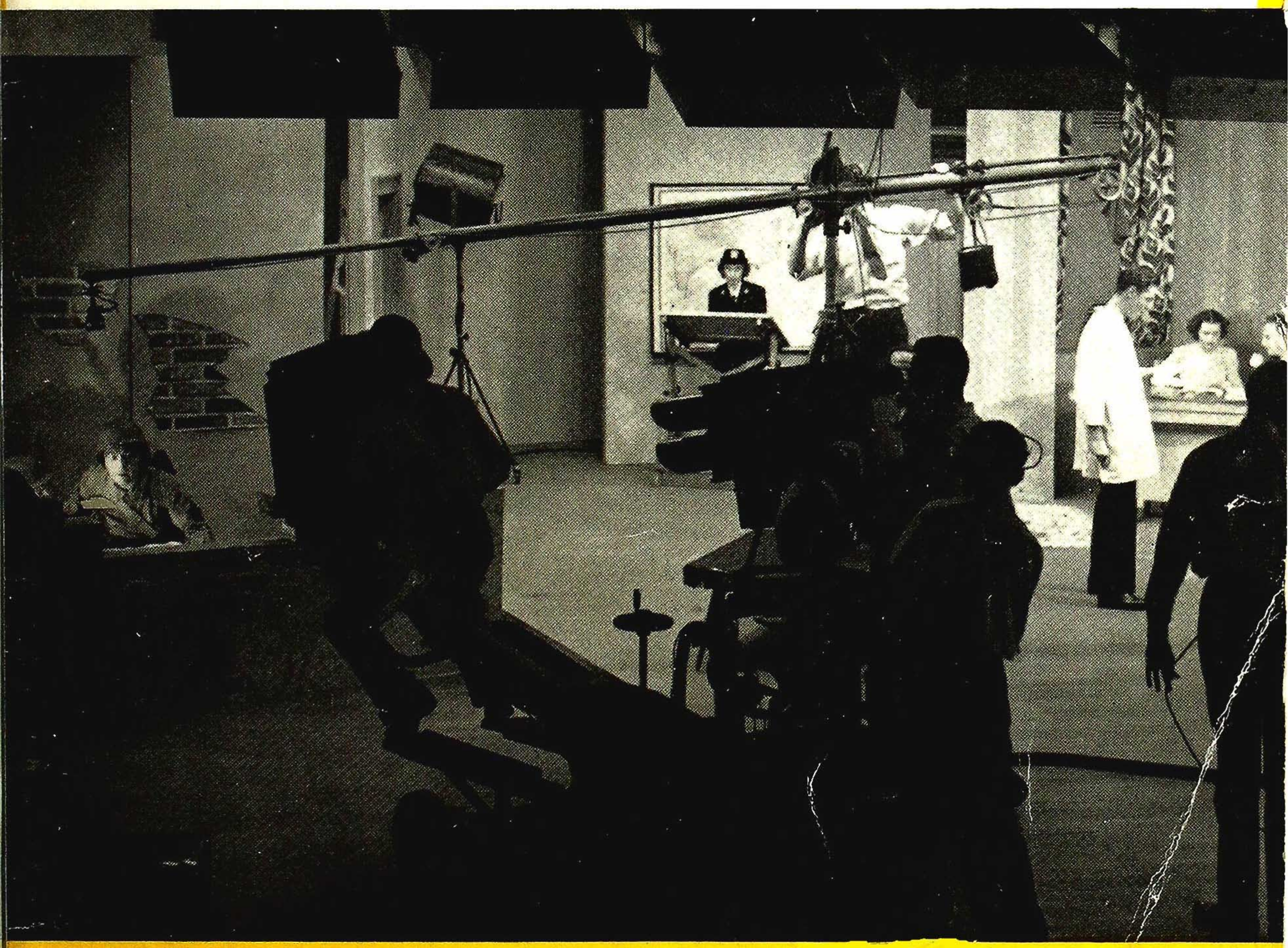
Television

THE MAGAZINE OF VIDEO FACT



One-Minute Film Commercials

Department-Store Survey

Locating a Station

35 CENTS

JANUARY 1945

ANOTHER RCA FIRST!

RCA ANNOUNCES BIG TELEVISION PICTURES AT LOW COST

The public will want brighter, larger images on self-contained screens . . . RCA will have them in postwar receivers!

SUCH pictures are ready now in the laboratory because RCA scientists had the imagination to go outside the field of electronics, into the realms of optics and astronomy, combining special mirrors and lenses into a whole new *system* of television projection.

With this new method, television pictures can now be projected onto large-size screens which are *part of the set itself* . . . big enough to be readily seen from all parts of even the largest living rooms . . .

Once again RCA engineers demonstrate the leadership in inventive research that has made them largely responsible for developing today's television system.

RADIO CORPORATION OF AMERICA

RCA VICTOR DIVISION • CAMDEN, N. J.

LEADS THE WAY... *In Radio... Television... Tubes... Phonographs... Records... Electronics*

RCA... **FIRST WITH THE THINGS THAT COUNT**

Television

THE MAGAZINE OF VIDEO FACT

CONTENTS

JANUARY 1945

VOLUME 1 NUMBER 4

COVER: Interior shot of the WCBW (CBS) studio in New York shows three sets during a telecast of the *Mademoiselle* magazine series, *Government Directives*. Program, an adaptation of a feature in the publication, dramatizes recruiting of young women for war work in co-operation with the War Manpower Commission. Pictured are service opportunities for girl geographers. Photo by Myron Ehrenberg.

Frederick A. Kugel, *Editor and Publisher*
Ben Kaufman, *Managing Editor;* T. R. Kennedy Jr., *Associate Editor*
West Coast—Frances Sage

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Look or listen

by GILBERT SELDES

Dual-purpose shows are analyzed by the director of television programs for the Columbia Broadcasting System. Author of The Seven Lively Arts and 11 other volumes, he has been in charge of CBS video programs since 1937. He has been a reporter, music critic, war correspondent in World War I, associate editor of Collier's, managing editor of The Dial and adapter of the classic play, Lysistrata, for its successful Broadway run in 1930.

BECAUSE television programs are chiefly created nowadays by radio broadcasters, we are frequently asked about programs which serve a double purpose, being good-enough television to justify looking at it, and at the same time being good-enough radio to listen to it *blind*.

Gilbert Seldes

If we were living in an abstract world, the question couldn't come up. As a matter of *pure theory*, a program must be inferior television if it is even moderately good with the video channel blacked out; if you can get 80 per cent of the value of a show without looking at it, then, in pure theory, the money spent for the picture side is wasted. And if it's *good* television, then, in pure theory, it must be bad radio.

But we live in a practical world, and in a practical world the following has happened:

We have on the air *The Missus Goes A-Shopping* which, in television, is not a picture of a radio show; it is re-created as something that has to be seen to be enjoyed. One night something went wrong, and it looked for a moment as if the video signal would fail. The director was faced with an alternative—to stop the program and wait, or to go ahead, knowing that John Reed King and the participants on his show would be very funny even if we didn't see them.

Actually, the threat did not materialize; we stayed on the air with both video and audio. I think that my decision would have been to go ahead with audio alone for a little while, cuing King to cast his material in radio form as much as possible. I think—but I am not absolutely sure.

We have another program, *Opinions on Trial,* which is presented in the shape of an action in a courtroom, and is basically an argument or debate between two groups of people, sometimes on a subject of social importance, sometimes on a trifling matter of human interest. No doubt, a few descriptive words would set the scene of the *court of public opinion* for a radio audience, and by skillful indentification and using names to re-identify it, could be a perfectly sound radio program. But the fact is, when Colonel Stoopnagle and Arthur Godfrey and Sally Victor discussed men's opinions of women's hats, we had pretty girls wearing pretty hats—People's Exhibit A, Defense Exhibit B—and when we discuss the future of German industry, we have charts and animations which really add something to the mere spoken words. In fact, it is my constant quarrel with the directors of this program that they do not visualize enough.

Dual nature of *Opinions on Trial*, CBS video forum, demonstrates that television programs can sometimes be either eye or ear entertainment. Courtroom set dramatizes visual side. Scene is from a discussion of whether blondes make better wives. Placard indicates upkeep involved.

A great deal of the discussion of the dual-purpose program centers around the daytime hours. What will take the place of the serials, clubs, hymns and the like, which are heard while work is being done around the house. There's always a chance that nothing will take the place of these popular programs—at least, not for a very long time. Television *can* operate 24 hours a day, but this in itself is no reason why it should; if radio can give more satisfaction to more people, it would be wasteful to televise. On the other hand, after a generation or two of looking and listening, people may find that they insist on the combination.

Then, it will be up to us to discover new program types, which will have a constant, but not intense, visual appeal, and a sustained audio value almost entirely independent of the pictures. Anyone can think of a dozen examples, the most familiar of which is symphonic music and appropriate scenic movies or famous landscapes. Unfortunately, no one thinks this combination has much *pulling* power, but then, we have all made mistakes about pulling power in our time.

We have a few trick ideas rattling around about the solution of this problem, but they are not yet outside the trick stage. I think that, at the moment, the obligation of a television-program department is to make television—and not to worry about reducing it below its top possible levels.

Coverage of the Presidential election at Columbia's WCBW indicates the twofold character of this type of special program. Returns may be seen or heard with equal ease. Visualization gives the whole picture.

One-minute film commercials

by R. S. EVANS

Theater distribution of miniature, advertising movies shrinks the cost of such films for television, according to the author. Vice-president of General Screen Advertising, Inc., he has been an executive with the Jam Handy Organization and the Saturday Evening Post.

TESTED patterns for the effective use of one-minute film commercials in television are provided by present theater-screen advertising.

On the screens of thousands of neighborhood movie houses, a growing list of major advertisers daily exhibits dramatized sales messages in a minute or 80 seconds of running time. Some of these films have been televised, pointing the way toward two-way distribution of the future and resultant savings for sponsors.

R. S. Evans

These short shorts, which are called *Minute Movies* by my company, are strips of 35-mm. film of 90 or 120 feet. They are shown with newsreels, shorts and trailers at regular theater performances. Of the 17,951 theaters in the United States, more than 10,000 now accept these sponsored, miniature dramas.

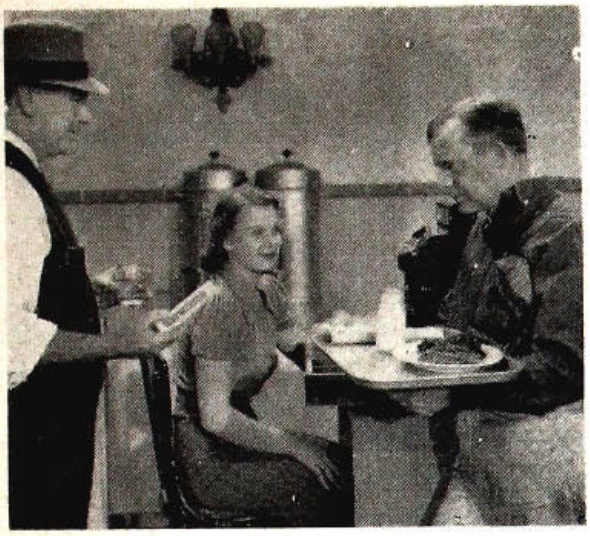
Here is a ready-made proving ground for acquiring television commercial *know-how* and for the all-important goal of achieving public acceptance. Film provides a natural setting for the advertised product because the motion-picture camera can be transported to places, which are impossible or impractical for mobile television equipment.

Surveys of theater audiences are continually made to learn how deep an impression is made by a minute- or 80-second commercial during a three-hour theater program. Readership has been disclosed at 85 per cent of the audience questioned. Of that number, 87 per cent has identified the advertised product. Ninety per cent has remembered one or more complete sales points and has expressed a liking for the advertising.

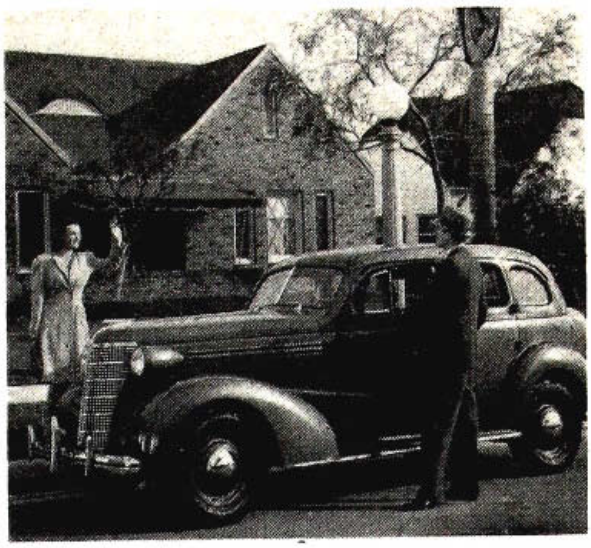
These screen commercials are booked through circuit and independent theaters in every State, offering both urban and rural circulation. Theaters are selected by neighborhoods to reach the advertiser's most likely prospects. Circulation rate is based on the average weekly attendance in each theater. Base rate is $3.00 per thousand, or one-third of a cent per head. An advertiser, who uses his film commercials for television as well as for theatrical distribution, will have the advantage of dividing low costs for master negatives and service prints.

The demands of good taste are paramount for a theater audience, which has paid to be entertained. Our film miniatures are written to provide situations, which are acceptable and believable. Every effort is made to avoid dragging in the product by the heels to the detriment of the incident portrayed.

Production costs of a 35-mm. master negative include script, cast, direction, photography, sound effects and one finished release print. A 35-mm. black-and-white commercial film, 90 feet in length, may be bought for as little as $750. If all or part of the photography must be done on location, costs will increase. If stock shots are used, there may be a saving. In any event, script requirements will determine price.



Alka-Seltzer film short points to twin use in theater and television.



Chevrolet used-car movie indicates the ease of locale shifts on film.

A 35-mm. service print costs about $3.50 for a 90-foot, black-and-white subject; a 16-mm. print, about $1.80.

Production of television films in a series of 13 or more will automatically reduce the costs. Furthermore, television will, no doubt, use 16-mm. master productions with still greater economies. Improvements made during the war with 16-mm. equipment and productions—many of them still secret—will be reflected in processes to be made available after the war.

Script Skills

Creators of television scripts must learn new skills. Attempts by radio writers and others to produce motion-picture scripts have often failed because either they or the sponsor forgot that pictures do so much of the work of conveying the story. As with short, theater commercials, off-screen narration will establish characters and situations with a minimum of time, making it possible to put into the allotted time and footage a condensation of material, available only with the visual medium.

Films have already solved many of television's production problems. The much-discussed riddle of how to solve depth in television studios finds a ready answer in using commercials on film.

One more indication of the kinship between television commercials and movie advertising is the use of short-short film samples in video sales-promotion presentations. Major demonstrations of television have been made in this manner. New York, Chicago and Boston audiences have responded favorably, and other meetings are scheduled.

Theater Results

Imagine a popular, drugstore product with perfect distribution and a blanket of national advertising. Then demonstrate that product on theater screens as the season is tapering off. Results show new penetration of the test markets, which produce sales increases at a profit. Actual example is a series for Alka-Seltzer, an early film user, through Wade Advertising Agency, Chicago. Condition of the sufferer is dramatized, the remedy applied and the relief obtained—all with off-screen narration in natural, everyday situations.

Such is the sort of case history, which television itself will produce with virtually the same methods. All of which leads to the suggestion that the use of films for video commercials has a ready-made pattern of acceptability and success to draw upon for ideas, for talent and for economies.

Locating a station

SELECTION of a station site, erection and equipment of a transmitter and other necessary elements of locating a television outlet should be approached with the same degree of good sense as the establishment of a manufacturing plant, department store or other business.

Exactly how to do this is explained herewith. The material was prepared for TELEVISION by a number of outstanding radio-television engineers, who also are responsible to their firms for choice of sites and materials, filing of proposals with the Federal Communications Commission and other details, down to turning on switches, when the equipment is ready to undertake a service to television-set owners.

Requisites

Purely from the standpoint of station location, the prospective television-outlet operator must consider the following: (1) The station's signal strength in densely populated city areas should be 25,000 micro-volts or better. (2) A mountain or very high building must be available. (3) There must be accessibility of power lines, telephones, water and the like. (4) Roads are important in order to reach the station in all sorts of weather.

It should be remembered that height is necessary because the radiated field varies directly with height. Similarly, the station's *effective power* varies as the square of the height or vertical distance between the transmitting antenna and the listener's receiving antenna.

Selection of the actual site is preceded by an analysis of whether the intended market area will support a station—originating or non-originating. Having determined the economic side, it is important in choosing a location, that the characteristics of the television signal should be understood thoroughly.

Television-radiated impulses, being in the very-high-frequency or VHF range, are of short duration and are seriously distorted by multipath radiation. Multipath distortion is the result of a radiated impulse reaching its destination over two or more paths. The most common multipath distortion, known as *ghosts,* is the result of a mixture of an impulse received over a direct course and one leaving the transmitter at the same time but arriving at the receiving antenna through reflection from a building, mountain or other reflecting surface. The reflected signal has traveled a longer path than the signal received directly, therefore arrives at a later time, resulting in a time delay or phase difference, and shows at the receiver as a ghost.

These television signals or impulses, being VHF, are radiated in straight lines or line of sight from the transmitter. Any object in the path of these signals causes a shadow area in the same manner as a building or a tree would cast a shadow in the path of sunlight.

Site

Understanding these two basic characteristics of the television signal, a site should be selected on either a tall building in the city or on a hill or mountain top a few miles outside the city limits. In either case, it must be ascertained that the antenna will rise above the surrounding terrain or buildings. The greater the antenna height above surrounding buildings or terrain, the freer it will be from shadow areas and multipath radiation. Also, the higher the antenna, the greater will be the distance to the horizon; therefore, the greater the coverage area.

Proximity to air routes and airports must be ascertained. This information must appear in the FCC application. It's a mistake to purchase or take an option on property prior to determining the antenna site in relation to air routes.

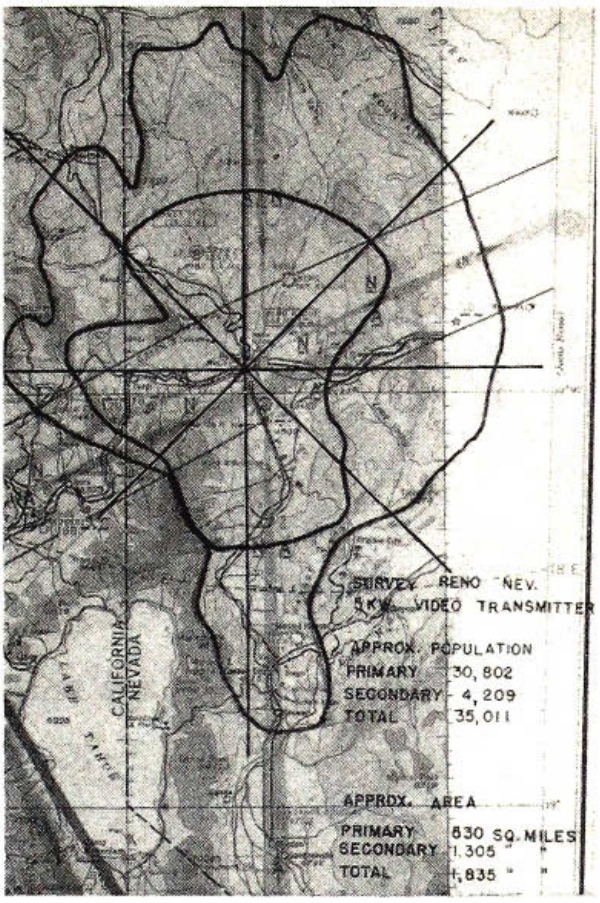
If a mountain top has been selected as the antenna site, accessibility of power lines, roads, telephone lines, water supply and transportation should be considered. Capital and operational cost may increase considerably if it becomes necessary to install power lines for a quarter or half mile, or if a roadway must be built and maintained.

Upon determining the antenna site, the height of the building or mountain above sea level and the latitude and longitude of the property, a preliminary contour map can be computed, using as a scale the formula outlined in the FCC bulletin, *Standards of Good Engineering Practice.* This will indicate the area, which will be served from the antenna site.

Transmitter Link

In the event it is decided to place the transmitter and antenna on a mountain top and maintain studios in a city, the link between the studio and transmitter must be either by coaxial or relay transmitter. If a relay transmitter is to be used, the relay antenna must be placed at the top of the building in direct line with the receiving antenna on the mountain top. As in the selection of an antenna site, an investigation must be made to determine that no obstruction lies between the studio and the transmitter.

Assuming the coverage indicated by the contour would be satisfactory for the successful commercial operation of the station, the next step would be to obtain FCC Form 330, which is used in making application for the construction of a commercial-television station. For those not familiar with this form, it includes qualifying background and financial stability of the applicant, as well as technical information on equipment.



Map shows a proposed station site in Reno and a contour map of the surrounding territory, with a calculated signal strength of five millivolts, the approximate area covered and the population therein. The inside contour line indicates the primary area of coverage. Outer contour line (secondary area) shows the calculated 0.5-millivolt signal limit. The inner contour represents the general service sought in urban areas; the outer contour, that deemed reliable for suburban and rural areas.

Assistance of the following is gratefully acknowledged in the preparation of this article: Dr. Thomas T. Goldsmith, Jr., research director, Allen B. DuMont Laboratories, Inc.; Raymond F. Guy, radio facilities engineer, National Broadcasting Company, New York; Lewis E. Pett, formerly of the FCC engineering department and now a field engineer for DuMont, and Herbert E. Taylor, Jr., assistant director of telecasting-equipment sales for DuMont.

PROGRAMMING

EXPERIMENTATION is beginning to pay off—in program results, anyway. Television shows have come a long way during the past year. Certainly, there are still a lot of problems to be solved, but they can be licked. Though finger pointing is easy for anyone, there comes a time, especially with a new year, when constructive criticism seems to be in order.

Lighting, which is pretty bad now, should stop being a headache when more sensitive pickup tubes are introduced, together with a more skillful handling of illuminants.

Lack of showmanship, sadly apparent in many cases today, will disappear as programmers begin to take television more seriously and put the right people in charge. It is largely a matter of personnel. Budgets count, too, but there have been too many good, low-cost shows to blame slim budgets for poor programs.

On the credit side, while there has been plenty of talk that television would develop its own art form, it has taken Worthington Miner, manager of WCBW (CBS), New York, to furnish concrete evidence that television has found its niche. In his *At Home* series, a certain intimacy has been captured, which seems made to order for the family living room.

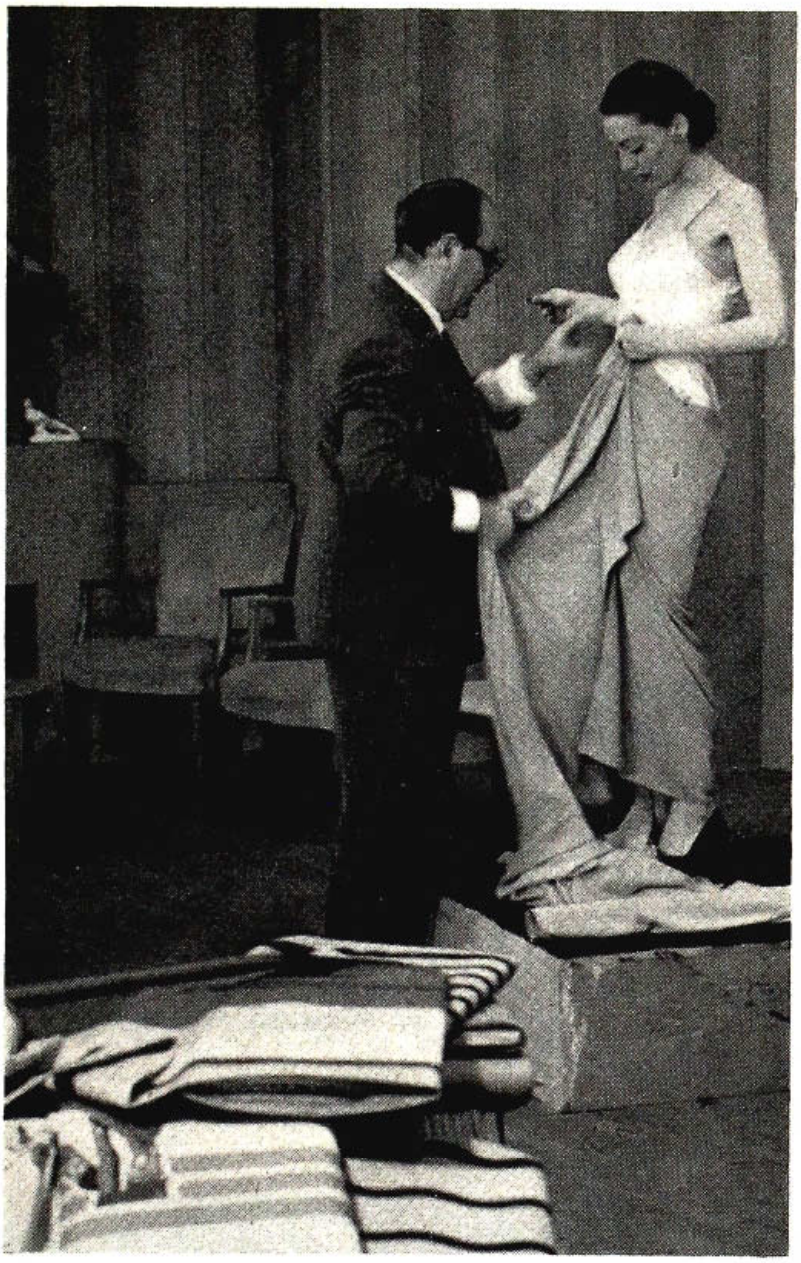
Format of *At Home* is simple. The program consists of a group enjoying itself during an evening at home. One of the couples has learned a new dance step, the attractive girl at the piano can really play boogie-woogie and, maybe, one of the men has an amusing story to tell. It all sounds corny, perhaps, and probably would be on the stage or at the movies. Yet, when the program is seen in a living room, the effect is entirely different and makes for one of the most entertaining television shows to date.

Sports pickups have set a smart standard of eye-and-ear entertainment. Prize fights and wrestling via WNBT (NBC), New York, and football over WPTZ (Philco), Philadelphia, have proved the popular value of on-the-spot telecasts.

Standout of television fare on the West Coast is the seemingly nonstop weekly dramatic stanza, *Embarrassing Situations*, which Klaus Landsberg stages at W6XYZ, the station he directs on the Paramount lot in Hollywood. Landsberg's deft blending of talent and electronic effects is well worth watching.

A significant trend has been the successful reconversion of top radio shows with visual potentialities into television fare. This development will help make programming simpler and more economical in the early postwar period.

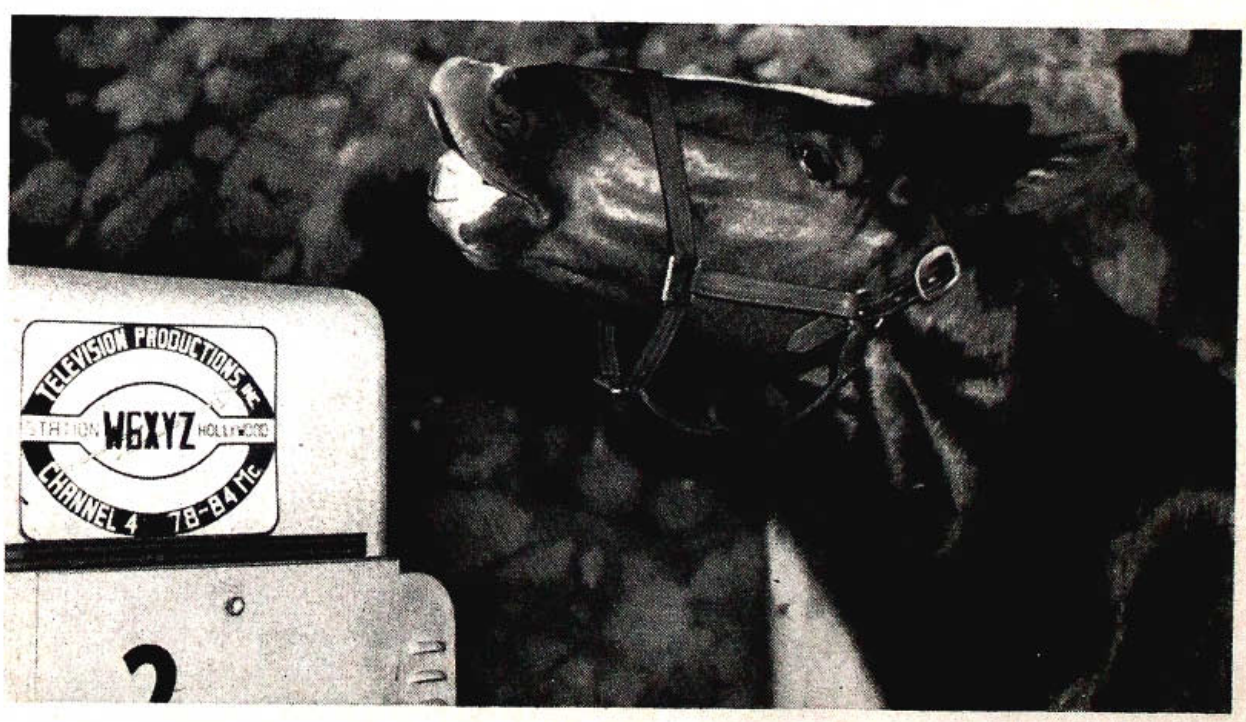
WABD, New York, airs Christmas carols by the St. Ignatius Loyola choir.



WCBW, New York, televises designer Omar Kiam in a demonstration during a studio production of the *Fashions of the Times,* third edition of the newspaper's annual fashion show.

WABD presents a war-bond show with a Pan-American slant, featuring Victoria Cordova, of the radio's *Saludos Amigos.*

WCBW is the host in the *At Home* series. Paquita Anderson, standing, stars. Arthur Godfrey, of the early-morning radio, is guest.



W6XYZ, Hollywood, seems to be getting the horse laugh. Incidentally, the nag is said not to be testifying for a tooth-paste commercial.

DEPARTMENT-STORE SURVEY WEIGHS TELEVISION

HARD-THINKING retailers, on the alert for greater postwar volume, concur in a majority opinion that television is expected to be an effective advertising medium.

Favorable sentiment toward visual-broadcast merchandising is indicated in a cross-section survey of 250 top-ranking department stores by the editors of TELEVISION. Polled were large-volume leaders as well as a representative number of progressive, smaller-volume stores.

Replies to a comprehensive questionnaire have been received from retailers in 25 States. Opinion is tabulated as follows:

Plan to Use Television	51%
Plan not to Use Television . . .	26
Don't know	23

Though a *show-us* attitude is apparent on the part of merchandisers, wholesale skepticism still prevailing toward radio advertising, is not the case in television.

Feeling of the cautious and doubtful about the postwar purchase of video-broadcast time is reflected in the following typical comments: "As soon as it has been properly developed. . . . After it becomes established, possibly five years from now. . . . If costs are not prohibitive. . . . We intend to feel our way. . . . As soon as it proves itself. . . . Our store of one-and-a-quarter-million volume is too small to consider this yet. . . . As soon as radio stations locally are ready. . . . When our customers have receiving sets sufficient to justify it."

Intra-Store

Installation of wired, intra-store television as a visual stimulus to store-wide sales is planned by nine per cent, based on an estimated equipment cost of $50,000. The number jumps to 14 per cent, figuring an initial outlay of $25,000. Intra-store television is believed sound, however, by 35 per cent.

Attitude toward the soundness of internal television systems includes such opinions as: "Sound, perhaps, but we are more interested in an additional external medium. . . . Yes, from what we know of it. . . . Could be. . . . I fail to see what good such television would be."

Station Ownership

Ownership of television stations is contemplated by seven per cent, considering an equipment budget from $100,000 to $500,000. This trend is already noticeable in the recent applications to the Federal Communications Commission by such stores as Maison Blanche, New Orleans; Filene's, Boston, and Gimbel Brothers, Philadelphia. Others with television interests include Macy's, New York, and Bamberger's, Newark, through the Bamberger Broadcasting Service (WOR), New York, and Abraham & Straus, Brooklyn, and Bloomingdale's, New York, through Metropolitan Television, New York.

Keeping up with television has also meant that this forward-looking advertising project has been delegated to a specific executive by 47 per cent of the replying retailers. Usually in charge is the publicity director, a policy-making executive in a department store as distinguished from the purely space-grabbing variety in other enterprises.

Findings of this survey are presented only as indications of a trend. Outlook for department-store television is promising in view of the limited amount of visual broadcasting that has been seen by U. S. stores. When more retailers have the opportunity to observe television, the number in favor may increase, judging from the figures computed in the present poll.

The experts speak

FROM all over the Nation 1,000 video-minded delegates gathered last month for a two-day convention in New York. They heard almost every available U. S. expert on television at this, the first annual conference of the Television Broadcasters Association.

Significant was the diversity of interests represented. Among them were advertisers, advertising agencies, broadcast-equipment manufacturers, department stores, film producers and exhibitors, foreign governments, newspapers and radio and television broadcasters.

Delegates bore witness to the most extensive views ever exchanged on the television art under the same roof. Presentations were delivered in speeches, panel sessions and a technical, question-and-answer period. A few high spots from the testimony of a long list of sight-and-sound specialists are glimpsed in the following columns.

Advertising

Discussion became heated among the advertising-agency representatives over the perennial question of whether programs would be controlled by either the networks or agencies.

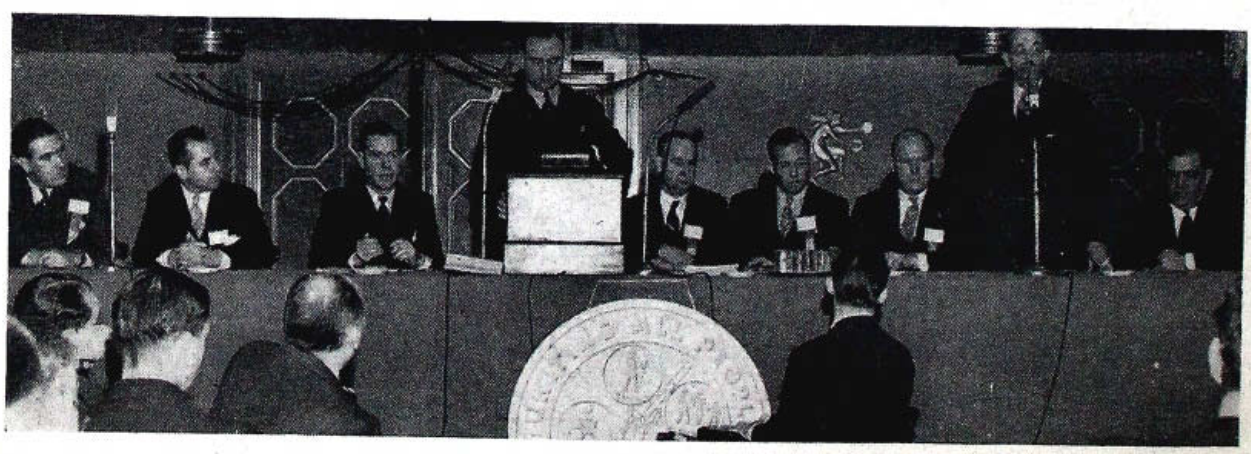
Controversy arose over a statement by John F. Royal, vice-president of NBC in charge of television that, as far as possible, "programs should be booked as complete shows to fill definite periods through one booker." Debate simmered down to the conclusion that, since major radio programs are produced by advertising agencies, the future would bring the same for television.

Broadcasting

Physical requirements of a new standard-band broadcasting studio, which would best anticipate the future needs of television, were pointed out by O. B. Hanson, vice-president and chief engineer of NBC. Measurements, he observed in answer to a question, would be "something in the order of not less than 25 feet for height, not less than 40 feet wide and somewhere between 70 and 90 feet long.

"For television," observed Hanson, "you do not have to decorate the studio. You have to have some acoustic treatment in it, have the sound approved, but you must have ceiling height in order to install your lighting fixtures and other gadgets that are necessary to hang scenery and so forth.

L. to R.: Bingley, Philco; Keister, GE; Landsberg, W6XYZ; Goldsmith, consultant; Brolly, WBKB; Mason, Anthony stations; DuMont; Hanson, NBC; Jolliffe, RCA.



"It would be highly desirable to have that studio on the ground floor because, in television, you may want to bring large objects into the studio, and it would be difficult if you had to take them on an elevator up to a higher floor. My feeling about it is that we would like to build television studios on an open lot and have some space around the lot so that we could do some things outside as well as inside."

Commented J. E. Keister, transmitter engineer of the General Electric Co.: "In designing such a studio, you should really design a television studio and you would have plenty of facilities and power and space for your broadcasting."

Feasibility of merging all phases of broadcasting operation into one station authorization by the FCC was the subject of another query. The answer came from Dr. Charles B. Jolliffe, vice-president and chief engineer of RCA Victor Division.

"I think it is desirable," Dr. Jolliffe declared, "and probably will result eventually that all broadcasting in a station, that is, AM, FM, television and any other forms of broadcasting, may be dated under a single authorization or in a single location. However, I do not think that any broadcaster should consider, just because he is in the sound-broadcasting business, that he necessarily has a preference before the FCC as a sight broadcaster."

Continued the RCA vice-president: "I think that it is going to be a long time before the FCC will consider that, in any new field of broadcasting or any other form of communication, the existing operator has any preference. We are going to have to prove our ability to carry on the new service just as you originally showed your ability to carry on the service that you are now carrying on."

Concluding his reply, Dr. Jolliffe remarked that "sound broadcasters are apt to take the same attitude that the buggy manufacturers took toward the automobile . . . they have a nice business now and do not want something coming in to spoil it. So, be careful that you don't remain a buggy manufacturer and let the automobile industry go out beyond you."

When asked whether television will be practical for stations in small markets, NBC's Hanson declared: "I think any market that will support a standard-band broadcasting station can support a television station. Our experience," said Hanson, "indicates that the technical costs of operating a television station are somewhere between three and four times that of a standard-band broadcasting station.

L. to R.: Gibson, GE; Landsberg, W6XYZ; Cuff, DuMont; Knight, Philco; Williams, NBC; Comdr. Eddy, formerly WBKB.

"It is generally conceded—and experience upholds—that television has an impact of not less than ten times that of oral broadcasting upon the audience. Depending upon how well the program is produced, and how interesting it is, that impact may be anywhere between 10 and 100 times. Thus, if costs are somewhat higher, it is assumed that the advertiser, if he can get at least 10 times the effect, will be willing to pay more for that service."

Small-town stations could draw on local talent sources, such as colleges and newspapers, indicated Robert L. Gibson, assistant to the vice-president in charge of broadcasting at GE.

Film

"The only real saving in personnel and equipment will come in the use of film," asserted Thomas H. Hutchinson, production director of RKO Television Corp. "Three men can handle a television program if it is on film where a live-studio performance or a mobile-unit pickup would involve somewhere between 15 and 20 men."

Broadcasting of entertainment-type film programs was explained by John T. Williams, business manager of WNBT, the NBC television station in New York. "Management's efforts to obtain film from the major and most minor film-producing concerns have met with small success.

"In spite of the reluctance of these firms to make available to television their productions, either old or new," said Williams, "NBC has been able to offer film programs to its audience twice each week on broadcasts lasting two hours each evening. On occasion our film features compare favorably with the offerings in the neighborhood theaters.

"To those of you who are planning to operate stations," the NBC business manager continued, "this lack of up-to-date entertainment film should not be alarming. You will find sufficient film available to program your station properly in its infancy through commercial and independent distributors, who want to do business with television."

Queried about what a manufacturer of 16-mm. products can do for the television industry, A. H. Brolly, chief engineer of WBKB (Balaban & Katz), Chicago, replied: "I think that 16-mm. motion-picture film and equipment are very well adapted to television. I won't say that they are the whole answer because there is still a great use of 35-mm. But 16-mm., in order to be used for television, must be of high quality to do justice both to the film and television. . . . The quality must be good, both as to pictures and sound. There is a great deal of 16-mm. that is very fine now but there is a great deal that is not suitable for television.

Dr. Allen B. DuMont, president of the firm bearing his name, which also operates WABD, New York, added that "we have been doing quite a bit of work, recording all of our programs." He explained that "the broadcast station today records on disks . . . and we have been recording our programs on 16-mm." But he stated that there is a definite need for better equipment than is available.

"It is not entirely satisfactory," Dr. DuMont said, "and I think ultimately there will be quite a market developed there. Another use for 16-mm film, of course, is in the projection room that Mr. Brolly has spoken about, and, at the present time, there is no commercial 16-mm. projector available for stations."

A close and mutually beneficial relationship between the film and television industries was forecast by Dr. Alfred N. Goldsmith, consulting engineer, who presided at the question-and-answer session.

Programming

An industry programming code was recommended by John F. Royal, NBC television chief, to guarantee the

presentation of clean programs. "We must control this phase of our business from within," he said, "and thus prevent attacks from without. Television will be a large target for sharpshooters from different directions, and it is for us to make ourselves so invulnerable that our critics shall have nothing at which to shoot."

Self-censorship from the point of view of good taste was advocated by Lee Cooley, director of television for Ruthrauff & Ryan, Inc.

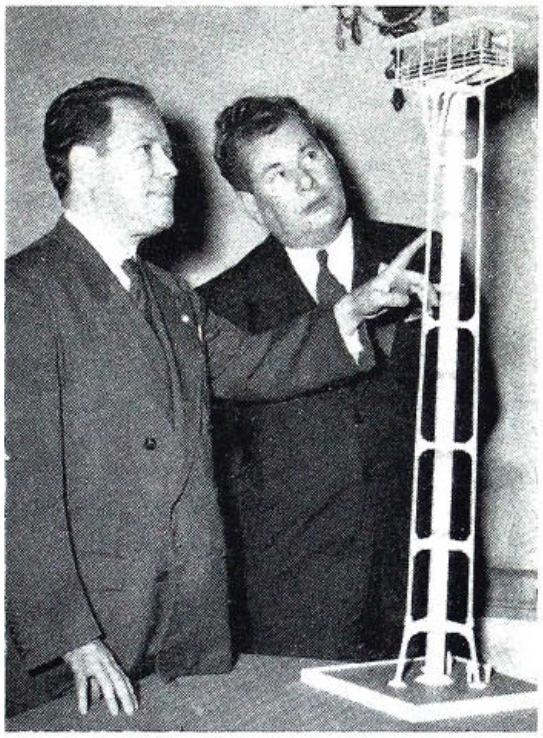
There is no difference in motion-picture and television make-up, stated Klaus Landsberg, director of W6XYZ (Television Productions, Inc.) on the Paramount lot in Hollywood. He noted an exception, however, "for the slightly darker make-up that must be used in television as long as we use more light."

The television audience will not stay home of an evening to see a good 30-minute program, which is surrounded by a lot of bad programs, according to RKO's Hutchinson. "All of which leads me to wonder," he said, "whether or not a potential television client would not get better results if he bought an hour and a half one night a week rather than six 15-minute periods spread over six days. I realize that this refutes the advertising theory of the necessity of repetition and its proven results, but are we going to find the same thing true in television that we found in radio?"

Relays

Nationwide transmission of television programs via a two-way radio link was described by Walter S. Lemmon, general manager of the radio-type division of International Business Machines Corp.

In co-operation with the General Electric Co., Lemmon stated, "We have recently received construction permits from the FCC to set up this system between New York and Washington and also New York and Schenectady. If the initial experimental operation proves satisfactory, we can readily extend the system across the country to Chicago and other points West."



Walter S. Lemmon, of IBM, describes automatic relay tower to Paul L. Chamberlain, GE.

Accommodating at least two high-definition images in each direction, Lemmon explained, the proposed inter-city system will also be capable of carrying "several high-quality FM broadcast programs, several facsimile channels for picture transmission and a number of high-speed circuits for transmitting the fast impulses of various business machines." These, he indicated, will provide the "pay load" for the support of television until the video art is full-grown.

"The present relay system we are constructing," he said, "will carry band widths of 10 to 12 megacycles, and we believe these can be widened to 20 mc. as the art develops. . . . The relay stations are designed to be fully automatic in operation, although, during the first year, we will provide attendants to observe the characteristics of operation."

COMMERCIALS

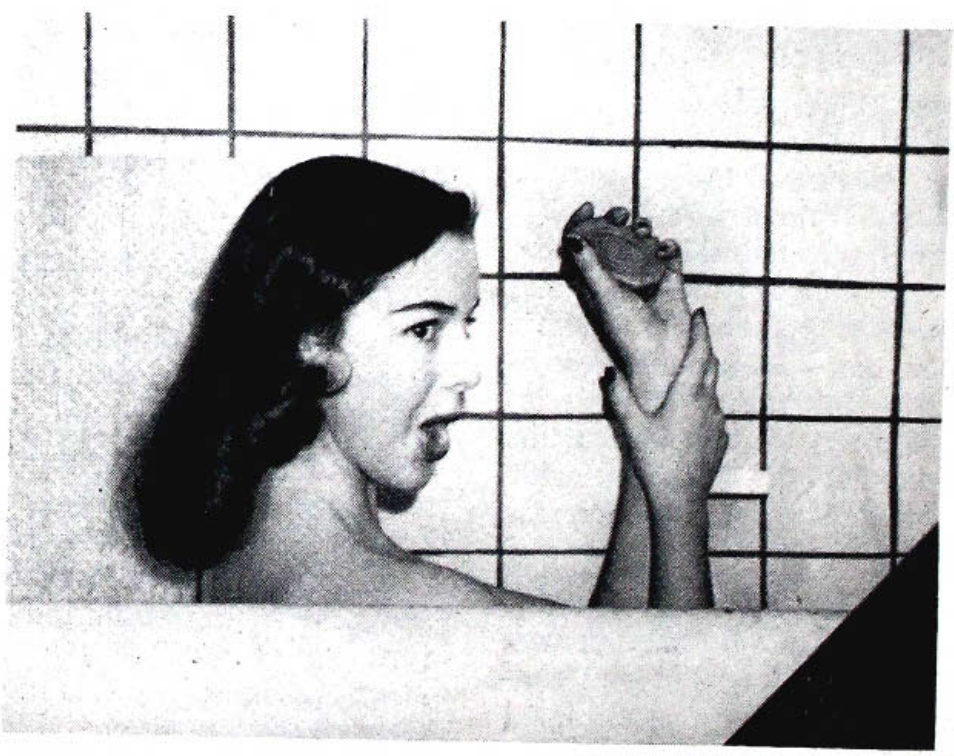
IF seeing is believing, there's no more effective way of selling goods than by television.

Proof of the view that television adds an ingredient to broadcast selling is seen in the growing participation of major sponsors and advertising agencies. This interest, which reached its highest point during the past year, is being shown by the same groups that have found standard-radio broadcasting profitable.

Commercial participation along experimental lines has been easy on budgets, too. Though six of the nine U.S. video outlets carry commercials, only WNBT (NBC), New York, makes a time charge, which is nominal at that.

Free air time for commercial experimentation has been granted by: WABD (DuMont), New York; WPTZ (Philco), Philadelphia; WRGB (General Electric), Schenectady, N. Y.; WBKB (Balaban & Katz), Chicago, and W6XAO (Don Lee), Hollywood.

Reason for this apparent gift is shrewdly forward-looking. Aside from the promotional value of instilling confidence in television, broadcasters feel that, since present circulation of sets is token, establishing a rate at this time may set too low a level for future charges. Even the exception, NBC, has no rate card at this time, negotiating all sponsored shows individually at nominal cost.



Larry Colwell

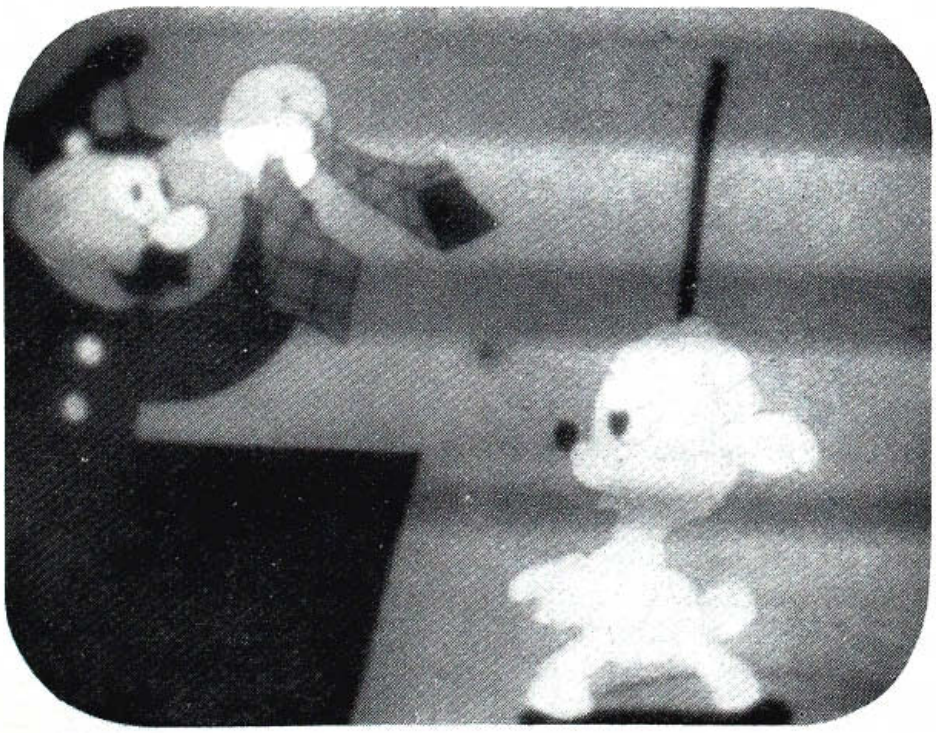
Ruthrauff & Ryan, Inc., offers a singing commercial for Lifebuoy at WABD. Prepared by Lee Cooley.

Kenyon & Eckhardt, Inc., displays a cross-section miniature of the Richard Hudnut salon on Fifth Avenue in behalf of the firm's Success Course. Glorianne Lehr, producer of the program at WABD, stands alongside building model.

Hudnut make-up is tested on twins to demonstrate *before* and *after* effect of the firm's cosmetics.

Commonwealth Edison Co. of Chicago pictures cooking methods in kitchen capers at WBKB.

Norman D. Waters exhibits effectiveness of Cel-o-sheen tablecloth in program at WABD.



Alfred J. Silberstein, Inc., uses animated film cartoons for Botany Worsted Mills over WNBT. Each cartoon is climaxed by a weather forecast, which is faded in by an appropriate trailer. Photos are off a television screen.

IT HAPPENED IN 1944

LOOKING back over the past year's events reveals the rapidly growing acceptance of television and the tremendous promise of things to come. Despite the grim obstacles of global war, the video art has experienced a renaissance. The record tells the story.

Applications to the Federal Communications Commission for construction permits authorizing television stations indicated phenomenal industry interest. Commercial licenses were sought by 98 applicants up to Dec. 21, 1944, as compared with only 14 requests on Dec. 31, 1943.

The television panel of the Radio Technical Planning Board reached definite conclusions, which were passed on to the FCC. These recommendations for lower frequencies in commercial broadcasting and higher ranges for experimental operation represented the crystallized opinion of the overwhelming majority of engineers and industrialists. Stabilized progress awaited the acceptance of these conclusions by the FCC.

Announcement was made of the postwar availability of larger-dimension pictures for home receivers. Postwar images will apparently run up to 18 x 24 inches. Substantial reductions were made in the likely cost of cathode-ray tubes. Wartime applications of these tubes have resulted in mass production on a hitherto undreamed-of scale, which has also brought higher precision and quality. Experimentation on circuits and their improvement pointed the way toward better and cheaper receivers. These developments, among others, will make possible $150 sets, which have already been indicated by Emerson Radio & Phonograph Corp. and RCA Victor Division.

More sensitive pickup tubes were forecast. Their arrival offers promise of bringing an audience any news event that the human eye can see.

Theater television aroused great interest in the film industry. Ambitious plans were recommended to the FCC by the Society of Motion Picture Engineers.

Syndication methods for distribution of programs got under way. Significant were eight applications for radio-relay stations filed with the FCC in mid-December by Television Productions, Inc., operator of W6XYZ, Paramount Pictures' subsidiary in Hollywood. Plans revealed that either two-way home transmission or, more probably, one-way theater operation, was contemplated on a nationwide basis. Applications stated that prospective programs were not intended to be received directly by the public, thus indicating a web of theater outlets was intended. Licenses were asked for relay links in Peru Mountain (Vt.), New York, Buffalo, Detroit, El Paso, Des Moines, Chicago and Los Angeles.

In the course of the year, the American Telephone & Telegraph Co. proposed radio-relay and coaxial-cable systems, with equalized telephone lines for short-distance pickups. International Business Machines Corp. and General Electric Co. put forward a combined television and teletype relay. Western Union and Radio Corporation of America planned a radio-relay system for telegraphy. Raytheon Manufacturing Co. projected a relay for television. Philco Corp. filed for a New York-to-Washington relay for television to supplement that organization's present relay to New York via NBC, which is in turn hooked up to GE in Schenectady.

Television Broadcasters Association, one year old this month, held a convention, which was attended by 1,000 delegates. Amazing response from all quarters of the business world proved that television was accepted.

TELEVISION IN REVIEW

Advertising Accounts

Year-end commercial participation indicated the firm undertone of the preceding months. In the face of the holiday season, advertising agencies and sponsors were active at the following stations:

WABD (DuMont), New York—Anderson, Davis & Platte, Inc., for Alexander Smith & Sons Carpet Co. (package show by Bud Gamble); BBD&O, Liberty Mutual Insurance Co. (film package by RKO Television Corp.); *direct,* Gertz Department Store, Jamaica, N. Y., and Gimbel Brothers, Philadelphia (packages by Television Workshop).

Also at DuMont were Al Paul Lefton Co., Inc., for Loft Candy Corp.; *direct,* R. H. Macy & Co., Inc. (scheduled live package by RKO); Ruthrauff & Ryan, Inc., Lever Brothers' Lifebuoy, Rinso and Spry; Charles M. Storm Co., Tintex.

WNBT (NBC), New York—The Biow Co., Inc., Bulova Watch Co.; Maxon, Inc., Gillette Safety Razor Co., Inc.; Alfred J. Silberstein, Inc., Botany Worsted Mills; Sweeney & James Co., Cleveland, Firestone Tire & Rubber Co.; J. Walter Thompson Co., RCA Victor institutional.

WPTZ (Philco), Philadelphia—*Direct,* Philco institutional.

WRGB (General Electric), Schenectady, N. Y.—*Direct,* GE institutional; relay from NBC of Bulova, Gillette, Botany and Firestone commercials.

WBKB (Balaban & Katz), Chicago—*Direct,* Commonwealth Edison.

W6XAO (Don Lee), Hollywood—Lee Ringer, Broadway Department Store; Foote, Cone & Belding, Nu-Made Mayonnaise.

Agency Developments

William H. Weintraub & Co., Inc., plans a video debut this month. . . . William Esty & Co. has assigned two of its radio producers, Kenneth MacGregor and Kendall Foster, to head television activities, which are expected to get going soon under the general supervision of Thomas D. Luckenbill, vice-president in charge of radio.

N. W. Ayer & Son, Inc., will have a television program on the air by next month. . . . Young & Rubicam, Inc., is dickering for time at DuMont. . . . J. Walter Thompson Co.'s television projects are now being handled solely by Tom Weatherly since Gene Kuhne's transfer to the agency's motion-picture department as a writer-producer.

Allocations

The Federal Communications Commission expects to issue its report on frequency allocations for non-governmental services about Jan. 15, it was learned as this issue went to press. Proposals of the Commission will provide about 30 days for the filing of briefs and oral arguments before a final decision is announced.

If the FCC accepts the recommendations of the Radio Technical Planning Board, television will be given the green light provided State Department approval is forthcoming.

Better Images

Controversy over better television pictures, which began last April when the Columbia Broadcasting System announced its upper-spectrum policy, flared anew in recent conflicting announcements by that network and the National Broadcasting Co.

Clearer, sharper images had been developed in France during the Nazi occupation, it was reported in a broadcast by Edward R. Murrow, chief of the CBS European staff. Evidence to the contrary was presented by John F. Royal, vice-president in charge of television at NBC, at the first annual conference of the Television Broadcasters Association.

Having heard that 1,000-line television was ready in France, Royal stated he had asked John McVane, NBC Paris representative, to investigate. McVane replied that Jean Guignebert, director general of French radio, threw cold water on rumors current in America that France had made tremendous strides in television during the war and was ready to make practical use of high-frequency television after the war.

According to McVane, Guignebert said: "I believe it will take us at least four and probably many more years of experimentation with 1,000-line high-frequency television before it will be practicable for the public. . . . At the moment France is not ready even to go ahead with 450-line television except on a minor experimental scale."

CBS countered with a cabled interview from Paris. Charles Collingwood, that network's correspondent in the French capital, reported that Rene Barthelemy, chief engineer of Compagnie Francaise de Television, had confirmed that practical 1,000-line television had been developed in France.

"If it has been suggested in the United States," Collingwood quoted Barthelemy, "that the 1,000-line television, which we have developed in the Compagnie des Compteurs (parent company of the Compagnie Francaise de Television) laboratories, is of no practical importance, I can only say that I and the firm with which I am associated feel that 1,000-line television is ready for exploitation and that it is perfectly feasible. This is not to say that the new television will be available to the public tomorrow or even in a few months. But there is no longer any insurmountable technical obstacle to putting it into general use."

Barthelemy, according to Collingwood, explained that he had been working specifically on 1,000-line television since 1940 and during that time his company spent more than 10,000,000 francs on the research which led to the present development.

(*For further opinions on television pictures greater than the present standard of 525 lines, see p.* 19.)

New FCC Chairman

Harris & Ewing

Paul A. Porter

Paul A. Porter is now acting as chairman of the Federal Communications Commission, following a recess appointment to membership on the Commission by the President to fill the unexpired term of former Chairman James L. Fly.

Appointment of Porter is expected to be confirmed by the incoming Senate. In which case he will be named chairman officially by the President. Meanwhile, he has taken over the temporary chairmanship held by Commissioner Ewell K. Jett since Fly's resignation.

The recess apointment was made necessary by the failure of the outgoing Senate to act on Porter's nom-

ination to the FCC in November.

Former publicity director of the Democratic National Committee, Porter was, from 1937 until 1942, Washington counsel for the Columbia Broadcasting System. Since leaving CBS, he has also held major posts with the Office of Price Administration, War Food Administration and Office of Economic Stabilization.

Presidential Inauguration

Plans have been under way for some time by Philco Corp. to relay the fourth-term inauguration of President Franklin D. Roosevelt. Up to press time, arrangements, except for engineering details, seemed to be set. The hookup would be to Philadelphia, with possible network links to New York and Schenectady provided the signal were effective. Technical problems, though, might easily upset the whole project.

Stations

The Blue Network is negotiating with the DuMont and General Electric stations for use of their facilities. . . . Paul B. Mowrey, veteran producer formerly with the CBS video department, is now the Blue's supervisor of television.

WABD (DuMont), New York, is in the throes of expansion, with workmen busily constructing an addition to the recently opened Studio B. . . . For the second consecutive year, George Lowther has directed an adaptation of Dickens' *A Christmas Carol.*

WCBW (CBS), New York, is believed to be planning extra broadcasting hours on a new Tuesday schedule, which will be added to the station's present Thursday and Friday evening sessions.

WNBT (NBC), New York, is understood to have an expanded program of live shows in the works for this year, but no one's talking—at least, until the allocations situation clears up. . . . A commercial rate card is known to be in preparation.

WPTZ (Philco), Philadelphia, was visited recently by a camera crew from RKO-Pathe, which photographed the station's remote football setup at the University of Pennsylvania's Franklin Field for a film short on television soon to be seen in the movie houses.

WRGB (General Electric), Schenectady, N. Y., is expected to begin a series of experimental commercial stanzas produced by the station's program department, which aims to learn how some productions are going to be treated commercially.

WBKB (Balaban & Katz), Chicago, is planning a lot of commercial activity with advertising agencies. . . . Comdr. Bill Eddy, former general manager now on leave to the Navy, is touring the country recruiting likely youngsters for naval radar.

W9XZV (Zenith), Chicago, has been off the air while the final stage of its transmitter has been rebuilt. . . . Broadcasting is expected to recommence shortly.

W6XAO (Don Lee), Hollywood, has scheduled a fortnightly program by the newly formed workshop of the Affiliated Committee for Television, which has been organized by the Hollywood guilds and unions. Shows are written and produced co-operatively for the sake of learning the video technique.

W6XYZ (Television Productions, Inc.), Hollywood, will resume this month its war-service program of touring Army and Navy hospitals in this vicinity with a mobile unit.

TBA

For a selective coverage of the first annual conference of the Television Broadcasters Association, see *The Experts Speak,* pp. 14-19.

Following the convention, the board of directors elected officers. J. R. Poppele, secretary and chief engineer of the Bamberger Broad-

casting Service (WOR), New York, was chosen president. He succeeds Dr. Allen B. DuMont.

Robert L. Gibson, assistant to the vice-president in charge of broadcasting at General Electric, was named vice-president, succeeding Lewis Allen Weiss, executive vice-president of the Don Lee Broadcasting System. O. B. Hanson, vice-president and chief engineer of the National Broadcasting Co., replaced Poppele as assistant secretary-treasurer.

Re-elected were Will Baltin, secretary-treasurer and three board members, whose one-year terms had expired. They were Dr. DuMont, Curtis W. Mason, chief engineer of the Earle C. Anthony radio stations, and F. J. Bingley, chief television engineer of Philco Corp.

Eight new members were approved by the board for admission to TBA, bringing the total up to 37 organizations. New, active members were Farnsworth Television & Radio Corp.; Yankee Network, Inc., Boston, and Bremer Broadcasting Corp., Newark. Affiliates approved were Rauland Corp. and American Television Laboratories, both of Chicago; Federal Telephone & Radio Corp., Newark; Pan-American Television, New York, and Twentieth Century-Fox Film Corp.

Amendment of the bylaws was also voted to permit educational institutions to apply for membership.

Awards were made at the convention to the following: first honors for a general contribution to television went to Brig. Gen. David Sarnoff, on leave from the presidency of Radio Corp. of America to the Army. Other citations in this group were given to Dr. Walter R. G. Baker, vice-president in charge of electronics at GE; David B. Smith, director of research for Philco, and Dr. Alfred N. Goldsmith, consulting engineer.

Recognition for technical achievement was accorded RCA's Dr. Vladimir K. Zworykin, who received the first award. Others cited were Philo T. Farnsworth, chief engineer of Farnsworth Television & Radio Corp.; Lloyd Espenschied, consulting engineer for Bell Telephone Laboratories; Dr. Peter C. Goldmark, formerly chief television engineer of the Columbia Broadcasting System and now its director of engineering research and development, and Dr. DuMont.

Program awards were received by stations WABD, DuMont (first); WCBW, CBS; WNBT, NBC; WPTZ, Philco; WRGB, GE, and W6XYZ, Television Productions, Inc. Interesting was the fact that CBS was cited despite its recent withdrawal from TBA.

Brig. Gen. David Sarnoff receives the first gold-medal award for a general contribution to television from Paul Raibourn, head of the awards committee for the TBA conference. Worthington Miner, of CBS, is a smiling onlooker.

BBD&O looks at television

by TED LONG

Batten, Barton, Durstine & Osborn, Inc., presents an advertising-agency viewpoint through the head of its television and motion-picture department. The writer has been in radio since 1927. A former producer-director, he has been in charge of broadcasting for Lord & Thomas in Chicago and of programs for CBS in Washington, D. C.

ADVERTISING agencies are interested in every medium capable of communicating information in behalf of their clients' products to large groups of people.

Television, we at BBD&O have decided, has the potentialities of becoming an effective mass medium; possibly, in the future, one of the most effective available to an advertiser. The reasons for this seem to us to be fairly apparent.

Ted Long

Combine sight and sound, add animation and the transmission of all three by radio directly into the home, as does television, and it is easy to understand why this advertising agency is interested in television as a sales medium; why we have been doing something about our interest for the past two years.

We have learned much about television during this short period, but there is still much to know. There was one thing that we found out rather quickly. To be really familiar with the medium, it is necessary to work in it. That is the reason we have produced commercial-television programs on an experimental basis for about two-score clients.

Our feeling is that we are abreast of today's television, that we have some good ideas about its future, that we know something about the medium—what to expect, what not to expect. We feel that we have some acceptable ideas about how to use it commercially. But perhaps, best of all, we have proved to our own satisfaction that the same rules of good showmanship and good advertising apply to television as to other media. There are really no great mysteries about commercial-television programming. The *know-how* comes in the adaptation of the material to the medium.

What is said here is not intended to brand us at BBD&O as *television experts*. There are as yet no television experts, at least as far as programs go. There hasn't yet been enough time or actual experience to create them. We are, however, learning very fast and we expect to go on experimenting with commercial-television programs in as intelligent a fashion as we can.

Perhaps it would be of interest to know something about some of the television shows we have produced. In our experience, we have covered most of the types falling into the usual categories—variety, drama, comedy, novelty. Added to these are programs that have been pure experiments.

For instance, we put on one program made up entirely of commercials back in our earlier days. We wanted to know what would and what would not be acceptable to the television audience. We thought we knew but we wanted to make sure if we could. So, the question was pointedly put to our audience.

"We're going to show you six conceivable post-war television commercials," it was announced, "and we

want your frank opinion about them —which you like, which you do not and why."

In every instance, the audience's answer held true to predictable reasoning. Again, it was a matter of good showmanship and good advertising being most acceptable. You might be interested in three typical answers. They are quoted as received:

"I hate commercials in all forms," said one, "always have and always will. So, I hate to admit it but I went out and bought a bottle of Wildroot after seeing your commercial." That is not an uncommon reaction to some commercials we know in radio.

"Very good," another declared, "but try to keep them shorter and more entertaining." That is another expected reaction. One thing it points out is that the message can, comparing it with radio, be as effective or more effective in shorter time.

"Commercial number six—the funny one—was the best part of the show," stated the third reply. Well, it doesn't take a Nielson chart or a CAB rating to prove that people like to laugh. The whole point about television commercials is that a sense of proportion, a sense of good taste, knowledge of the medium, good showmanship, good advertising — those same ingredients that make successfull advertising impressions in other media—will put them across in television.

Radio Approach

Another type of commercial-television program approach is via radio. You have probably heard the opinion that radio programs are not good television-program fare. I am not in sympathy with this thinking. Conversely, I think that a great many radio programs in their radio state, or only slightly revised from that state, will make excellent television-program material. As a matter of fact, it is most conceivable that the commercial-television programming approach in the postwar period will more nearly follow that of radio than that of motion pictures or the theater.

Interesting is the effect of such an approach on the economics of programming. There is continually much talk about the cost of producing television programs. It seems fair to say that no one now knows accurately what will make up those costs for the postwar years, or whenever television gets into operation on a commercial scale. It is much too early to estimate accurately. There are many reasons.

On the card-rate side, the factors involved go way down into the hourly cost of actual station operation, personnel costs, actual listening areas, number of sets in the coverage area and facilities required, among other considerations. The willingness of the expected audience to buy receivers is not yet accurately determined. On the programming side, costs that may be used as yardsticks are very uncertain, particularly those applying to material or personnel. How then is it possible to think in terms of cost for postwar commercial-television programs? It is impossible to do so at this stage of the art's advancement within anything approaching narrow limits.

Cost Comparison

There are some things, however, that do offer constructive thinking. In the first place the *Class-A* type of motion picture, or even a capsule version in the Hollywood manner, would cost too much money for a television program. If we turn to the *Class-B* or low-budget type of movie, even in capsule format and even if the cost comes within reach, we are at best delivering for commercial-television programming a second-best kind of entertainment. No medium can long stand if its best features are second-best. Ultimately, commercial television will have to stand on its own feet by developing its own type of programming and, in the meantime, the radio approach would seem to offer a natural lead-in. At least, it is worth consideration.

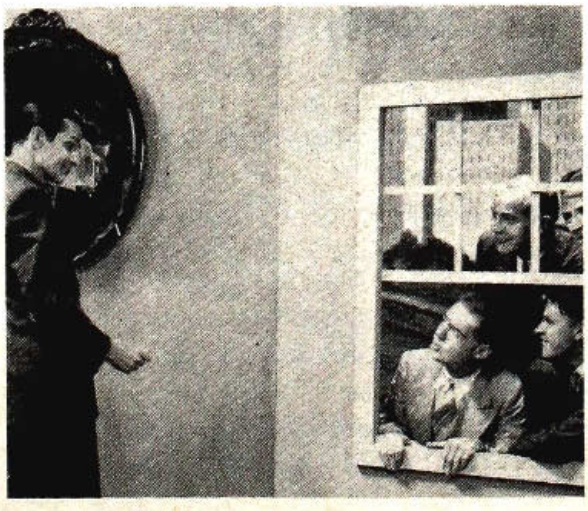
Granting such consideration, it begins to be possible to think in terms of costs for commercial-television programming by thinking in terms of cost for radio plus the cost of adding sight to sound. Our experience indicates that such costs for commercial-television programs are not likely to be out of proportion with returns that such commercial programs may reasonably be expected to give.

It is not particularly important at this stage of television's development to determine whether such projected costs would average 125 per cent or 175 per cent of comparable radio costs. It is only important that, when television reaches the stage of being an advertising medium, the cost per thousand for the advertiser to reach the audience is in economic proportion. The really important thing is that, if television is to be a large-scale success, it must be a successful advertising medium. There is every reason to believe that everyone concerned with the industry—broadcaster, advertiser, advertising agency, manufacturer, even the listener—will work as diligently as possible to bring the cost per listener within the reach of the advertiser.

Finally, if the costs for television advertising are in proportion, television will be a good advertising medium. It will then take its place among those media which, when correctly used, result in drastic decreases in product-production costs, enabling the public to buy for less. It is entirely conceivable that television may produce for itself this favorable advertising position.

Much of what has been written here is indirectly along the lines of pointing a way for future commercial-television programming. Advertising agencies have a considerable responsibility in the future success of television. There is much current speculation about a dearth of television-program fare. I think that there need be no fear. In the United States there are about 2,000 advertising agencies—some large, some small. A majority of them are involved in radio to some degree. About two score of them produce most of the major programs we hear on the air. I think that it is safe to assume that these same agencies, plus a few more, will inherit the responsibility of television programs.

Certainly, with such a fund of interested and creative talent available, there need be no fear of an aedquate supply of good television programs. BBD&O expects to continue with its experimentation and study of television, pending the day of actual commercial television, in the belief that preparation is necessary.



A shaggy mane is reason for friends to look in and present the sufferer with a bottle of Wildroot hair tonic to correct an uncouth top. This BBD&O commercial has been seen on WRGB.

Scenic problems

by EDNA GAMBLE

An active designer of television scenery tells how she works. She has created and executed scenic art for productions by major advertising agencies at WABD, New York.

CREATING scenery for television presents many technical problems, which have not been faced by scenic artists in other branches of the entertainment world. Advantages and drawbacks of the visual-broadcasting medium must be understood to design and execute television scenery effectively.

Edna Gamble

For the sake of realism, it is preferable to construct much of the scenery for interiors rather than paint it on backdrops or flats. Many interiors today, however, are composed largely of painted material, with bookcases, moldings and the like painted on flats rather than built in separate units. This procedure is the result of low budgets and lack of space in which to store bulky pieces. Constructed parts increase the cost of sets. Too much projecting scenery would be impractical in small studios, further limiting the space in which actors can move about.

A practical layout for a producer, who requires many interiors, is a set designed in eight or 10 sectional units. These sections can then be shifted to varying angles and different parts of the room, thus allowing the construction of several complete interiors from the same basic set. Sets should be constructed of lightweight material and designed so that they can be shifted easily. Best-quality material is not essential. The television camera picks up the effect produced rather than the quality of the material.

Because of the meager amount of space in some studios, exteriors have to be painted with greater perspective. However, even if you had, say, 20 feet in which to place scenery behind the actors to create distance in an outdoor locale, much of the scene would be lost because of the limited depth of field of the present-day television camera. If the background is any great distance behind the actors, the camera cannot take the foreground and background simultaneously with equal clarity. If the background were painted with proper perspective and placed close behind the actors, the illusion of depth would then be sustained.

Brilliance is an important factor in painting a scene. Often when a scene is painted too dark, it steals the light from the picture, since dark colors absorb light. Even though the director feels that a dark scene will best project the mood and plot of his story, the light is taken from the actors and they are thus less clearly defined. It would be better to keep the scenery in light tones and create a mood through the use of effective illumination. There has been too little experimentation in lighting thus far due, no doubt, to the lack of sufficient rehearsal time.

Most people become fidgety after about five minutes of looking at a television broadcast. Much of this loss of interest stems from the static quality of the present television picture, which is a result of the flat lighting from the overhead banks of lights and flat scenery. Today most shadows have to be painted on flat scenery. However, if scenery were built and had more angles, there would be a constant change and shifting of

Scene from circus production by the Sketch Book company over WABD shows spacious effect in a 15-foot drop. In foreground are Irene Hawthorne, of the Theatre Guild's *Sing Out, Sweet Land,* and Henry Swarze, of the new musical, *Central Park.*

shadows and a greater variation of composition as the camera is moved. The resulting picture would be less monotonous.

Often a dark floor in the studio will absorb half the light from the picture. To prevent this loss of illumination, a light-toned rug may be placed on the floor, or an inexpensive flooring may be added, which, in any case, will help to complete exterior scenes. A background of clouds was used in a sky ballet for which I recently did the scenery. It was found that the dark studio floor destroyed the entire effect of dancing in the clouds. We added a painted floor on which we placed a design of clouds like that of the backdrop. The desired effect of fantasy with almost ethereal clouds was sustained and heightened. The picture was clearer and more brilliant.

Most of the scenery I have painted has been in tones of gray because it is easier for the producer, viewing the finished set, to visualize at once what the scenery will look on the screen—even before rehearsals. Colored scenery is more expensive and presents special problems to the scenic artist. Since present-day television is monochrome, colors are translated in transmission into various tones of the gray scale. There is always a loss of brilliance when colored scenery appears on the television screen. Colors on the scenery itself may seem sufficient to the eye, both in brilliance and contrast, but the same colors on monochromatic television may be too closely akin in tonal quality. The scenic artist must know the tele-value of each color used—into exactly what shade of gray it will be translated—and must often sacrifice realism for the sake of tonal contrast.

Some technical knowledge of the medium is a big help. For example, if you have a black door on one side of the set and none on the other, the picture is unbalanced and there will be a flare on one side. It is inadvis-

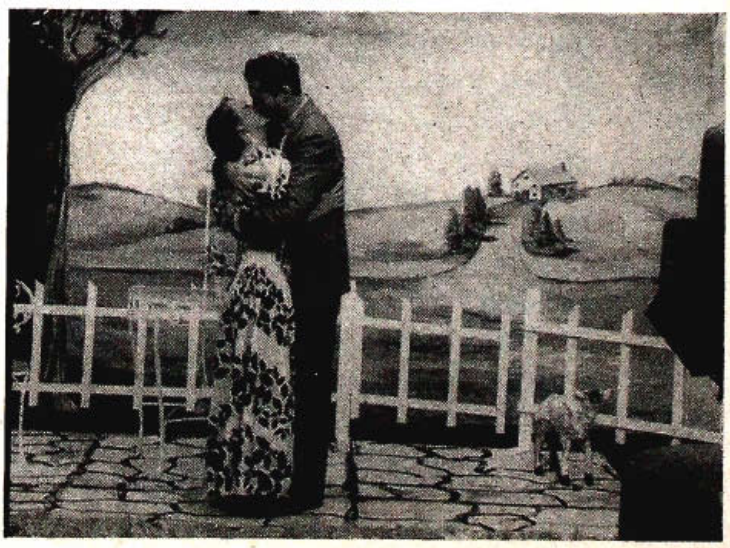
able to have background patterns too regular because, when the pattern hits the edge of the tube, there will be a slight distortion.

Regardless of how well the scenery has been made, if the set is not properly dressed, much of the desired effect is lost. There is nothing more discouraging to the scenic artist than a good set with the wrong props. Tones of furniture and draperies should be chosen to harmonize with the set and to give proper contrast. For instance, in one of my commercials for the Louis E. Westheimer & Co. advertising agency of St. Louis, a living-room set was designed for a Victorian-style residence. During rehearsals we used dark mahogany furniture and heavy brocade hangings. These props weren't too dark to use, though they darkened the scene slightly. However, when the actors came on the scene, several of them were wearing dark clothes, and we found that we would have to change the furniture and drapes in order to lighten the picture. The same scene was used in another studio with stronger lighting, and it was unnecessary to make any changes.

Another time, when we were unable to illuminate the set sufficiently with the available lighting equipment, we changed the script so that we could place a table covered with a white cloth in the center of the scene. This cloth reflected the light on the faces of the actors, compensating for the lack of proper lighting.

As a general rule, I avoid the use of black except to emphasize detail. Pure white should also be avoided. Too much white near the face makes the actor appear too dark. In one of my commercials, however, this darkened effect was desired. The Ruthrauff & Ryan advertising agency wanted a scene in which light coming from the horizon would silhouette a young couple sitting on a hilltop. We placed a light on the horizon behind the hilltop and turned down the lighting in the foreground. We found that the light behind the hilltop was not strong enough to give the amount of light necessary for this picture. But we still wanted to achieve this effect. Our solution of the problem was to paint the clouds on the horizon a brilliant white to compensate for the light needed to bring out the horizon. Contrast was heightened by darkening the grass rugs on the hilltop.

To sum up, settings must be adapted to the limitations of the studio and studio equipment. Light scenery is better than dark, because the television picture needs as much light as possible for contrast and clarity. The scenic artist must be able to visualize settings, props and performers in terms of tonal value on the screen in order to compensate, as far as possible, for the present static quality of the television picture.



Loss of light is prevented by the addition of a floor made of composition board and painted to simulate flagstone blocks. Scene is from one of the Winthrop Shoe Co. dramatic series staged at WABD.

ONE MAN'S REFLECTIONS

A Regular Feature by *DR. ALFRED N. GOLDSMITH*

What Is a Television Receiver?

Offhand, there seems to be an obvious answer to the question: "What is a television receiver?" In fact, it might be wondered why anyone should ask the question. And yet, the previous history of most manufacturing shows that there is real need to define even such apparently simple terms in unequivocal language.

Consider, for example, so seemingly innocuous a term as all-wave receiver. Products thus designated were put on the market by the radio industry. Some objections were raised on the ground that the receivers did not, in fact, receive *all* waves but only a limited segment of the frequency spectrum. Then the question arose whether such a receiver should alternatively be termed a short-wave receiver. Here again, some dissatisfaction with the proposed designation was voiced on the ground that the receiver did not pick up *all* short waves but only some of them.

Calling such a set an international-broadcasting receiver also seemed appropriate to some, although (as is well known) there are a number of bands used in international short-wave broadcasting. Accordingly, differences of opinion might arise between those who believed that *all* these bands should be received by any international short-wave receiver and those who held that reception of only one or two of the more important bands devoted to that service should be sufficient to justify calling the article in question an international short-wave receiver. The practical conclusion may be drawn that, even in cases where a term seems simple and accurate on casual examination, it may not prove to be completely so when more critically examined.

Some questions are therefore worth studying. How far will accurate designation and labeling of television receivers be in the interests of all concerned? Will these procedures place manufacturers on a parity of initial opportunity? Will they encourage television broadcasters? Will they lead the public to a correct understanding of the range and type of performance, as well as the utility of the television merchandise purchased?

Unless a term descriptive of a product conveys a correct impression to every prospective purchaser (or at least to all such customers as have a normal and reasonable viewpoint), there will be disappointment and dissatisfaction after the purchase has been made. This is neither to the benefit of the public nor to that of the industry. One of the best protections, which the reputation of an industry can enjoy, is public confidence in the honesty and correctness of the sales representations of that industry.

Returning to the description of a television receiver, it is soon found that this is an unusually difficult

erm to define accurately and on a basis acceptable to all involved. To begin with, a television receiver may be called on to receive many wide channels, particularly in the larger cities where the maximum number of television broadcasting stations may normally be expected to be established. On the other hand, in some of the smaller cities, the relatively high cost of television stations may limit their number to, say, one or two.

Shall all television receivers be capable of receiving all channels devoted to that service? If so, a certain economic handicap will be introduced for a considerable portion of the television audience. On the other hand, if the number of receivable channels is limited, the public will not be fully served in the larger cities. Considerable injustice will also be done to some of the television broadcasters, who have assumed the burden of building up a new art on Government-assigned frequencies and then are, in effect, deprived of their audience by failure to provide universal reception of their channels.

Easiest Construction

It is well known that it is usually easiest to construct receivers covering a given range of frequencies when such frequencies lie in a continuous series, each channel being adjacent to the next. But it is unlikely that television channels will enjoy that happy fate. They are more likely to be, at least in part, noncontiguous. This introduces further complications in providing for the reception of all the channels in a universal receiver—and again emphasizes the economic element.

Current differences of opinion between those who advocate television between about 50 and 300 megacycles, on the one hand, and those who urge its transfer to the channels well above 400 mc., on the other hand, do not contribute to the ease of solving the question of what a television receiver should contain. If television were to start commercially on the lower-frequency channels, but if it were made clear to the prospective television-receiver purchaser that television would shortly be transferred to some other range of frequencies, it is quite possible that either the receiver sale would not be consummated at all or that the customer would insist on having a receiver capable of picking up not only the lower frequencies in present commercial use but also those likely to be allocated for that purpose in the future. Technically and economically, such a demand might be a nightmare to the receiver designer and manufacturer alike.

Push-Button Tuning

Experience has shown that push-button tuning is particularly attractive in such cases as that of television, where definite channels of considerable width have been assigned and where accuracy of tuning is desirable without undue skill on the part of the user. Yet, push-button tuning adds expense to the receiver, and this added cost is in some general proportion to the number of stations to be handled by the receiver.

Assuming a television receiver to be provided with means for picking up any of the channels assigned to that service, shall each such channel have its push-button selector, or shall only some of the channels be thus provided? And if only some, how many?

It is seen that the term, television receiver, might mean at one extreme a set capable of push-button selection of any and all the channels assigned to television. Or it might mean a receiver covering only a portion of the available television

channels and capable of selecting some of these by a limited number of push buttons. Or it might be capable only of selecting any offered channel by knob-tuning control. It might cover only one of several frequency ranges devoted to commercial *and* experimental television, or it might be responsive to all.

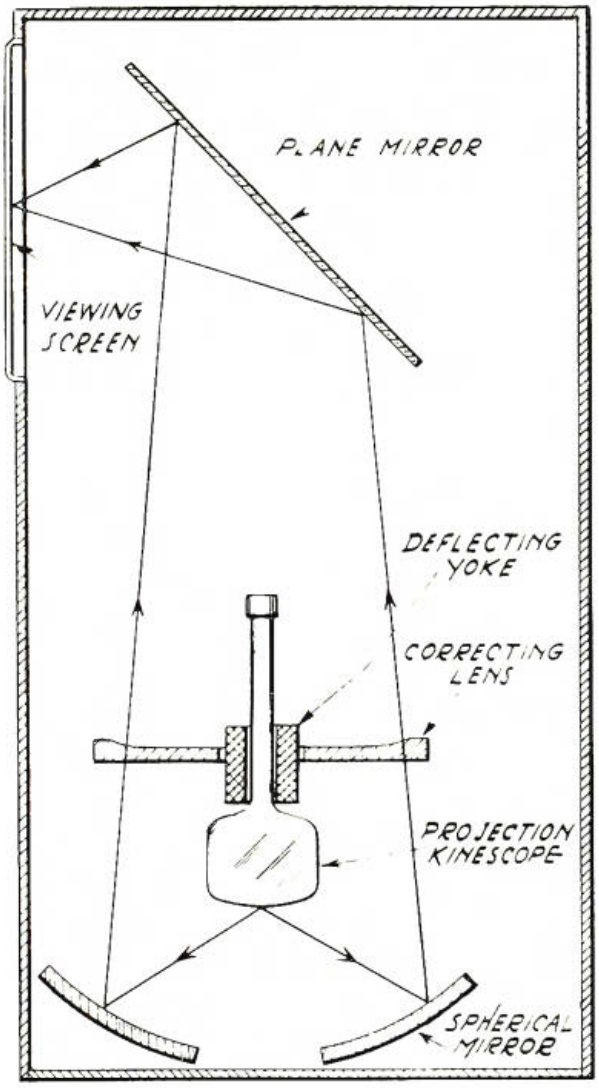
The economic factors involved indicate the undesirability of trying to force all customers to buy a type of receiver, which is necessary only for those living in large cities where there are many television stations. Perhaps, television receivers should exist in several types of increasing scope and performance and of fair adaptability, in each case, to the local conditions which the customer faces. Probably, the maximum number of channels, which will be used in any city for some time to come, will be on the order of 12 or 16; the minimum may be as low as one channel.

Wide Range

Whether so wide a range of requirements can be covered by one or two receiver types, or whether a greater number of types is economically justified, remains to be seen after further technical and commercial study and after the Federal Communications Commission has determined the television-frequency allocations.

A logical group to study the question of what constitutes a television receiver is the Radio Manufacturers Association. It can presumably define the term after detailed study in such fashion as to be fair to the set purchaser, to all cities served by television, to the broadcasters serving such cities, and to the manufacturers of television receivers. And the present is a good time to begin such a study, which, at best, will require general industry understanding and agreement.

PROJECTION-RECEIVER TYPE



Cross-section of a projection set shows the optical system. This one will be mass produced after the war by RCA. The illustration has been inserted by the editors to show typically what will be built.

The diagonal-lined rectangle is the cabinet. The projection kinescope, similar in construction to any cathode-ray tube, is of very high intensity. Its strong rays are reflected upward to the 18-by-24-inch screen, which is fixed in this case but may be retractable. Receiving circuits and other elements of the receiver are not indicated.

EDITORIALS

Film vs. Live Programs

Films will be tolerated only as program fillers by future television audiences, according to a recent statement by Lewis Allen Weiss, executive vice-president of the Don Lee Broadcasting System, operator of W6XAO, Hollywood video outlet. There are many, equally expert, who would take issue with such an opinion.

The only realistic approach is to consider television just another medium of entertainment. Whether the program is film or live won't be the criterion. All that will count is putting on a pleasing show. Almost anyone would rather watch a good movie than a third-rate live program.

Entertainment—not spontaneity—is the factor in program appeal.

Production Code

A lot of people would be disappointed if Gypsy Rose Lee appeared in a Broadway musical and failed to do her famous strip-tease number. This art form, though, has no place in the home on a television screen.

Recently, viewers in the New York area were treated to a display of the strip tease by a lesser-known exponent of that revealing art. Here is an example of why TELEVISION, a couple of issues back, conducted a nationwide poll of television broadcasters to determine the necessity of a production code for the industry. Consensus was that self-regulation must be the answer.

Unless a voluntary code is adopted, outside blue-nose groups are likely to step in and impose an unwelcome censorship.

Audience Preferences

Ever since electronic television got under way for the general public about four and one-half years ago, there have been audience-preference surveys.

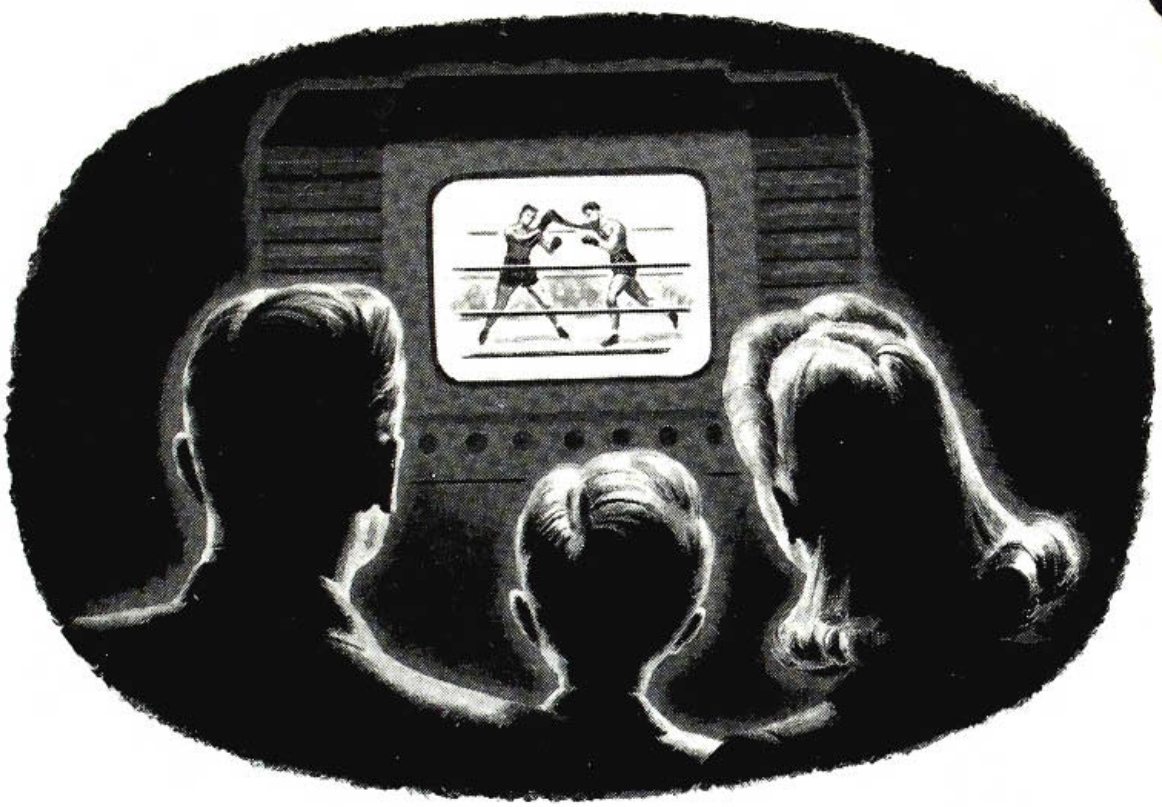
These rule-of-thumb yardsticks of opinion have been used as evidence of program popularity. Perhaps, they do give the true picture. It would seem that, if they did, it would be pure coincidence. What with the complete irregularity of program quality and the many varied types, it is impossible to draw a true picture from present surveys.

Perhaps, musical comedy rates lower than drama. Is this because drama is performed better and the right musical-comedy technique has not been found? Or is it because the audience prefers drama to musicals? How about comedy? Have we asked the audience to judge a fourth-rate comedian against prize fights at Madison Square Garden? How would Bob Hope rate if he competed against these same bouts at the Garden?

The only way, then, to get some indication of audience preferences would be by comparing different-type programs of equal quality, say, Jack Benny as against *We, the People*. Here we would have two top radio shows in their respective fields.

Surveys can be a valuable aid in determining audience preferences. At present, though, there are far too many qualifications for any positive statement as to the viewer's choice. A Gilbert-and-Sullivan devotee might rate G&S on television very low. Whereas, if the D'Oyly Carte Opera Company were doing it on television, that viewer would undoubtedly rate it high.

A reasonable conclusion would be that the time isn't yet ripe to allow audience surveys to guide today's embryonic programming efforts.



9000 HOURS OF TELEVISION

Philco Television Station WPTZ in Philadelphia has pioneered since 1932. Philco engineers have telecast more than 9000 hours of television programs. Dramas, variety shows, movies and civic programs have been televised at WPTZ . . . as well as news and sports events direct from the scene of action.

As part of Philco's television research program, these diversified telecasts have helped Philco engineers to develop new ideas in transmission and reception. Among them, America's first television wireless relay link. A share in creating America's first television network. The flat-face receiver tube. The ion trap. Improved sharpness, clarity and detail of television pictures. These milestones in television progress indicate what you may expect from Philco pioneering tomorrow!

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TELEVISION

Quiz

FOR PROSPECTIVE STATION OWNERS

1. What firm's pioneering development of the Cathode-ray Tube (the heart of a television set) gave television its first *clear* pictures... and made television commercially possible?

2. What manufacturer's national advertising—for more than a year—has been devoted to answering the public's eager questions about television?

3. What company designed and built 3 of the 9 television stations on the air today (more than any other company)?

4. What firm's extensive experience in television station design, construction and operation has set a pattern for profitable management of an average-size station?

5. What manufacturer's experimental station telecasting equipment has been providing a week-in-week-out demonstration of low operating cost and rugged dependability since the summer of 1940?

6. What firm's strong patent position assures clients of exclusive and important features not matched by other companies' television station equipment?

7. What company's experimental television station was the first to offer the use of its facilities during wartime to advertisers and advertising agencies to develop commercial techniques... and to provide experienced directors, writers and talent for television's inevitably-swift postwar expansion?

8. What manufacturer has provided a plan to instruct operating executives and technical crews, which will insure the efficient commercial operation of your postwar station?

9. What firm's telecasting equipment is rated "tops" in signal transmitting efficiency and effectiveness... and in installation and operating economies?

A. ***The one-word answer to all these questions is:*** **DuMONT**

A copy of "Planning Your Television Station" is yours for the asking. This booklet outlines equipment requirements for a complete, low-cost telecast operation... and suggests plans for expediting postwar delivery of equipment and training of personnel.

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