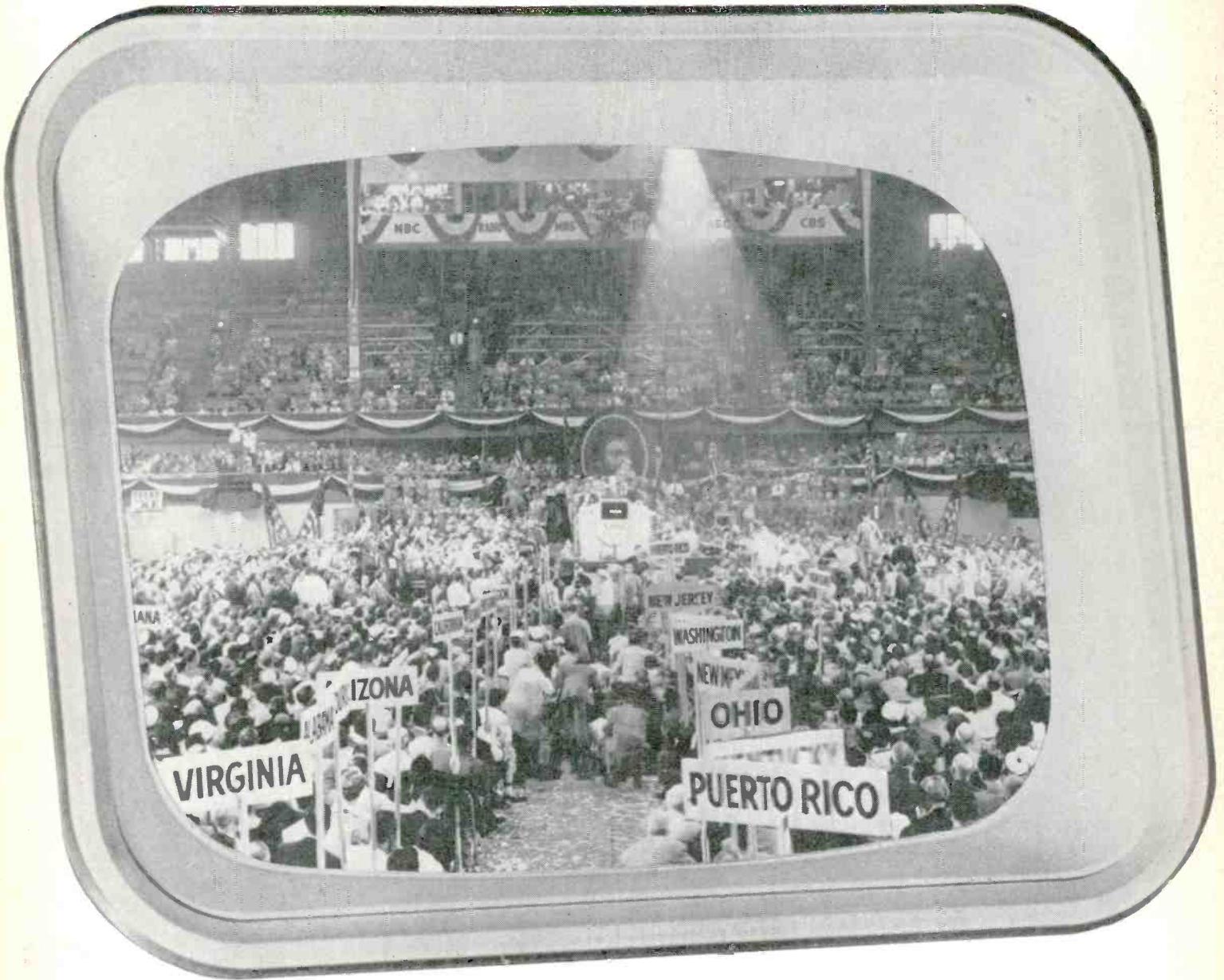


RADIO, TV and RECORDING



# TECHNICIAN-ENGINEER

AUGUST, 1956



*The Convention Will Come to Or-r-dur!*

RADIO, TV and RECORDING

# TECHNICIAN-ENGINEER



VOLUME 5 17 NUMBER 3

PRINTED ON UNION MADE PAPER

## The INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS

GORDON M. FREEMAN International President  
 JOSEPH D. KEENAN International Secretary  
 FRED B. IRWIN International Treasurer

ALBERT O. HARDY Editor, Technician-Engineer

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### . . . the cover

Television has brought a new glamor and excitement to the affairs of politics and government. It has caused women to sit before their television sets to watch Senator Joe McCarthy and Counsel Roy Cohn slow the wheels of the Pentagon. It has made the nation even more conscious of its acute problem of segregation vs. integration. It has made legislators groom themselves and seek spots on panel shows. Most of all—at convention time—it has made more Americans aware of their responsibility as voters to participate in the affairs of their government . . . to cast their ballots on election day.

### commentary

Soviet Communist Party Chief Nikita S. Khrushchev's remark that the workers in the free world do not have a free press was flatly contradicted by the International Labor Press Association.

In a statement broadcast over the world, and into Russia and the Satellite countries, by the Voice of America, ILPA Secretary-Treasurer Bernard R. Mullady termed Khrushchev's assertion "ridiculous."

"Mr. Khrushchev may not know it," he added, "but the trade unions of the United States are taking full advantage of the opportunity to reach their members through their own free press and the radio."

"We must point out," the statement said, "that the union publications in the free world are paid for by organizations of the workers themselves, issued by officials responsible to the membership, and editors hired by the workers. This is in direct contrast to the situation in Iron Curtain countries where the so-called worker's press is run by government officials appointed, and in turn removed, at the whim of the dictatorship machine."

### 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 1955 figures:

June, 1956—116.2                      June, 1955—114.4

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



# POLITICS

## ...under glass

Through the Gimlet Eye of the Zoomar Lens to the Magic Looking Glass in the Home Receiver, Network Television Reports the Political Conventions.

**I**T took the politicians a little time to get accustomed to having television cameras peering over their shoulders. Back in 1940, when NBC and Philco relayed the first convention telecast to a scattering of receivers in New York and Philadelphia, the politicians and the producers barely sensed the impact that TV could eventually develop.

In 1948, ten million people watched the conventions which nominated Harry S. Truman and Thomas E. Dewey.

In 1952, TV convention coverage came into its own. The Republican Old Guard didn't like the public scrutiny of the battle over delegate credentials in Chicago, but they soon realized that Eisenhower's grin and the public relations techniques of his supporters helped to sell him as the successful candidate in '52.

So, this month, as both parties assemble to pick candidates, TV is the big factor which makes the wheels go round. Delegates are warned not to yawn, not to remove their shoes, because the long-range cameras may be looking at them. Blue shirts, blue drapes, and blue seat covers are everywhere.

Whereas in 1952 the public possessed some 18-million TV sets, this month there are close to 40-million of them in public use. Politicians estimate about three viewers per set and figure that 120-million Americans, most of them voters, are watching the activities in Chicago and San Francisco.

The television industry spared little expense in men, materials, or money to make this the greatest news-coverage event of its kind in history. Studio layouts eat big chunks of space at both convention halls. NBC's "Convention Central" at Chicago,

for example, takes up 20,000 square feet in the Amphitheatre, including three TV studios, three radio studios, a tape-recording room, a film-cutting room, control rooms for both radio and TV. CBS occupies another big complex of studios and technical rooms. The biggest studio contains the test kitchens and make-up rooms for Westinghouse's Betty Furness; the second largest radio goes to news chief Ed Murrow.

ABC has 14 rooms at the Amphitheatre, centered around two TV studios and a radio studio. The network has a staff of 350, including 30 news commentators.

The big worry during the first week of the two weeks of extravaganza was the chance of the two conventions overlapping. Emergency arrangements were made, but the general decision was to plan with no overlapping involved. But to be sure that each event had its proper coverage, different networks furnished the "pool" coverage for each convention.

In Chicago, NBC manned the cameras and facilities which furnished the "pool" picture to all networks. CBS had the same task assigned in San Francisco.

Thus, the fundamental TV story was made uniformly available. The big trick for the networks was to furnish sidelights like "Pogo for President" to keep the listeners tuned to a particular net.

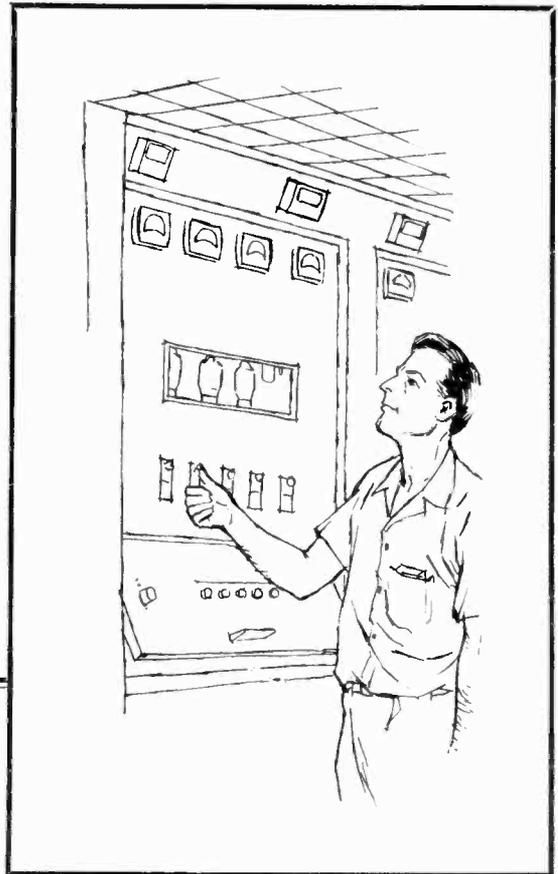
All networks are trying new engineering gimmicks, which are taxing the knowledge and abilities of the technicians and engineers to the utmost.

NBC, for example, came up with Porto-Vision, a contraption which permits people on different cameras to talk to each other and split images to converse across the screen from different camera set-ups.

*(Continued on Page 11)*

# How remote can you get?

*The National Association of Radio and Television Broadcasters, a management group, recently called upon the FCC to open the flood gates for remote control operation of broadcasting stations. Taking strong exception to such a move, the IBEW has filed the petition printed in full below. No docket number has been assigned and no estimate can be made on when action will be taken on this petition.*



*In the Matter of . . . Amendment of Part 3 of the Commission's Rules and Regulations With Respect to Remote Control Operation of Standard Broadcast Stations in the Conelrad Service.*

## **Petition for Institution of Rule Making Proceedings to Amend the Commission's Rules Relating to Remote Control Operation of Standard Broadcast Stations in the Conelrad Service**

**T**HE International Brotherhood of Electrical Workers hereby files this petition for the institution of rule making proceedings. This petition is filed pursuant to the provisions of Section 4 (d) of the Administrative Procedure Act and Section 1.702 of the Commission's Rules and Regulations.

The International Brotherhood of Electrical Workers alleges and is prepared to show as follows:

1. That it is an unincorporated association functioning as an international labor organization with its office located at 1200 Fifteenth Street, N. W., Washington 5, D. C.; having a membership in excess of 650,000 and having presently in existence in excess of 1712 Local Unions, and representing a substantial number of persons employed by licensees of the Commission engaged in standard broadcast operations.

2. That it appeared as a party to and participated in rule making proceedings in 1952 and

1953 relating to remote control operation of certain broadcast stations and is presently appearing as a party to and participating in rule making proceedings relating to proposed relaxation of rules and regulations relating to remote control operations of certain broadcast stations, which latter proceedings bear Commission Docket No. 11677.

3. That the Petition in Docket No. 11677 filed February 15, 1956 by the National Association of Radio and Television Broadcasters stated at p. 7 thereof that:

“. . . in order to insure the continued effectiveness of CONELRAD. it is proposed that *any* future remote control authorization to a standard broadcast station, whether or not now participating in the Conelrad operating system, be conditioned upon the station's equipping itself in order that it will be able to satisfactorily operate in the system and, by remote switching of the transmitter or by using a separate transmitter,

change from its normal operating frequency to either 640 kc or 1240 kc as specified by the Commission." (Underscoring supplied.)

4. That the specific language of the amendments submitted in accordance with Section 1.702 by the Petitioner in Docket No. 11677 proposed that the Commission's Rules and Regulation be amended by the addition of a new Section, Sec. 3.66 (d) which would provide that stations *authorized to operate with a directional antenna or with power in excess of 10 kilowatts* may be operated by remote control only if equipped so as to be capable of operation on the Conelrad frequency assigned and the necessary switching from the station's assigned frequency to the Conelrad frequency can be accomplished from the remote control position.

5. That the Commission's Notice of Proposed Rule Making in Docket No. 11677, released April 12, 1956 invited comments as to whether the Commission should require *all* future remote control authorizations, regardless of power to be conditioned upon the installation of equipment that will permit satisfactory operation on the Conelrad frequency assigned and the necessary switching from the station's assigned frequency to the Conelrad frequency.

6. That the International Brotherhood of Electrical Workers, as appears from the Comments submitted in Docket No. 11677, filed no comments with respect to the proposed amendment consisting of the addition of the proposed Sec. 3.66 (d) because of its view that the petition in Docket No. 11677 should be dismissed in its entirety.

7. That inasmuch as both the Commission and the National Association of Radio and Television Broadcasters have indicated their recognition of the desirability of promoting the effectiveness of the Conelrad program and inasmuch as no logical basis exists in fact for distinction between present and future remote control authorizations in this respect, it would be necessary and appropriate in the public interest and in furtherance of the declared statutory policy of making available rapid and efficient communication service for the national defense to require that all remote control operation be permitted only if the station involved is equipped so as to permit satisfactory operation on the Conelrad frequency assigned and the necessary switching from the station's assigned frequency to the Conelrad frequency.

8. That your petitioner, International Brotherhood of Electrical Workers, has made diligent effort to secure information as to the technical performance of remotely-controlled stations in the Conelrad service as appears from petitioner's letter to the Commission dated March 20, 1956 on file in Docket No. 11677. That in reply to petitioner's inquiry the Commission stated, in effect, that it possessed no organized data on the subject of petitioner's inquiry. That inasmuch as the relevant data is peculiarly within the access and control of the Commission it is necessary and appropriate in the public interest for the Commission to assemble and organize that available data on the technical performance of remote-controlled stations in the Conelrad service in the course and by means of the rule making proceedings herein sought.

Wherefore, the premises considered, and in accordance with Sec. 1702 it is requested that the Commission institute rule making proceedings looking to the adoption of the following proposed addition to the Commission's rules and regulations:

Add the following new subsection, after the present language and with appropriate paragraph designations, to Secs. 3.66, 3.274 and 3.572 of the Commission's rules and regulations:

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

Respectfully submitted:

ALBERT O. HARDY

*Director,*

Radio, TV & Recording Division

International Brotherhood of  
Electrical Workers

1200 Fifteenth Street, N. W.

Washington 5, D. C.

LOUIS SHERMAN

*General Counsel,*

International Brotherhood of  
Electrical Workers

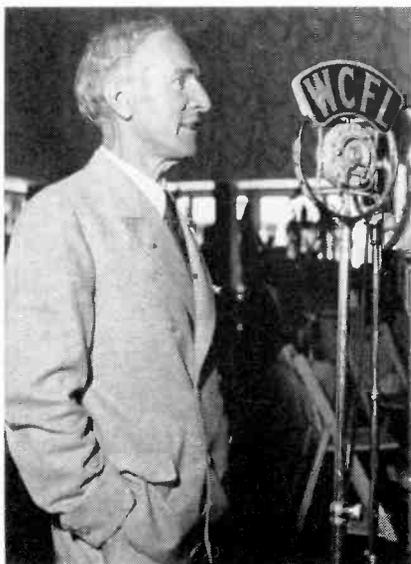
1200 Fifteenth Street, N. W.

Washington 5, D. C.



The Chicago station recently added a helicopter to its fleet of remote equipment.

# WCFL, Chicago, Passes 30-Year Mark



Upton Sinclair, whose book "The Jungle" exposed working conditions in Chicago stockyards, spoke over WCFL on behalf of a labor organizing drive.

Through the efforts of a hard-working IBEW member and a staunch old Chicago trade unionist, the first labor-owned station was established.

**I**T WAS on a Sunday afternoon, March 18, 1923, that the delegates to the Chicago Federation of Labor meeting passed a resolution, calling for their executive board to investigate the possibilities of establishing a broadcasting station "for the benefit of organized labor."

Though there was no debate on the matter, questions arose: Would the government grant a license? Where would the money come from? What kind of programs would the station broadcast?

The matter shuttled back and forth across the board meeting table, but CFL President John Fitzpatrick and Secretary Edward Nockels refused to let it die.

Nockels, a wiry vegetarian, former fixture hanger, and pioneer member of IBEW Local 134, surrounded himself with volumes of radio law, and his electrician's mind probed the technical difficulties and checked costs.

When the question finally went back to the CFL floor, the delegates voted in support, and the Chicago Federation of Labor began accumulating funds. Unpaid missionaries began pounding the pavements, moving from one local union meeting to another. In time, they came up with more than 100,000 pledges of \$2 each, most of them from men averaging less than \$25 a week.

Meanwhile, Nockels prodded the Federal Radio Commission, forerunner of the FCC, into yielding a license. Space on the Navy pier was rented from the city at \$1 a year in return for use of the station by public agencies, and equipment was purchased.

According to the late John Fitzpatrick, who was CFL President from 1905-1946, the station soon received a letter from the Secretary of Commerce in Washington, which said, "Be advised if you are going to undertake to go on the air, that the air channels are filled and there is no room for another station on the air."

Secretary of the CFL Edward N. Nockels, wrote back: "The Chicago Federation of Labor is going on the air, and we want to advise you that if there is any other station broadcasting when we get ready to go on, we will go along with them and take the consequences."

The station went on the air June 26, 1926. It was the first—and now the only—labor-owned radio station in the United States. (Only one labor-owned radio station in the world is older—2KY in Sydney, Australia, which began operating in 1925.)

Today, WCFL is one of the 10 most successful independent radio operations in the country. Operating on 50 kilowatts, it has time and again proven its value to laboring people of the Mid West. Members of IBEW Local 1220 handle the engineering tasks at the station and have had good contractual relations for many years.

**I**N THE early Thirties Major Edwin Howard Armstrong jolted a complacent amplitude modulation radio industry with his “staticless radio”—frequency modulation. FM brought a whole new concept to broadcasting—opening up the heyday of high fidelity and permitting loud and clear sound channels on television.

During the 20's, Major Armstrong had been toying with the FM idea and by 1933 was far enough along with it to persuade RCA to give him space in the Empire State Building in New York. After a few years, however, RCA decided to concentrate on television, and the major moved his apparatus to Alpine, N. J., on the Palisades just across the Hudson from uptown New York. There he established W2XMN, which in 1938 began broadcasting via FM on 42.8 mc and became the mecca for FM broadcasting.

In addition to developing FM, Major Armstrong also was responsible for other major advances in radio transmission and reception. In 1912, while still in college, he invented the regenerative circuit, which made possible the creation and maintenance of a world-wide wireless communications system.

A few years later, while serving in France as a Signal Corps major during World War I, he in-



## Major Edwin Armstrong

**The man who developed frequency modulation, the superheterodyne receiving system, and other innovations was a fighter against odds.**

vented the superheterodyne receiving system used in all standard receivers today.

Major Armstrong made two-way police radio feasible, when in 1920, he invented the super-regenerative circuit. Then in the succeeding years he began to devote himself to the establishment of frequency modulation broadcasting.

Interest in electronics began very early for Major Armstrong. He was born in New York City, December 18, 1890, and found his interest in electronics when his father brought him a book of inventions that included the story of Marconi's achievements. At Columbia University, he specialized in electrical engineering, receiving his bachelor's degree in that field in 1913, and his master of science in 1929. In 1934 he became professor of electrical engineering at Columbia, the post he held until his untimely death in 1954.

Before his death, his latest project had been multiplexing signals on a single FM band. As recently as October, 1953, the Armstrong Alpine station originated the demonstration program of his new FM multiplexing system.

In his last years Major Armstrong had devoted much of his time to patent suits against RCA and other manufacturers of electronic equipment and against broadcasting companies which he believed were infringing on his patent rights.

Much of the major's income from his other inventions (which was sufficient to make him at one time the owner of more RCA stock than any other individual) was poured into W2XMN and his other FM projects, the total being estimated by his associates at several millions.

His achievements in the field of electronics won

*Continued on Page 11*



A Navy enlisted man shows visitors the old-time radio equipment used in the early days of broadcasting.

# The Navy's Radio

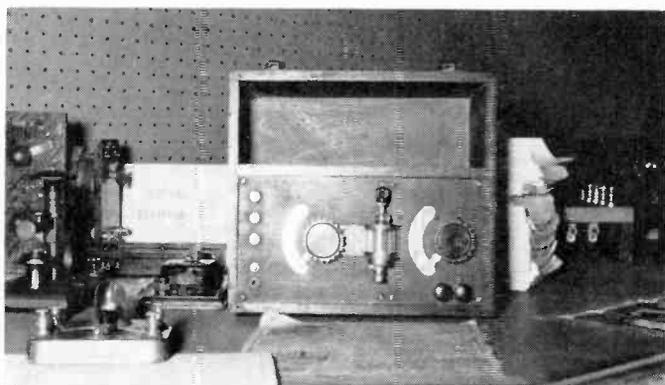
*NAA deactivated after distinguished history of service as one of the most powerful stations in the world*



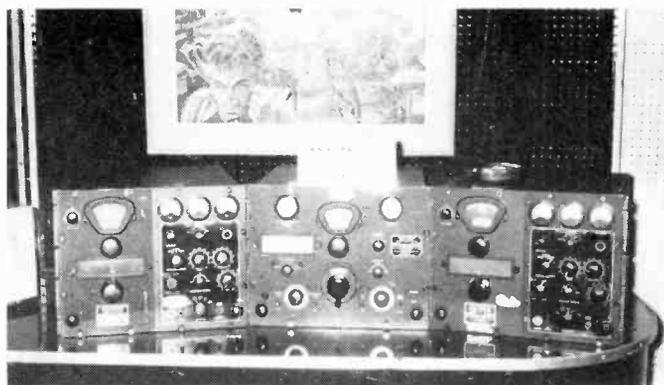
A Navy Electronics Technician demonstrating and explaining radioteletype operation to some of the visitors at the Open House.

ON July 14, ceremonies marked the deactivation of Radio Arlington, in Arlington, Va. Commissioned in 1913, it was the first of several powerful radio stations in a chain begun by the Navy at that time. Navy progress which brought the station into being is also responsible for its demise. Its services will be absorbed by the Navy's communications facilities at Annapolis and Cheltenham, Md.

Radio Arlington was once the most powerful and famous radio station in the world. It was also the first modern high-power radio station in history. Several other "firsts" can be attributed to it. The first long-distance radio conversation originated with Radio Arlington when Secretary of the Navy Josephus Daniels spoke from his desk in the Navy Department at Washington, D. C., with the *USS Nebraska*, off the Virginia Capes. This was followed by first transoceanic radiotelephone system ever set up; in 1915, a circuit was established between Arlington and the Eiffel Tower, in Paris. Later, Radio Arlington again scored as a pioneer in a long-distance



Type DT-600 Everyman Radiophone receiver manufactured by the DeForest Wireless System. The enclosed crystal detector is on the front panel.



Display of World War II Receivers. Many nostalgic memories are aroused by this RBA-RBB-RCC receiving equipment.

# Arlington Ends 43 Years of Service

radiotelephone conversation with the Navy's Radio in Honolulu.

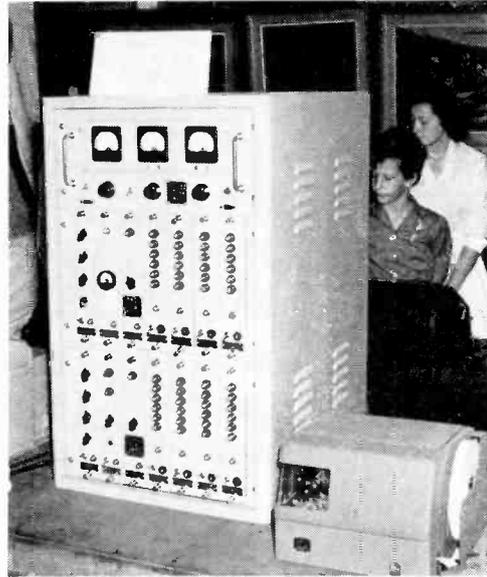
As early as 1899, the Navy became interested in employing radio as a means of rapid communications between the fleet and the shore establishments. After a series of tests, the Navy's first high power transmitter—a 100 kw Fessenden synchronous rotary spark—was purchased for installation at Arlington.

The success of the station led to demands for more powerful equipment. New types of transmitters—first, the rotary arc and, later, the vacuum tube transmitters—were developed and first installed at Arlington. The world's largest self-supporting radio tower—600 feet—was erected. Throughout the years of its existence, Arlington continued to be a proving ground for new radio equipment.

In 1941, the dense air pattern of the Washington, D. C., area required the dismantling of Radio Arlington's towers. From that time until deactivation, it served primarily as a radio link station between the components of the Naval Communication Station at Washington.

Many broadcasters have expressed gratitude for the assistance given by Radio Arlington during its early years as the leading broadcast experimental station. Radio telephone circuits were pioneered at Arlington. Its volume of traffic through 1918 exceeded that of any other station.

The Navy notes that Radio Arlington has, di-



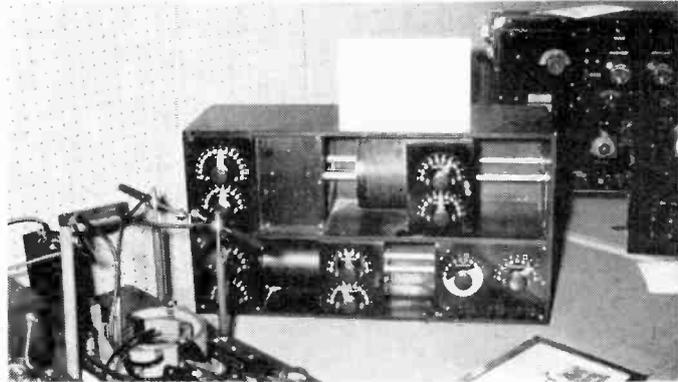
Transistorized 4-channel Radio Teletype Equipment. Each vertical panel can be removed as a drawer, facilitating access for repair or replacement.

rectly or indirectly, affected almost every man, woman and child in the United States. For years, the station transmitted time signals which were the standard of reliability for America's clocks and watches.

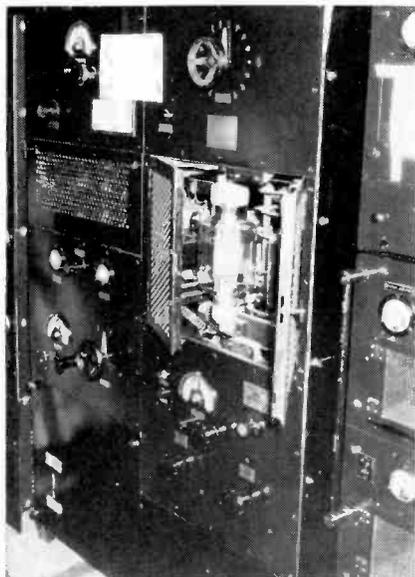
Dr. Lee de Forest, the "father of radio broadcasting," and Karl August Steinmetz, the first to



A deluxe battery-operated receiver built at the Naval Gun Factory, Washington, D. C., as it was displayed to visitors.



Tuning this receiver was no problem at all—for an octopus. Note the accompanying spark equipment in left foreground.



Early transmitter equipment used by the Navy in its broadcast operations from Radio Arlington.



300 watt transmitter formerly used in Long Wave Service. This type was once workhorse of the Navy short-haul communications lines.



Another example of early transmitter units. Such equipment once served the Navy's worldwide communications net.

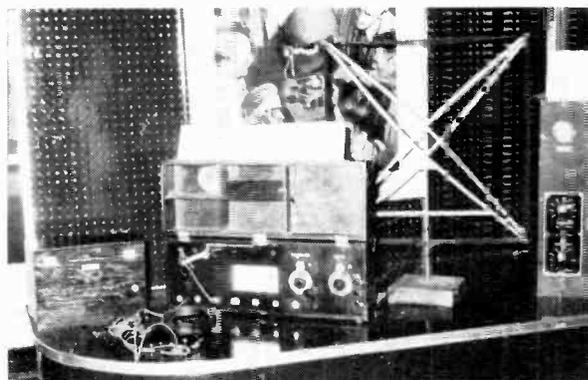
## Radio Arlington

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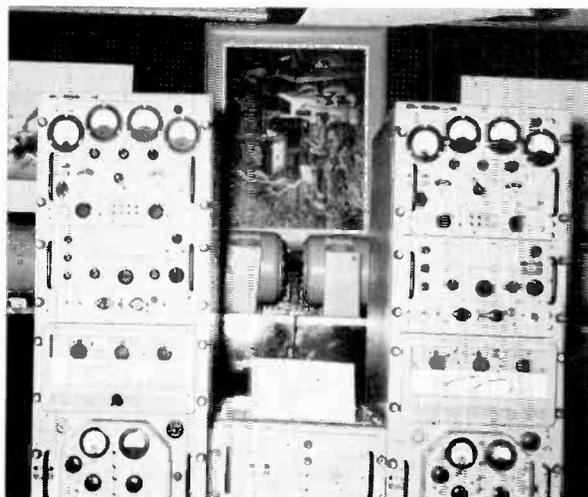
make man-made lightning, conducted important experiments at Radio Arlington. Dr. de Forest, in Hollywood, Calif., said of its silencing, "I deeply regret that this historic radio station must now be decommissioned by the U. S. Navy, which has always been my faithful ally through the early development of radio communication. I observed with keenest personal interest the first trans-Atlantic radiotelephone messages from there to Eiffel Tower, Paris, and to Honolulu."

J. R. Poppele Director of the Voice of America, said in Washington, D. C., "saying goodbye to the Navy's Radio Virginia is to me like saying farewell to a life-long friend. No matter what part of the world an American radio operator found himself, he never felt very far from home as long as he could copy Radio Virginia. In this respect, the early transmission of Radio Virginia was truly the original Voice of America."

The Navy conducted an "open house" at Arlington during the last week of the attendant ceremonies. The original equipment was gone—replaced by exhibits of equipment marking the progress of the years. But to an "Old Timer," the ozone, the odor of rotating equipment and the ghosts of yesteryear were still in the air. Yes, and so goodbye—to a life-long friend.



Very early model superhet. This was one of the first "portables" shown here complete with battery-box, loop and phones.



Display of some of the Navy's newest and most compact transmitting equipment at the Radio Arlington Open House.

# READING TIME

---

**Audio Control Handbook** by Robert S. Oringel, Hastings House, 41 East 50th Street, New York. \$6.50.

This book is a compilation of well-written and well-organized material on, as its title states, audio control. The author draws upon many years of his personal experience and background and is in the engineering department of the Voice of America.

Such a book as this one is somewhat difficult to write—the average author skips over or misses elementary explanations and often leaves the novice reader at a loss—without the fundamentals, more complicated material is only confusing. Such is not the case here; included are pictures of the microphones referred to, polar patterns of pickup areas, remote amplifiers, demonstrated cues, etc.

This is a very practical, elementary text. It can be recommended for the neophyte and also to production personnel, who may gain appreciation of the audio man's point of view.

**The Howard W. Sams Color TV Training Manual** by C. P. Oliphant and Verne M. Ray. Catalog No. TVC-1, 266 pages, paperbound, Howard W. Sams & Co., Inc., 2201 East 46th Street, Indianapolis 5, Ind. Price \$6.95.

Interest in color television is increasing rapidly at both the manufacturer and consumer levels; and it is predicted that for some time well-trained personnel for servicing color receivers will be at a premium. The Sams Color TV Training Manual is designed to train the monochrome service technician so that he can service color receivers. The manual is equally suited to formal training or to self-teaching methods.

The manual is based on the popular Color TV Training Series which ran serially in the PF Reporter. The series has been completely revised and expanded to include latest developments. There are over 500 illustrations, 126 in color. This manual is destined to be to color television what the famous Photofact Television Course is to monochrome television.

The book is divided into three main sections: (1) Principles of the Color TV System, (2) Color Receiver Circuits, and (3) Servicing the Color Receiver. The first section discusses colorimetry, the requirements of the composite color signal,

and the make-up of the color signal. Section Two describes the theory and operation of all color receiver circuits such as the bandpass amplifier, color sync, color killer, demodulators, matrix, the color picture tube and its associated circuits. The servicing section includes complete data on setup procedure, alignment and trouble shooting. All material is written so that it can be understood by any technician who is trained and experienced in the servicing of monochrome receivers.

Included in the appendix are photos of actual color picture tube displays, colorblocks which explain the use of several color bar and white dot generators, and a glossary of color television terms. A group of questions are presented at the end of each chapter. The answers to all questions are included at the back of the book.

## Major Armstrong

*Continued from Page 7*

many honors for the major. Two of them were the Medal of Honor of the Institute of Radio Engineers and the Legion of Honor. His death was a loss of one of the most brilliant and inventive minds in the field of electronics.

Death came in February, 1954, at the age of 63 when the inventor plunged from his 13th floor apartment in New York. Finding a farewell note to his estranged wife, police listed his death as a suicide.

In his final letter, Major Armstrong blamed his round-the-clock absorption in patent litigation for the neglect of his home life and the subsequent separation from his wife. The man who had worked so intensely at every task he tackled had finally gone beyond the point of no return.

## Politics Under Glass

*Continued from Page 3*

CBS came up with a new TV camera, "no hands" telephones, high-speed electronic calculators, and newly designed walkie talkies.

ABC uses Intrafax receivers, which permit bulletins to be flashed on the screen without interrupting speeches, etc.

To make things complete, even the gavel pounding will be better this year. A foot-square post of solid maple was installed next to the speaker's rostrum to take the pounding of the presiding officer's gavel. The idea was to avoid jarring the sensitive microphones when the chair gavels for order.



## **LITTER** *along the highway*

**Do you forget your civic pride and toss wastepaper and tin cans out the car window? Stop a moment and read these facts about a national problem.**

**T**HERE is more soap in America than any other place in the world, but the American countryside often looks as though it were inhabited by pigs, instead of people. It is ironic that a country which stresses cleanliness should be so littered.

Foreigners are amazed at the mess Americans leave in their national parks, along their beaches and along the highways. Take a walk along a public beach, and sparkling beer cans and candy wrappers will stare up at you.

It's true that only God can make a tree, but only we can make the mess. Is it really possible to notice the beauty of the great out-of-doors when Kleenex bushes and coke bottle plants make their way into the underbrush? Is it really thoughtful to throw trash away in a place like the Redwood forest, the Yellowstone National Park, the Grand Canyon or even in a farmer's alfalfa patch? Most



**THIS PILE** of litter, photographed in the median strip of Maryland Route 2, between Baltimore and Annapolis, represents the accumulation of debris picked up in one afternoon on a half-mile of that highway. It was left in the center strip for several days as an object lesson for motorists using the road. (Photo by Maryland State Roads Commission).

persons would not throw refuse on their living room floor, but when it comes to the natural floor of mother earth, they pay little respect to the beauty they are by the Grace of God allowed to witness.

Some states have passed laws to combat the litterbug as much as possible. In the state of Virginia, a litterbug may be fined as much as \$500. That's how much Virginians think of their scenery.

Our countryside is one of the ways we can be refreshed spiritually and mentally. It is just plain selfishness to leave a mess and ruin the scenery for others.

Then there is the money angle. We have to pay more taxes because it takes a sizable amount of money to clean up after us.

A volunteer group, entirely non-profit, known as "Keep America Beautiful, Inc." has as its main purpose the elimination of litter from highways, parks, beaches and other public areas. KAB is backed by business and industry in cooperation with state, city and other civic groups. It is their aim to change the public's habits if they can.

One of their best solutions is the litterbag. The idea is quite simple. Every motorist should carry in the car somewhere a paper bag where he and his family or friends can place their litter. When the car stops at a gas station or besides a roadside receptacle the contents may be thrown away.

It is a very simple thing to keep our scenery looking the way it was meant to look. It takes only a very little thoughtfulness on the part of everyone. Remember, your litterbag is a necessity, if you plan to use America's highways and see America's beauty this summer.

In determining policies and programs for litter prevention and control, Keep America Beautiful's board of directors, headed by William Stolk, President of the American Can Company, will have the benefit of advice and assistance from an advisory council which already represents more than 30 national organizations, including youth, school, farm, conservation, recreation, government and women's groups. Also the Boy Scouts and Girl Scouts will take an active part in the clean-up program.

Impetus for the incorporation of Keep America Beautiful came mainly from those industries whose products and packages careless people throw away in public places. KAB's program will be built around long range continuing education to create awareness of litter as a responsibility to the individual.

## Tips for the Litterbug



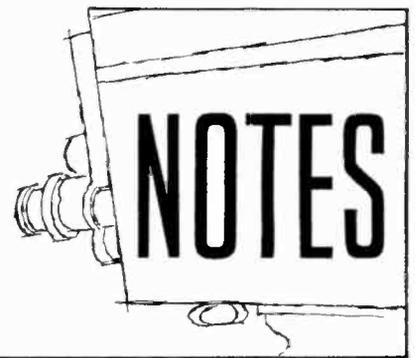
✓  
Keep an empty bag or basket handy at the picnic table to collect waste-paper and scraps. Wind-blown trash can quickly litter a park.



✓  
Disposal cans are provided in most public parks and on city streets. Place trash in a receptacle as soon as the lunch is over.



✓  
An outdoor fireplace is an even better spot for paper disposal. Good campers and picnickers use the fireplaces provided.



## *New Hi-Fi Equipment*

The Theatre and Sound Products Department, Radio Corporation of America, has announced two new hi-fi electronic components for home-assembled music systems—a 12-inch dual loudspeaker with a frequency response of 40 to 18,000 cycles, and a 10-watt amplifier unit which incorporates pre-amplifier and input selector.

The new components are electrically matched and complete with fittings for direct plug-in use with associated RCA hi-fi sound units, according to M. J. Yahr, manager, RCA Distributed Products. The new speaker and amplifier are available from RCA sound products and customized high fidelity distributors.

The 12-inch hi-fi loudspeaker (Type SL-123) features a smooth frequency response over the range of 40 to 18,000 cycles, a power handling capacity of 15 watts, and high reproduction fidelity from pianissimo to full forte. The speaker incorporates a unique rubber damping on both high and low frequency units to provide optimum acoustical impedance and to eliminate standing waves in the suspension and cone.

Smoother crossover response and a wider angle of high frequency response have been obtained, he said, by off-center placement of the speaker's tweeter unit and by the concave design and method of centering the tweeter's center radiator. The SL-123 speaker has a suggested user price of \$55.95.

The 10-watt hi-fi amplifier (SVP-10-A), he said, has been designed to meet a need for a single compact chassis which incorporates input selector, pre-amplifier, and power amplifier functions. Built-in pre-amplifier for magnetic pickups, coupled with the incorporated variable tone controls, makes possible correct tonal balance for all types of recording characteristics.

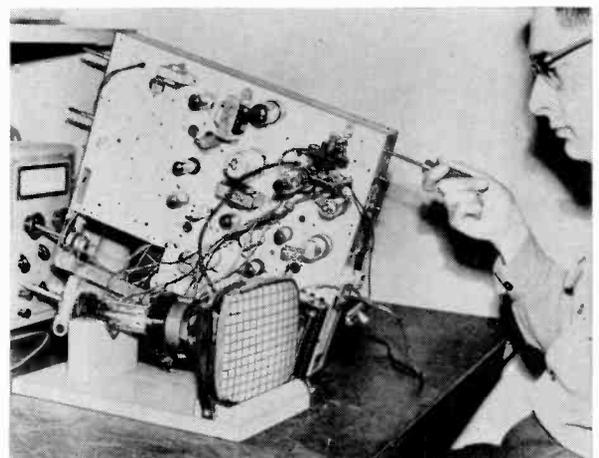
Other features of the new amplifier include a frequency response of 20 to 20,000 cycles, 10

watts output power at less than 3 per cent total distortion, and compact, lightweight design. The unit weighs less than 10 pounds, and measures only 11 inches wide, 7 inches deep and  $7\frac{1}{8}$  inches high. Suggested user price: \$69.95.

## *TV Check Tube Useful*

The new rectangular television receiver check tube, the 8XP4, recently announced by Sylvania Electric Products Inc., is finding many applications. The new tube, shown above mounted in a rack for servicing a chassis, may be used in virtually every electro-magnetically deflected receiver regardless of the deflection angle of the tube for which the receiver was designed. The 8XP4 has a deflection angle of 90 degrees which makes it ideal for testing larger and more popular size picture tubes, the new portable types, and all other new tubes, most of which are now manufactured with 90-degree deflection angles.

The versatility of the 8XP4 is its predominant feature. No external conductive coating or ion trap magnet is required. These time-saving fea-



Sylvania's 8XP4 mounted on the work table for use in checking receiver reception. The technician makes an adjustment with a cross-hatch pattern.

tures, Mr. Atcherley said, combined with the 8XP4's automatic self-focusing, make it possible to use the new tube in receivers designed for either magnetic or electrostatic focus picture tubes.

Packed in the first imprinted white carton used in the industry, the tube is easy to carry. The carton may also be used as a cradle for the new test tube in many instances, he declared.

### ***Half-Inch Camera Tube***

Developmental samples of the one-half-inch vidicon camera tube for use in light-weight, miniature transistorized TV cameras, which are expected to play an important role in NBC's coverage of the national political Conventions in Chicago and San Francisco, will be made available to TV camera manufacturers within a few weeks, L. F. Holleran, general marketing manager, RCA Tube Division, announced on July 20.

Despite its miniature size—it is only three inches long and one-half inch in diameter—Mr. Holleran explained the new vidicon has a greater sensitivity to light than the standard one-inch vidicon camera tube used in present industrial TV systems and TV film cameras. This is due in part to its improved light-sensitive photoconductive layer. Furthermore, he said, the tube has been designed with a heater that minimizes battery drain in order to meet the requirements of small experimental transistorized battery-operated TV cameras that will be carried on Convention floors by NBC commentators and observers.

### ***Remote Tape-Disc System***

Automation in radio programming advanced another step last month with revelation by Gates Radio Co. that it has developed a new two-unit system incorporating facilities for both tape and 45 rpm disc and promising complete and automatic operation.

Known as the "Autostation," the system comprises a production unit for makeup of programs and a playback unit in which taped announcements may trigger a 100-disc Seeburg record assembly or optional tape playback unit for unattended operation.

A complete unit will be offered to radio stations (minus microphone) for \$5,975.

The production unit includes a special speech input console, three tone generators (or oscillators) and binaural tape transport mechanism. Speech system includes tape recording amplifier, monitor amplifier and speaker, microphone and turntable mixing channels. Gates describes the procedure as follows:



NBC commentator Chet Huntley demonstrates what the well-equipped TV reporter will wear at the conventions. He carries portable TV camera and backpack transmitter, two-way transceiver for radio communication (in his pocket) and light portable TV set.

"The sound track for voice or music is on one-half of the binaural tape. The remaining half of the tape is employed for tones, of which three different tones are applied. One of these tones trips the record player and two remaining tones are available for starting up to two tape recorders, such as a delayed sporting event or to trip any two circuits, whatever they might be. Three keys on the control panel, when pressed, apply the desired tone. For operating, the announcer, let's say, is producing a disc show. He makes his first announcement, dubs in a jingle if he wishes. When announcement is over, he presses the tone key that will later automatically operate the record changer. He then makes his second announcement and presses the tone key again, and so on for all announcements on the show.

"When this tape is moved to the M5409 playback unit, only the first announcement is heard as the tone at the end of the announcement automatically starts the record player. When the record is finished, the second taped announcement automatically takes place which, like the first one, when finished starts the next 45 rpm record, continuing for hours without attention."

# Station

# Breaks

## ***CHEX-AM-TV Settles***

A strike by NABET (AFL-CIO) at CHEX-AM-TV, Peterboro, Ontario ended on July 27 as the result of agreement on a contract retroactive to January first. Eleven employees went out on strike on February 18, after 18 months of negotiations for an initial contract failed to produce any results.

The management's offer at the time of the strike was to maintain unchanged wage rates, coupled with the proposal that "merit" increases would be decided on an individual basis, at the management's discretion. The technicians were making \$27 per week and sought wage increases averaging 15 per cent.

The new wage scales and the terms of the new agreement have not yet been announced but will cover announcers, operators and four other employees.

The strike was supported by the Ontario Federal of Labor, the Canadian Council of Authors and Artists and the local CIO-CCL Council. Very substantial support was given the strikers by the United Packinghouse Workers and the United Steel Workers.

## ***Governor Supports Booster***

Governor Edwin C. Johnson, formerly a senator and a member of the Commerce Committee, has issued an executive order permitting a Steamboat Springs, Colo., television dealer to relay television signals from Denver to Steamboat Springs.

The dealer was appointed to the Governor's staff in an effort to protect him against FCC action. The FCC has been moving against unlicensed boosters in the Pacific Northwest and elsewhere. The Governor's action of August 3 has not yet been subjected to comment by the FCC.

## ***Labor's Color Stake***

IBEW Local 1031, which produces more than half of the entire national output of television and radio components, recently presented in Chicago a week-long stage presentation of "A Salute to Color Television." The show was an all-union

spectacular featuring Imogene Coca, Muggsy Spanier and other performers.

Local 1031 President M. F. Darling called color TV "the next big advance" for radio-TV broadcasting and said that "labor has as much at stake in selling and promoting this new kingpin product of our industry as has management."

## ***Videotape Sales Head***

Named manager of the new Video Sales Section of Ampex Corporation, manufacturers of magnetic tape recorders, is Ross H. Snyder.



Creation of the new section is geared to Ampex's current expansion program to meet the demands of the television industry for the new Ampex Videotape Recorder which records television programs on magnetic tape. Snyder, who has been with Ampex since 1952, will also continue in his previous capacity

as manager of Theatre Equipment and Custom Products Sales for the Audio Division.

Before joining Ampex, Snyder was Chief Audio Engineer for radio station KJBS in San Francisco and a consultant on audio investigation for Consumers' Research, Inc. Ampex Corporation also announces a new Engineering Department, in addition to the Audio Engineering Department, to give more emphasis to this new field of development. Charles P. Ginsburg who was project engineer for the development of the Videotape Recorder since its conception over three years ago, has been appointed Chief Engineer of the Video Engineering Department. Named as Senior Project Engineer for Video, according to Gundy, is Charles E. Anderson.

## ***Technician-Engineer***