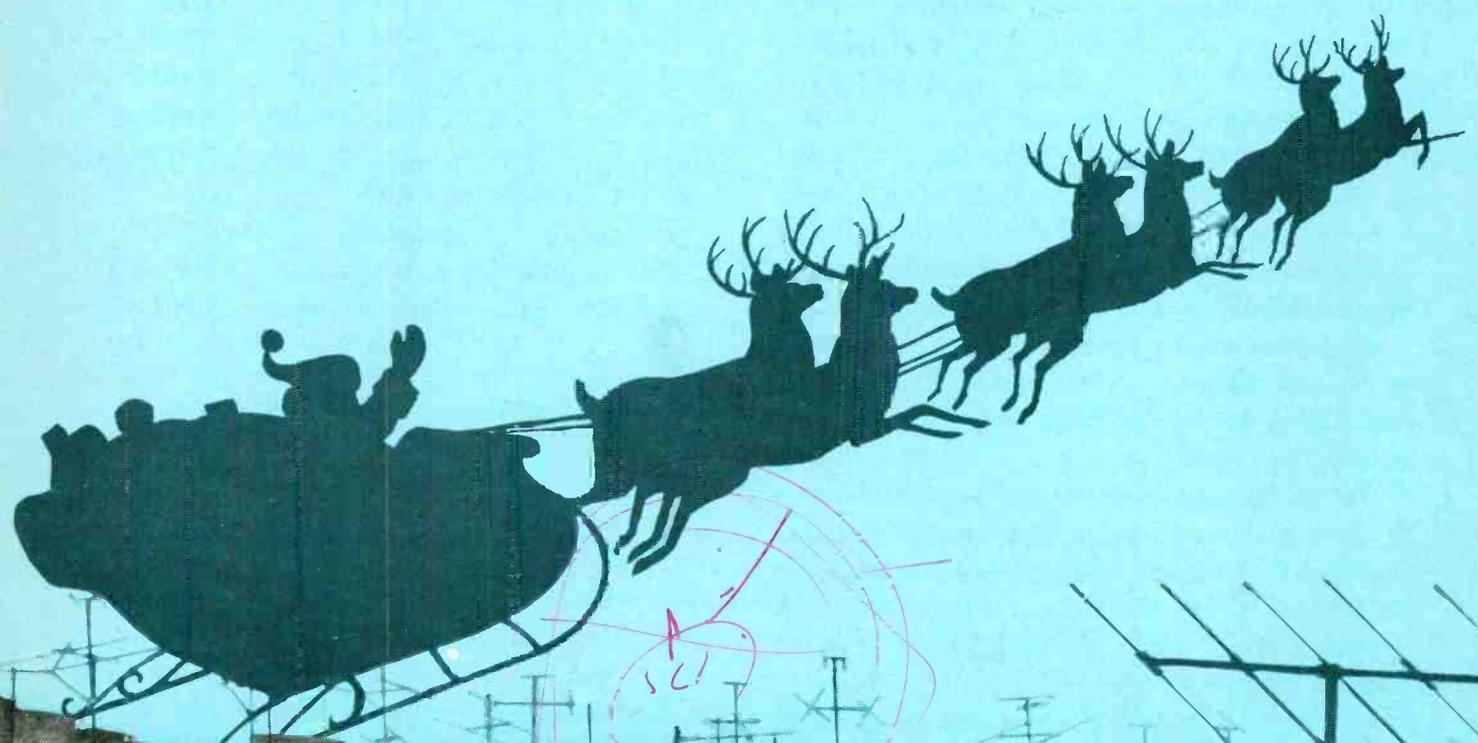


RADIO, TV and RECORDING

TECHNICIAN-ENGINEER

DECEMBER, 1954



International
Brotherhood
Of Electrical
Workers (AFL)



COMMENTARY

Two Views of Christmas

BY midnight, December 25, thousands of broadcasting technicians and engineers across the land will have been thoroughly steeped in Yule lore—Old Santa's daily reports from the North Pole as presented on countless kiddie shows, TV cooks' recipes for real old-fashioned fruitcake, reworked jokes about blondes in Christmas stockings as delivered by network comedians, fades and closeups on little waifs staring hungrily through ice-crusting windows at Yuletide feasts, the daily projection of Susie Snowflake's erratic descent to earth, and the regular peaking of Rudolph, the Red Nosed Whatchamacallit, and Frosty the Dissolving Snowman.

To add nutmeg to the nog, these thousands of kilowatt slaves will place toys around the trees and deck the halls with odd bits of broken branches on Christmas Eve, along about sign-off time, and go to bed for 39 winks . . . until the charge of the pajama brigade mounts in full force about day-break for a gallop to the blue spruce and burned-out light bulbs.

Then follows, what is called in a spectacular,

"a mob scene," with father panning around for his morning coffee and finding only small outstretched hands holding wind-up keys, skate keys, broken toy-piano keys, train tracks, toy trucks, teeter-totters, and ticklish troubles with tiny tots trying to test their toys and tempers against papa's probing, plaintive patience.

In brief, it's Christmas.

And may we wish you, one and all, a very merry one, full of good cheer and hope for the future.

ASIDE from the merriment, which we have ineptly described, there is the serious and spiritual side of the season which needs our attention too. The whole Christian world, this December, prays for an end to international tensions, for a solution to the terrifying consequences of atomic warfare, and for more attention to the everyday needs of the common man. We urge you to join this prayer for spiritual blessing. May the spirit of brotherhood which is so much a part of the American labor movement become the spirit which guides our nation to fulfillment of its ideals.

RADIO, TV and RECORDING
TECHNICIAN-ENGINEER

VOLUME 3 17  17 NUMBER 11

PRINTED ON UNION MADE PAPER

Published monthly by the International Brotherhood of Electrical Workers, AFL, 1200 Fifteenth St., N. W., Washington, D. C., for the men and women in the recording, radio and television industries.

J. SCOTT MILNE, *President* • JOSEPH D. KEENAN, *Secretary*
ALBERT O. HARDY, *Editor*

Entered February 20, 1952 as second-class matter at Washington, D. C., under Act of August 24, 1912. Subscription Price: United States and Canada, \$2 per year, in advance.

THE Middle East, this December, is a restless, uneasy land. Sporadic raids on border settlements in Israel, the whispered struggle for control of the new government in Egypt, and the still unsettled problems of oil expropriation in Iran, are only three of many manifestations of unrest in this cradle of civilization.

Israel, in the center of this troubled picture, is a new state trying to preserve its identity on the world scene and to regain its composure after the passionate riots of the 30s and the battles with the Arab League during the late 40s, when the uneasy United Nations truce gradually achieved statehood for the Jewish people.

The nation is regimented today in a hierarchy of big cooperatives and labor organizations, as it seeks to protect itself and simultaneously build up a strong, economic base for its diverse peoples. Israel has accepted hundreds of thousands of immigrants from scores of countries, many now coming from North Africa, and the main job of Israel today is the welding of these newcomers into a single community.

To achieve unity, two major mediums with which we are concerned, are used. One is labor organization, the other, broadcasting.

Israel is the only country in the Middle East where the development of trade unions and employer movements reaches all forms of occupational life. In a recent survey, the International Labor Organization, headquartered at Geneva, stated that in Israel the right of occupational association is neither guaranteed nor restricted by legislation "but is exercised by an established and traditional practice." Israel trade unions are, in fact, organized under "a general law" which provides simply that "any number of persons may establish a society for any lawful purpose."

The biggest most all-inclusive labor organization in Israel is Histadrut. Histadrut is both employe and employer—a giant trade-union cooperative in almost every field of endeavor, comparable in its occupational scope to our own American Federation of Labor (but in this way only). It produces goods, sells them, shares profits, establishes wage scales through regular negotiations. In Israeli factories, labor and capital are partners.

To understand the methods of present-day Israel you must understand that this is a land of flux. Until recent years it was a sparse land of Arab sheep herders, nomads, small settlements of Arabs and Jews . . . somewhat detached from the world under British mandate administration.

Palestine, to Jews scattered throughout the world, was the root from which they came, the promised land of the Old Testament. When the opportunity to create a Jewish nation became evident, Jews throughout the world threw all their resources to achieve this end.

The immigrants which poured in were not nomads

20th Century Voices in the Holy Land

State-controlled broadcasting in Israel harks back to the early days of British rule and the turbulent months when the Jewish underground fought the Arab Legion in a street-to-street struggle for Jerusalem.

and shepherders, but urban workers, technicians, even scientists, engineers, and professional people.

These immigrants now had a sparse land and the manpower, and the funds were coming. They had alternatives to reach their national goal. They chose to establish a closely integrated state, bordering on socialism but leaning heavily on American and British principles of personal freedom. Some personal freedom has been sacrificed to achieve economic independence and political unity, but now that tension with neighboring Arab states is easing somewhat, these freedoms are returning.

Broadcasting in Israel is state controlled—not in the manner of Radio Moscow or Radio Pieping but in the manner of the BBC, the British broadcasting establishment.

There is no privately-owned broadcasting—perhaps, for two reasons: Israel broadcasting today is greatly influenced by its heritage under the British mandate, when the BBC sent technicians to handle broadcasting and the British Colonial Office directed the administration of the small country. Secondly, the government of Israel is afraid that, were it to permit privately-owned and operated stations, the old factions of the underground and the years of insurrection would crop up and throw the nation once again into open strife.

There are three separate broadcasting organizations in Israel—Kol Israel (“The Voice of Israel”), Kol Zion Lagolah (“The Voice of Zion”), and Galei Zahal (“The Wavelengths of the Israel Defense Forces”).

There is no television. General Sarnoff of RCA, long a booster of Israel, studied the possibility of video on a recent visit, but the government finds it, to date, much too expensive an operation for its limited funds.

Kol Israel operates from three studios—at Jerusalem, Haifa, and Tel Aviv—with the main headquarters at Jerusalem. The central studios are between Jerusalem and Tel Aviv. The stations put out two separate program schedules, operating on a number of wave lengths for eight or nine hours for a total of approximately 17 hours of broadcasting a day. Haifa began operations during the past year, using a weak but satisfactory transmitter.

It is only about an hour’s automobile drive from Jerusalem to Tel Aviv, and about another hour and a half from Tel Aviv to Haifa. So the nation and the small broadcasting net is closely linked.

Two 50 kw transmitters, one medium (525 meters) and one shortwave, (33.3 meters) are situated near the coast beside the Kol Israel antennas.

Eighty per cent of the Kol Israel programming is in Hebrew, but the remainder of the programs come out of a melting pot. There are two newscasts a day in English, one in French, and three in Arabic. In addition, two hours each day are religious services in Arabic, consisting of the reading of the Koran and Mohammedan prayers. There are programs four times a week in Rumanian and Hungarian, three programs a week in Turkish, two in Persian, in addition to brief newscasts in Yiddish and Ladino. The last two are pidgin variations of the Hebrew tongue—Yiddish influenced by German and Ladino by Spanish.

There are programs for special sections and occupational cooperatives of the nation. The Histadrut has one hour each week during which it interviews workers, reports on plant and project activities.

The second establishment in Israel—the Voice of Zion—uses the facilities of Kol Israel for overseas work. It is owned and operated by the Jewish Agency for Palestine, a quasi-official organization. It follows the usual methods of overseas broadcasters in other countries—news, music, and discussions.

The army radio organization is a set-up strange to us, but highly useful to the Israeli Army. It is said in this new nation that “the civilian is the soldier on 11 months leave of absence.” Every able bodied man serves a month’s active duty each year and he is in the reserves for the remainder of the year. Army Radio’s chief function keeps the reserve soldier in touch with the military administration throughout the year. It does so in a highly entertaining way. Galei Zahal presents quiz shows, music, and light fare, in addition to its

news of military life and its informative segments. Its programming is entirely in Hebrew, and it operates for four hours each evening.

Many of the technicians for all of the stations are sent to England for BBC training. An increasing number, however, are coming to the U. S. A. under State Department permits for study.

All the stations have mobile units, but for tape recordings only. There are no live pick-ups. Because of the hard currency situation, the technicians are often pressed for tape. To cook up a program, they sometimes have to edit six to seven tapes at a sitting. They are becoming expert at dubbing out and erasing old tapes.

But such inconveniences are as nothing to broadcasting in Palestine two and three decades ago. The history of broadcasting in the Holy Land is a story of trials and struggles and changes of political power lasting for many years.

In the late 1920s there were attempts by the Jewish sector of Palestine to establish a station. The Histadrut, already a powerful Jewish group, set up a corporation and appealed to the government of Great Britain, which then controlled the country, for permission to broadcast. The request was turned down.

About 1936, however, the British administration set up the Palestine Broadcasting Service, using BBC technicians and equipment. Studios were prepared just outside the old walls of Jerusalem. A transmitter was installed at Ramallah many miles away in present-day Jordan.

Later, when British troops pulled out of Palestine, the Arab Legion was left on guard at the PBS studios. For some unexplained reason, Arabs broke in and destroyed recordings and damaged studio equipment. In the course of the fighting the studios were recaptured by Jewish forces and reactivated.

The transmitter at Ramallah fell into Arab hands, too, and it has remained there since, now being operated by the government of Jordan.

In the days of the Haganah (the Jewish Defense Force), underground radio stations were set up for broadcasts condemning the British mandate and calling for Jewish unity. During the 30s, when there was much rioting between Arab and Jew in Palestine, these underground stations moved here and there, operating short-wave out of suitcases and what-have-you.

All underground broadcasting stopped during World War II and started again in 1946. Between November, 1947, and May, 1948, when the British mandate ended, broadcasting became more and more important to the Jewish Agency as a means of unifying the Jewish nation. British regulation grew less and less strict, as their troops prepared to leave.

When the mandate ended on May 15 the underground

Continued on Page 13

Who's Irresponsible?



Petition filed by NABET with Labor Board sought to separate interests of Michigan television and radio stations, even though all operate 'under the same set of standards and general policy.' The petition was dismissed. NABET accused IBEW of being irresponsible as a result. Brotherhood counters with evidence that the No-Raiding Agreement has been violated.

THE most recent issue of the NABET edition of the *CIO News* tells a story purported to be a "case study for responsible unionism as against irresponsible unionism." It is 180° out of phase, but typical of the sort of anti-IBEW propaganda which we should be accustomed to by this time. The facts in this case have been so obscure and distorted, however, that we are compelled to comment.

Local Union 1295 has, for many years, represented the engineering employes of WKZO (and, more recently, WKZO-TV) in Kalamazoo, Mich. However, the bargaining unit and the agreement also includes the employes of the company in Grand Rapids, at WJEF and WJEF-FM. NABET filed a representation petition last May, seeking NLRB certification of a unit confined to WKZO and WKZO-TV and contended that the Kalamazoo employes have interests apart from those in Grand Rapids.

Following a hearing, the NLRB determined that "The station manager . . . is the managing director of the television station and both radio stations; he is also

the immediate supervisor of WJEF's station manager and chief engineer. The office and accounting department of all these operations is located in Kalamazoo; one public affairs director performs the public affairs service for all operations." The Board goes on to say: "All of the employer's engineers and technicians have the same basic training and comparable skills, and there have been a considerable number of transfers between Kalamazoo and Grand Rapids. All three stations operate under the same set of standards and general policy . . . Representation petition dismissed."

The dismissal of the petition by the Board was dated October 12, 1954. NABET made no protest of the dismissal but proceeded to file another petition for what the Board had indicated as the appropriate bargaining unit. This latter petition was an act in direct contravention of the AFL-CIO No-Raiding Agreement. The effective date of the No-Raiding Agreement was June 9, 1954—the date on which the instruments of adherence and ratification of the signatory unions were delivered and declared effective. The fourth of some thirty affiliated CIO Unions to sign the No-Raiding

Agreement is the National Association of Broadcast Employees and Technicians. As signatories, the parties agreed that the No-Raiding Pact would not apply to disputes in which representation proceedings were pending before the NLRB on June 9, 1954 nor would it apply so long as such proceedings were pending. It is quite obvious that NABET had a technical right to pursue its May petition to its final end, on October 12. Any further proceedings, however, were clearly contrary to the No-Raiding Agreement since all signatory unions pledged that they would not "organize or attempt to organize or represent employees as to whom an established bargaining relationship existed" with another union. The "established bargaining relationship" is defined in the Agreement as meaning "Any situation in which a Union or a Local . . . either (a) has been recognized by the employer as the collective bargaining representative for the employees involved for a period of one year or more, or (b) is certified by the National Labor Relations Board, or other Federal or State Agency having jurisdiction, as the collective bargaining representative for the employees."

Second Petition Ignored

At the time the second petition was filed all of the employees in the appropriate bargaining unit signed a petition requesting NABET to withdraw its Labor Board petition. This request was ignored. So as to expedite negotiations, because the current agreement had reached its anniversary date on August 1, Local Union 1295 agreed to a consent election in this latter case.

The election was scheduled by the Board before the International Office was aware of the fact that an election was to take place on November 5. In the light of the No-Raiding Agreement, the International Office made representations to the Regional Director to have the ballots impounded. While NABET came to agree that the ballots might be impounded, consideration of the delay and for the best interests of employees prompted the IBEW to withdraw its request to the Regional Director. Hence, the election was held as scheduled and the ballots were counted. The result—16 to 5 for the IBEW.

The NABET publication goes to some length to explain its having lost the election. Intimidation, coercion, fear and plain lies are attributed as reasons for its loss. This pathetic article concludes by saying, "NABET lost an election at WKZO but the real losers are 25 engineers who deprived themselves of NABET membership, where the welfare of the member rates first." So ends the article (and the case)—a symposium on "responsibility." But even the wage scale in the IBEW agreement is misquoted in the article. Rumor, opinion and conjecture ostensibly make the case. The true facts are much more interesting and far more conclusive.

How to Write YOUR CONGRESSMAN

WANT to let Washington know where you stand?

Want to help your representative government become more representative?

Want to get something off your chest?

Then, write your Congressman.

More and more people are doing it these days. They're sitting in front of their television sets and getting steamed up about this senator and this issue . . . listening to "American Forum of the Air" . . . "Youth Wants to Know" . . . and they're writing in to voice their opinion.

Congressmen are glad of it. The more mail they get, the better they are able to assess the importance of a legislative problem. Trouble is, some of these viewpoints they receive are lopsided. If a particular pressure group wants to push a Congressional bill they flood the Congressional offices with form letters. They all will express one viewpoint. Each one is a voter's viewpoint. Unless the opposition jumps in and quickly writes letters disagreeing with the initial flood of letters, Congress may be swayed into voting wrong.

As Congressman Jacob K. Javits of New York (who was recently elected Attorney General of the State of New York) recently stated: "Paper and pencil in the hands of Mr. and Mrs. Average Citizen are, by all odds, the most effective weapons we have in the war for good government."

Washington reporters know that the one time they can be almost sure to find a Congressman in his office is from 8:30, when the mail is delivered, until 10 or 11, when committee meetings start.

How do you write to your Congressman? Here is a recommended procedure:

- Know his name. If you don't know it, ask your local newspaper or news director.

- Write legibly.

- In the first sentence, tell him what you're writing about; then tell him how you feel about it. Don't just say "Vote for this" or "Vote against that."

- Don't be abusive or threatening.

- Express your own ideas, not somebody else's.

- State your case fully, but be brief.

- Address your letter to "Hon., United States Senate (or House of Representatives), Washington 25, D. C."

- Start your letter "My Dear Senator:" or "My Dear Congressman:"

15,000,000 Letters to SANTA CLAUS

Junior's letters to St. Nick are better
than those once produced by his pop.



NO one knows just when a hopeful child sent the first letter to Santa. It was probably shortly after 1823 when Dr. Clement Moore's poem, "A Visit From St. Nicholas," gained prominence after being printed in eastern newspapers. Starting with the Civil War period, the custom rapidly gained popularity with both children and Santa's helpers, their parents.

The modern concept of Santa's maintaining records of the behavior of all children became general in 1866 when Thomas Nast, the political cartoonist who originated the Republican elephant and Democratic donkey, drew his "Santa Claus and his workers." His drawing depicted Santa in his workshop with a group of elfin assistants, his sleigh, packages of toys, stockings at the fireplace and records of the good and bad deeds of all children.

This concept of St. Nick using his record book to determine who should get what gifts prompted many youngsters to write him. And in their letters, as today, they stressed their good behavior as a basis for their requests.

Although the contents of letters to Santa remain the same, Junior's notes to St. Nick, today, are more legible than those Pop sent to the North Pole for a bike or sled. At least, that's the opinion of a majority of teachers polled by the Sheaffer Pen Company in a national study of handwriting trends.

More than 5,000 school principals were questioned on such points as how well children write today, what styles of writing they taught and what

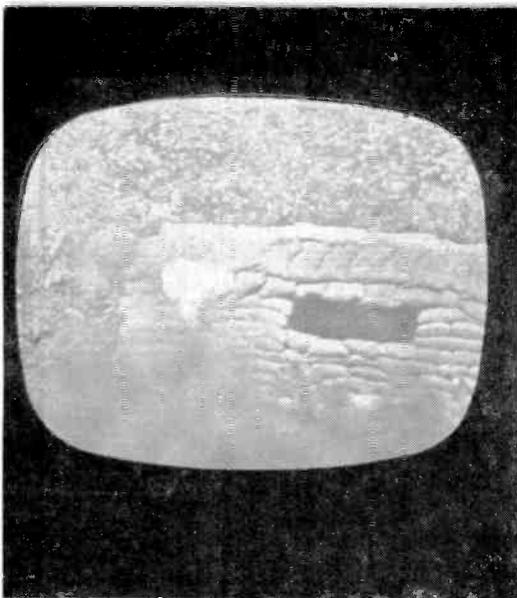
effect modern writing tools have on their handwriting. More than 64 per cent of the teachers participating said youngsters write as well or better than their parents did.

If every youngster between the ages of 5 and 9 writes Santa this year, his helpers will have to read more than 15,000,000 letters. They—or their helpers in the kids' homes—probably will read those letters faster than they could read the notes from 1920's tots aged 5 to 9, who totaled only 11,400,000. For it they can thank manuscript writing and improved writing equipment, according to the survey.

SOMETIMES when a letter to Santa finds its way to a postbox instead of a fond parent's pocket, it ends up in Santa Claus, Ind. (population about 300). Each December thousands of letters addressed to "Dear Santa" pour into the pleasant little town's post office.

In one recent December more than 3,500,000 pieces of mail came to Santa Claus, Ind., to be remailed with the magic postmark. In the town's small park there is a statue of Santa and a Christmas wishing well dedicated to "the children of the world."

Although many American parents become conscious of the improvements in their youngsters' handwriting only through letters to St. Nick, in England Christmas long has been a time for checking children's handwriting. It was a common practice for British tots, as far back as Queen Anne's reign (1702-1714) to write Christmas stories. Their laboriously produced handwriting was compared by their parents with similar pieces done the year before.



Close up of an "enemy" pillbox as seen with the aid of Signal Corps' TV and Army's 100-inch camera, shown at right.



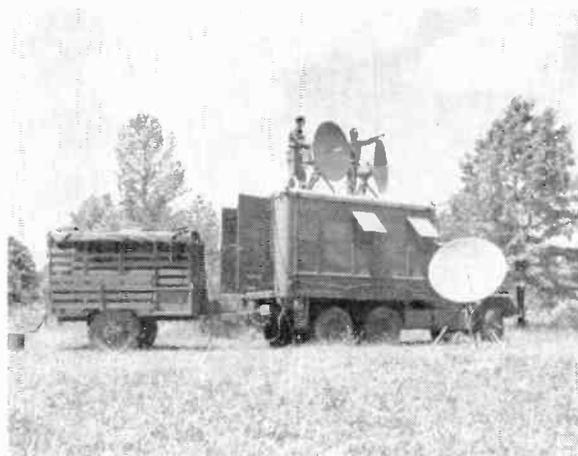
An Army TV cameraman uses big camera to sight on a distant object during tactical television demonstration at Fort Meade.



Internal shot of experimental television unit, aboard L-20 aircraft, with cameraman shown monitoring picture in view finder.

Television Become

The eye of the video camera promi



Base station of Signal Corps Interim Tactical TV System. Here pictures are received, sent over cables to Command Post for strategic planning.

Here a cameraman photographs an "enemy" soldier being interrogated in the field. Command post can question prisoners direct via shortwave equipment.



TELEVISION has donned khaki and "joined the Army."

In a demonstration of momentous significance and importance television was used tactically for the first time by the U. S. Army's Signal Corps during 1954 at Fort George G. Meade, Md., a short distance from the nation's capital.

It is conceivable that television will, in a matter of a few years, as a result of this demonstration have an impact upon military concepts and operations of the magnitude of gunpowder, artillery, the machine gun, the tank, the airplane, radio and radar. Clearly, an entirely new concept has been injected into military communications.

The Fort Meade demonstration, or more correctly demonstrations, of combat TV, were a combined operation of the United States Army Signal Corps, the Radio Corporation of America and the National Broadcasting Company, Incorporated. The big attraction, the reason for an assemblage of high brass, including General Matthew B. Ridgway, Chief of Staff of the U. S. Army. and a vast nationwide video audience was a single combat-clad GI carrying an odd-looking little box-like device in his hand. This device was a vidicon television camera, with which that soldier and others in tanks and in observation-type aircraft, flashed instantaneous pictures—television pictures—to regimental headquarters of the crucial action unfolding on a supposedly enemy-held beach.



This shows the manner in which television camera is mounted in an L-20 observation airplane for combat aerial reconnaissance.



Army cameraman covers "enemy" prisoners as they march down road. Picture goes via cable or microwave to headquarters.



This parabolic reflector is the microwave transmitting antenna used by Tactical Relay Unit to send pictures to the Command Post.

is a Weapon for War

es to revolutionize military tactics. In wartime, IBEW technicians may become tactical TV engineers. . . . first class, of course

For the first time in history, a unit commander at a command post in the field was able to utilize the roving, piercing eyes of the television camera to instantaneously direct action; swiftly adapting his original plan of battle to new situations brought to him by vidicon cameras in the immediate, close-up battle area and by larger cameras carried in reconnaissance planes circling the "enemy's" supply and staging areas.

The Fort Meade demonstration, dubbed "Operation Threshold," involved soldiers of the famed Third Armored Cavalry Regiment. Immediate problem of the troops was a simulated attack by armored and amphibious units against "enemy" fortified positions. The operation was divided into two parts—a demonstration of the Army Signal Corps' Interim Tactical Television System, on a black-and-white closed-circuit system feeding to monitors and the commander's receiver in the command post tent; and a second assault conducted under the television "eyes" of the color TV cameras for broadcast over the NBC network. This latter demonstration was watched in the command post on RCA color receivers.

Three rugged, compact Vidicon cameras carried by combat cameramen with the troops and two larger cameras, as modified by the Signal Corps Engineering Laboratories, mounted in L-20 reconnaissance planes, comprised the Signal Corps TV unit, attached to the regiment as a part of the regimental communications system.

The three ground cameras were linked by cable to truck-borne transmitters which relayed the pictures by microwave to a receiving unit and small preview monitors at the command post. From the airborne cameras, pictures were sent directly to the headquarters receiver by microwave relay, where they appeared on a fourth monitor. A TV technician at a field table in the command post with the commander and his intelligence and operations officers was responsible for the switching of images from the small monitor screens to a large viewing screen directly in front of the C. O. Thus, the commanding officer was able, at any time during the demonstration, to request a direct view on his screen of any sector covered by any camera in the field.

THE C. O. was further able to direct his cameras toward any desired objective or area by the use of radiotelephone links between the command post and the field cameramen.

While the mock assault unfolded, an audience of high-ranking military and industrial leaders and members of the nation's press back in the "command post of the future" watched the demonstration. Among those observing the action were: General Matthew B. Ridgway, Army Chief of Staff; Major General George W. Smythe, Deputy Commander of the United States Second Army; Major General George I. Back, Chief Signal Officer of the Army and Brigadier General David

Sarnoff, Chairman of the Board of the Radio Corporation of America.

While the distinguished audience watched, a new type of "enemy" tank appeared on the screen and its details were rapidly noted by a staff intelligence officer. A few minutes later an "enemy" prisoner, interrogated before a ground Vidicon camera, minutes after his capture in the forward area, revealed the size and characteristics of "enemy" forces opposing the assault. A terrain map found on the prisoner and held close to the camera indicated an "enemy" counterattack plan. The plan was immediately confirmed by one of the two airborne cameras, which had located a buildup of "enemy" forces, and the commander in the "command post of the future" instantly changed his original plans in order to smash the counterattack before it could get rolling. With the help of another camera, also near the front, helicopters were dispatched, for speedy evacuation of wounded.

Through the entire demonstration, the C. O. was able, through the lenses of his television cameras in the field and in aircraft, to constantly see, evaluate and control the battle situation.

As a result of the Fort Meade demonstration, the tactical uses of military television within the capabilities of today's equipment were dramatically shown. These uses, explored by the Signal Corps over the past several years during its development of training techniques and equipment, include: reconnaissance of enemy-held territory to detect supply points, assembly areas and movement of forces; transmission of data from the field to command post headquarters; the adjustment and control of artillery and mortar fire; the location, evaluation and designation of artillery targets; the briefing of tactical commanders before an action by showing terrain, routes of approach and enemy positions; the observation and control of amphibious landings, river

crossings and assaults as well as the movement behind the lines of friendly troops and supplies and intelligence reporting, including examination of captured personnel and equipment.

Each of these functions has been performed in the past by a variety of means, ranging from written or typed messages to radiotelephone and telegraph communications. Whatever the system employed, however, the commander has been able to visualize an action only through the experience, judgment and interpretation of a score or more of other people. Oftentimes this vital information has been hours or even days in reaching him.

In the words of General Back, speaking at the beginning of the closed-circuit portion of the demonstration, the combat commander has been blind, insofar as he could see very little, if anything, of just what was taking place along the battlefield held by his troops. He knew not what was happening to his men, machines and equipment.

Although the demonstration of the Signal Corps' black-and-white television equipment showed the great capacity of the medium in the military field, the RCA-NBC colorcast furnished a peek at a military TV system that someday will furnish a commander with a constant picture of a battle as it exists, including color differentiation between natural and camouflaged objects, different terrains and foliage and between the almost infinite variety of colored markings and signals used by both friendly and hostile forces.

In essence, the Fort Meade demonstration was a progress report to the United States Army and to the American people on the development by the Armed Forces and the electronics industry of yet another vital role for television in adding greatly to the effectiveness of the nation's combat forces. ■

The transmitter van of Field Unit Number One sets up operations in the rolling Virginia countryside not far from the nation's capital. Atop the truck are cameramen manning RCA studio-type cameras. RCA microwave transmitter, at right, can relay pictures up to 20 miles.



AFL Schedules New Commentator



Morgan



Flannery

Beginning next year, the radio voice of the American Federation of Labor will be Edward P. Morgan, who recently resigned as director of news for the Columbia Broadcasting System to join the American Broadcasting Company's news staff.

Morgan will be heard five nights a week over 175 ABC stations, more stations than now carry the current AFL newscast on the Mutual Network.

Morgan replaces Harry Flannery, who was filling the post temporarily since the resignation of Frank Edwards. Flannery returns next month to his regular assignment as editor of *The AFL News-Reporter*.

Union Shop Ban Is Reversed

Railroad unions score a victory as a Texas appeals court knocks down an injunction barring a railroad and 16 nonoperating unions from entering into a union shop contract. The court reverses an earlier decision holding that the union shop amendments to the Railway Labor Act are unconstitutional and that state right-to-work laws are controlling. The appeals court sees the union shop provisions of the Act as a legitimate exercise of Congress' authority to regulate interstate commerce; and it finds that they don't violate the First, Fifth, Ninth, Tenth, or Thirteenth Amendments to the Constitution, since these place checks on government action and not on the conduct of private parties. Having determined that the union shop provisions are valid, the court concludes, in accordance with the express language of the law, that they take precedence over state restrictions on union security.

The lower court also tied its decision to the theory that a strike for a union shop contract would cause irreparable injury to the carrier. But the appeals court thinks this reasoning is off the beam. To enjoin bar-

gaining on that ground, it says, would be to destroy the right of collective bargaining altogether. (*Machinists et al v. M. E. Sandsberry, Jr.*—Tex. Ct. Civ. App.)—*BNA's Union Labor Report*—November 26, 1954.

State Sick Benefit Legislation

Four states now have legislation requiring benefit payments upon absence for nonoccupational disability. The four are California, New Jersey, New York and Rhode Island.

The benefit levels required by the state programs are, of course, considerably less than those ordinarily adopted in negotiated plans. The maximum benefit required by the state laws is \$26 a week in New York.

In three of the states, the required disability benefits may be provided either through the state program or through a private plan providing benefits at least equal to those prescribed by the state legislation. In the fourth, Rhode Island, all workers are covered by the state system directly, but private plans may be negotiated to provide supplementary benefits.—*AFL Research Report*—November, 1954.

Maybe GOP Doesn't Need Labor Secretary

Organized Labor had high hopes for Administration appreciation of its problems when the AFL Plumbers' President Martin Durkin was appointed Secretary of Labor. The fiasco over Taft-Hartley which followed showed the Administration's true intention and resulted in the resignation of Durkin and the appointment of James P. Mitchell.

Labor watched closely, again hoping for the best. Secretary Mitchell, too, tried to formulate a liberal program for the American workman. This month, in Los Angeles, he daringly came out against state right-to-work laws. He told the CIO convention, categorically, that he was opposed to such laws now in effect in 17 states.

Like his predecessor, Mitchell found no support in his views at the White House. President Eisenhower made it clear that Mitchell was speaking for himself.

Progress Meeting

The Fourth Annual Progress Meeting of the IBEW Radio, Television and Recording Division has been scheduled for Dallas, Tex., June 17-19, 1955. Sessions to be in the Baker Hotel. More about it all next month.

RFE Beams Through The Iron Curtain

A five-station net and 23 powerful transmitters broadcast regularly to an estimated population of 70-million Communist-ruled people.

THE true meaning and message of the Christmas season will reach millions of human beings shackled in mind and body behind the Iron Curtain this Yuletide, thanks to the efforts of the American Heritage Foundation's Radio Free Europe.

Everywhere in Europe where men are no longer free to live their lives in the democratic tradition, RFE's powerful transmitters will pierce the barriers of communism, bringing hope and determination to whole nations held in the ruthless grip of the Soviet Union.

Hated and feared in the Kremlin, RFE set as its task at the time of its creation in 1949 by a group of private American citizens, the bringing of truth, hope and encouragement to the enslaved peoples behind the Iron Curtain. Each time a citizen of red-dominated East Europe twists his radio dial to the frequency of an RFE transmitter he is literally taking his life and the lives of his family in his hands.

Yet the American Heritage Foundation knows that millions upon millions of listeners do risk their lives daily to hear RFE's words of truth and decency. The existence of such a giant audience of oppressed peoples is proven when one realizes that in the beginning, Radio Free Europe consisted wholly of a tiny seven and one-half kilowatt mobile transmitter.

Today RFE is a five-station network, utilizing 23 powerful transmitters located in West Germany and Portugal. The five stations broadcasting regularly to Poland, Czechoslovakia, Hungary, Romania and Bulgaria, reach an estimated population of some 70 million people, bringing them truth, in order that they may cast off the Soviet yoke.

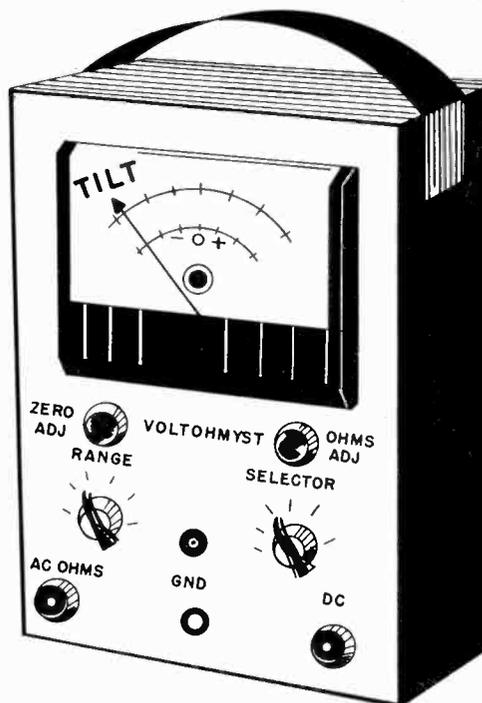
RFE gives the millions under red domination the facts and information with which they create their own "People's Opposition" to the Communist puppet regimes. It counters the Red campaign of confuse-and-divide, and it makes it more difficult for the Kremlin to integrate and consolidate its captive populations.

The effectiveness of RFE is well-known and proven by the statements of countless escapees from the doomed areas lying behind the 'Curtain. Letters mailed and smuggled through from the Red areas prove its effectiveness. RFE's frequent "truthcasts" clearly indicate that it has gotten under the skin of the Communists. If it hadn't, then why the need for Red collaborators

denounced over RFE's network to change their names in an effort to conceal their true identity.

And RFE gets its messages of hope through to its listeners, despite the fact that the Reds spend more money annually trying to jam out Western broadcasts than RFE spends transmitting them. In a constant effort to keep well ahead of the Red jammers, RFE's primary weapons are advanced engineering techniques and professional know-how. A variety of methods are employed to frustrate the Reds. By far one of RFE's most effective devices is that of tuning all of its transmitters onto a single target for a certain period of the day, thus making a sieve of the Iron Curtain and generating a volume which makes jamming impossible.

As long as whole nations lie prostrate and enslaved behind the Iron Curtain, anti-Communist leaders will continue to fight for the freedom of their homelands from the studios of Radio Free Europe. With American know-how to assist them, these exile leaders—educators, statesmen, journalists, clergymen, entertainers and many others—have established a network which enjoys the full and complete trust of those enslaved by communism. ■



Reading Time

Staging TV Programs and Commercials, by Robert J. Wade, 232 pp., Hastings House, New York, \$6.50.

This work is practical and down-to-earth and avoids generalizations, concentrating, instead, on the specific details the man-on-the-job needs to know.

Author Wade, freelance set designer and TV art consultant and for nearly ten years art director of NBC-TV, describes his book as a "combination manual, scenic shop companion and "how-to-do-it" guide for those artists, technicians and incipient production facilities directors and general studio assistants who are involved in TV staging and are faced with the problems of planning and executing sets and accessories.

The book is filled with hundreds of illustrations, ranging from overall views of network studios to details of hardware for TV scenery.

Picture Book of TV Troubles, (Vol. I—Horizontal AFC-Oscillator Circuits), by John F. Rider Laboratories Staff, John F. Rider publisher, Inc., 80 pp., \$1.35.

Obtaining and Interpreting Test Scope Traces, by John F. Rider, John F. Rider Publisher, Inc., 192 pp., \$2.40.

How to Use Test Probes, by Alfred A. Ghirardi and Robert G. Middleton, 176 pp., John F. Rider Publisher, Inc., \$2.90.

This trio of new Rider paper-bound publications is aimed primarily at the TV service man, although it

would be useful to the student of electronics, as well.

The first volume, the picture book, is the initial number of a planned series reporting the results of trouble shooting a large number of TV sets in the Rider Labs.

The second book details the use of the cathode-ray oscilloscope in the maintenance and production of electronic equipment.

The third work describes the various types of test probes and their use in TV receiver servicing.

All three volumes are extensively illustrated with diagrams, charts and photographs.

Famous Last Words



Submitted by Local 202

Basic Television, Principles and Servicing, by Bernard Grob, 660 pp., McGraw-Hill Book Company, New York, \$6.00.

"A comprehensive course in television, including color TV, for radio servicemen and technicians . . . a suitable text for television courses that follow a course in radio fundamentals" is the description of this second edition by its Author, Bernard Grob. An instructor at RCA Institutes, Mr. Grob has profusely illustrated his work with photographs, charts and diagrams.

Impatient Crusader, by Josephine Goldmark, University of Illinois Press, Urbana, Ill., 1953, 217 pp., \$3.50.

Excellent account of the life of Florence Kelley, the dedicated social reformer who battled long and courageously for child labor laws, establishment of minimum wage laws, industrial health control, etc.

It's Your Law, Too!—Jewish Labor Committee, 25 East Seventy-eighth St., New York 21, N. Y., 1953, five-page pamphlet. Free.

Points out the protection all workers receive from FEP laws. Designed for use in states where FEP is being considered.

20th Century Voices

Continued from Page 4

radio blossomed out almost overnight as the new government radio.

Today the Jerusalem studios of Kol Israel are the same studios used by the Palestine Broadcasting Service two decades ago.

Until a few weeks ago the technicians and engineers of Israel were unorganized. In November the staff workers of all three broadcasting establishments held a joint meeting and decided to form their own industry-

wide union, which will affiliate with the Histadrut.

Already the technicians of the Jewish state are reaping the benefits of unionism, for all workers, whether union members or free riders, benefit by trade and craft bargaining. Salaries are based on the cost of living index, with reopenings every three months. There is an inflationary trend in the economy, but the government is taking steps to cope with the problem.

Meanwhile, Israel radio continues its vital work as educator, informer, organizer for the young government in the Holy Land.

Technical NOTES

21-Inch Color Tube

Radio Corporation of America announced in November that its 21-inch color television picture tube is now commercially available to TV set manufacturers.

The new color tube (RCA-21AXP22) has a picture area of 250 square inches—nearly 22 per cent more viewing area than that of any other color picture tube now on the market, according to Douglas Y. Smith, vice president and general manager of the RCA Tube Division.

In addition to having popular picture-size appeal, the 21-inch color tube is a major step toward large-screen home color receivers at mass-market prices, he said. Despite its greatly increased viewing area, the new tube is offered to set manufacturers at \$175—the same price charged for RCA's 15-inch color tube.

The 21-inch color tube is now in production, at the rate of 100 tubes per day. In addition to big-screen pictures, the 21-inch kinescope offers set manufacturers and owners such advantages as:

Excellent color-picture brightness, contrast, and fidelity which match the picture quality of comparable-size black-and-white kinescopes.

Short tube length which will facilitate the design of compact television cabinets. Despite its considerably increased picture area, the RCA 21-inch color tube is actually shorter in overall length than the 15-inch kinescope.

Round, metal-shell construction which makes the tube, at 28 pounds, appreciably lighter than 19-inch all-glass types, and produces the industry's largest color image.

The RCA 21-inch color picture tube is not an enlarged version of the 15-inch type introduced last year, Mr. Smith said. It stands alone as a major engineering achievement and as the solution to numerous, seemingly insurmountable problems of achieving brightness, color purity, and pin-point convergence inherent in creating larger color pictures.

A unique engineering feature of the tube is an RCA-developed curved shadow mask which is principally responsible for the tube's excellent color brightness and fidelity, he said. It can absorb, without distortion, more power input than any other type of mask.



LARGEST COLOR TELEVISION picture tube so far produced is this 21-inch type, which has a picture area of 250 square inches—22 per cent more viewing area than that of any color tube now on the market. The tube is said to be even more compact than the 15-inch color tube.

The tube's metalized screen is an array of more than one million small, closely spaced phosphor dots on the inner surface of the tube's Filterglass faceplate. The dots are arranged in triangular groups, each containing a red, green, and blue dot. The curved shadow mask, containing more than 350,000 tiny holes, is mounted immediately behind the tube screen, with each hole aligned with a particular trio of dots on the screen. The electron beams produced by the tube's three electron guns must pass through each of the 350,000 holes in the mask to strike and activate the phosphor dots in each triangular group.

The shadow mask's unique thermally compensated action enables it to expand under the bombardment of the electron beam in such a manner that each of the 350,000 holes remains in alignment with its particular trio of red-green-blue dots on the tube screen, Mr. Smith explained. This constant alignment assures color purity.

The mask is mounted within the tube in such a way

that its supports do not touch any part of the tube face-plate, and therefore do not limit the picture area.

The RCA-21AXP22 produces both color and black-and-white pictures measuring $19\frac{5}{16}$ inches by $15\frac{1}{4}$ inches, with rounded sides. It utilizes three electrostatic-focus electron guns spaced 120-degrees apart, with axes tilted toward the tube axis to facilitate convergence of the three electron beams at the curved shadow mask.

The tube utilizes magnetic deflection and magnetic convergence, has an ultor voltage of 25 kilovolts, and requires a focusing voltage of approximately 4.5 kilovolts.

Helipower Package

General Electric Co., Syracuse, N. Y., has announced the availability of a new 100 kw transmitter and 1-bay helical antenna as a "helipower" package for vhf channels 7 through 13. Development of both the transmitter and the antenna was carried on simultaneously to produce an antenna capable of handling a signal put out by a 100 kw transmitter.

The "helipower" package is designed to meet the demands of broadcasters who aim at a better TV coverage with a high-power transmitter and a low-gain antenna, Paul L. Chamberlain, GE general manager of broadcast equipment, stated. He pointed out that the addition of the package to GE's TV broadcast line gives the broadcaster a wider selection of equipment for attaining the maximum power of 316 kw permitted by FCC regulation.

Using the "helipower" combination, a 100 kw transmitter and 1-bay helical antenna with an approximate gain of 4, or a 50 kw transmitter with an 8-bay batwing antenna with an approximate gain of 7.8 the broadcaster may now reach maximum power in either of two ways, Mr. Chamberlain said.

The new package is priced at approximately \$395,000. It is available for delivery in about six months.

Video Monitor Package

Dumont Laboratories, too, has come out with a packaged product—an "inexpensive" video-signal monitor, designed primarily for use in television broadcasting. It is made available by packaging the Dumont-type 325 TV line selector and 327 cathode-ray oscillograph.

A Dumont spokesman pointed out that virtually any cathode-ray oscillograph becomes a TV broadcast monitor when used in conjunction with the line selector, but said the monitoring performance of such a set-up "is necessarily limited by the characteristics of the oscillograph." He added that for these reasons these two new instruments "were designed to complement each other for use as a package in television work."

Playback Pace Changer

A device which permits the playback of a recorded speech or music in a shorter or longer period of time than the original without change of frequency was demonstrated by Dr. W. L. Everitt, dean of the University of Illinois' College of Engineering, before the Western Society of Engineers in Chicago November 19.

Method for time or frequency compression and expansion of speech highlighted a joint meeting of the IRE Audio Group with the Chicago Acoustical and Audio Group. Method, based on fact that listening can be faster than speaking, alternately permits transmission of messages at either lower or higher frequencies without changing the original time.

Dr. D. E. Weigand of the Armour Research Foundation delivered a paper before the Western Society on the subject, "A Flux Sensitive Head for Magnetic Recording Playback."

Movies Use Tel-Eye

Film directors and their crews can now get an instantaneous view of what's being shot by movie cameras, thanks to a new motion picture film technique developed by Allen B. Dumont Labs and RKO-Pathé.

The technique employs a miniature Dumont "Tel-Eye" television camera. This is mounted on the movie camera, and the television of the scene being shot is shown, simultaneously with the shooting, on large screens. By using TV units mounted on several film cameras, plus multiple viewing screens, directors can see at a glance what several cameras "see" and shift from camera to camera, as in TV studios. The end result, officials noted, will be more economical and efficient movie production.

Navy Training via TV



The only instructional television instruments developed specifically for training purposes by the U. S. Navy are shown above. They were developed by the Office of Naval Research at the Special Devices Center, Port Washington, N. Y. From left to right, are: Chief D. D. Drew, TD 1 F. L. Richson, and Capt. H. Sosnoski, director of the Special Devices Center.

Station Breaks



Local 1139 Anniversary

Local Union 1139, New Orleans combined its annual dance with a ceremony to award membership pins recently. Business Manager Robert Grevemberg reports that one member was given a membership pin signifying 20 years' of continuous good standing, three charter members were eligible for 15-year pins, 23 members received 10-year emblems and that 18 were recipients of 5-year awards.

This year's social event marks the 15th year of the local union's existence. Hence, the dance was a gala affair.

Guests included the officers of Local Union 130 and the officers of the local AFTRA organization. Representative O. E. Johnson attended the affair on behalf of the IBEW International Office.

Local 31 Arbitrates

An arbitration award was announced November 27, setting new wage scales for KDAL and KDAL-TV, Duluth, Minn. The award provides for a retroactive increase on October 1, 1954 of \$10 per week, \$5 will be added on April 1, 1955 and an additional \$5 on October 1, 1955. Hence, a \$95 top scale is established for the 24-month escalator. KDAL is a 5 kw affiliate of the CBS Radio Network. KDAL-TV has been on the air since March 14, 1954 and operates on Channel 3 as an affiliate of the NBC and ABC Television networks.

WSPD Election Won

Local 1218 has been certified as the exclusive collective bargaining agency for the announcers at WSPD, Toledo, Ohio. An election held on November 29 has been certified by the National Labor Relations Board. WSPD is owned and operated by the Storer Broadcasting Company and is a 5 kw affiliate of the NBC Radio Network.

KHJ, KHJ-TV Settlement

The strike at General Teleradio's KHJ and KHJ-TV, Los Angeles, ended when a settlement was reached on November 25, 1954. The Technicians won a two-year agreement with a wage-reopening provision for the end of the first year, a \$2.50 increase in wages with a re-

duction of the escalator to four years and a fourth week of vacation for those having five years' service.

The stage employes will receive substantial wage increases, recognition of certain classifications of work and have solved their makeup supervision problem.

The building engineers will also receive an increase in pay, four weeks vacation after five years of service and have established a severance pay plan.

Agreement was also reached regarding an overall pension plan—if such a plan is established, its benefits will extend to all of the employes represented by Local 45.

New WATV Transmitter

Station WATV(TV), Newark, N. J., began operation recently of a new transmitter with 316 kw ERP. The transmitter is located in the Empire State Building on nearby Manhattan. With the change in power, the station is said to be the first outlet in the area with a "super-power" signal.

WDTV to Westinghouse

Westinghouse Broadcasting Co., Inc., announced on December 3 it has purchased Station WDTV in Pittsburgh from Allan D. Dumont Laboratories, Inc., for \$9,750,000, said to be the highest price ever paid for a television station.

The transaction is subject to the approval of the FCC.

The purchase of WDTV brings to four the number of television stations operated by Westinghouse Broadcasting, a wholly-owned subsidiary of Westinghouse Electric Corp.

The other three TV stations are located in Boston, Philadelphia and San Francisco.

A Westinghouse spokesman said WDTV will continue under the management of Harold Lund, general manager of the Pittsburgh station.

There have been several other station sales in the millions during 1954. We hope to bring you a summary of them all in our January issue. Station ownerships and network affiliations seem to be in flux in many sections of the nation.