported at considerable length on a recent trip to the U. S. where he and other ETU officials were guests of the IBEW, AFL-CIO. A good many things impressed the Australians about America but nothing more than the mysterious operations of U. S. airlines. Soon after their arrival in the U. S. they flew from Denver to Cleveland where one of the ETU officials missed his suitcase. For four days the Australians, American union friends and airline officials hunted for the suitcase. Finally the airline announced that the bag had been discovered in London, England. How it ever got there nobody could figure out. Two days later it arrived back in Cleveland, and this time the Australians were really impressed. The unescorted bag that had gone 9,000 miles all the way from Denver to London, England, and back to Cleveland, had to go through U. S. Customs. The lonely suitcase was checked, investigated, cleared and finally turned over to its Australian owner.

If You `Buy Union'

Union-made cigarettes include these brands: Raleigh, Viceroy, Lucky Strike, Kool, Pall Mall, Herbert Tareyton, Hit Parade, Chesterfield, L & M, Philip Morris, Marlboro, Old Gold, Kent, Marvel, Holiday, Sano and Encore . . . Non-union made cigarettes include Camels, Winston and Salem.

Caged Comment

Overheard: "Life has gotten to be a rat race, and the worst of it is that the rats are winning."

For Chest Thumpers

IN NEW YORK CITY, union barbers, to their own astonishment, discovered that the newest thing in hairpieces for businessmen is the chest toupee. They made their discovery at the National Barber Show where a prankster went up to Diana Tessler, president of a hairmaking company, and proposed, just as a stunt, that her firm make a chest rug. Miss Tessler replied, "Stunt? Why, we've been making them for businessmen for a long time." Who wears them? Says Miss Tessler, usually scrawny little fellows with hairless chests who want to appear masculine and hairy as they parade on beaches or near swimming pools.

