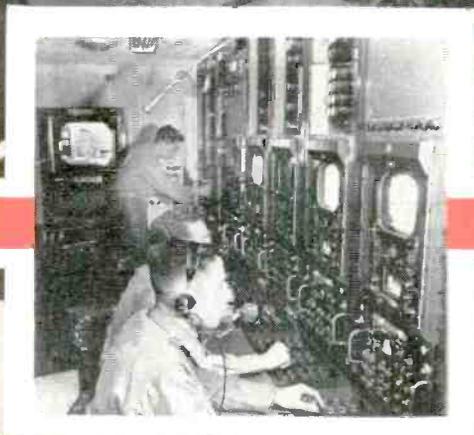
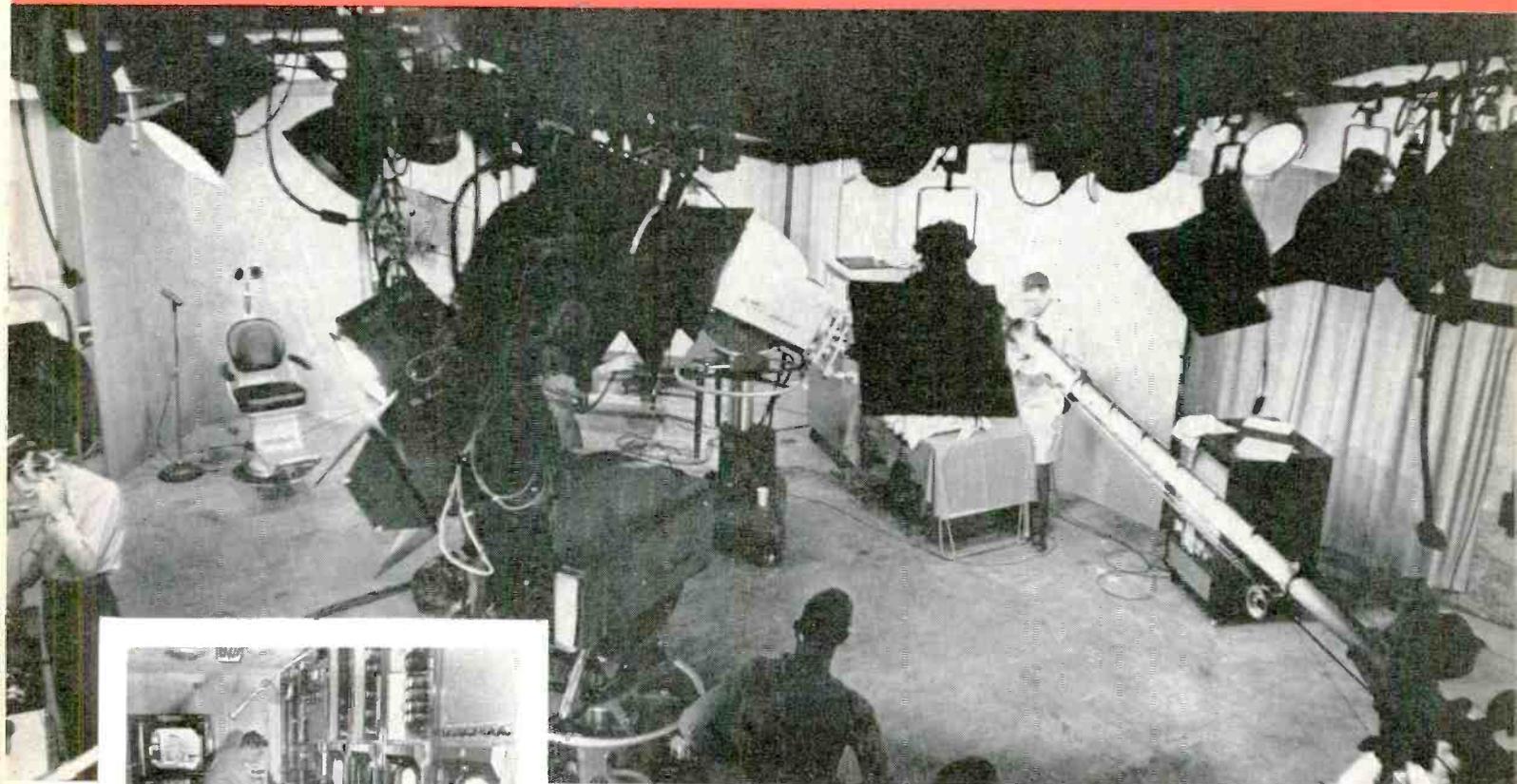


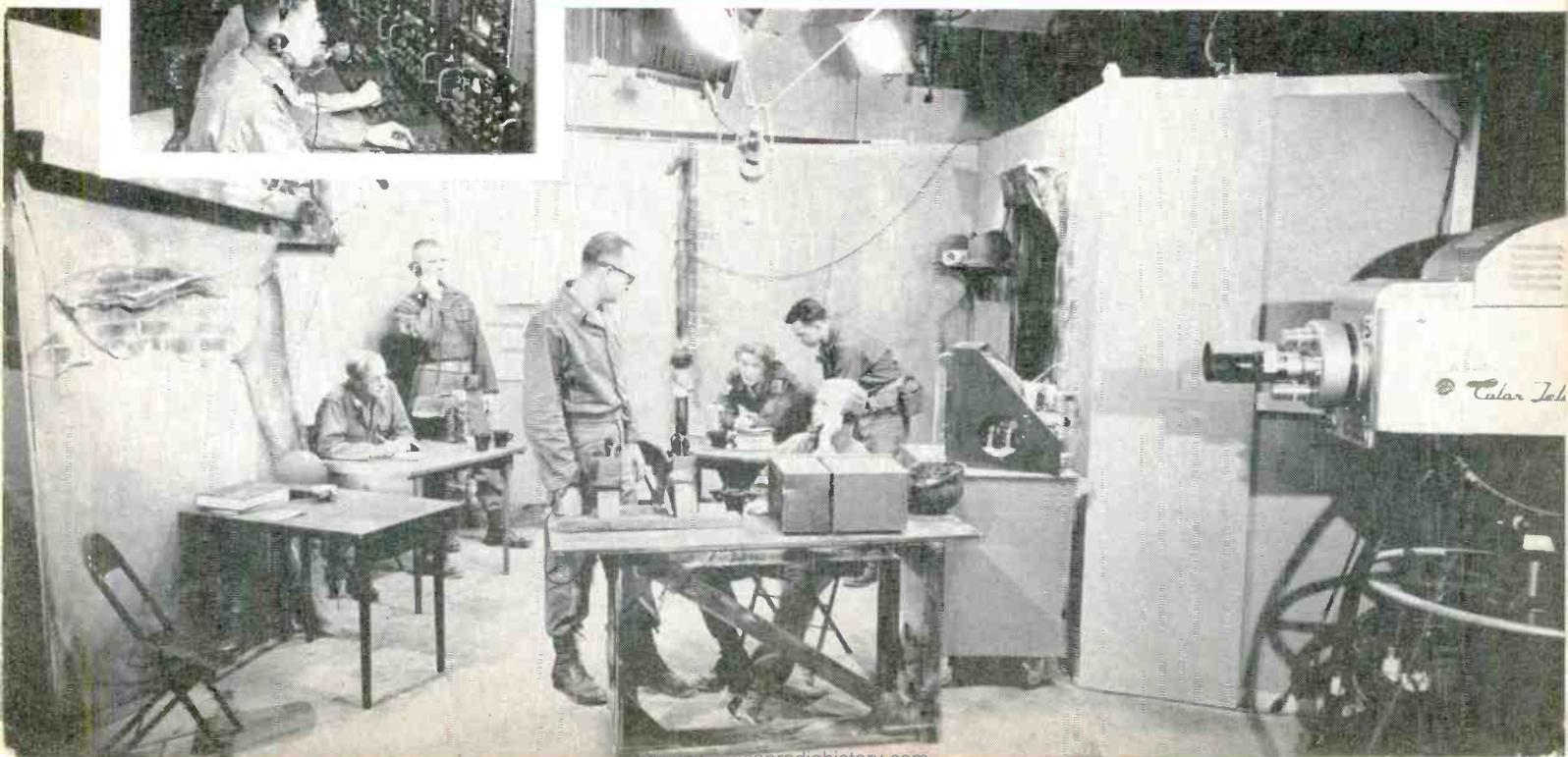
RADIO, TV and RECORDING

TECHNICIAN-ENGINEER

FEBRUARY, 1958



TELEVISION AIDS MEDICS AT WALTER REED HOSPITAL



RADIO, TV and RECORDING
TECHNICIAN-ENGINEER

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The INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS

GORDON M. FREEMAN International President
JOSEPH D. KEENAN International Secretary
JEREMIAH P. SULLIVAN International Treasurer

ALBERT O. HARDY

Editor, Technician-Engineer

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. . . the cover

Our cover and a feature article this month tell of television facilities at Walter Reed Hospital, the Army medical center in Washington, D. C. The top picture on the cover shows Studio A, located in the Armed Forces Institute of Pathology.

The small picture insert shows the video control room where five color camera heads are controlled. This room also houses encoding systems, test instruments, remotely-controlled switching relays, and three VHF transmitters which feed the coax net.

The bottom photo shows a Studio A dramatization of medical work with mass casualties from an emergency command post in the event of war.

commentary

Wages Have Not Justified Price Inflation!

Editor's Note: The following is an excerpt from a statement by Mr. Leon Keyserling, president, Conference on Economic Progress and former chairman, President's Council of Economic Advisers. We are indebted to Mr. Keyserling for his expression of judgment and his permission to print his statement.

Wages are consumer income, just as profits are business income. As investment in productive facilities fed largely by profits has run so far ahead of consumption fed largely by wages, it follows that wages have not kept up with profits or with the requirements for our economic health and growth. Prices affect both the real buying power of business for investment purposes (profits), and the real buying power of wages for consumption purposes.

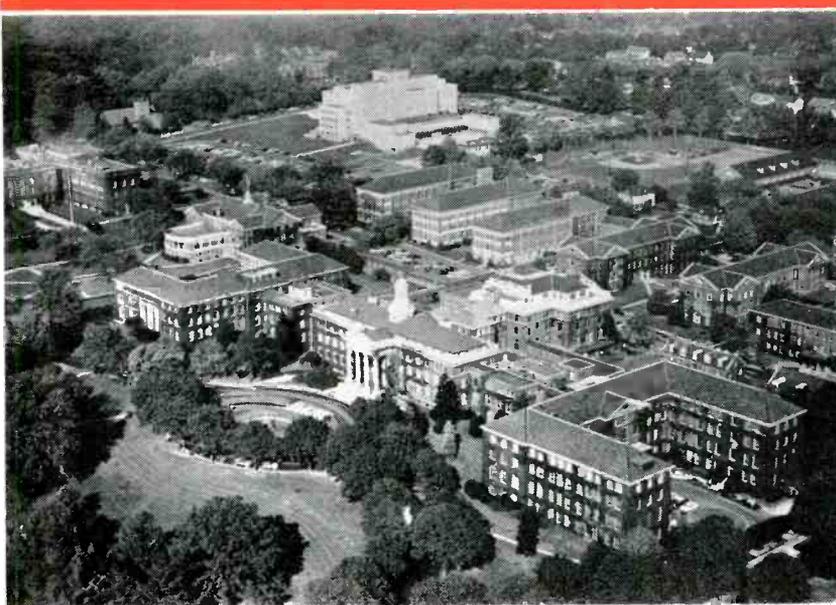
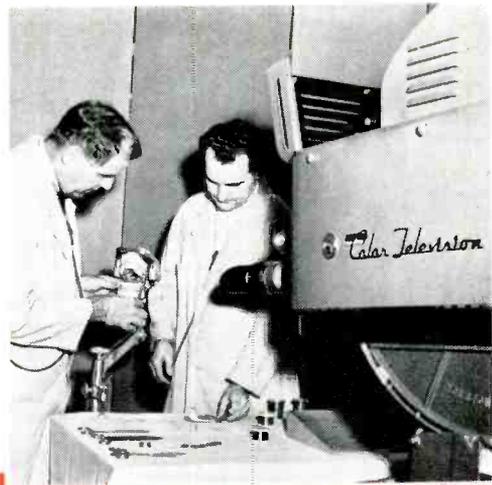
As the former has outrun the latter, it follows that prices have been too high relative to wages, and that wage increases, when looked upon as business cost affecting profits, have not justified the price inflation. What better indication could there be of this than the fact that some of our major industries have just announced record-breaking profits for 1957, despite operations averaging 15 per cent or more below capacity?

the index . . .

For the benefit of local unions needing such information in negotiations and planning, here are the latest figures for the cost-of-living index, compared with the 1956 figures: December, 1957—121.6; December, 1956—118.0.

WALTER REED

Pioneers TV Medical Training



ABOVE: A long focal length lens is used in Walter Reed Army Medical Center's Television Division camera to obtain a closeup look at a denture model used to demonstrate proper techniques for wire fixation of jaw fractures. To the viewers, the model appears screen-size. Holding the denture is Col. Robert B. Shira, chief of Walter Reed's Oral Surgery Section while Lt. Col. Edward H. Stiesmyer, a dental resident assigned to the hospital looks on.

LEFT: An aerial view of the Army's vast medical establishment at Walter Reed.

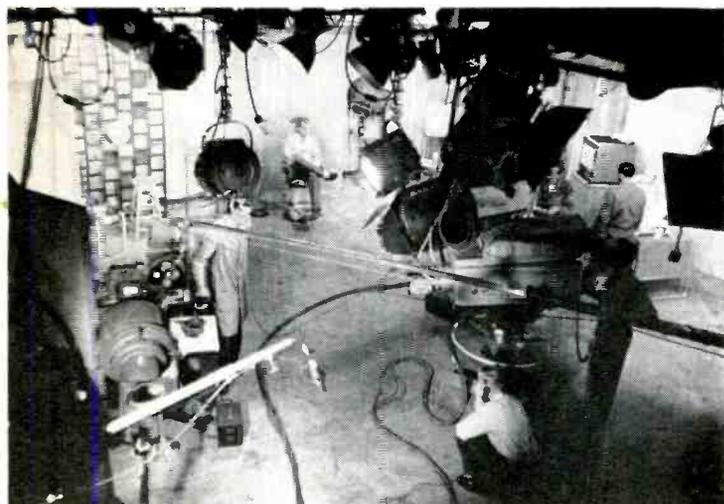
THE television camera has made the operating-room theater practically obsolete at Walter Reed Army Medical Center in Washington, D. C. At the Army's central treatment and research facility doctors, nurses and technicians no longer crane their necks and strain their shoulders in order to see what the surgeons are doing around the operating table. They sit comfortably, instead, before color television receivers in a nearby room and view the intimate details of the operation on the screen.

Television at Walter Reed has made possible the simultaneous viewing of microscopic organic matter by large audiences. It has enabled military dental specialists to assemble in a single room and witness new dental techniques sometimes involving the inner cavities of a single tooth. It has permitted large assemblies of medical men to witness reenactments of battlefield medical procedures in a closed circuit manner.

Today the Television Division of Walter Reed Army Medical Center is well established as a training and educational medium for the Army Institute of Research, the Central Dental Laboratory, the Army Prosthetics Research Laboratory, the Armed Forces Institute of Pathology, and the Walter Reed General Hospital—all units of the Walter Reed Medical Center.

When it was decided that a closed-circuit compatible color television system would be best suited to the requirements of the Army Medical Service, bids were requested and a contract for the installation of the system was awarded in June, 1955, to RCA. The equipment began to arrive about six weeks later, and installation was completed the following year. Innovations have been added since.

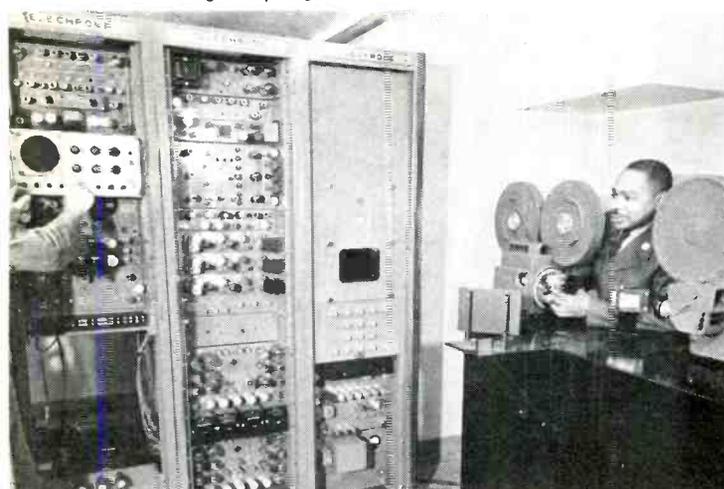
Operating on a three-channel net, the Walter Reed Television Division has three studios, each with its own control system. It operates with the



A view of Studio A during a recent production which involved a variety of demonstrations, each one represented by small sets shown here arranged across one end of the studio facility.



Here in the Master Control Room for Walter Reed's Television Division, the Program Director, Technical Director and Audio Engineer control rehearsal and airing of programs.



SP/2 Nick Perakis of Oakland, Calif., throws the switch on the rack mounted color kinescopic equipment for two recording cameras operated by SFC Moses E. Robinson, Washington, D. C.

call letters WRAMC-TV. The main studio is in the Armed Forces Institute of Pathology building. The central control room directly controls five color cameras. Two cameras on the studio floor cover any lecture, dramatic, or documentary program televised from there.

There is a ceiling-mounted camera in the McNabb Autopsy Suite at the Armed Forces Institute of Pathology and another in Operating Room No. 6.

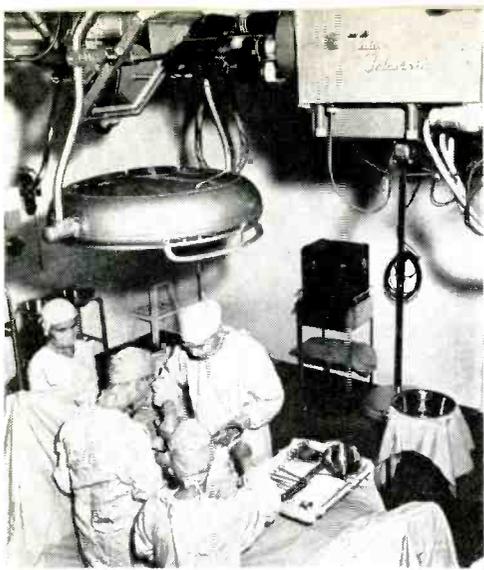
With this and more equipment, the 50 civilian and military members of the Television Division have aired hundreds of programs, including not only shows and demonstrations viewed locally but also many piped to downtown Washington locations and to New York City.

The latter was a two-hour dental demonstration microwaved to a meeting of the Greater New York Dental Society. Recently, Walter Reed scientists presented professional papers to members of the D. C. Medical Society at Washington's Statler Hotel over closed-circuit television emanating from Walter Reed. Medical men attending the October meeting of the Association of Military Surgeons of the United States saw live television demonstrations over Walter Reed's TV facilities. Working with the University of Maryland, the division is producing a series of advanced mathematics courses for teachers in various parts of the District of Columbia and nearby Maryland areas. The cost of transporting such programming off post is borne by the organization receiving the program.

Walter Reed's TV viewers have seen hospital wards, plush conference rooms, and battleground scenes which originated from the hospital studios. The Army Prosthetics Research Laboratory is constantly developing new methods to decrease the physical disability of the amputee.

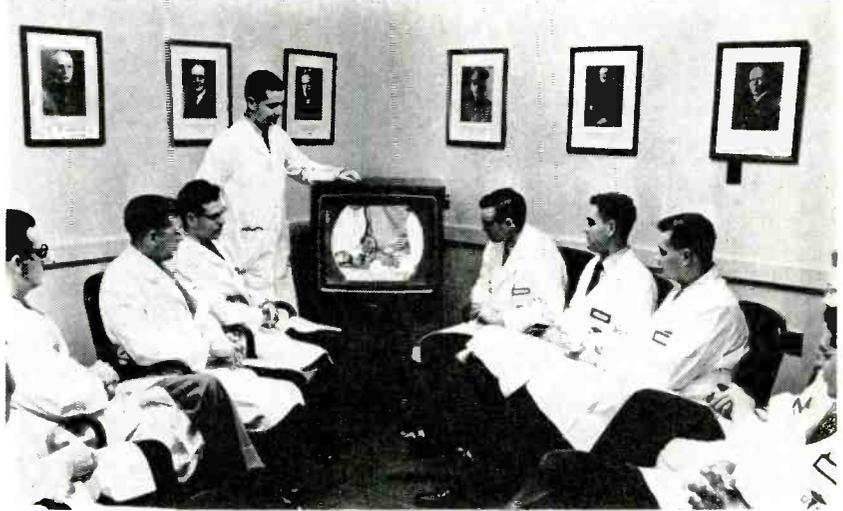
"All who have training and education responsibilities are concerned with a continuing shortage of qualified teachers," says Dr. Paul W. Schafer, executive director of the WRAMC Television Division. He further states: "There are just not enough to go around, this being no less true in medicine than in the field of education generally. Simple quantitative approaches to this problem have not reduced our continuing efficiency. It appears," Dr. Schafer continues, "that something new, something qualitatively different is needed. The Television Division of Walter Reed Army Medical Center is dedicated to the thorough exploration of the training and educational potential of our most potent means of audio-visual communication—color television."

Technician-Engineer



RIGHT: The color television camera in Operating Room No. 6, Walter Reed Army Hospital views an operation. The camera looks at the surface of a mirror which is suspended at an angle above an aperture within the center of the operating light, which is always focused on the operating field.

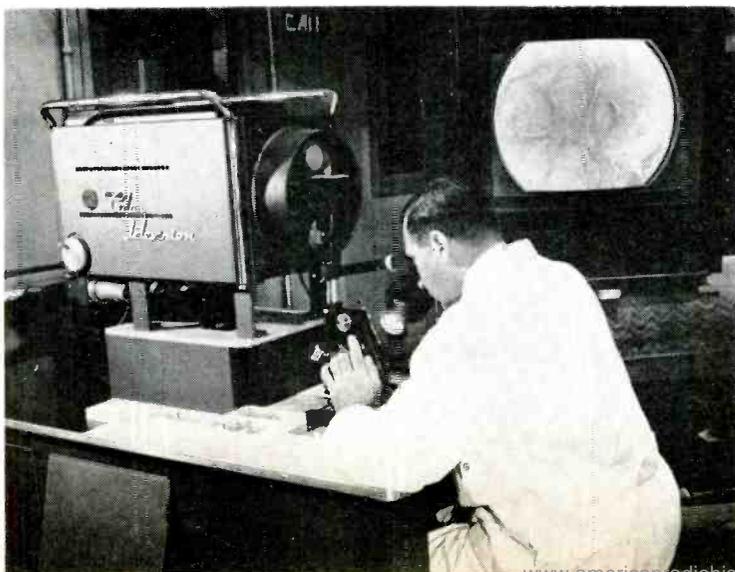
BELOW: Interns and Residents at Walter Reed Army Hospital observe an operation taking place in Operating Room No. 6, three floors above them. Seated before the television receiver they can see close-up, enlarged views of the operating field with greater clarity than would otherwise be possible.



BELOW: Completely new to the television industry is the color TV microscope, designed by Walter Reed Army Hospital and RCA technicians, and shown being used by Lt. Col. Helmuth Sprinz, Army Hospital surgical pathologist. Light passes through the microscope and engages a beam splitter which directs a sufficient amount of light to the microscopist's eye permitting him to examine suspect tissue just as though television were not involved. The remaining amount of light passes directly through the beam splitter and is reflected through a prism into a three-vidicon color television camera of special design. The whole assembly is mounted on an instrumentation table which may be easily wheeled into many different laboratories, classrooms and conference rooms. With this system it is possible for the microscopist to see a parallax corrected field with any number of students in as many different locations as can be reached by the Division's distribution system.



R. W. CURTIS
Chief Engineer,
WRAMC-TV



BILL SCHETTLER
Ass't Chief
Engineer,
WRAMC-TV



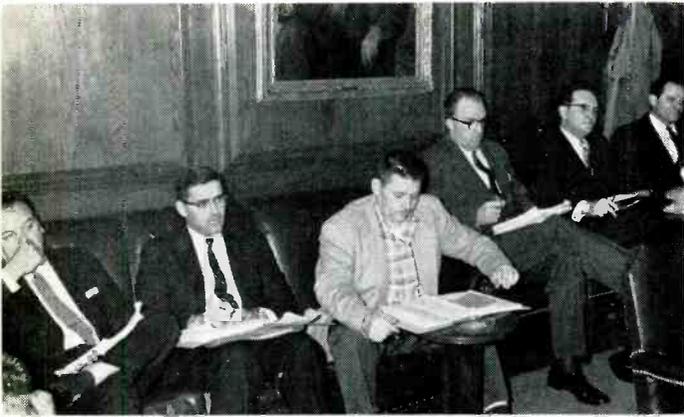
Eight Local Unions Meet; NEGOTIATIONS HELD IN WASHINGTON Seek Agreement for O-and-O Stations

During the CBS negotiations, a serious point of controversy receives undivided attention. At the table and on the right: R. G. Thompson, Gordon Shadwick, H. R. Guillotte, W. C. Fitts, Jr. and J. J. Beloungy, all of CBS. Left and right background, respectively, James S. Murphy and James Williams of Local Union 45. Immediate foreground, Ralph Barnett of Local Union 1217. On left of table, Charles Calame of Local 1212 is discernable only by his hands, Al Hardy obscures Marvin Balousek of Local Union 1220 and just beyond is Andrew J. Draghi of Local Union 45.



Around the table during the preparation for meeting with the company, beginning in the left lower corner of the picture: Calame, 1212; Hardy, I. O.; Balousek, 1220; Draghi, 45; Murphy, 45; Barnett, 1217; Culbertson, 45; Becker, I.O.; Williams, 45; Meyer, 1220; Graveline, 1294; Wilkerson, 715; Lester, 1212; DeGutz, 1212; Sarros, 1217; in immediate foreground (back to camera) Servoss, 1212.





"We're listening" is apparent in this picture (left to right): Meyer, 1220; Graveline, 1294; Sarros, 1217; Servoss, 1212; Wilkerson, 715; DeGutz, 1212. Representatives of seven of the eight IBEW locals with CBS employees were in Washington.



Informal conversation prior to the beginning of one of the negotiation sessions. Left to right, far side of table, R. G. Thompson, Gordon Shadwick, H. R. Guilloffe, W. C. Fitts, Jr. and J. J. Beloungy. At end of table, Ralph Barnett of Local 1217 and, at right, Al Hardy, IO.

THE representatives of seven of the eight local unions which contain members employed by CBS, Inc., met at the International Office on January 13 to correlate and finally compose a proposal for a new national agreement. With a compound of much diligence and a great deal of midnight oil, a proposal was readied for the company representatives' attention on January 20.

From the 20th through the 31st of January, meetings with the company produced an offer of a renewal agreement which was deemed by the negotiating committee to be unsatisfactory. None-

theless, the offer was taken back to the various local union memberships for the purposes of explanation and opinion. Only one local union meeting had been held by the time this issue of the *TECHNICIAN ENGINEER* went to press; more detail will probably be available for the next issue.

The offer being considered by the membership was a two-year agreement from February 1, 1958, an average increase of approximately 5.4 per cent for the first year and 5.6 per cent for the second year, including direct wage increases and fringe benefits.

AFL-CIO Industrial Union Department Leader Hits Subliminal Projection

"In a world where 'subliminal projection' threatens our inner privacy, it is important that we have strong, clean, effective and democratic organizations which will stand against the tide . . . and proclaim human rights above all else." IUD Director Al Whitehouse recently declared during an address before the Harvard University School of Business.

Whitehouse roundly condemned the idea of "subliminal projection" as a technique which—if put into practice—would permit "those who control our mass communications" to "control our behavior."

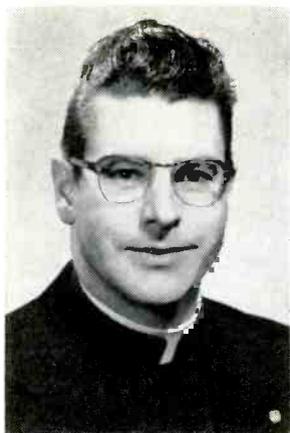
He pointed out that "in such circumstances we might be made to believe that unemployment is good or that the be-all of life is consumption. The status quo could

be well guarded and conformity could be imposed without difficulty."

The IUD director said that he was convinced that "subliminal projection" and its advocates are symbolic of "the great moral crisis of America."

Admitting that organized labor "has been infected by the social ills of our day" he said that corruption must be eliminated. Whitehouse, however, flatly refuted the charges that trade unions are undemocratic.

"There is no more democratizing force in industry today—or for that matter in all America," he declared, "than our free trade unions. . . . The union has meant that a worker can speak up where it counts most—in the shop. . . . It has brought democracy where it matters most—right on the job."



Rev. George Twigg-Porter, S.J.
West Coast Director,
Sacred Heart Radio Program

*Road Trips and Remote Recordings
Keep Jesuit Priest Busy . . .*

West Coast Director of 'Sacred Heart Program' is Well Versed in Gear

All photos by Mrs. George Buckingham

THE largest religious radio program in the world is "The Sacred Heart Program," a Catholic undertaking emanating from 85 television stations, 847 AM and 100 FM stations, with almost 3,000 broadcasts a week. Its transcriptions are handled by hundreds of IBEW members at stations across the nation.

One of the men who helps to produce the program—a Catholic priest—is a member of IBEW Local 202, San Francisco. He is Rev. George Twigg-Porter, S.J., a clergyman well versed in the gear of the electronics technician.

Father Twigg-Porter is regional director for "The Sacred Heart Program." He handles special recordings as well as promotional work for radio and television coverage in the West Coast states. The more than 150 outlets in the area are his primary concern. When he is not distributing notices of pending programs, he is planning remote pickups and special tape sessions which will go to St. Louis, Mo., for final transcribing of the program.

Work for "The Sacred Heart Program" is centralized at St. Louis, where Rev. William K. Schwienher, S.J., is television program manager and director. The national director is Rev. Eugene P. Murphy, S.J. Music director is Dr. Mario Salvador of St. Louis. Pressings, processing, and editing of both radio and TV versions, in both English and Spanish, are handled by IBEW technicians at Technisonic Labs in St. Louis. (A story on this facility appeared in the September, 1957, issue of the *TECHNICIAN-ENGINEER*.)

In addition, a French version is prepared in Canada. The Spanish is partially prepared in St. Louis and the balance in Barcelona, Spain. Still

another version—Chinese—is prepared in Formosa.

The program goes to five continents and appears in four languages, as indicated.

The program is financed by free-will offerings from listeners. There is no fund promotion over the air. The program is a public service feature of well-established renown.

When Father Twigg-Porter became regional director for the program he soon became acquainted with members of Local 202 of San Francisco and found their advice helpful in preparing his recordings.

"My brothers in the local have been wonderful with help and suggestions," says Father Twigg-

Brother William Ferrill, S.J., adds another pin to the U. S. map showing "Sacred Heart" coverage.



RIGHT: A group of singers in the University of Southern California Trojan A Capella Choir listens to a playback of their performance, as Father Twigg-Porter watches the tape.



BELOW: Brother William Ferrill, S.J., a Jesuit brother, takes time out from his duties as supervisor of boarders for the University of San Francisco to help Father Twigg-Porter unload equipment.



Porter. "Members of the local, especially those connected with Sound Recorders (the finest recording studios in San Francisco) always have helped with suggestions and criticisms of programs. We keep our Ampex 401 up to date with any circuit changes suggested by Jack Hawkins of Sound Recorders. I attend local union meetings whenever I can, but frequent road trips and remote recordings prevent my regular attendance."

The Catholic priest's general recording set-up includes the Ampex 401 and an Ampex mixer 3761, which is used only when needed for an announcer and choral group set-up.

"One mike pickups seems to have proved best for our work," he says.

His mike is a Western Electric Cardioid Multiple Pattern 639B, and auxiliary mikes include an Electro-Voice 636 and a Shure 555.

When Father Twigg-Porter refers to "we" he means to a great extent Brother William Ferrill, S.J., a Jesuit brother who served as supervisor of the boarders for the University of San Francisco, but who also serves as unpaid assistant to Father Twigg-Porter on many remote recording jobs.

The two men load up the back of a car with the gear and set out well prepared. An aluminum table, which folds neatly into the trunk of the car, they call the "best investment for setting up recording sessions."

"However, there is a potential shock hazard when used for repairs or alignment," they concede.

For quick playbacks the team uses a Voice of Music portable PA. Califone Model 6J is used for playing back records. A Telectro Recorder installed in the car serves the clergyman to and from an assignment. He uses it to take quick notes and make summaries of what has transpired. The unit works off an 80-watt-output ATR converter.

The Jesuit priest carries along a general repair kit for special hookups and connections. For background music, his hookup to the Ampex Mixer includes a Clarkstan Arm and GE pickup with record compensator and pre-amp.

"For testing equipment, for alignment of the Ampex and general repairs, we have the usual—audio oscillator, VTVM, VOM, tube checker, con-

Sacred Heart Director

denser checker, signal tracer, etc.," he lists "Limited funds leads to the selection of testing equipment in kit form or donation. We cater especially to Heath Kit and Knight."

Back at the office or studio, the IBEW member uses a Techmaster preamplifier and a No. 15 amplifier with Kilpsch enclosure and University speaker.

"We get an excellent response for hi-fidelity playback," he comments.

Father Twigg-Porter is enthusiastic about his work. His intimate knowledge of the technical aspects of broadcasting and recording is a major asset to "The Sacred Heart Program."

Additional Facts about the Program

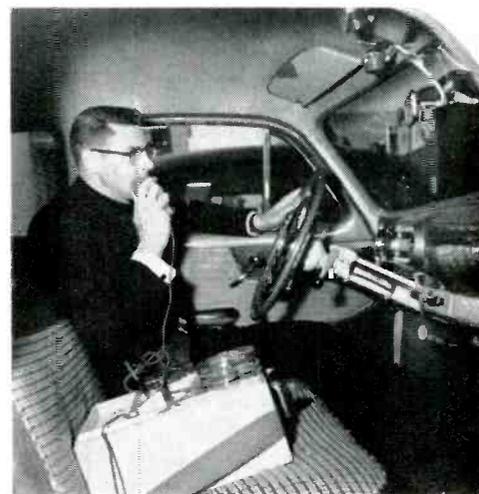
The 15 minutes of prayers, hymns, and inspirational talk for each program is transcribed on 12-inch discs and/or recorded on film.

The program is used by 31 stations of the Armed Forces Radio Service, by 61 Veterans Administration hospitals, and eight prisons. It is heard in Spanish on 39 U. S. stations and 26 foreign stations; in French on 31 stations in Canada, Haiti, and Guadeloupe. The program is also heard in Australia, the Philippine Islands, Hawaii, Formosa, Italy, Malta, India, and Central and South America.

The program began modestly on one station at St. Louis University and has, like the mustard seed, grown into a great tree.



Brother Ferrill checks a TV print while Father Twigg-Porter listens to a "Sacred Heart" disc.



A Telectro recorder in his car helps the regional director take notes and make summaries in transit.



LEFT: Father Twigg-Porter and Brother Ferrill set up equipment. An Ampex Mixer No. 3761 is occasionally used for an announcer or soloists and choral groups. A Western Electric Cardioid Multiple Pattern No. 639B is used for most recording sessions. Auxiliary microphones are Electro-Voice No. 636 and Shure No. 555. The two men carry a general repair kit for on-the-spot work. Members of Local 202 have advised the clergymen on latest electronic developments.

REVIEW *and* OUTLOOK

Propriety and Legality

The chairman of the Federal Communications Commission, Mr. John C. Doerfer, defends on the ground that it is legal the practice of accepting speech honorariums from associations composed of businesses that must answer to his agency.

At the same time, Mr. Doerfer says, he accepted Government pay for the same speech-making activities. A case in point was when he appeared at a regional conference of TV and radio stations in Spokane. The association paid him \$575 for expenses for Mrs. Doerfer's attendance which came in his own words to "about \$275." The extra \$300 was an honorarium, he assumed.

Perhaps it is "legal" for Mr. Doerfer to accept money and expenses for making speeches to members of industries over which his agency has great power. But is it proper for Mr. Doerfer at the same time to charge the Government expenses for the same speech?

We pose the question not to embarrass Mr. Doerfer, who must answer not only to a Congressional committee but also to himself. We ask the question because there are a number of Government regulatory bodies like the F.C.C. which have great power over industry—and individuals—in this country.

The Interstate Commerce Commission is another; so is the Securities and Exchange Commission. The Civil Aeronautics Board is still another. There are the Federal Trade Commission and the Federal Power Commission. And these are not the end of the regulatory bodies with vast powers to decide matters which can affect the well-being of industries and the pocket-books of the public.

These bodies sometimes act as prosecutor, judge and jury in matters which come before them. Almost all of their decisions can be appealed to

the Federal courts, but the fact is that as a matter of principle, where there is reasonable evidence to uphold the rulings of the boards and commissions, Federal courts are reluctant to substitute their own judgment.

As a matter of practice, these regulatory bodies themselves act as a lower Federal court, perhaps with even broader powers than a Federal court. For whereas the judiciary's role is to determine the law of the matter, the regulatory bodies may also determine their own policy as they interpret the statutes Congress has authorized them to enforce.

So it seems to us that the regulatory bodies, because of these broad powers, should adhere to the least standards of propriety that guide the Federal judiciary. Those proprieties are pretty simple ones; no Federal judge who held them in due regard would place himself in the position of accepting any sort of favor from a litigant before his court.

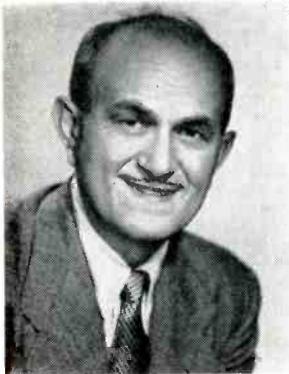
Right now Congress is investigating the manner in which the regulatory bodies are interpreting and enforcing the laws, and observance or lack of the proprieties is certain to become an important part of the record before the hearings are over. Some of the men who are members of these boards and bodies may feel that entertainment or acceptance of favors from other men whose businesses they are supposed to regulate is not improper.

We hope Congress will feel differently and will say so. For a great many people feel differently about the matter; favors create a suspicion of favoritism, and that reflects on the whole system of quasi-judicial regulation, even though the men who accept the favors try their best to be fair to everyone concerned. The favors may be legal, but legality isn't always propriety. And legality isn't always enough.

Much has been published about the present Congressional investigation of the FCC and its commissioners. Though the IBEW has made no official comment about the investigation, the editorial above, from a recent issue of "The Wall Street Journal," pretty well expresses our sentiment.

TECHNIQUES of Magnetic Recording

JOEL TALL
Member, Local 1212



Brother Tall demonstrating way of marking tape at edge of Ampex 300 head shield assembly for cutting and splicing in EdiTall Block. (Photo by Jack Sharin)

Author of New Book on Magnetic Recording Is Long-Time IBEW Member

BROTHER JOEL TALL, of Local 1212, New York City, has written a book, *Techniques of Magnetic Recording*, which has just been published by The MacMillan Company of New York. A very comprehensive discussion of the subject, it deserves careful reading by anyone who has an interest in the recording field.

The author draws upon his extensive background in recording and very thoroughly covers the field. Happily for his readers, he digests a great deal of the history of magnetic recording, much of which might otherwise be lost. Considerable additional interest may be engendered by the pictures of such devices as the BBC's Marconi-Stille tape machine and the patent application of the 1920's, descriptions of picture-sound sync systems and even a discussion of legal uses of recording devices. No conclusion should be drawn that this book is simply a recitation of history, however. On the contrary, it is an intensely practical book—somewhat of a “handbook,” in the technical sense—yet almost entirely devoid of mathematics and theoretical discussion which would be more appropriate to equipment designers.

The titles of the various chapters are indicative of the book's practical value: “Simplified Theory of Magnetic Recording,” “Drive Mechanisms,” “Maintenance,” “Motion-Picture and Television Techniques,” “Magnetic Recording in Education,” and so on.

Brother Tall was born in Roxbury, Mass., in the early 1900's and began his “commercial” radio career as a receiver maker for the Automatic Radio Manufacturing Company in Boston in 1923. By 1942 he had gravitated to New York, where he began to work for CBS. In the interim he had had experience with Wireless Specialty (only old timers may recall this once-famous

name) and had dabbled in sales, service and related work in and about New York.

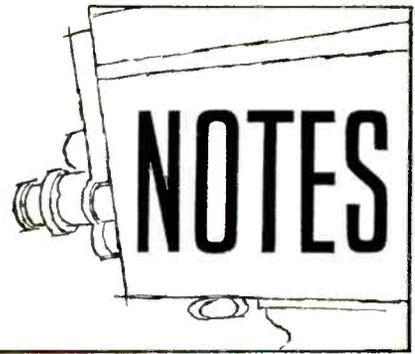
His writing activity is a matter of some renown, beginning with an article on manufacturing processes in the *Talking Machine Journal* in 1927, through some five articles on recording and editing in *Audio Engineering* in 1950 and a number of articles on tape recording in the *New York Times* and the *Saturday Review*. He has really reached the peak of what must be near-perfection, however, in the book which is his latest endeavor.

He has achieved a measure of fame with his invention of the “Editall” tape splicing block in 1946. This highly useful tool is widely used to facilitate accurate and efficient splices in almost every recording shop and radio station and as one user commented in a letter to the inventor, “. . . Someone should erect a small statue to you some place in Radio's Hall of Fame. . . .”

The foreword of this book was supplied by Edward R. Murrow. Mr. Murrow's remarks concluded with a most appropriate statement—“Modern-day reporters and the legion of those who have taken to tape recording professionally and for pleasure will find it a most useful book.”

Brother Tall has served on Local Union 1212's examining board and its executive board and was instrumental in the original establishment of the *1212 News* in 1945. His IBEW membership dates back to December, 1942, and has been continuous since that date. The IBEW and his associates should take great pride in his work, a distinct service to recordists.

Techniques of Magnetic Recording, Joel Tall, The MacMillan Company, New York, 1958, 436 pages and bibliography and index, \$7.95.



Viewers Answer Back

A major commercial television company in London, England, has developed an apparatus that will permit TV viewers to register their disapproval while the program is on the screen.

A spokesman for the Associated Rediffusion Company said the device is in the last stages of development. He said the idea is to let the "viewer answer back."

With the device, a disgusted viewer will just push a button on his TV set and a loud "brack" will sound in the studio. Simultaneously, a red "fireside critic's light" will flash.

The spokesman said the company planned to equip a 200-viewer "cross-section group" with the device at first to provide a guide to how the shows are doing.

He told newsmen that installations would begin in about two months.

Printed-Circuit Color Camera

A new "live" color television camera, described as smaller in size, simpler in design and easier to operate than any now available, was recently unveiled by the General Electric Company's Technical Products Department. It is the first such device to incorporate printed circuits and transistors.

J. Milton Lang, general manager of the Company's Broadcasting Stations Operations, demonstrated a pre-production model of the new three-tube color camera at the opening of General Electric's new WGY-WRCB radio-television broadcasting center in Schenectady, N. Y. He said the camera has been under development for more than a year by a team of broadcast engineers at the company's Technical Products Department, Syracuse, N. Y.

As in currently-available color TV cameras, three image-orthicon tubes are used to pick up red, green and blue color signals. "But here," Mr. Lang explained, "any resemblance to currently-available color TV camera ends."

The new color TV camera weighs but 215

pounds, 75 pounds less than current models. Dimensions of 34 by 18 by 22 inches are 10 inches shorter; three inches narrower and about an inch lower, Mr. Lang said.

Special circuitry designed for the camera ensures truer registration of colors with no blur or runover into other colors. This problem has long been a thorn in the side of color TV cameramen.

In addition, Mr. Lang explained, use of a newly developed optical system has eliminated the need for many glass surfaces through which color signals previously were required to pass. This "highly-efficient" optical system results in improved color quality. It was developed by the Company's General Engineering Laboratory.

The new camera was made smaller than current models by use of printed circuits and of transistors to replace certain tubes. The smaller size is expected to prove a boon to TV cameramen, especially in situations requiring downward panorama "takes."

John Wall, manager of broadcast equipment sales for the Department, said no price tag has been placed on the new camera at this time. However, it will be priced competitively. Color TV cameras now on the market, sell for about \$50,000.

The camera was developed with ease of maintenance in mind, Mr. Lang said. Most of its complex innards is divided into hinged panels and plug-in assemblies so they can be swung outward for maintenance and tube assembly.

In addition, the camera is equipped with controls and operating features to permit cameramen to make on-the-spot adjustments in color and registration. Once the camera is adjusted, it becomes mechanically and electrically stable, thus requiring but a minimum of attention while assuring more precise home reception of color programs.

For greater maneuverability of the camera, two of three camera cables required on current models were eliminated. Improved circuitry in the camera is the answer. The single cable runs from the camera to control console.

Transformer Catalog

A new 12-page catalog describing its full line of transformers is now available from Peerless Electrical Products, a division of the Altec Lansing Corporation.

The catalog is published for the use of both professional and hobbyist designers and builders of high fidelity, broadcast, and recording equipment.

It provides specifications, performance curves, application data, and prices on transformers representing the most advanced developments in the science of audio transformer design.

The catalog may be obtained free of charge by writing to Peerless Electrical Products, 6920 McKinley Avenue, Los Angeles 1, Calif.

Televiewing 'Hazard'

The authoritative British medical journal *Lancet* said recently televiewing could now be included in the list of "hazardous occupations."

The journal, organ of the British Medical Association, warned TV viewers against becoming too engrossed in the programs and advised them to get up and walk about at least once every hour to prevent thrombosis in the leg. It also said that before sitting down to a night's viewing, viewers should remove girdles and other tight garments.

Freedom to Advertise

I have always been among those who believed that the greatest freedom of speech was the greatest safety, because if a man is a fool the best thing to do is to encourage him to advertise that fact by speaking.

—WOODROW WILSON.



"Long ago we stated . . . that a single employee was helpless in dealing with an employer . . . that union was essential to give laborers opportunity to deal on equality with their employer."

CHIEF JUSTICE CHARLES EVANS HUGHES.
U.S. Supreme Court in *NLRB versus Jones and Laughlin Steel Corp.*, 1937.

Right to Work Means Working for Less

Perhaps you're tired of hearing about the battle against so-called "right-to-work" laws. Maybe you can't see any advantage to unscrupulous employers and can't understand why employers constantly promote such legislation. It couldn't be a matter of money, could it? Yes, it can—and is, brother.

The latest official Department of Labor statistics show the difference between wage levels in states with "right to wreck" laws and neighboring states where the union shop is legal. In nearly every case, wages are higher in states where union shops are allowed than they are just across the state line where the union shop is banned!

The June, 1957 Labor Department figures show average hourly factory wages as follows:

Wages in "Right to Work" States with no union shop.	Wages in Neighboring States Permitting Free Unionism
Virginia, \$1.61	West Virginia, \$2.10
Tennessee, \$1.65	Kentucky, \$1.98
Mississippi, \$1.40	Louisiana, \$1.94
Arkansas, \$1.46	Missouri, \$1.98
Texas, \$2.04	New Mexico, \$2.19
Iowa, \$2.05	Illinois, \$2.19
Nebraska, \$1.87	Kansas, \$2.08
South Dakota, \$1.79	Minnesota, \$2.08
North Dakota, \$1.82	Montana, \$2.21
Utah, \$2.25	Wyoming, \$2.10
Nevada, \$2.53	Idaho, \$2.10
Arizona, \$2.25	California, \$2.33

Nine out of twelve of the state pairs—75 per cent of the total—show that wages in the "right to work" states are definitely below those in the neighboring "free unionism" states. Why should that be? Unionists know the answer well: Where unions are free and strong, wages rise. Where unions are hampered and weak, wages lag.

Six states with "right to work" laws have been omitted from these comparisons. Five of them—Alabama, Florida, Georgia, North Carolina, and South Carolina—have no "free unionism" neighbor states. In all of these states average wages are low, ranging from \$1.44 to \$1.77 last June. The sixth omitted state, Indiana, passed its "wreck" law only last year. There hasn't yet been time to measure that law's effect on Indiana wages.

Station

Breaks

Classroom Camera

To let its audience see the teaching methods of local public schools and learn more about elementary school education, Station KRNT-TV of Des Moines, Iowa, has turned one of its studios into a fulltime classroom. Cameras, microphones, and lights, installed by IBEW technicians of Local 347, are hidden in the walls and a ceiling grid. Each week day at 1 p. m. a class from a local elementary school holds a regular school session in the studio classroom. Furniture is changed as different classes appear, to conform to what the children are used to. With the show coordinated and narrated from separate studios, the teacher is free to conduct an uninhibited, unrehearsed half-hour of lessons. The show, which is a public service feature, has a wide audience, it is reported.

WAVE to Expand

Stations WAVE and WAVE-TV, Louisville, Ky. which employ members of Local 1286, marked the 24th anniversary of the company recently with announcement of expansion plans. The stations are to build a new Radio and Television Center, which they expect to put into operation in the spring or early summer of 1959. A one-story structure to be located in downtown Louisville, it will cost in excess of \$1½ million, the company states.

Blokes OK TV Nekkids

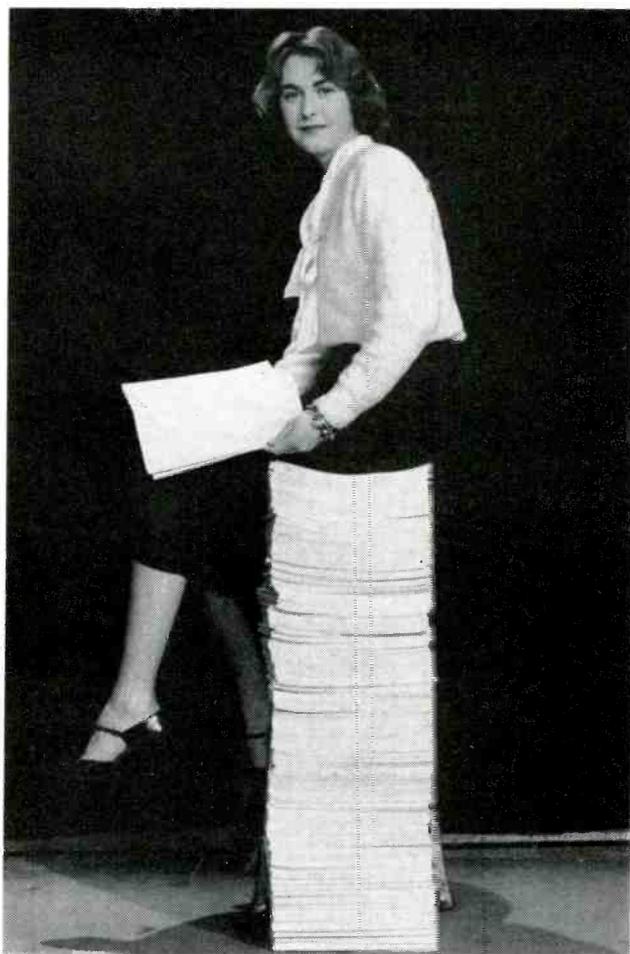
The British commercial television station in London, England, broadcast a girlie show complete with nudes February 4. All indications were the audience loved it.

Complaining telephone calls, the yardstick by which many such shows are judged, were few, the television company reported.

The show, kept off the screen until late "so that all the kiddies are in bed," included a fan dancer and an Indonesian ballet whose members wore transparent drapes.

The broadcast was of Britain's girlie theater, The Windmill, one of the most famous in the world.

Stacked Agreements

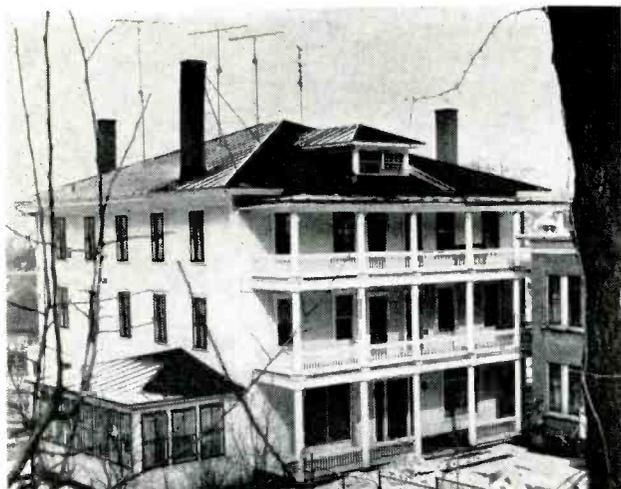


Miss Joanne Jamison, WTOP Music Librarian, is firmly (?) ensconced on top of some 200 WTOP-IBEW Agreements. This should prove that a good union agreement is a firm foundation, or something.

The renewal agreement, effective December 1, 1957, was negotiated for Local 1215 of Washington, D. C., by Business Manager Frank X. Green, President Harold E. Beall and Business Representative Norton C. Richardson.

Incidentally, what is inside of the agreement looks good too, according to the local union.

Bordering on TV



There's a television tax in Canada, but the people who live in this international split level at Rock Island, Quebec, aren't worrying about it. All the rooftop antennas are on the south side of the house, which extends over the border into the U. S. at Derby Line, Vt. As long as the sets are in rooms outside the Canadian boundary, the owners don't have to pay the tax. Although they're citizens of two different countries, residents of both towns share some buildings which straddle the line, including a library and an opera house.

Local 45 Burned Out

On Sunday, February 9, a fire totally destroyed the office of Local Union 45 on Santa Monica Boulevard in Los Angeles. According to reports at press time, the exact cause of the fire was unknown although it seemed obvious that it originated in a lower floor of the building.

Business Manager Draghi reported to the International Office that as of Sunday evening the smoldering ruins of the two-story building were a complete loss except for some of the records and papers of the Local Union which were water-soaked and in only relatively readable condition.

The Local Union began a search on the following morning for new quarters.

Space was found at 5327 Santa Monica Boulevard, about a mile closer to Hollywood than the former address, which was 7265 Santa Monica. After some trouble, the telephone company restored the original telephone number HOLLYWOOD 3-2317. Now the office staff is back in business. Whether or not the new spot becomes the local's permanent location depends on upcoming local union decision. Indications are that the new address will suit the members well.

Are you receiving your TECHNICIAN-ENGINEER regularly and at the right address? Following the distribution of each issue of the magazine, the International Office in Washington receives dozens of returned copies marked "Moved, No Forwarding Address," "Incorrect Address," etc. The office staff is now reviewing the complete mailing list in an effort to bring it completely up to date. If you have a new address, or if you are not already receiving the TECHNICIAN-ENGINEER, cut out the coupon below and mail it to us THIS WEEK!

The TECHNICIAN-ENGINEER

ADDRESS CHANGE

International Brotherhood of Electrical Workers
1200 Fifteenth Street, N. W.
Washington 5, D. C.

NAME:

LOCAL UNION

OLD ADDRESS:

Street or Box Number

City and State

CODE NUMBER IN PRESENT ADDRESS (Shown at Right)

NEW ADDRESS:

Street or Box Number

City and State

ALEXANDER BROWDY
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