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Televiser

JOURNAL OF TELEVISION



A Rehearsal of a Variety Show at CBS Television

- ➔ A GUIDE FOR NEW PRODUCERS—PAGE 9
- ➔ TRAINING TELEVISION PERSONNEL—PAGE 11
- ➔ DETAILS OF TELEVISER'S "TELEVISION INSTITUTE"—PAGE 24

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presents

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Federal Telephone and Radio Corporation



Newark 1, N. J.

Sept.-Oct., 1945

With the war's conclusion comes television's long awaited opportunity to put on its long trousers and to step out as a young, robust industry—bringing employment to thousands, entertainment and enlightenment to millions. The immediate weeks and months ahead are fateful ones for television and for all those associated with this new postwar industry!

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Televiser

JOURNAL OF VIDEO PRODUCTION, ADVERTISING & OPERATION

Published by TELEVISION PUBLICATIONS, 11 W. 42nd St., New York City

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LETTERS TO THE TELEVISER

From Sam Cuff . . .

Editor of TELEVISER:

With the expansion of television and the subsequent multiplication of operational problems at DuMont, we have found it necessary to formulate certain policies which hereafter will govern the management of Station WABD. These policies have not just been dreamed up, but have grown out of difficulties and problems which we have faced in the last few months, and to some of which we have found the solution.

The first policy we have established is one which of course you would expect. We look upon ourselves as visitors in the homes of those who view our programs, and the first rule we have set down is the same simple rule that governs our actions as guests in the home. We have found in the past that the observance of this simple rule is not quite so simple after all, for some producers are prone to attach the standards of the theatre, or radio, to television programs. Television is, of course, a completely new and separate medium, and what might pass for drama in the theatre may not be acceptable in the home where children may be watching. In connection with radio standards, a perfectly clean vocal gag may turn out to be not so clean when visualized. As a result, we feel that all programs from here on must be carefully checked to avoid any possible mistakes in good taste. Apropos of this, it will be necessary to have all scripts submitted to the office of the Executive Producer as much ahead of time as possible. We make a point of setting no specific time so that no hardship will be worked on anyone. However, it is expected that in a few months a definite dead line will be set and an attempt made to adhere to it.

We have found in the past that directors of programs are hindered in their work especially during air time when any unnecessary person is in the control room with him. The slightest noise in the control room during a program, even a whispered comment, is very apt to interfere with the smooth working of the director, the engineers, and the camera crews. We have found it necessary, therefore, to establish another policy, to the effect that no one—with the exception of the director and the engineers—is to be in a control room during a program without the permission of the Executive Producer's office or the General Manager's office. In cases where, for one reason or another, it is deemed important, this permission may be granted, but the reason for an individual being in a control room must be of importance and urgency.

This policy takes effect immediately.

SAM CUFF, *Gen'l Mgr.*
Station WABD-Du Mont
New York City

"Applause . . ."

Sirs: Congratulations on your Summer TELEVISER.

O. H. CALDWELL, *Editor*
Caldwell-Clements, Inc.
New York, N. Y.

Sirs: I read the summer issue of the TELEVISER from cover to cover. It certainly is an excellent job, and I believe your listing of articles will be of great help to those interested in specific phases of television.

DAN D. HALPIN
RCA—Victor Division
Radio Corporation of America
Camden, N. J.

Sirs: On this side of the world, where radios are comparatively scarce, and television receivers unknown, TELEVISER helps to bridge the gap. TELEVISER is aiding my television education by giving me a background for the field I hope to follow upon my return to that moth-eaten, blue pin-stripe suit I left some place over three years ago. When I first became interested in television I began looking for some literature on the subject. In desperation, I wrote to Miss Lasher of *Editor and Publisher* and asked for suggestions. She recommended TELEVISER.

After seeing the first edition I was sold 100%. It was just what I had been looking for in the way of educational literature. It is the best trade publication I've ever seen, for it tries to educate instead of just gossip. I read everything you print from cover to cover.

Someday I hope to see the TELEVISER a monthly.

LT. M. H. HELLER
Army Air Forces
Guam

Sirs: You are in a unique position. You have a magazine which is fulfilling a need in the growth of the television industry. That need is a thorough discussion of what television has done and is doing and perhaps a few pages of what television will do in the future. One is very often inclined to accent the latter, until video becomes a word of the future—interesting to talk about if you're in the mood for dreaming.

TELEVISER, I believe, has done its best to stress the immediacy of video—that television isn't waiting for the wonderful postwar world of rocket ships and civilian walkie-talkies—that it's on our doorstep now crying for attention. And attention means more than opening the door and looking at it occasionally.

CHET BEHRMAN, *PRODUCTION MGR.*
Station WKMO, Kokomo, Indiana

Sirs: To us who have been in the television field for a good many years, your magazine comes as a welcome guest. It has filled a blank spot in television reading and most assuredly is doing an excellent job of it.

A. D. SOBEL, *Chief Engineer*
Air King Products Co., Inc.
Brooklyn, New York

Sirs: TELEVISER is highly stimulating and affords educational possibilities of enormous value. I am thankful for the day our public relations director handed me the TELEVISER application blank, stating: "Maybe you'd like to spend \$4.00 for this." It was \$4.00 well spent. Count on me for continuous renewals.

DON BELL, *PRODUCER*
Station WJW
Cleveland, Ohio

Sirs: I enjoy every copy of the TELEVISER. It was a happy day when I first noticed it on a newsstand. I read it; file it in a binder; and it is later studied and read by hundreds in the base technical library. It is very anxiously awaited each quarter. Too bad it isn't published monthly.

My one suggestion for improvement is that you print more program scripts complete with production notes for study by readers.

LAWRENCE L. ODLE, *CAPT. SC*
Army Air Base, Rapid City, S. D.

Sirs: I have read, and re-read the Summer issue of TELEVISER. Miss Betty Scheyer, also of The Writers' Nest, has already given two most interesting reports on TELEVISER, and the great contribution your magazine is making.

Here at the Nest, we just cannot help coming right out, giving our sincere and earnest praise because of the gigantic task which you have performed with great mastery and tact.

JONATHAN LE MIRE
The Writers' Nest & Writers
Workshop Round Table
Hollywood, Calif.

Sirs: I find TELEVISER magazine most helpful in both Radio and Television classes here at the University of Denver. It approaches the new problems from so many different viewpoints, it takes only a little imagination to make us all feel like actual participants in the studio procedures. Enclosed is check for my subscription.

ROSCOE K. STOCKTON
Chairman, Radio Department
University of Denver

Sirs: I thought I might add a note to my renewal blank to let you know how much I enjoy your magazine. Fact is, though it doesn't fatten your subscription list any, I make a practice of circulating my copies among radio people in this town. I might add that I do make pointed remarks about the subscription blanks therein and know of several new subscribers from this area.

Television seems a long way off here in Pittsburgh, but at least several of us hold court on the subject from time to time and even went so far as to call a meeting at one of the stations once this spring to exchange ideas. There weren't many to exchange but at least I quoted profusely from TELEVISER and that started the circulation of my issues!!

FLORENCE SANDO
Kaufmann's Dept. Store
Pittsburgh, Pa.

TELEVISER



BUY WAR BONDS

ELECTRONIC TELEVISION IS AN RCA DEVELOPMENT

This is the third of a series of advertisements showing that RCA engineers developed the basic essentials of the electronic television system—including tubes and circuits.

RCA built the first all-electronic television transmitters and receivers—the first commercial television station—established the first television relay system—presented the first electronic theatre television—was the first to televise a baseball game, and a Broadway play; and was first to televise from an airplane.

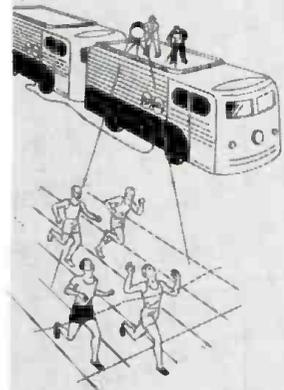
RCA is, and will continue to be, the leader in practical, successful commercial television. You may expect the best of all kinds of television transmitting and receiving equipment from RCA.

3. THE ORTHICON

IN a paper presented before the New York Section of the I.R.E., June 7, 1939, Albert Rose and Harley Iams, of the RCA Research Laboratories, announced the Orthicon, a new television pick-up tube. In its issue of the following month, this tube was characterized by *"Electronics"* as "... one of the most significant advances in television electronics since the advent of the Iconoscope itself... A new and greatly improved form of the Iconoscope, using low-velocity electrons for scanning, thereby avoids spurious

signals, obtains storage efficiency ten to twenty times that of the Iconoscope, and produces an output current linearly related to the light input."

With this tube, storage efficiency was stepped up to almost 100 per cent, compared to 5 to 10 per cent previously obtained, and overall sensitivity increased 20 times. The practical effect of this tube was to free television from the limitations of the studio and its artificial lighting, and make the whole world of living events a stage for television.



The Fountainhead of Modern Tube Development is RCA



RADIO CORPORATION OF AMERICA

RCA VICTOR DIVISION • CAMDEN, NEW JERSEY

In Canada, RCA VICTOR COMPANY LIMITED, Montreal

WASHINGTON VIDEO-NOTES

By LARRY CARL
TELEVISER'S WASHINGTON BUREAU

PROCEDURE FOR TELEVISION station applicants, following FCC allocations between 44-108 megacycles, is as follows:

APPLICATIONS ON FILE NOW: An application may be modified for a particular channel in accordance with present TV standards. If the application contains full engineering data regarding the old band applied for (prior to final allocations), it won't be necessary to amend it except for such changes as have been made in equipment for the proposed station.

FUTURE APPLICANTS: "Downstairs" applications may be filed as previously. "Upstairs" applicants can get a coverage chart on application to the FCC. All filings should specify particular channels and coverage. The FCC, however, may not be able to assign the channel requested. Sixty days will elapse after the "freeze" is lifted before any final assignments are made.

* * *

WRC-NBC, WASHINGTON, HAS applied for an *experimental* video outlet in the nation's Capital. Transmitter tower is to be 199 feet high behind the Wardman Park Hotel. With FCC approval of its application, NBC plans to erect a 350-foot tower, giving it an effective height of 549 feet. Transmitter equipment will be in the Garden Room of the hotel. The Wardman Park "Little Theater" will be used as a studio site. Following FCC approval, it's our guess NBC will be on the air before the first of the year with tele for the Capital City. Also, we feel co-axial cable network service will be used, linking the Washington station with WNBT, the net's pioneer "sight and sound" outlet in New York. NBC is also applicant for a commercial outlet in Washington (WNBW, Channel 4).

* * *

DUMONT'S W3XWT IS PROGRESSING according to plan under the technical supervision of Bill Sayre. The debut date is still set for sometime shortly after September 15. Field tests from the

proven entirely satisfactory. There is a possibility that W3XWT's transmitter eventually will be moved to a higher section of suburban Washington. As of August 6th the FCC was still planning to assign low-power stations to Channel 1, applied for by W3XWT. DuMont wishes to have a fairly strong (5 KW. aural—4 KW. visual) outlet in the Washington area, and may amend their commercial application for another channel, depending on the Commission's final decision as to Channel 1.

* * *

WMAL (EVENING STAR STATION) made its first public announcement of its video plans. Bainbridge Crist, in "The Sunday Star" of July 8, stated: "WMAL is planning to file with the FCC in near future for television." No channel has been designated, and the site for the studio and transmitter has not yet been announced, although we understand a site in the western section of Washington, near American University, is under consideration. *TELEVISER* also understands consideration has been given to use of vacant land near WMAL's present transmitter site in suburban Bethesda, Md. The Evening Star station will separate its studio facilities from WRC-NBC at the war's end. The television studios will most likely be merged with new sound facilities yet to be constructed. The company is already an applicant for FM.

* * *

WINX — (WASHINGTON POST) has made the first public statement regarding its possible entrance into television. The Post recently purchased W3XO, pioneer FM outlet, for \$75,000 from Jansky & Bailey, consulting engineers. Statement accompanying FM station purchase, issued by Eugene Meyer, president of WINX Broadcasting Co., said: "The W3XO purchase is the first step in The Post's radio expansion plans which eventually might include facsimile and television." In a statement to *TELEVISER*, Wayne Coy, general manager, interpreted the announcement this way: "The Post and WINX are not precluding television, but have no definite television plans at the moment. We may eventually go into television, but our leaning now is

more towards facsimile." To maintain its competitive position, we predict WINX will enter the video field.

* * *

BAMBERGER-WOR HAS RE-APPLIED to the D.C. Zoning Adjustment Board for construction of a 300-foot tower at 40th and Brandywine Streets, N.W., for its projected Washington video station. Site is 406 feet above sea level. The present application followed rejection of original locale after a record turn-out at a heated hearing before Zoning Adjustment Board July 11th. WOR's original location at 39th and Fessenden, N.W., seven blocks northeast of present site, was rejected after sixty citizens of the area appeared in opposition. Both applications were handled by J. R. Poppele, WOR Chief Engineer, and Harry Wender, Bamberger's Washington attorney.

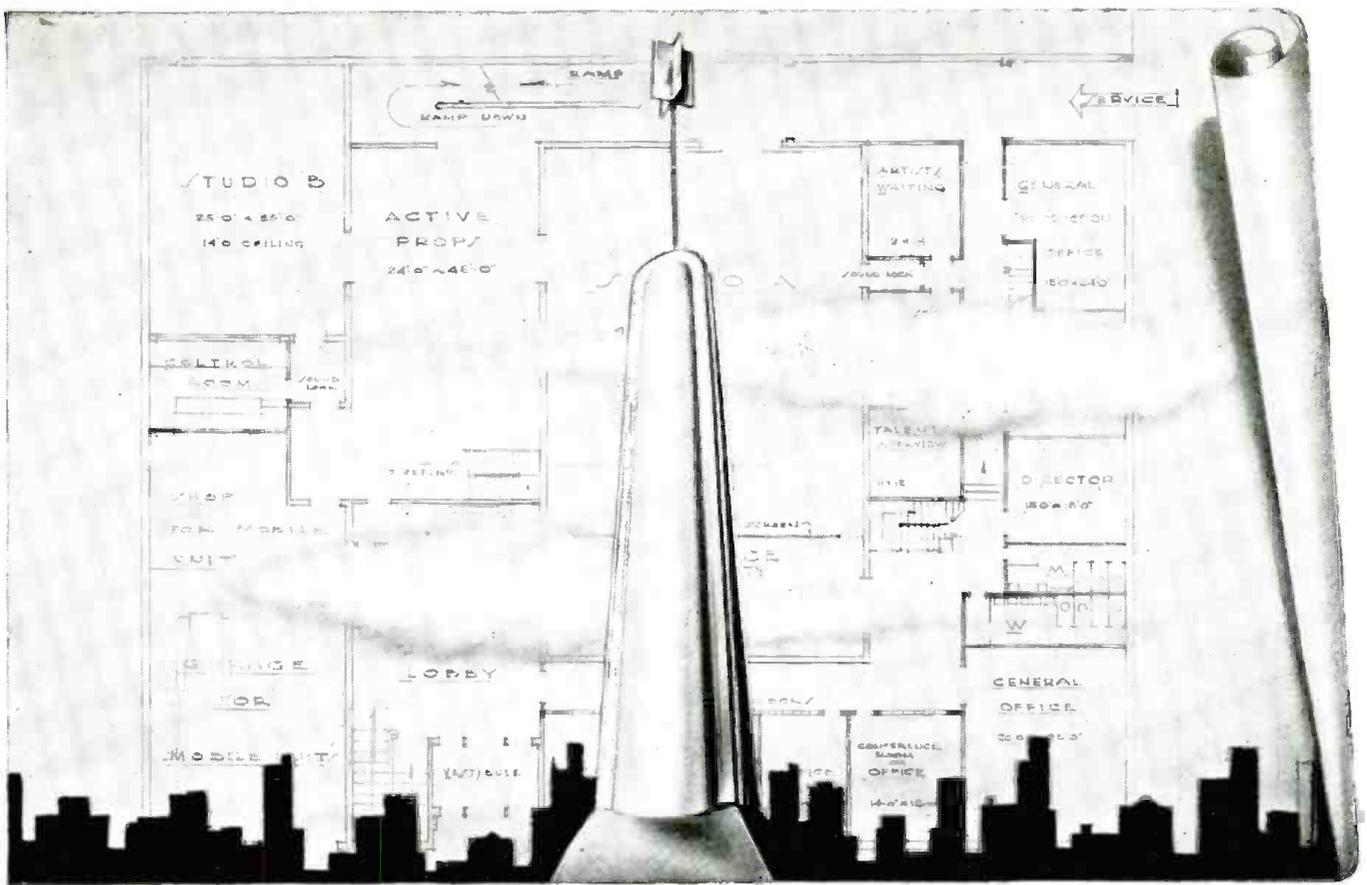
* * *

THE UNIQUE GENERAL ELECTRIC-International Business Machines radio relay network between Schenectady and Washington via New York City, authorized last Fall by the FCC, is to be started shortly. This is the relay which will handle two-way television programs, four full fidelity sound channels and 12 IBM channels for IBM Radiotype at one time in each direction, according to a GE announcement. Field tests were started during the first part of August from the Washington end. Certain parts of the plan are still being decided. *TELEVISER* expects to have more information shortly as to studio, if any, transmitter location and starting date. GE-IBM have asked FCC for similar radio relay network between Los Angeles and San Francisco. Frequencies requested for the Washington-Schenectady operation are from 1305 megs. up.

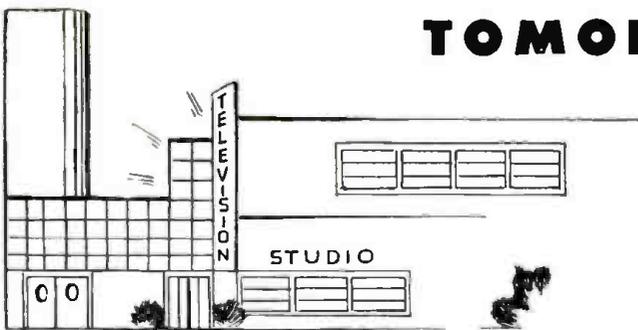
* * *

BYRONS MOVIE PRODUCTIONS, 1712 Connecticut Avenue, N.W., is the first and only Washington company so far to set up a "custom" film production in the Capital City. The idea is to prepare film for video stations same as transcription firms prepare ET's for sound radio. Any and all types of feature work or film shorts will be handled. Byrons recently handled NBC filming of Eisenhower arrival in Washington for WNBT, featured on the front cover of Summer *TELEVISER*.

TELEVISER



DUMONT—FOR THE PATTERN OF TOMORROW'S TELEVISION



TO PROSPECTIVE TELEVISION STATION OWNERS... DuMont has pioneered a pattern for the peacetime commercial operation of a typical television station—a pattern that is yours for study whenever you wish.

DuMont has designed and built *more* television

stations than any other company—stations that, week after week, are demonstrating the simplified precision control of DuMont-engineered equipment, its low operating cost, extreme flexibility, high efficiency and rugged dependability.

DuMont postwar designs incorporate all the flexibility and refinements accruing from more than four years of continuous and increasingly elaborate programming experimentation. Early peacetime delivery is assured through DuMont's Equipment Reservation Plan, plus competent training of your personnel.

Visit DuMont's Station WABD, New York...our Sales Manager will gladly make arrangements.

Copyright 1945, Allen B. DuMont Laboratories, Inc.



ALLEN B. DUMONT LABORATORIES, INC., GENERAL OFFICES AND PLANT, 2 MAIN AVENUE, PASSAIC, N. J. TELEVISION STUDIOS AND STATION WABD, 515 MADISON AVENUE, NEW YORK 22, NEW YORK

TELE-HIGHLIGHTS

By
STANLEY KEMPNER

PRESIDENT Harry Truman sent the nomination of Ex-Governor William Henry Wills of Vermont to the Senate for confirmation to succeed Norman S. Case as Federal Communications Commissioner whose seven-year term expired on June 20. . . . Television facilities and personnel of the Columbia Broadcasting System were made available to network clients on a working basis for the testing, development and broadcasting of commercial programs. A charge of \$150 an hour rehearsal time for use of major studios, personnel and equipment will be levied although there will be no charge for time on the air. . . .

* * *

Lawrence W. Lowman, vice president of the Columbia Broadcasting System, on leave with the Armed Forces, was named vice president in charge of CBS's Television. George Moskovics was appointed Commercial Manager of WCBW. These are first steps in line with CBS's intensified video activities, which also included the addition of 3000 more square feet of space and extensive studio alterations in the Grand Central Terminal Bldg. . . . A Television Clinic was held at the St. Louis Radio Institute under the sponsorship of the Committee on Radio Education and Division of Audio-Visual Education of the St. Louis Public Schools. . . . Sherron Electronic Co., of New York, was granted permission by the FCC to construct an experimental television station in that city. . . . Brig. Gen. David Sarnoff, RCA prexy, predicted television would become a billion dollar annual business in five years. . . . Television is going to be a great success for the essential scientific bases have been laid and its development will move in stride with the close of the war, James Lawrence Fly, attorney, and former Chairman of the FCC told members of the Radio Division of the American Marketing Assn. in New York. . . .

* * *

The Crosley Corporation of Cincinnati was purchased by the Avia-

tion Corporation in a transaction involving \$22 million. Acquisition includes Radio Station WLW, plus several television and FM experimental stations. . . . Experimental Television Station, W2XJT, owned and operated by William B. Still of Jamaica, Long Island, N. Y., begins operating October 15. . . . The merits of direct-viewing television systems were set forth by Allen B. DuMont before a meeting of the Institute of Radio Engineers in New York. Principle advantages cited included high light brilliance, better contrast range, wide angle viewing, lower accelerating voltage, longer life, better resolution, less alignment difficulty, and simplicity of the focusing system. . . . Film shorts for television will be produced mainly in the East, Ralph B. Austrian, executive vice-president of RKO Television Corporation declared on return from a Hollywood trip. . . .

* * *

The entire production of television receivers during the first year or more, from the day permission is given to manufacture sets, will be sold in the five marketing areas of the U.S., which now have program service, Paul E. Carlson, merchandise manager, Allen B. DuMont Labs told the Sales Promotion Group of the American Marketing Assn. at a luncheon in N.Y. He indicated that the areas included New York, Chicago, Philadelphia, the Albany-Schenectady section, and Los Angeles. . . .

* * *

Permission was granted by the FCC to the Raytheon Manufacturing Company of Newton, Mass., for the construction of five experimental microwave radio relay stations to be installed between New York and Webster, Mass., in the first leg of a proposed nationwide microwave communications system. Experimentation will be used for relaying of high definition and color television programs among other things. . . . RCA and Philips Incandescent Works Co., formerly of Eindhoven, Holland, signed a new agreement granting the Radio Corporation of America the right to continue licensing other manufacturers under Philips patents. Thus ended a "controversy" which for a

time made good "speculative news copy" for the trade papers regarding the possibility that the Dutch "giant" might enter the domestic market as a competitor to American receiver manufacturers in both the television and radio fields. . . .

* * *

Television receiving sets in every room are desired by the average hotel visitor, a survey completed and released by the Hotel New Yorker revealed. Of the 17,180 replies received from a mailing of 69,833 credit card holders, 71.2 per cent favored the introduction of television in the hotel rooms as soon as possible. Sixty-one per cent favored a central system, such as the central radio system now in effect at the Hotel New Yorker, and 39 per cent said they preferred individual unit services. . . . CBS was reported to have obtained the American rights for 1000 line television as developed in France—(also new foreign patents covering color television) . . . Twentieth Century-Fox Film Corp. filed an application with the FCC to erect a commercial video station on Channel No. 5 in New York City. . . . Captain A.G.D. West, British television leader, on a visit to America, told reporters that television service would be resumed on the 405-line standard next May. . . . There will be no less than 200,000 television receivers in American homes by the Summer of 1946, the Grey Advertising Agency, Inc., of New York, predicted in its July issue of "Television Grey Matter," the firm's monthly house organ. A minimum of 20 video stations will be in operation as against the present nine, the Agency further declared. . . .

* * *

Klaus Landsberg, director of W6XYZ, Television Productions, Inc., Los Angeles, designed the first video camera equipment made since the inception of the war. Known as the "Landsberg Telemobile" unit, it will do away with portable suit-case equipment. It is built of hard aluminum, is compact and includes everything necessary in the way of control equipment, amplifiers, power supplies for two cameras, and feeds directly into the transmitter. Each unit is easily accessible. . . . Firestone Tire and Rubber Co. renewed its "Voice of Firestone Televues" on NBC's WNBT

(Continued on page 37)

TELEVISER



Dorothy Hart, Conover Cover Girl

- IN COMMERCIAL PHOTOGRAPHY
- IN MAGAZINE ILLUSTRATION
- IN PROMOTION & PUBLICITY
- IN FASHION ADVERTISING
- IN MOVIES & STAGE
- IN FASHION SHOWS

AND NOW

IN TELEVISION

THE *Conover Cover Girl*
REPRESENTS THE GREATEST SALES
FORCE IN THE WORLD!

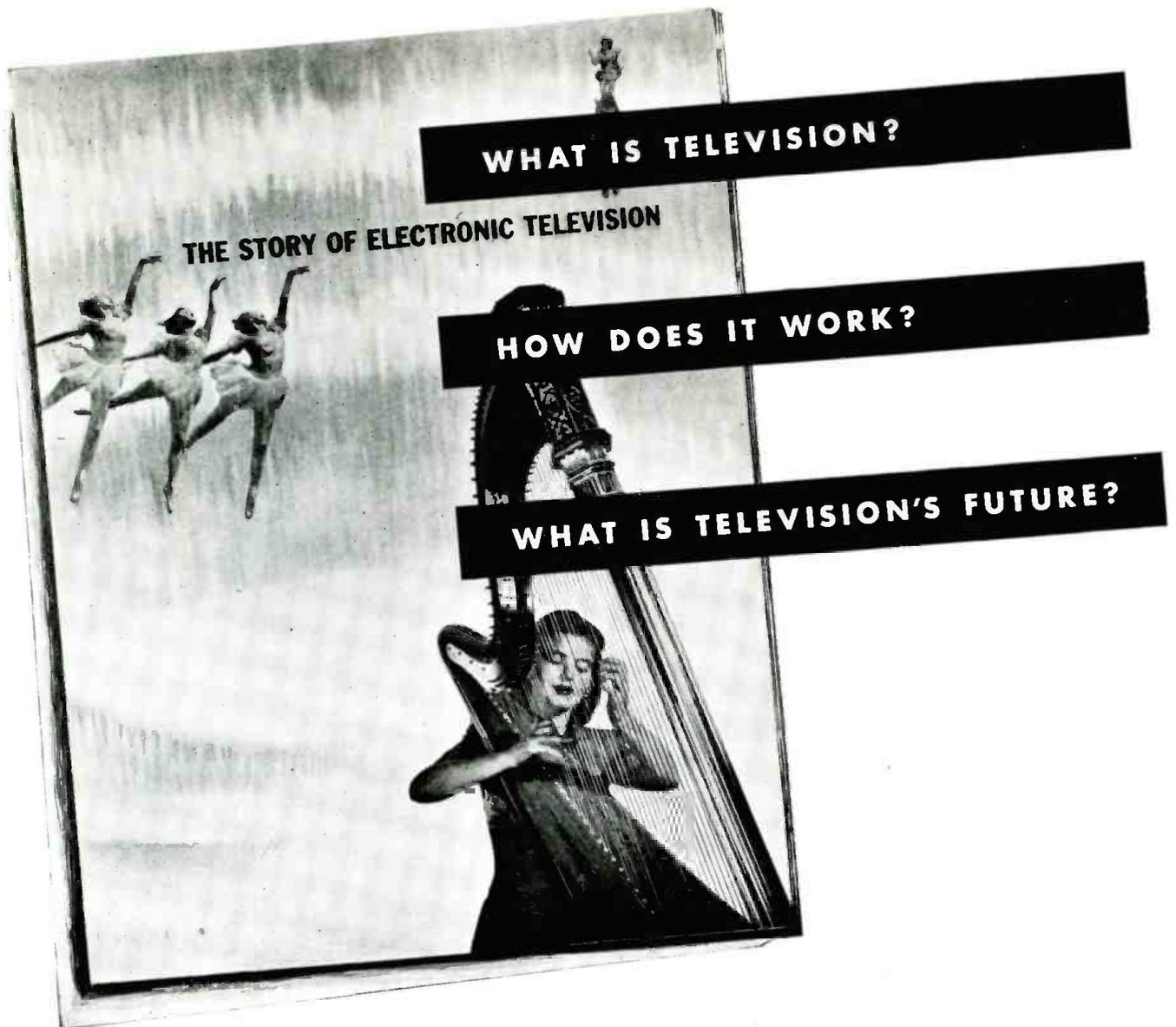
Harry Conover

52 VANDERBILT AVENUE
NEW YORK 17, NEW YORK
Murray Hill 4-0820
AGENCY

ROBERT S. FERTIG, *Director of Television*
TELEVISER

Conover Girls have appeared on Tele-Shows for:

Harper's Bazaar • Casual Clothes
Buchanan & Co. • Ruthrauff & Ryan Inc.
Phillip Morris • Esquire Magazine
Dobbs Hats • R. F. Macy & Co.
Everfast • John David Stores • Fleet-
wood Cigarettes • Lever Brothers
Mademoiselle Magazine • Geyer,
Cornell & Newall • Charles Storm Co.
Alden's Chicago Mail Order • Charles
of the Ritz • WNBT • WABD
WCBW • American Broadcasting Co.
Young & Rubicam • and others.



SCORES OF QUESTIONS like the above will be answered for you when you read "The Story of Electronic Television." Here, in a colorfully illustrated, easy-to-read booklet is the complete, concise explanation of the miracle of modern television.

Heretofore, this fascinating booklet was available only to those directly connected with the television industry. Now it can be offered to all interested persons. It sets forth in plain, non-technical language the entire story of television, how it began back in the minds of the ancients, how present-day science has made it a reality. In this booklet you will find how electronic television

works, how it has been developed since the early days when Philo T. Farnsworth first set forth the basic idea as a fifteen-year-old high school student. And in this booklet you will find a key to the potentialities of television as it will affect our daily living, how it will contribute to the fields of entertainment, industry and education.

"The Story of Electronic Television" has been called the most complete, understandable explanation of this important new endeavor yet written. For your free copy, write the Farnsworth Television & Radio Corporation, Fort Wayne 1, Indiana.

FARNSWORTH

Television · Radio · Phonograph-Radio

Farnsworth Television & Radio Corporation, Ft. Wayne 1, Indiana. Farnsworth Radio and Television Receivers and Transmitters; Aircraft Radio Equipment; Farnsworth Television Tubes; the Farnsworth Phonograph-Radio; the Capehart, the Capehart-Panamuse.

I: PROGRAMMING AND PRODUCTION



Milton Caniff, creator of the GI comic strip "Male Call," brings to life the cartoon's central character, Miss Lace, via WNBT-NBC

A GUIDE FOR THE NEW TELEVISION PRODUCER

By CAPT. WILLIAM C. EDDY, USN (Ret.)

PRODUCING a television show has a technique of its own. Although television employs the same general selection of lenses as are used in the motion pictures and the stage settings are similar to those used in the theatre, the technique of production is a combination of that used in both fields. One of the outstanding problems in producing a good television show is the maintenance of continuous action, a problem which requires forethought by the producer as to his use of lighting, cameras, and microphones from the time the show first hits the air until the closing sequence. Remember—there can be no pauses or blanks for the resetting of equipment or cuing of lines. It is necessary, then, that the producer first establish in his mind a complete picture of what he wants to accomplish and

from this formulate a detailed plan as to exactly how he will use the equipment at hand to create the desired effect.

Cameras

It is considered good technique to play cameras as far downstage as possible, utilizing a proper choice of lenses for closeup and intermediate work rather than unnecessarily moving the camera into the set.

The producer should always attempt to end an act or sequence with his cameras, microphones, and floor lighting all the way downstage so that the next act can start from this position.

Considerable thought should be given to the lenses selected to open a telecast and the subsequent necessity for changing this selection during a sequence. Starting out with the cameras equipped with lenses having extreme focal lengths (16"-4" for ex.) will generally lead to trouble or the

partial use of the cameras later in the act. It is much safer to use a series of intermediate focal length lenses in the cameras relying on proper camera placement to obtain desired results rather than to change of lenses during the act. Such a lens change will require one to two minutes of program time, during which period that camera is unusable.

The normal lenses used in television are from 9"-14" with a 6" high speed, lens and a 16" F. 4.5 lens.

Slow pans and dolly shots are permissible and can be used to the benefit of the act providing they are not overdone. The producer must remember that the camera movements are a severe test of camera personnel, and are not as satisfactory when reproduced as the track shots employed in Hollywood productions. Many times it is possible to move characters downstage to the camera for a desired shot rather than dolly the camera upstage

* Director of Station WBKB, Chicago, and author of "Behind the Television Camera," to be published soon by Prentice-Hall, New York City.

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toward the performers. This is particularly true in shooting single characters.

Lighting

The producer should always analyze the cross lighting situation that develops when shooting from two different angles. In most cases, lighting preference is given to the closeup camera although sufficient illumination must be provided for all shots.

Be extremely careful about reflections on the set, such as windows and mirrors which may kick back the front lighting from the floor mounted units. At no time should the cameras be pointed into either direct or reflected lighting.

Stage Business

A producer should arrange the "stage business" so that characters play parallel to the focus plane of the camera. If one character is upstage, the other down, it is impossible to get them both in focus because of the speed of our lenses. This will require consideration in planning the set and action. You should endeavor to have your characters play as close together as possible, even though this action may appear to be "hoked." It is the only way that you can be sure of a satisfactory television picture.

Backgrounds

Background detail is not as important as it is in many of the associated fields, because of the limitation in depth of focus of the lenses used in television. Stress the dressing of the immediate foreground of the set. Have all characters on the set play toward the camera. This problem is particularly vital in cases where conversation is being shot around a table. Characters here must be placed so that the camera can get in for reasonably effective direct and relief shots without having out of focus heads and backs in the foreground.

Script

It is good practice to have all lines delivered ad lib, or from memory. The use of any type of script on the set is decidedly untelegenic. A line delivered ad lib is worth three pages of script read from the book. In writing your sequences put in as much small stage business as you can successfully work in, remembering that the picture is worth eight times

that of the sound and that a still picture is only good for fifteen seconds of interest on a television receiver. Television will stand reasonable "mugging" on long and intermediate shots, but this over-emphasis must be held back on closeup work.

Movie Inserts

Outdoor locale and other insert work is normally accomplished with film. It is, therefore, necessary that this material be made available for preview and timing several hours before rehearsal in order that it can be checked and inserted in the sequence. The use of film does not tie up any stage cameras and can further be dissolved or switched into the program in the same manner as any of the stage cameras.

Switching

Switching technique is similar to that used in movies, comprising dissolves, switches, fades and blackouts. Superimposed shots, i.e., two pictures superimposed, can sometimes be used effectively in shooting a scene.

In order to simplify and standardize the orders which the director will normally use in producing a television show, a glossary of accepted terms has been adopted for use in this station.

To Check Mikes—

"Give me a mike check on No. 1—boom, etc."

To Check Cameras—

"Give me a camera check on three."

To Switch Between Two Cameras—

"Take One" or Take Two.

To Double Fade Two Pictures—

"Fade Down one—fade up two."

To Get a Picture Ready for Fading Up As in an Opening Shot—

"Punch up one and fade it down."

To Dissolve Between Two Cameras—

(1) "Set up dissolve, cameras one and two."

(2) "Dissolve one into two."

To Mix Studio Mike with Transcription—

"Fade music under—up voice,"
or

"Fade voice under—up music."



View from control room of Capitol Radio Engineering Institute, Washington, D. C.'s radio-television trade school as it begins tele course.

Training Tomorrow's Video Personnel Today!

By IRWIN A. SHANE

UPPERMOST in the minds of many radio executives is the question: "Where will we get the trained personnel to operate and program our television station when we convert to a video-audio operation?" The thought of carrying on a half-hearted television effort while station personnel, trained only for sound-radio, learn the proper technical and entertainment techniques of television, is not a happy one to station managers who are eager to swing into full operation just as soon as conversion is completed.

The excruciating thought of green technicians and inexperienced directors committing laughable blunders and boners, while sponsors tear their thinning hairs, is enough to cause gas pains and ulcer-like symptoms in any advertising executive contemplating the advent of television.

The general public, who will have placed high hopes and heavy investments in the new medium, will suffer the most serious disenchantment should programs, which are obviously the handiwork of amateurs, not of skilled television crafts-

men and technicians, be the inevitable order of the day.

If this is the case, the public's reaction is bound to prove extremely harmful to television generally. It follows that poorly produced and transmitted programs will discourage the mass sale of receivers and the sponsorship of programs by advertisers. The only alternative would be for new television stations to broadcast on "closed circuits" (as did CBS) for a period of approximately three months, or until all the kinks of producing program are ironed out, until technical and creative personnel have received the training and experience to produce, stage and broadcast first-rate productions. In the meantime, a station and its listening audience would be limited to film fare, and remote pick-ups if it has the mobile equipment, and if local pick-ups are available.

Radio and television executives therefore agree that such a television "faux pas" must be avoided at all costs, especially since the opportunity for instruction and experimentation at present exists while audiences are still small, while many

television stations still welcome outside programs, while the scramble for profits is not yet under way.

As a service to television, the country's existing video stations are urged to open their doors to radio station executives, advertising personnel, and program producers generally—and permit them an opportunity to observe how television programs are prepared and presented, and possibly arrange for regular schedules for those stations who wish to produce their own experimental programs from time to time.

A Start Is Made

Should it prove impractical to accommodate all comers, it has been suggested that the networks first invite their associated stations. This would account for more than one hundred of the country's most likely television outlets. Secondly, the equipment manufacturers, who really have most to gain, should—as a condition of purchase—make television facilities available to their customers so that they might become thoroughly familiar with the operation, technically and program-wise, of a television station.

A start has already been made in this direction. General Electric's station, WRGB, in Schenectady, already plays host to the American Broadcasting Company, New York's WOR, and Cleveland's WHK.

DuMont, for a long time, had made its facilities available to WOR, WNEW and the Blue Network.

Philco's WPTZ is prepared to allow Philadelphia radio stations to use its facilities as soon as its new station is placed in operation.

As for the advertising agencies and program producers, they have been granted the full use of studio facilities at Stations WRGB, WABD and WBKB. Recently WCBW (CBS) announced its intention of cooperating with agencies on commercial shows.

A few of the more progressive radio stations, even in areas remote from television outlets, have made an intelligent start in training radio personnel for television. Station WHK, of the United Broadcasting System, in Cleveland, for

example, has organized nine television groups among its employees, each group specializing in a different phase of television programming (i.e., drama, sports, variety, children's shows, puppets, etc.) with the members of each group meeting once a week, on their own time, for instruction and experimentation in their particular television specialty.

"Dummy" cameras equipped with pilot lights, and regulation boom mikes, are used to simulate studio action. Cameramen wear earphones and receive instructions from a director in an improvised "control room." Each broadcast is recorded on 16 mm. film and on records. Close-ups, medium shots, and long shots are filmed as requested by the director. The films are edited and shown the following week, by means of rear projection on an 18" x 24" screen set up in an improvised "television receiver." From the film and recorded sound, the groups receive a fairly accurate record of their work. When a group feels competent enough, they are sent to Schenectady, several hundred miles away, to present their program under actual studio conditions, with all expenses paid by the United Broadcasting Company.

Recently WHK presented a bit of Shakespeare—in modern dress—produced, and acted by members of WHK's staff. Since then a regular schedule of broadcasts has been inaugurated.

School Courses

Another solution of the problem may be through well-organized courses of instruction in recognized trade schools for technicians, and through courses in television writing, production, programming by the country's colleges and universities. Such courses are already being given by four of New York City's leading schools, including Columbia University, New York University, City College of New York, and The New School; by Yale University; and by the University of Southern California.

Other schools who are planning to add television courses include Western Reserve University in Cleveland, Syracuse University, Purdue University, University of Denver, the University of Iowa, and many, many others.

But where are the trained instructors to come from? The answer, again, is: The existing television stations. In New York City, two of the instructors of university courses are from DuMont.

The Columbia University course is sponsored by the National Broadcasting Company and has John F. Royal, NBC vice president, as instructor. The New School television course is taught by Nat Rudich, who received his training directing programs at DuMont.

It is recognized that an army of instructors must be trained for the scores of schools and colleges who will be deluged with requests for television courses of all kinds once the new medium gets under way. The instructors must receive first hand experience, experience which can only be obtained by observing and working in a television station.

Spent Summers at WRGB

Professor Edward Cole of the Yale Drama School, for example, spent several summers observing the production techniques of Station WRGB. He made careful notes of each performance, of the lighting, staging, settings, costumes and camera direction. As a result, Professor Cole's class in television production at Yale has borne rich fruit, having sent forth members who won praise for their work in New York.

If each of the country's six active television stations were to invite five instructors for a period of one month, more than 350 college instructors would receive valuable instruction and experi-

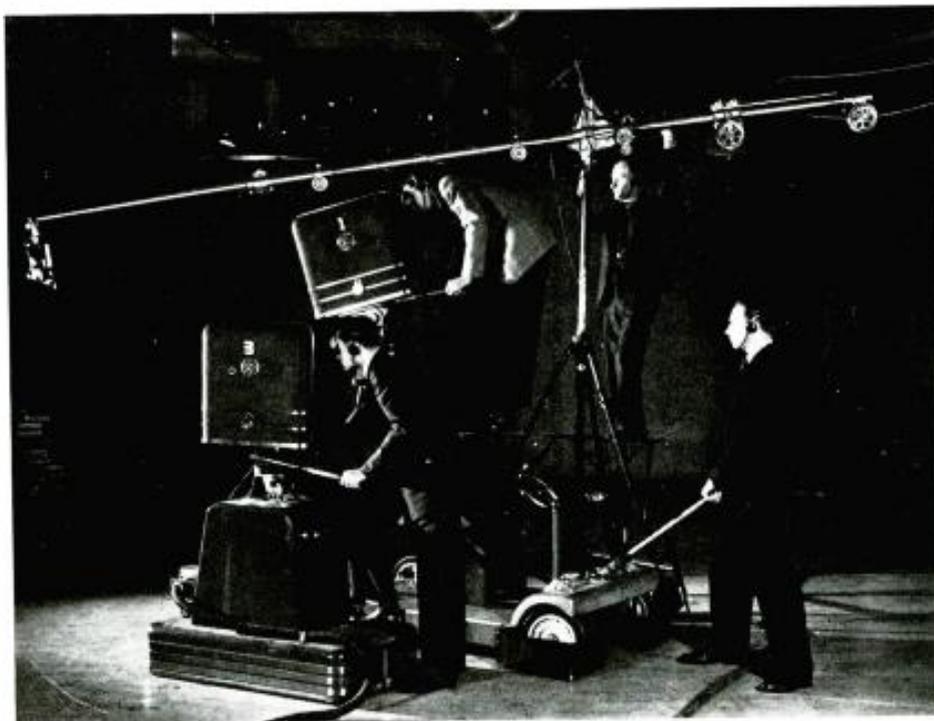
ence, experience that would help them better understand and better teach television to the scores of returning veterans and others who will seek careers in television as writers, producers, directors, actors, scene designers, etc.

Filling the Reservoir

All of television would ultimately benefit by filling the manpower reservoir with such trained personnel. It would cut the period of fumbling, the period which caused the critics of *Billboard* and *Variety* to chuckle and guffaw disdainfully as they watched the clumsy, self-conscious efforts of the country's television stations as they attempted to produce acceptable programs from 1939 to 1944—and failed!

For television to get off to a flying start, it is generally recognized that serious thought—followed by action—must be given to the problem of training personnel for television, not after television is a going industry, not after the public begins to mutter about the poorness of television programs. Then it would be too late. The time is today—now!

A studio crew in action at Station WRGB. Many months of training are required before technicians can handle shows well.





Scenes from Bizet's "Carmen," presented by WNBT under the direction of Dr. Herbert Graf, NBC's director of operatic productions

GRAND OPERA ON TELEVISION

By HERBERT GRAF*

OPERA in America, often ridiculed as old-fashioned or even dead, is more alive today than ever before. Not only have the Metropolitan Opera, the New York City Center Opera, and Fortune Gallo's San Carlo Opera season at the Center Theatre attracted huge audiences in New York, but interest in opera is growing all over the country. The best proof of this development is the increasing number of small opera companies which are springing up in many places. From a position of splendid isolation, where for nearly 100 years it enjoyed the exclusive patronage of a small wealthy society, opera since the depression, when its original sponsors were forced to withhold their financial support, has stepped down to look for a wider audience. It has been greatly helped in this effort by the advent of radio and recordings.

But while these new media have won millions of new friends for opera, they cannot be considered full substitutes for operatic performances, for they omit one essential aspect—the visual. In the usual radio broadcasts of opera performances in America, attempts are rarely made to com-

pensate for this loss by means of special radio adaptations, except for a short descriptive commentary before each act. Thus, only the acoustical value of an opera, usually diminished by the use of a foreign language, is transmitted to the radio audience. Motion pictures have opened up new vistas for opera, but thus far have not made full use of these possibilities. It is rather the newest member in the family of electronics, *television*, which promises the most realistic opportunities for an immediate influence upon opera. By adding sight to radio sound, television is able to transmit the full aspects of opera, and it can easily be expected to do for opera what radio has done for concert music.

Much Experimental Work

In spite of the existing technical and economical handicaps, including the present unfortunate music situation, much experimental work has been done in this field. It provides a safe foundation for some predictions as to the prospects of grand opera in television programming of the future. I do not mention here the various experiments in the field of light opera (which were discussed in the article "Televising Light Opera" by Bob Stone

in the Spring issue of *TELEVISER*, but will confine myself to "grand" opera. I believe, however, that television will help to bridge the unnatural gap which separates these two operatic forms in America today—a gap which does not exist in Europe. Gershwin's "Porgy and Bess," Oscar Hammerstein's version of "Carmen," "Oklahoma," "Carousel" and other elaborate musicals have begun to tear down this barrier.

In the field of opera telecasting, NBC's first attempt at "grand" opera was a performance of "Pagliacci" on March 10, 1940, with a Metropolitan Opera cast. General Electric followed with productions of three "real" operas (one-hour versions of Tschaikowsky's operas "Pique Dame" and "Eugen Onegin," and a full length performance of "Hansel and Gretel"), and several comic operas staged by the Julius Hartt Musical Foundation of Hartford, Connecticut. The writer, in 1944, produced several types of opera selections at NBC—a dramatized aria, Figaro's song from Rossini's "Barber of Seville" (staged in and outside the barber shop); a 13-minute scene, the first meeting between Mimi and Rudolph from Puccini's "La Boheme"; and a 45-minute condensed version of an entire opera,

* Director of Operatic Production at NBC Television, and Stage Director of the Metropolitan Opera Association.

"Carmen." The casts, made up of young American singers, included Mona Paulee (Carmen), Felix Knight (Don Jose), Hugh Thompson (Figaro and Escamillo), Lois Eastman (Mimi), John Hamill (Rudolph), and others. New English adaptations were made especially for these television performances.

These experiments proved that grand opera can be a "natural" for television. It combines action, music and drama, and yet can be done with comparatively few sets. But obviously television requires new methods of operatic production, at least when the opera telecasts originate from a television studio. Telecasts from an opera house, for technical reasons, belong to the future, but even if these should later become technically possible, I doubt whether such television broadcasting of grand opera will be acceptable, from an artistic point of view, to an audience whose eyes have been trained by the movies to demand realism.

Essentials For Television

Special script adaptations, new English translations, new production methods, a new type of singer possessing both good looks and acting ability, modern scenery, ensemble teamwork—all are essentials of grand opera production in the television studio, which, in the legitimate operatic field in America today, remain unfulfilled dreams because of the economic and artistic problems involved.

Furthermore, television offers great possibilities for artistic effects which cannot be attained in the opera theatre: the intimacy of full facial expression and details of action by means of camera close-ups, a greater variety of scenes, and increased theatrical effects by the use of slides and film. As the expense of grand opera production is necessarily high, various new planning and organization ideas will originate. Problems concerning stock companies, recording, filming, and other production methods are questions which have hardly been touched upon as yet.

The problem of television adaptation of old operas is, in itself, a chapter full of possibilities and dangers. Contrary to general opinion, operatic plots for the most part are far from foolish, being based in many cases on famous original stories from which interesting ideas might be derived for the new adaptation. For instance, the libretto of "Carmen" is based on the famous novel by Merimé;

"Bohème" on Murger; "Faust" and "Mignon" on Goethe; "Manon" on Pré-vost; "Traviata" on Dumas; "The Barber of Seville" and "Marriage of Figaro" on Beaumarchais; "Rigoletto" on Victor Hugo; "Tosca" on Sardou; "Othello," "Romeo" and "Falstaff" on Shakespeare, "Eugen Onegin" on Pushkin, and so on to Hofmannsthal's masterful libretto for Richard Strauss' "Rosenkavalier," and Gershwin's "Porgy and Bess."

Offers Great Opportunities

Aside from the wide field of legitimate opera, television offers great opportunities for the composition of new operas to be written especially for television. This would give those modern writers and composers a chance who, at the present time, have no outlet for their works in the field of legitimate opera, and are compelled to have their operas come into the limelight—as Oscar Hammerstein said to

me recently—"through the backdoor"—meaning the legitimate Broadway musicals.

A great danger exists that adaptations of great works in the operatic repertory will be made by people who do not understand the inherent style and composition of the originals. Such adaptations will ruin the old masterworks rather than enhance their values. To avoid this situation, it will be of primary importance to train operatic writers, composers and producers for this task, just as we have to train new singers. The ultimate goal would justify the effort expended. For there is every reason to believe that television should offer good opera both a technical medium for the popularization of its masterworks, and an artistic medium for the creation of modern operas. In either way, television may well make the most decisive contribution to making grand opera an art of the American people.

TELEVISION "QUOTABLES"

"THE radio actor should ask himself, 'Am I an actor or just a reader of lines? Can I memorize half a hundred sides a week? Am I a master of the gesture? What is my ability to assume necessary facial expressions? Am I a good pantomimist? Do I have histrionic ability in its fullest sense? How do I look before the camera—am I photogenic, or am I suitable for character parts?' If he can answer the above with sincere affirmatives, there is a place for him. If he can only muster negatives to the above questions he has cause for worry."

**RALPH B. AUSTRIAN, Vice-President
RKO Television Corporation.**

* * *

"REMOTE programs after the war will be outstanding in the field of television programming. No other type of program, no matter how well presented, can compete with on-the-spot news happenings. To actually see as well as hear the excitement of the big news event of the day is the great advantage the television audience may anticipate. On-the-spot remote news coverage is an art all its own. It yields to no competition from any feature yet developed. Also, under the heading of remote programs, falls

the category of sports broadcasting. In the televising of football, baseball, basketball games, etc., a new field of listeners and viewers is brought to the fore. That new audience is the feminine viewer."

**PAUL B. MOWREY, Director of Television,
American Broadcasting Company.**

* * *

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**WALTER EVANS, Vice-President
Westinghouse Electric Co.**

TELEVISER



A scene from a recent CBS production of a "GI Dreams of Home." Note "dream" quality of the set. (CBS Photo)

ADAPTING A SCRIPT FOR TELEVISION

By FRED RICKEY

Script Writer, CBS-Television

RADIO scripts, short stories, plays . . . these are the sources upon which television has and probably will depend for dramatic material until more money and expanded production facilities encourage skilled writers of the theatre, screen and radio to free-lance in television. Until that day an important part of the staff writer's job will be the adaptation of proven material. Of course, the staff writer must also create original material, but his many duties, such as assistant directing and directing, although invaluable for his writing technique, restrict his creation of original scripts. Then, too, the sustained thinking process, indigenous to the production of first-rate dramatic material, is a luxury which a time-conscious television industry cannot afford.

The majority of CBS dramatic shows during the last nine months (with a few exceptions such as "Two Soldiers" and "Untitled") have been included within the "Women in Wartime" Series. The most recent production was based on the July (G-Eyed) issue of *MADemoiselle* magazine. One dramatic sequence, a

"dream" sequence, had to be adapted from a wordy, although poignant article by Irwin Shaw entitled "Dream of Fair Women." The problem of adaptation in this case was twofold: the creation of a dramatic situation from a talky discourse; translating a soldier's "Dream of Fair Women" into visual terms that would preserve the incongruous fluidity of movement and thought peculiar to any dream.

Outside of the construction of a set which showed an apartment situated in the middle of clouds, the "dreamlike" quality of the sketch had to depend almost entirely upon dramatic content and background music for its effectiveness. For effects, projected cloud backgrounds, illusionary devices commonly used in motion pictures are not available to television today. In this case the limitations of technical facilities imposed important restrictions upon the adaptation. The following portion of script shows how some of the problems were handled:

Scene opens with a semi-long shot of the front of a building in India. Joe is at the left leaning against the

building, one foot propped behind him. He is in the first stage of a four-stage drunk. His collar is open and he is perspiring. . . . From time to time he takes out a handkerchief and mops his face. . . . He looks up at the sun, and up and down the street, but never at the camera.

NARRATOR: (Fairly young, sensitive, understanding, and with a sense of humor): May we introduce you to Joe? We call him Joe, although you may know him by a different name. We call him Joe because that is how any one of five million world scattered soldiers from any one of forty-eight United States have come to be known.

Ah . . . you'll have to excuse Joe for not glancing our way to acknowledge the introduction. You see, it's kind of difficult to contact a soldier seven thousand miles away in the sun-broiled Indian town of *Raputchana*.

[All this time the camera has been coming in on Joe. Now he looks at his watch, reaches in his pocket and takes out a pass and looks at it.]

NARRATOR: Fourteen hundred . . . 2 p.m. civilian time, 12th July, 1945. Nearly all of the forty-eight hour pass gone by . . . forty-eight monochromatic hours of native music and squint-eyed native faces . . . forty-eight hours hanging around street corners, standing at a native bar singing *tipsy, lonely* songs, drinking sour tasting native rum to quench the burn of loneliness . . . to dull a dream that every Joe hopes to find when he gets leave from the front.

When the Narrator talks about the native bar and the sour tasting native rum. Joe looks off to the side, and wipes his mouth with the back of his hand. Then he walks to the doorway then slumps down, dejected, tired. He takes out a package of cigarettes, flips out a butt, takes matches from his pocket, lights the cigarette and takes a couple of deep drags. He drops the butt, crushes it, closes his eyes, and blows the smoke right into the camera.

[DREAM MUSIC.]

(Continued on page 46)

WABD PROGRAMS HAVE BEEN VARIED AND EXTENSIVE



TELEVISION programs over WABD-DuMont, New York, have probably been more extensive and varied during the past couple of years than those of any other station in the country.

In DuMont's early experimental period when the station used the call letters W2XWV, the studio did considerable experimenting with commercial and sustaining programs.

A pioneer who participated in the early explorations and is still broadcasting regularly is Lever Brothers, whose program "Wednesday at Nine is Lever Brothers' Time," is produced by Ruthrauff & Ryan.

Testing variety entertainment, dramatic skits, "televisions" of radio shows, audience participation efforts, comedy sketches, preposterous competitions waged before the television camera, serious educational programming, integration of live talent and film over a period of two years, has resulted in an impressive back-log of experience for the show's producers.

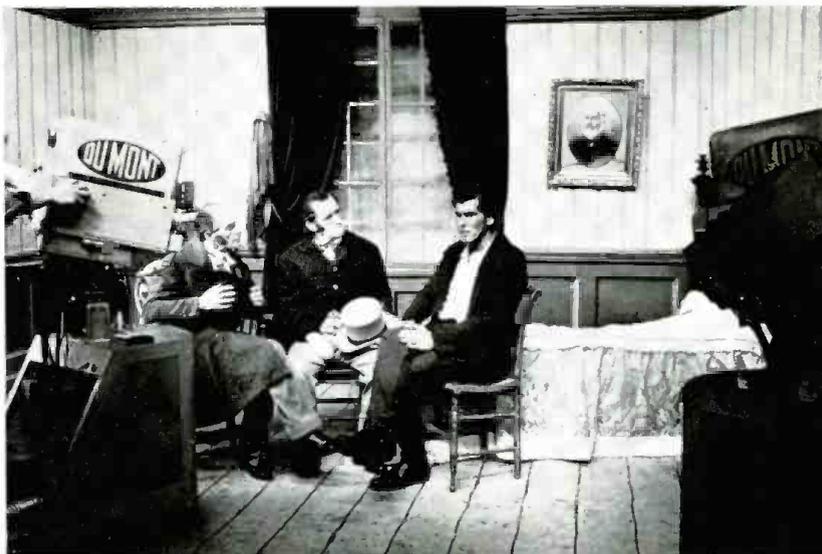
The constant weekly experimentation with television commercials has also proved valuable. Straight commercials, trick effects, whimsical twists, musical commercials, demonstrations, tie-ins with current advertising campaigns in magazines and comparative product tests before the cameras are some of the many types explored.

Oldest Programs

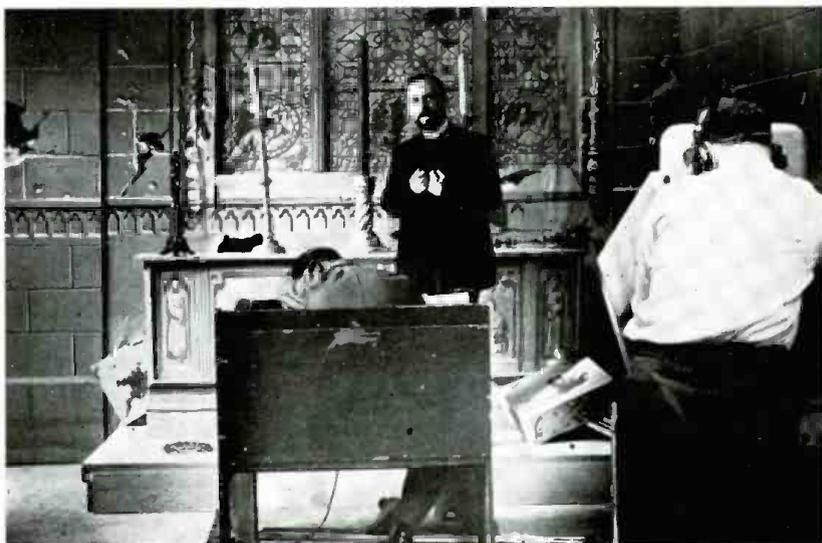
Two of the oldest programs in television were running during the early programming period of WABD. One was Doug Allan's "Thrills and Chills," a series of adventure programs which brought some of the most colorful personalities in the world to the television camera. This show is still being broadcast from the station. The other was "The Face of the War" with Sam Cuff, general manager of the station.

Fashion shows have proved to be superb television fare down through the years. Probably the most successful of these on television is "Fashions Coming and Becoming," produced for the Sanforized Division of Cluett Peabody & Co. by Young & Rubicam. Among other fashion shows presented on WABD were:

I. J. Fox' Fur Fashions with Glorianne Lehr; Stardust Garment's show by Norman D. Waters & Associates; Butterick's patterns with models dis-



"Telltale Heart," Edgar Allen Poe's thriller. (Ruthrauff & Ryan Adv. Agency).



"The Cathedral," was a special DuMont Easter sustaining feature.



Offenbach's opera, "Pomme d'Api," produced by Television Workshop.



"Magazine of the Air" (U. S. Rubber Co.) featured 5-man life raft in tank.



"Fashions Coming and Becoming" with Betty Furness, via Young & Rubicam.



"Scheherazade" was presented by Chas. M. Storm Agency with La Meri.

TELEVISER

playing costumes while an offstage voice described the details, yardage and trimmings for the pattern, a series by the Abbott-Kimball agency; Alden's Chicago Mail Order House series produced by Buchanan & Co.; and Keeler & Deitz show for Cincinnati Fashion Frocks.

* * *

Many organizations and educational institutions have eagerly taken advantage of the opportunities to explore television via use of facilities of WABD, the American Television Society, the Television Producers Association and the New School of Social Research among them.

Programs Explored

WABD has explored many types of sustaining programs, including:

"The 'Ike' on Sports," a currently running series featuring the major sports personalities of the day; numerous types of variety shows, talent auditions and revues; dramatic programs, particularly George Lowther's excellent productions of "A Christmas Carol," "Submarine," and "The Cathedral," Ben Kaufman's and Tony Ferriera's "Suppressed Desires"; cultural programs such as Kirby Cushing's "DuMont Televised Book Forum"; John Hewlett's "Author! Author!"; and programs for the donation of blood to the Red Cross, sale of war bonds and other phases of the war effort.

Motion picture film has been abundantly explored for television fare. Commercials were given on film for Botany Woolen Mills, Canada Dry's "Spur," Chesterfield, Esso Motor Oil and others. Every type of movie from the educational short to feature entertainment fare has been presented on sustaining time.

Leading figures in the sports, entertainment, political and news world frequently visit the television station to participate in the new medium. Among prominent personalities have appeared before the cameras of WABD including Frank Fay, Tom and Bill Slater, Lou Nova, Jack Dempsey, Canada Lee, Tony Galento, Fritzi Zivic, Benny Leonard, John Reed King, Fred Waring, Eddie Dowling, Michael Whelan, Jessica Dragonette, Mia Slavenska, Wendy Barrie, Senator Robert Wagner and scores of others.

Many Advertisers

A listing of the advertisers who have participated in DuMont commercial experiments is varied and impressive. "The Magic Carpet," produced for Alexander Smith Carpet Company by Anderson, Davis & Platte, is one of the veteran programs on the station involving ingenious video effects and sometimes whole worlds of fantasy. This program recently attracted many of the acts of Ringling Brothers, Barnum & Bailey circus to the studio.

(Continued on Page 46)

“

WE CAN CARRY SIGHT



BELL TELEPHONE SYSTEM

AS WELL AS SOUND^{LL}

Communications is the business of the Bell System. Our contribution to the development of nation-wide television service lies primarily in the transmitting of programs from place to place.

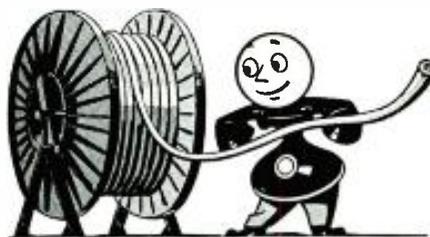
With the facilities now available and in prospect, the Bell System can readily achieve transmission of sight as well as sound programs.

Whether by telephone wire, by coaxial cable, by radio relay, by other methods, or by combinations of any of them, the Bell System intends to use the best, most dependable and most economical means possible.



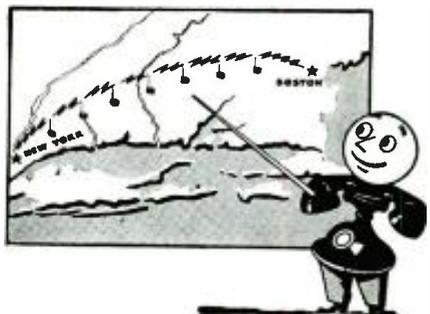
BY WIRE

Regular telephone wires provided with special amplifying equipment and specially shielded pairs of wire in regular telephone cables can be used for television transmission over short distances. They may be used for transmission within cities for local pick-up or studio-transmitter links.



BY COAXIAL CABLE

In addition to use for telephone service, coaxial cable—when properly equipped—is also suitable for transmitting television. By the end of 1945, the Bell System expects to have coaxial cable manufactured for upwards of 2000 route miles. Construction of the remainder of the 6000-7000 miles of routes so far planned can be expected during the next few years.



BY RADIO RELAY SYSTEMS

Work is now under way to set up a Bell System micro-wave radio-relay system between New York and Boston for which research was well advanced before the war. Behind this project is the Bell System's experience in trans-oceanic short-wave telephony and in very short-wave multiplex telephony in this country. Added to this background is the great body of knowledge that has come from the intensive war work done by the Bell Telephone Laboratories in the micro-wave radio field.



Pencil sketch of Bob Emery's (WOR) presentation of "Heritage of Wimpole Street" by Robert Bright, art director of Station WABD

DESIGNING FOR TELEVISION

By ROBERT BRIGHT

Art Director, WABD-DuMont

THE television setting designer's job is a constant struggle to keep abreast of television. In the months ahead, it will be even more important than before to master the new possibilities permitted his work as new lights and cameras are released.

In the past and today, overall brilliant light compels the introduction of comparatively heavy shades and shadows to prevent their being washed out. A successful night scene is an extreme rarity in television. Light sources are difficult to indicate; in a brilliantly lit studio, a 1000-watt spotlight gives only weak delineation.

The set and property designer must also be aware of the capabilities of the camera. He must know when the camera tends to expand the apparent width and depth of objects, when some object becomes distorted or enlarged by being brought too close to the lens. Once he learns these limitations, he can use them constructively.

In George Lowther's "The Cathedral," a crippled soldier hobbled through a breakaway door, away from the camera, down an aisle between two rows of pews to a seat in front of the altar. The whole walk, which was taken in short steps be-

cause of his crutches, was about 18 feet. The camera, which followed him part of the way, made it look like 60 feet. Knowledge of the camera's performance helped us conserve studio space here.

The usual wartime shortages of materials have created some nasty little problems for us. Canvas is scarce. Straight lumber is in the class of auto tires, steaks and your favorite cigarette brand. Lighting equipment is below the standards we'd prefer. Occasionally, though, by having to improvise and invent, we have discovered materials close at hand which substitute satisfactorily for the ones we would normally order. In at least one case, we found we could improve on the original.

In "The Cathedral" we wanted a big piece of flashed acetate for our stained glass window. A 1000-watt semi-flood light on a dimmer mounted behind the window was to simulate the Easter Sunrise. A material too transparent would admit too much light and injure the iconoscope. Our substitute for the not-to-be-purchased acetate was a heavy grade of architect's tracing paper which has all the qualities of etched glass. It breaks up the light source into thousands of tiny facets without diminishing the total amount of light.

One of the most elementary problems we face in planning scenery is planning a picture. Since television is first of all a picture, as designers we try to deal with it as such. Should the light obliterate some of the shadows needed to give our pictures the proper tonal value and balance in lines and masses, we try to restore the shadows with paint. In Munson G. Shaw's little Latin-American variety show, "Fiesta," the set had to be sunny and light with the usual white plaster, grilled windows and Spanish tiled roofs. Some of the moldings and overhang were real. Some were not. But all shades and shadows were painted and looked quite real.

We design a good value range, light to dark. The mood of our production tells us a good deal about how our value range should be designed. Ruthrauff & Ryan's Treasury Show utilizing a tropical scene in Rio de Janeiro had to be in a light and sunny setting. Our value scale accented the light areas with plenty of dark portions for contrast and sparkle. A beautiful photomural of Rio harbor for a background set the mood and our baroque railing and plaster walls gleamed in good, strong light.

Often we find that a window or pic-

ture painted on a flat is more convincing than the real thing. Care must be taken by the director, though, to prevent shadows from falling on the painted scene "outside" a painted open window or the illusion falls apart. A small window with simulated strong sunlight streaming through is often more effective when painted; in Bob Emery's WOR production, "The Singapore Spider," we had a most convincing leaded window whose sunlight was nothing but pure white paint.

The same set called for a model three-masted schooner hanging over a fireplace. Our model was painted, of course, since a small table was between it and the camera throughout the show, which kept the hard focus of the camera at a safe distance. Our light source having been established at the painted window, a carefully painted shadow made quite a convincing little boat model. To the right of the mantle was a painted framed picture the painted shadow of which was presumably caused by the same light source, our painted window.

Again we used knowledge of the camera's characteristics to our own advantage.

Tricks of Dressing

One characteristic of the camera that requires particularly careful handling in planning settings is its aptness to magnify blank areas in sets to great empty holes. As in playwriting, scenery must have portions of calm, a few blank spots to provide static repose. The artist must study these spots. If the panels in a Louis XV interior are too big or are spaced too far apart, our dainty, refined little salon might look like an empty warehouse. In Bob Emery's "One Who Came to Gettysburg" we had a blank spot about two feet wide between our door and a very important sofa. This spot was so placed as to implement the entrances of four actors, all of whom crossed from the door to the sofa. Our blank background gave just a little added importance to the actors in those four short camera pan shots.



The complete set seen by the Tele-Audience. Note faithfulness of detail in finished production.

In Susan Glaspell's "Trifles," another WOR production, we learned a few tricks about dressing a set, or rather overdressing one. As we have seen, the camera has a tendency to look for blank spaces, so we often have to add detail that would not ordinarily be there. "Trifles" had a board interior; pretty monotonous if there is too much of it, so we hung props all over the walls, coats, shawls, lamps, roller towel, lots of pots and pans and other good farmhouse props. Here again our background was protected from sharp camera focus and we could paint a rather convincing window with snow on the mullions and transoms.

George Lowther's excellent little drama, "Submarine," made great demands of its actors and producers but required little of the cameras. The cameras were in relatively static positions throughout most of the performance, about seven feet away from the downstage end of the set. Every-

thing in our shallow set was in focus at all times. There was almost no panning.

The set was seven feet wide and five feet deep. The scenery, thus sharply focused, had to be in good detail. The rivets and painted steel plate, the pipes and valves were all as stark and hard as the lines of the play. The static quality of the scenery, the set position of the cameras all made good background for the tense drama of the play and an excellent build-up for the climax in which the English prisoner leads the German submarine into a mined harbor and to the U-boat's destruction. Water was poured down on the set from above. The scene faded to a close-up of a small tank in which air bubbles were rising and this last, startling movement terminated a powerful dramatic creation.

As each new development in television studio equipment is released, the designer can shuck off more limitations and give increasing scope to the imagination that television stimulates so effectively. By the time materials are available and better lenses and more sensitive cameras permit increasingly valid interpretations of the pictures to be televised, set designing for television may well have developed to the status of a widely recognized and highly contributory art furthering the acceptance and advancement of the magnificent visual medium that is television.

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TELEVISER Magazine

11 W. FORTY-SECOND ST., N.Y.C.

“Speaking of Children’s Programs . . .”

By DOROTHY L. McFADDEN
President, Junior Programs, Inc.

THE child audience for television is going to be an even larger one than that for radio programs, because children are extremely visual minded. Something that they can see attracts them much more than something in sound only, and the visual makes a deeper impression on them than any other form of entertainment or education.

For that reason the station managers and program producers will do well to prepare carefully for the young audience. Young Johnny, Jr. will more often than not be the cause of the family’s buying a television set. He will also be its most faithful and critical watcher during the first important months of commercial television. If Johnny, Jr. enjoys the programs he sees, he will spread his enthusiasm through his young friends to such an extent that their families will buy sets sooner than they otherwise might. But if the programs prove dull and uninteresting, his disgust will soon be evident and will add weight to any economic or other reasons which may influence the family against buying.

Juvenile Interest Factors

As soon as a youngster has seen a dramatic or variety program on television that he thoroughly enjoys, ordinary radio programs will seem as dated and old-fashioned to him as the silent films do to us today. He will want the fun of seeing his entertainment, and will select his story heroes and comedians from then on from the people on his television screen. The fact that he need not pay out his precious pocket-money to see this type of show will weigh heavily in its favor with our calculating young American! Not that he won’t still want to go to the movies, but if television programmers are wise, he will soon find more fun and variety suited to his needs and likes in his own home at the video receiver.

Commercials done for the young audience will sell goods more quickly than spoken “plugs” ever did. A trip through any store with a child will prove that. See him stop at counters where any kind of sales demonstration is going on. Watch



The giant brushes his teeth after dinner. Scene from “Jack and the Beanstalk,” presented by the General Electric station, WRGB, Schenectady

him pick out a book from its illustrations, a bicycle because of its paint and gadgets, a chemistry set with the most elaborate equipment. It is the “eye appeal” that does it. Packaging of cereals and other child-customer products will undoubtedly be revised to give television impact. Johnny will tell his mother what the gift item looks like for which he needs three box tops.

With more than 20 million children in this country between the ages of five and thirteen, and with radios in 89% of our American homes, it behooves the television planners to get ready for this important audience.

The first thing, however, is to learn to know that audience. What do children enjoy seeing? The experience of Junior Programs, Inc., giving over 2000 performances to millions of children from coast to coast, should prove of some value as a guide. Dramatic shows were the most popular, of course. We gave plays, operas, narrated ballets, and plays with music and dancing, using our own companies of professional adults. The young audience likes plenty of plot, suspense, humor, and lots of action. “People standing around and talking,”—a child’s description of a grown-up play,—doesn’t fill the entertainment bill for children.

They want to see motion, clearly defined characters, funny situations. They like variety,—so we also selected the best marionette shows, animal acts, concerts, famous speakers with films, and so on, for them.

We soon discovered that any one of these types of programs *if carefully produced by talented artists*, would hold an audience of any age. Some of our own productions, planned for the 8-12 year olds, were booked and enthusiastically received in colleges and army camps. Television has a wonderful chance to produce entertainment for the whole family.

Testing Juvenile Reactions

Watching groups of 500 or 3000 youngsters at a performance, or smaller audiences at carefully arranged auditions, one can learn a great deal. Television producers must try in some way to use test audiences until they learn the children’s reactions to these new and untried techniques, for television is a new medium, and no one,—even those who write books or radio programs or do theatre for children can claim to know all the answers. Those experiences are valuable and should be used to the full; but no intelligent producer would take a radio
(Continued on page 27)

TELEVISER

"JOURNAL OF THE TELEVISION INDUSTRY"

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OCTOBER 15-16, 1945

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Consultant Television Engineer
Chairman, Operations Panel



JAMES LAWRENCE FLY
Former FCC Chairman
Luncheon Guest Speaker



PAUL MOWREY
Television Director, American Broad. Co.
Member, Programming Panel



RAYMOND E. NELSON
V-P, Chas. M. Storm Adv.
Member, Advertising Panel



JOHN REED KING
Star of "Missus Goes A'Shopping"
Chairman, Program Production Panel



HARVEY MARLOWE
Tele Consultant, American Broad. Co.
Member, Program Production Panel

A VERITABLE university of television will get under way for two days on Monday, October 15th at the Hotel Commodore when the "Television Institute," sponsored by TELEVISER, opens its doors to scores of radio, advertising and television executives.

A total of thirty-nine subjects, ranging from "Programming a Television Station" to "Cost Factors in Television Advertising," will be thoroughly explored by the "institute's" six main conference panels and eight seminar "round-table" discussions.

The panels, each headed by an outstanding television personality, will cover: (1) *Television Programming*; (2) *Television Program Production*; (3) *Station Management*; (4) *Station Operation*; (5) *Television Advertising*; (6) *Television Merchandising*.

The eight seminars, each limited to twenty-five persons, will take up, in minute detail, the everyday problems of operating a television station, including television acting, writing, directing, producing, television commercials, talent, programs, station management, and other specialized matters.

Experts Listed

The experts, who will participate on the panels and luncheons, have been announced as follows:

DR. ALFRED N. GOLDSMITH, noted television consultant.

JAMES LAWRENCE FLY, former FCC chairman.

NORMAN CORWIN, famed radio writer.

THOMAS F. JOYCE, former sales manager of RCA-Victor.

RICHARD HUBBELL, author of "4000 Years of Television" and "Television Programming and Production."

DR. E. W. ENGSTROM, director, RCA Laboratories, Princeton, N. J.

LEO HURWITZ, CBS television director.

PAUL ALLEY, director, NBC Film Programs.

JOHN REED KING, star of the "Missus Goes A-Shopping."

HELEN RHODES, television producer of Station WRGB, Schenectady.

WILLIAM MCGRATH, television director, Station WNEW, New York City.

GERALD O. KAYE, television instructor, City College of New York, and sales promotion manager, Bruno-New York.

PAUL RAIBOURN, president, Television Productions, Inc.

GOLDSMITH, FLY, CORWIN, JOYCE AMONG INSTITUTE'S 44 RANKING TELE SPEAKERS

RONNIE OXFORD, director-producer, NBC Television.

EDWARD SOBOL, director-producer, NBC Television.

STUART NEDD, television actor.

BARBARA ENGELHART, television actress.

BUD GAMBLE, television producer.

IRWIN A. SHANE, Editor-in-Chief, TELEVISER.

WILLIAM J. HALEY, director-general of the BBC, speaking from London.

STANLEY KEMPNER, television editor, *Retail Home Furnishings*.

RAYMOND E. NELSON, producer of more than 100 television programs.

JUDY DUPUY, author of "Television Show-business" and former Radio-Television editor of *PM*.

SAM CUFF, manager of Station WABD-DuMont, New York City.

S. CARL MARK, television director, Al Paul Lefton Advertising Agency.

C. E. NOBLES, television engineer, Westinghouse Electric Co.

PAUL MOWREY, television director of the American Broadcasting Co.

BOB EMERY, television producer of WOR.

PATRICIA MURRAY, television editor of *Printer's Ink* and veteran television performer.

GEORGE L. MOSKOVICS, comm'l. mgr., CBS Television.

CHAS. J. DURBAN, ass't. director of advertising, U. S. Rubber Co.

DAN D. HALPIN, former president of the American Television Society.

LOUIS A. SPOSA, service director of Station WABD-DuMont.

HERBERT E. TAYLOR, Jr., director of transmitter sales, Allen B. DuMont Laboratories.

PHIL FUHRMANN, sales mgr., Station WABD-DuMont and numerous other experts.



NORMAN CORWIN
Noted Radio Writer-Producer
Luncheon Guest Speaker



THOMAS F. JOYCE
Sales Manager, Raymond-Rosen Co.
Member, Merchandising Panel



PATRICIA MURRAY
Television Editor, *PRINTER'S INK*
Member, Program Production Panel



SAMUEL H. CUFF
Manager, Station WABD-DuMont
Member, Station Management Panel



LOUIS A. SPOSA
Service Manager, Station WABD
Member, Management Panel



IRWIN A. SHANE
Television Producer and Editor
Chairman, Retail Television Panel

Sessions Start at 10 AM

Sessions will start at 10:00 A.M., and following lunch, will continue from 2:00 to 4:30 P.M. each day. During the evening hours the "Institute" guests will observe the rehearsal of several television shows and their presentation on the air. On Wednesday morning, those who wish to make the trip will visit Station WRGB, in Schenectady.

Other "Institutes," sponsored by TELEVISER, are scheduled for Washington, Cleveland, Chicago, and Cincinnati.

The registration fee of \$10 includes admission to all the panels, seminars, studio tours, and two luncheons.

TELEVISER

39 TOPICS FOR INSTITUTE'S 6 PANELS, EIGHT SEMINARS ARE ANNOUNCED



PAUL ALLEY
Director, NBC Film Programs
Member, Programming Panel



DR. E. W. ENGSTROM
Director, RCA Laboratories
Luncheon Guest Speaker



WILLIAM J. HALEY
Director-General, British Broad. Corp.
Luncheon Guest Speaker
By Radio From London

MONDAY, OCTOBER 15

Registration, 9-10 AM

Morning Sessions (10 AM to 12 N)

I. PROGRAMMING PANEL (*West Ballroom*)

(**RICHARD HUBBELL, Chairman**)

1. Radio vs. Television Programming
2. Use of Film in Programming (*demonstrated*)
3. Programming A Television Station
4. Local Talent and Program Resources
5. Technique of Tele-Audience Surveys

II. OPERATIONS PANEL (*Room "A"*)

(**DR. ALFRED N. GOLDSMITH, Chairman**)

1. Locating and Designing A Station
2. Equipping Your Television Station
3. Time Sales and Cost Factors
4. Black & White Vs. Color
5. The Independent Station

III. LUNCHEON (12:15 to 2 PM) *West Ballroom*

(**DR. ALFRED N. GOLDSMITH, Master-of-Ceremonies**)

Guest Speakers:

- James Lawrence Fly
- Norman Corwin
- Dr. E. W. Engstrom
- Irwin A. Shane
- Wm. J. Haley, director-general of the BBC, speaking from London

Afternoon Sessions (2-4:30 PM)

IV. PROGRAM PRODUCTION PANEL (*West Ballroom*)

(**JOHN REED KING, Chairman**)

1. Acting for Television
2. Writing for Television
3. Directing for Television
4. Producing for Television
5. Special & Visual Effects

V. MANAGEMENT PANEL (*Room A*)

(**DR. ALFRED N. GOLDSMITH, Chairman**)

1. "This Business of Television"
2. Station Operation Costs
3. Training of Studio Personnel
4. Experience of Station WABD-DuMont
5. Television for the Small Station

Evening Hours (Optional)

STUDIO TOUR: Station WCBW-CBS,
15 Vanderbilt Avenue

TUESDAY, OCTOBER 16

Morning Sessions (10-12 Noon)

I. ADVERTISING PANEL (*West Ballroom*)

(**GEORGE L. MOSCOVICS, Chairman**)

1. Producing Commercial Programs
2. The Advertising Agency Viewpoint
3. Cost Factors in Television Advertising
4. Preparing the Television Commercial
5. The Television Audience

II. SEMINAR "ROUND-TABLES"

1. Directing (10-11:00) *Room E*
(**Edward Sobol, Chairman**)
2. Writing (10-11:00) *Room F*
(**Fred Rickey, Chairman**)
3. Producing (11-12:00) *Room E*
(**Bob Emery, Chairman**)
4. Acting (11-12:00) *Room F*
(**Stuart Nedd & Barbara Engelhart, Co-Chairman**)

III. LUNCHEON (12:15-2:00) *West Ballroom*

(*Speakers to be announced*)

Afternoon Sessions (2-4:00 PM)

IV. MERCHANDISING PANEL (*West Ballroom*)

(**STANLEY KEMPNER, Chairman**)

1. Retail Uses of Television
2. Programming for Dep't Stores
3. Keeping the Television Customer Sold
4. Installing and Servicing Television Sets
5. The Antenna Problem
6. The Receiver Market

V. SEMINAR "ROUND-TABLES"

1. Education & Television (2-3:00) *Room E*
(**Edward Stasheff, Chairman**)
2. Special Events (2-3:00) *Room F*
(**Paul Alley, Chairman**)
3. Careers and Employment in Television (3-4:00) *Room E*
(**Judy DuPuy, Chairman**)
4. Television for Retailers (4-5:00) *Room F*
(**Irwin A. Shane, Chairman**)

Evening Hours (Optional)

STUDIO TOUR: Station WABD-DuMont
515 Madison Avenue, Studio B

* * *

WEDNESDAY, OCT. 17: Tour of WRGB, Schenectady, For Those Who Wish to Make the Trip. *Guests Must Pay Own Fares and Hotel Expenses*

(Continued from page 22)

or stage play and transfer it to a television studio, when planning for a young or an older audience. Video programs must be carefully planned for the medium, for its limitations as well as for its special advantages. Since in the juvenile field, adults will be producing, not for other adults, but for children, they must study the child response.

My suggestions,—from my Junior Programs experiences as well as from working at G-E's Schenectady station WRGB,—would be these: First, have a small child audience of varied ages and home backgrounds in the studio at your last pre-camera rehearsal. Don't wait for the camera rehearsal, as the studio audience's view of action will often be obscured. Naturally, seeing the show in the studio this way isn't the same as seeing it on a television receiver. Watching a child audience there will teach you most of all. But if you want to use children's reactions in shaping your play before it goes on the air, before it is so set that the director won't change it, use this test audience in the studio during a dress rehearsal without cameras.

Careful Auditioning Required

Someone who knows the show,—the assistant director, perhaps,—should watch this audience throughout, making notes constantly. He should notice when prolonged laughter or excited comment drowns out succeeding lines, so that time may be allowed for such response. He should listen to the audience comments to find out whether the plot is clear, the jokes understandable, the words audible. Children hate to miss anything, they are easily confused if the pace is too rapid, the diction bad, or the characterization blurry. He should watch the audience also to determine time lengths; perhaps the show gets dull toward the end, needs cutting, or perhaps it should be longer for the sake of clarity. After this rehearsal test, let the audience criticize freely. That is the only way to learn what youngsters like. Perhaps they think the "commercial" was silly,—then don't use it, it won't sell your product. Possibly they were bored with the whole presentation,—then drop it now, before spending more time and money on it. If they have good suggestions, as they will more often than you would suppose, by all means use them. Your directors will begin to understand the young audience's

viewpoint after a lot of sessions like this, and will get better results.

My second suggestion would be to audition all other possible programs from outside sources with children at your side, whether the program be amateur or professional, from an agency or other source. It has been a revelation to me in these ten years of pre-viewing to find how many people *think* they can do programs for young audiences. Television stations will want juvenile material, may need it quite desperately at times, but please I beg of you, select it with care! Don't pre-view something for five minutes that you will want for a half hour show. Pick your material for the right length as well as quality. There are dozens of so-called "professional" marionette companies that do not give as good a performance as eight-year-olds who do it for fun. Artists who do monologues or tell stories or give science demonstrations all think they have a wonderful "kid show." There will be hundreds of "American Indian" acts and travelogue movies and trained dogs or what have you, trying to climb onto the television bandwagon when it goes commercial. Remember, no show at all is better than a bad juvenile show. If your young audience gets bored and disgusted the whole family will feel the reaction and the entire cause of television will suffer.

Question for Producers

Since so much work and money goes into each television show, the producer should ask himself whether his programs for children are really worth while. Television can be good entertainment, and at the same time add to the child's interest in the world about him, its people, its scientific marvels, its beauties, its literature and music, or even in his understanding of himself. If producers will take their responsibilities toward young America seriously, and plan a variety of the very best forms of entertainment programs for after-school hours with as much care as should go into "school-of-the-air" planning, television can make a lasting contribution to the happy development of the next generation.

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This is a complete and authoritative book covering the whole field of television design, operation, and maintenance of equipment. Here you have full details on all the fundamental processes of television engineering—presented in the logical sequence of transmission, from the camera itself, through amplifying and transmitting equipment, radiation through space, reception and amplification, detection, and finally, image reproduction. Every radio and television engineer owes it to himself to be *really* well-informed—make this vital and important book part of your working equipment.

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BACKGROUND MUSIC FOR TELEVISION

By SYLVIA WEBER

THE decision to use background music during a recent American Television Society production of "More to Be Pitied than Scorned" was done to add variety to the show and enhance the production. The music could not be "hinged on" as a mere accessory. It had to be an integrated part of the whole production; otherwise it would only interrupt and confuse the continuity. If well chosen, the music would be a linking agent, tying the various episodes together. It would fortify the action and facilitate the transitions in mood—from white mellow tenderness to dark villainous terror; from dour heavy grief to brave heroic rescue.

Music motifs served to identify the principal characters and their recurrence and repetition established a pattern and form to the production. Grief-stricken Faith Trueheart, for example, disowned by her father, deserted by her husband, and living in her Bowery friend's tenement house, tenderly and tearfully recalls her happy past (music: "*Hearts and Flowers*"). Suddenly someone knocks at the door and terrifying villain music cues the audience of impending danger. The music acted as a link, anticipating the inevitable entrance of the villain, Desmond Dalton.

The Fight Scene

In the fight scene, due to limited space, the action was rather confined. Nervous and pressing music made the fight a real one, an exciting one. It filled in the gaps and made the blows round and solid. Throughout the play the musical motifs made you love the heroine, hate the villain, and honor the hero.

What determined the selection of the music? Could you take casual sentences that suggested "good songs" and use them as cues? In the play, Faith speaks of being deserted at the altar by her newly acquired husband. The song, "There Was I Waiting at the Church," immediately came to mind. However, Faith's whole speech was one of sorrow and remorse while the song, despite its title, was rather gay in

spirit. Not the dialogue, but the underlying idea or thought, should suggest the music. Thus the music became an integrating link. Music, to elaborate each key sentence or word, would be inconsistent and too haphazard. It is therefore better to limit oneself to a few carefully chosen pieces and have them recur where necessary. There must be consistency with the "idea." As in a good color scheme, the hues, intensity and values may differ, but there must be a harmonious relationship between them.

Finding Right Music

Where is the music to be found? You know the general mood you want to project, but you may not be able to place your finger on the name of the particular piece to represent it. "Motion Picture Music," a volume found in many music libraries, will help solve the problem. Under general headings: fear, grief, laughter, fighting, etc., the book suggests the titles of many selections appropriate for the particular emotion or action. The music may then be easily obtained from any good music library. Music lent only overnight should be photostated.

In two rehearsals the music had to be adjusted to the requirements of television. Since only one boom mike was available, the piano accompaniment had to be damped and cushioned to prevent it from interfering with the lines of the actors. While it was not to act as an eraser on the spoken dialogue, the music could not be so soft the audience would be virtually unable to hear it. Instead, the music had to flow easily and comfortably. The single boom mike placed the responsibility on the pianist for the control of volume.

In television, unlike the theatre where the pianist is seen or his presence is felt, any "clinkers" or intended discords to achieve the corny and colorful effect of a mellerdramer might be misinterpreted. The pianist as a person is missing from the picture and his music must remain in its proper place—the background.

The Theatre and Television*

By RICHARD HUBBELL

THE modern theatre makes use of a number of "theatrical" conventions, the acceptance of which is necessary on the part of the audience. Every art has certain conventions which are acceptable to the public. In viewing a motion picture we accept as real the illusion of reality induced by moving shadows on a screen. Television, which gives promise of becoming a new art form, has not yet produced any established and universally accepted conventions and only a few satisfactory techniques. Perhaps this is a good thing, for it gives us a chance to evaluate what has been done so far and to do plenty of advance planning and theorizing.

The more successful forms of theatre have not attempted to be realistic in the ordinary sense of the word—naturalistic, if you prefer. They have made use of selected elements of reality, blended into a whole which is frankly artificial, theatrical. In the acceptance of this convention lies the charm of the theatre; in theatrical make-believe nothing is impossible. The human eye sees this make-believe exactly as it is in full color, binocular vision, but somewhere inside the brain, alchemy is achieved and an illusion created, because we accept the theatrical convention.

No "Give and Take"

The camera, on the other hand, does not have any brain or emotions. It sees a given scene and passes along what it sees as a straightforward, realistic image. At the receiving end of the system this scene is reproduced in terms (at the moment) of a two-dimensional monaural sound. In the course of this transmission the psychological give-and-take between an actor on the stage and his audience is partly or entirely lost, along with an as yet undetermined proportion of the impact of the living flesh-and-blood personality.

But, although the television system loses these advantages, it gains others; multiple viewpoint through many cameras with infinite camera angles; the ability to extend one's vision and hearing over many miles and to "be in two places at one time"; the psychological magic of montage and of

visual effects; intensification, or "canalizing" of attention; and exclusion of irrelevant detail through use of close-ups.

A production of the legitimate theatre is usually played on a three-walled stage which represents the interior of a building. Three walls are seen in the form of scenery, but there is also a fourth and imaginary wall. In real life it would complete the circumference of the room, but in the theatre this would be inconvenient since it would prevent the audience from seeing what is happening on the stage. A theatrical convention takes care of matters. The fourth wall is omitted, but the actors pretend it is there, and the audience feels as though it is looking through the side of a house with X-ray eyes. The location of this imaginary wall is defined by the proscenium arch, the "picture frame" of the stage.

In a theatre each member of the audience views the show from a single, fixed position—his seat. The entire production is viewed from this one angle, varied only by the movement of the actors from one part of the stage to another or by an actor coming out from behind the proscenium arch, stepping "out of the frame" into a close-up on the apron or front portion of the stage. Because of this it has become customary for directors to stage their plays with all action turned toward the imaginary fourth wall. In order to project a personality over the footlights and reach the back of the house, it has become a necessary convention to accentuate and enlarge an actor's way of speaking and method of acting.

The theatre is essentially limited by the unities of time, place, and action. A scene, once started, must continue to run for a number of minutes, representing an equivalent or longer period of time. Failure to observe this unity usually causes confusion. A scene, once established, cannot be changed every other minute except at prohibitive cost, and the action of a given scene must progress logically from point to point within the limited confines of the stage.

The fundamental sensory appeal of a stage play is aural; the spoken word comes first. The script of a drama is primarily dialogue, and each director and actor fills in his interpretations. The visual part



RICHARD W. HUBBELL

Production Manager & Tele Consultant, Station WLW, Crosley Corporation, Cincinnati

comes after the aural, with the broad physical action so necessary in motion pictures relatively unimportant on the stage. A stage play is easily adapted to radio, less easily to motion pictures.

Television, like theatre, demands the ability of a performer to sustain a performance from start to finish, despite the continual distracting movement of cameras, lights, microphones. It calls for memorized lines—no reading from scripts as in radio. The only exception to this would be in the presentation of extemporaneous programs or of up-to-the-minute news in which there is no time to learn lines and in which the audience usually wants to get its news accurately and without benefit of the commentator's extemporaneous speculations.

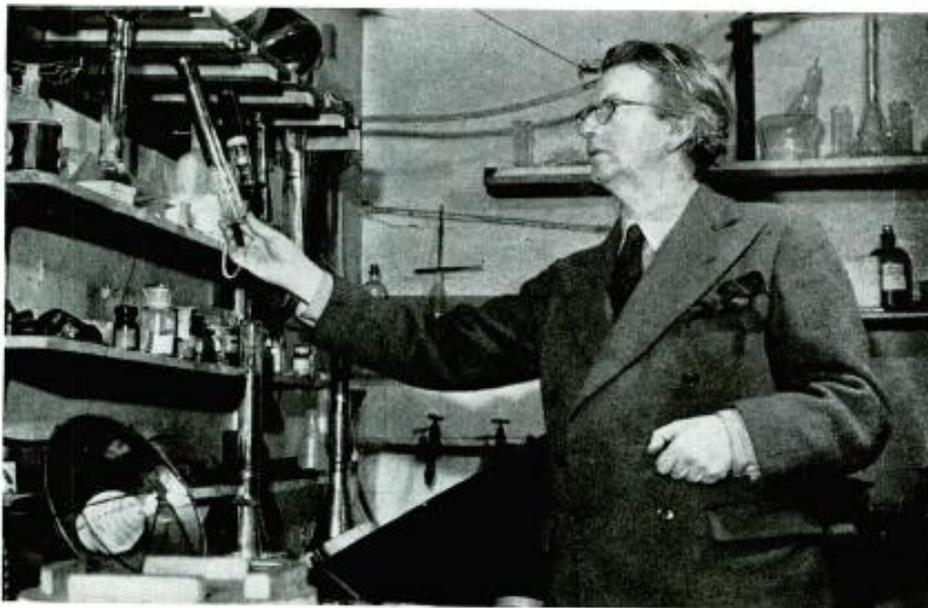
A theatre training is invaluable, for television artists must have a sense of showmanship, a flair for the dramatic. Some of the most dreary examples of early television programming have come from producers who have talked and thought a lot about the subject but had no opportunity to develop showmanship. Despite all rationalizations to the contrary, television is show business, whether one is presenting a documentary, an "educational," or a variety show.

Unlike the audience in a theatre, the television audience does not see the program from a single, fixed viewpoint. It sees the show from myriad, moving viewpoints—via a number of cameras, all mobile—and the whole effect is enhanced by the techniques of montage, visual effects, and regulated sound.

The audience is separated from the performer.
(Continued on page 45)

* Abstracted from Richard Hubbell's book, "Television Programming & Production" (Murray-Hill Books, Inc., 1945. 303 pp. \$3.)

GREAT NAMES *in* TELEVISION



JOHN LOGIE BAIRD

TWENTY years ago a London store advertised a novel "sideshow" for the entertainment of its patrons. The tired shoppers who crowded in to sit down and look at shadowy outlines on a screen may not perhaps have realized that they were privileged to see the first public display of a great invention, nor that the "men as trees walking" that they now saw would in years to come be replaced by television pictures in full detail, natural color, and relief. For the demonstrator was John Logie Baird.

Baird did not devote himself to television until he was thirty-five years old. He was born in Helensburgh, Scotland, in 1888, son of the Minister of the West Parish Church. He studied at the Royal Technical College, Glasgow, and at the University; he then settled down to the life of a business man in London until in 1923 he was forced to give it up for reasons of health. He retired to Hastings, fixed up a small laboratory, and began to experiment in television, a subject which had fascinated him since his student days.

After some months' work Baird succeeded in reproducing objects in outline.

He then moved his laboratory to an attic in Soho and continued his research, and it was at this stage that he accepted a three weeks' contract to demonstrate at a London store at £20 a week. But his funds were running low, until by October 1925, as he said later, "he was down to his last £20.

Reproduced Dummy's Head

Then one morning he made an adjustment to his apparatus, put a dummy's head in front of it, and saw it reproduced in full detail on the screen. Baird has described how he rushed out, seized the nearest office boy and gave him half-a-crown to come upstairs and be the first human being to be televised.

A few months later, on January 27th 1926, Baird demonstrated his Televisor to the members of the Royal Institution, the first demonstration of true television ever given. The B.B.C. began a television broadcasting service in September 1929, using the Baird system—the German Post Office actually began television broadcasting with the Baird apparatus two months earlier.

First in a Series

∴

Meanwhile the new invention was making its way into the cinema. In 1932 the finish of the Derby was shown by Baird in the Metropole Cinema, London. The Baird Television Company was formed, with John Baird as President, and by 1939 it had installed screens in several of the London cinemas, showing popular events, such as the Boat Race, boxing matches, or the Trooping of the Color.

The outbreak of war put an end to commercial television, for security reasons. The Baird Television Co. closed down, but the President went back to private independent research. He equipped the out-buildings of his home at Sydenham Hill as laboratories, and worked at the perfecting of television in color and relief.

Showed Color Television

As early as 1928 Mr. Baird had demonstrated, at the annual meeting of the British Association, an experimental apparatus showing television in color and another showing the pictures in stereoscopic relief. The early devices were mechanical, but by 1939 Baird was demonstrating color television with an electronic apparatus, using a cathode ray tube. The 1939 machine used a revolving color disc to add the color, the principle being to send red, blue and green images in rapid succession, causing them to blend to form a picture in natural colors, very much in the same way as color printing.

During the war, he has developed a system dispensing with the revolving color disc, the color appearing direct upon the screen of the cathode ray tube. These pictures show twice as much detail as those sent out by the B.B.C. in 1939. The stereoscopic principle is the same as that used in the simple hand-apparatus with which the Victorians used to entertain their after-dinner guests, giving them photographs and "views" to look at through glasses which threw them into relief. Baird has incorporated the same principle in the working of the cathode ray tube; two pictures are sent out by the transmitter, one as viewed by the right eye and one as viewed by the left; the right eye sees the right eye picture only and the left eye the left, producing the effect of depth.

Baird showed television in full relief and full natural color for the first time in December 1941, to the technical press; in the summer of 1944 he showed it again with all the improvements he had added to it. He calls the new apparatus the "Telechrome," and thinks that within a few years of the end of the war reasonably priced receiving sets should be available.

Invented the "Noctovisor"

John Baird was the first man to transmit television across the Atlantic, in 1928; he is also the inventor of the "Noctovisor," an apparatus for seeing in the dark, and through fog, with invisible infra-red rays. By using these rays he was able to show on the screen of his television apparatus persons sitting in total darkness; he demonstrated this to members of the Royal Institution in 1926, and to the British Association in 1927. Dr. Alexander Russell, President of the Institute of Electrical Engineers and of the Physical Society, declared at that time: "The use of this apparatus in warfare is obvious."

Since 1941 Baird has been consulting Technical Adviser to Cable and Wireless Ltd., and much of his recent research has been concerned with the application of television principles to wireless telegraphy. He believes that it will ultimately be possible to transmit images of a sheet of quarto typescript at the rate of 25 a second—an approximate speed of 750,000 words a minute. He foresees sending by television facsimile not only pictures, but plans, blueprints, charts, machine and architectural drawings, newspapers and whole books.

John Logie Baird is an Honorary Fellow of the Royal Society of Edinburgh, Fellow of the Physical Society, and Associate of the Royal Technical College.

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Allen Balcom DuMont
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WATCH FOR THEM!

"A CABLE FROM ENGLAND"

By C. P. SNOW, C. B. E., PH.D.*

LONDON:

IN 1936 England started the first television service in the world. By 1939 it was still the only regular service in any country which gave pictures of high definition: between 1937 and 1939 a good many English people got into the habit of sitting at home and enjoying a good view of the tennis championships at Wimbledon, cricket matches at Lords, and all kinds of public events in London. The transmitting station stood in the north of London and the service was only guaranteed for a radius of 30 miles. This covered the whole of the urban area around London—about a quarter of the English population. In fact the range was larger, and I personally used to get excellent results in Cambridge, over 50 miles from the transmitting station. Many public events could be viewed on the television screen with about the same pleasure as a news-reel at the cinema.

World War II stopped all that. For military reasons the station had to close down—and Britain wanted all her television experts for other purposes. Their technical skill was called on for the development of radar. Britain had known for years before the war that she had to develop radar in order to survive. It was her one hope of beating off the bigger air force. The sheer physical condition of Britain—a small densely populated island, uncomfortably near foreign air bases—and the numerical weakness of the Royal Air Force made it natural for her scientists to throw everything into this weapon; it was not an accident that when World War II began Britain had developed radar much further than any other power. And she had desperately to keep improving it all through the days of the war.

It was worth it, but the country had to pay the price. Radar is the greatest of the British war developments, but it meant that others had to stop; there were not enough scientists to go round. Television was one of the victims. In the last year or two Britain has been planning how best to pick up the pieces and start again.

* Editor of Cambridge Library of Modern Science, was Editor of *Discovery* 1938-40 and has been a Fellow of Christ's College, Cambridge, since 1930. Head of the Physics section of Britain's Central Register since 1940, he is the author of numerous scientific papers and novels.

A Government committee has just reported on the steps to be taken. This committee was led by Lord Hankey, who was for many years Secretary to the Cabinet, and knows more State secrets than any other living person. The British Government attaches so much importance to the future of television that it would only ask a man of Lord Hankey's wisdom and reputation to undertake this particular job. The report is clear and positive. It says that if the war had not happened the chief technical problem would now have been solved—that is the problem of giving a picture of such a high definition that it can be thrown on to the cinema screen. This still cannot be done, but research must be undertaken as soon as men can be spared from the war. The experience so many scientists have had on radar will be useful. We can expect that in a few years we shall be able to transmit television pictures as well defined as the cinema's, and colored and stereoscopic into the bargain.

International Television

That is for the future. Plans are also being made for the present. The committee reports that the 1939 service should be got back into action at the earliest possible moment. Perfection will follow. Anyone who viewed the 1939 programs knows how high the entertainment value was. But there must be one important extension. The London station can only serve one quarter of the population; the present moment is the right time to put television within reach of all. The small size of Britain happens to make it technically easy. *Six stations distributed about the island could provide for over 90% of the population.* This will be done. It will be possible almost anywhere in Britain to switch on one's own private view of the first great ceremony in Westminster Abbey after the end of the Japanese war.

That is only the beginning, of course. Television will have to be international. International agreement is required at once upon the bands of frequency to be set aside: and very soon international standardization will be necessary so that programs can be exchanged between one country and another.

"LIGHTING THE SET"

By PAUL ADANTI
WRGB Technical Staff

LIGHTING is one of the great problems of television from the points of view of both production and engineering. To the director, light is a definite dramatic factor. When used correctly, light enhances action, builds mood and gives a vitality to the picture which lifts it out of the flatland of the viewing screen into reality. To the engineer, light makes the difference between a reproduction that is full of random noise, flare and dark-spot and one free of these technical flaws which distract attention from the picture content.

The viewer, too, is highly aware of the effects of lighting although he may not fully comprehend their significance. He may not always recognize good lighting but he is always conscious of a lack of something, however intangible it may be to him, in a poorly lighted picture. Also, he has consciously or unconsciously, adopted a set of standards from the motion pictures which will inevitably be used as a basis for comparison.

Lighting for television has many complicating factors. Since action in this medium is instantaneous and continuous, it does not allow setting lights for each change of camera shots; it generally takes place over comparatively wide areas and many sets are used in a single production. Then, too, the pick-up tube in its present state of development requires extremely high levels of illumination as well as correction for spectral response.

At WRGB, the attack on the lighting problem has been aimed at overcoming as many of these complexities as possible. The dramatic and technical requirements have not been divorced but are approached from the point of view that both are necessary to provide a product which in quality can compete with other media.

Two Light Sources

At the present time, two types of light source are used: mercury-vapor and incandescent. The mercury-vapor light units are of three types: a ceiling flood containing three 1000-watt capillaries in a linear array, a floor-flood containing three 1000-watt capillaries in a triangular stack and a floor spot containing a single 1000-

watt capillary. The ceiling floods, of which there are twelve, are controlled from a central point and can be rotated in both horizontal and vertical planes at the same time. The pattern from this light is roughly oblong and its output measured on the floor directly under the light is 750 foot-candles. The floor-floods are mounted on movable stands of adjustable height and have a round pattern, the intensity of which is 600 foot-candles at 6 feet. There are three of this type. Both ceiling and floor-floods are operated on 1000-volt AC. The floor-spot is on a stand similar to the floor-floods and is operated at 1000 volts DC. This light can be focussed or broadened to provide either a spot or a flood and has a round pattern, the intensity of which is 1500 foot-candles at 10 feet. All mercury-vapor lights are water-cooled and heat output is negligible. The spectral output of these lights is high at the blue end of the spectrum and low at the red end. The incandescent lights consist of three 5KW and four 2KW spots of standard type. These are mounted on trolleys overhead and can be positioned from the floor.

Experiments were conducted with color charts to achieve a spectral response through the video chain which most closely approximated that of natural light. It was found that a mixture of both incandescent and mercury-vapor in more or less equal proportions was required.

How Lights Are Used

In practice, the ceiling floods are used to build up overall illumination, the floor floods provide the front fill and the mercury-vapor and incandescent spots are used for modeling and rimming.

To separate figures from the background, rimming light of fairly high intensity is applied from overhead and slightly to the rear. This is preferably angled from either side and can be fixed to cover areas of greatest action or manipulated to follow the figure. Modeling light is applied from either or both sides and can be fixed or following depending upon the amount of action.

In general, the proportions of light used for background and foreground are

in the ratio of 1 to 3 respectively, with the middle ground, lighted by spill and kick from the foreground illumination, varying between these figures. Side modeling light proportions are in the ratio of 1.5 to 1 to each other and the rimming light value is 7 to 9 times the background illumination or about 1500 foot-candles. These values are adhered to in sets where no attempt to create mood is made but where a good reproduction from program and technical aspects is desired. Flat-lighting and lighting merely to satisfy engineering demands are studiously avoided even in the largest sets and where there is action over a considerable area, modeling and rimming lights are manned to follow it.

Creating a Dramatic Mood

To illustrate what can be done with light to create a dramatic mood, let us consider the WRGB production of "The characters in this fantasy were a gargoyle and an angel and the scene was the belfry of a medieval cathedral. The time was Christmas eve and a light snow was falling outside the tower. The set contained a large window in the back through which moonlight shone and created a pool of light on the floor before it. The snow sparkled in the light as it fell outside the window and seemed to deepen the gloom within. The action took place within and on the edge of the beam of light which had for its source a 5KW incandescent spot mounted behind the set and angled down through the window. Two floor-floods were placed on either side downward to provide a little front light to keep the figures from being silhouetted completely. Floor kick and spill from this light gave enough illumination to keep the picture from flaring at the bottom and edges, resulting in excellent reproduction despite the low overall level of illumination. In this example, the effect created by lighting was considered to account for at least fifty percent of its dramatic value.

There is no set formula for mood lighting. Best results are obtained by experimentation and final results can be judged only on the picture obtained at the viewing screen. One important thing to remember is that to achieve the best dramatic effect, the picture should be as free from technical flaws as possible; the distracting influence of a bad flare at the

(Continued on page 46)

2: OPERATION AND MANAGEMENT



Station WRGB in action. Note the three cameras in use. Also note the overhead mercury vapor lights. (General Electric Photo.)

PLANNING THE TELEVISION STATION—First of a Series

By DR. ALFRED N. GOLDSMITH

A TELEVISION STATION and its operation constitute a complicated venture. Given thorough technical, financial and operating knowledge, it can be well handled—but not on a hit-and-miss basis. Considerable sums of money are necessarily involved. It is therefore particularly necessary to plan television projects in great detail, and to estimate their cost with as high degree of accuracy as possible. Annoyance and even disaster can thus be avoided, and smooth and profitable operation ensured.

Location of Tower Important

Perhaps the first matter to be considered is the location of the tower and antenna system. The tower should be located on the highest available point reasonably centrally placed with reference to the area which it is desired to serve. It should itself be as high as permitted by economic limitations, municipal zoning regulations, and restrictions on possible aviation haz-

ards along flight paths or near airports. And it should be as close as practicable to the studio location which is selected, thus minimizing the cost of the link between the transmitter and the studio. It should be possible to place close to the transmitter a good receiving station for picking up transmissions from mobile units on outside programs such as some sports events. The transmission line between the transmitter itself and the elevated antennas for video and audio signals (unless these are combined) should be engineered with due regard to its cost versus the power losses in it. The transmitter must be suitably housed in an all-weather building, and located with reference to convenient nearby transportation facilities for the staff (unless a special automobile or bus service is to be provided by the station owners).

Connection between the transmitter and the studios may be by equalized telephone line for distances up to five or ten miles,

or by coaxial cable for any desired distance, or by a radio relay link (which usually covers between 10 and 30 miles per link in the system). Sometimes it will be possible by special methods to use a section of a longer radio-relay or coaxial-cable system for studio-to-transmitter connection.

Location of the studios presents many conflicting requirements. For important persons who may address the television audience, it is probably necessary to have at least a small "personal-appearance" studio in a convenient location in mid-town. Otherwise it will be desirable to provide especially comfortable and speedy transportation to the studios for such persons. Dramatic and variety performances, on the other hand, require large areas close to ground level for their convenient handling—and such space can be secured at reasonable cost only in relatively sparsely populated sections. On the other hand, the question of rapid and reliable

transportation for the actors and studio staff in all weathers and seasons is an important one—and this can be best met by studios located in the more populous sections. Careful study of available sites is thus necessary to determine the best compromise between the essential factors.

Inasmuch as smooth television performances require considerable rehearsal time, there must be available an adequate number of rehearsal studios. While these need not be as completely and elaborately arranged as the actual performance studios, yet they must have sufficient facilities to enable faults in rehearsal—whether of the video or audio variety—to be readily detected and corrected. Closely adjacent should be the dressing rooms. Indeed, considering the high speed of operation necessary in television, it is clear that dressing rooms must be strategically located relative to the studios to minimize to the utmost the time required for changes of costume.

As in the case of motion-picture studios, well-fitted carpenter and paint shops must be provided in locations where the noise and vibration of operation will not conflict with studio operation. Storage space for lights, microphone booms, and the like, and scene docks are obvious necessities. As a matter of economy, the scene docks should be particularly ample to facilitate quick storage of a set after striking it and to enable it rapidly to be located and re-used as desired. In this case, as for the studios themselves, ample head room is also necessary.

The Control Rooms

The heart of television operations is the control room, for here actual direction and production is carried out. Control rooms must be placed adjacent to their studios according to present practice, although it is doubtful whether this requirement will be so necessary or even desirable in the ultimate operations, particularly when it is considered that a television performance in future days may take place in a number of not necessarily adjacent studios. After all, the control-room operation is based on a rapid study of, and decision between, a number of available camera angles, together with means for the guidance and instruction of the studio personnel as the needs arise. And what better medium for doing these things than the highly developed television of the future itself? Why not see the whole of all participating studios by means of television?

Composite shots, effects, and the like will be handled from the advanced control rooms of the future or from locations containing equipment guided from such control rooms. The importance of the electrical-composite shots, with "background injection" from slides or film or miniatures, is such that it is certain that economy and beauty of presentation will require their use. Accordingly it is desirable that ample space for control-room expansion shall be available.

Experience has shown that motion-picture film will be widely used in television production, including film sequences even in live-talent shows. There are also many other uses of film as such, for example, in television news reels and educational films. Ample projection-room facilities are therefore necessary for any modern television station. Operation of the film-projection room must be coordinated on

a split-second basis with that of the live-talent studios through the control rooms, and the corresponding equipment and operating provisions must be made. Particularly is this the case since many effects and standard sequences, such as station-identification announcements, will likely be on film. Further, the television commercials will frequently enough be in motion-picture form, an obvious example being the showing of the capabilities of an advertised automobile in "taking punishment" on a test-course run.

Aside from the technical facilities so far described, there are various necessary associated facilities. Further, the specialized requirements of television installations are many. These all merit further and more detailed consideration and will be discussed in the next, and future issues, of TELEVISER.

STUDIO AUDIENCES . . .



Paul Whiteman, band leader, and Danton Walker, columnist, are among the guests at a recent American Broadcasting Co. television performance at WABD-DuMont, New York City. (Lower photo), Schenectady townspeople for "Town Meeting of the Air" at General Electric's station, WRGB



LARGE SCREEN TELEVISION

SINCE the early days of television, numerous research engineers recognized the desirability of providing large, bright, and clear images. Even before the introduction of all-electronic television as a regular service to the public by RCA and NBC in 1929, research staffs had tackled the problem of projecting television pictures on large-sized screens. Despite wartime curtailments of research activities, the public now is assured video pictures of virtually any desired size.

The secret lies in the development of a projection-type television system, applicable to home receivers, as well as to theaters. By means of the system, which incorporates pre-war technical advances in the art, RCA, for one, plans to produce home sets capable of receiving pictures 16 x 21 inches or larger, with screens for home receivers in a variety of sizes, running to as large as 4½ x 6 feet. For theater television RCA has already demonstrated pictures 15 x 20 feet in size, projected to a movie screen from a balcony 60 feet away!

These achievements signify for television an advance in the art comparable to the progress in sound broadcasting reception from earphones to dynamic loudspeakers and pave the way for still greater improvement when the desires of a television-conscious public become fully known after the war. Heretofore, all television receivers sold to the public depended upon either direct viewing of pictures at the flared end of a tube or viewing of the tube's reflection in a mirror. In both instances, the size of the tube itself had to be increased to obtain larger images.

Motion Picture Experience

Research scientists discovered that requirements for theater-screen television were quite similar to those for motion pictures. In fact, standards originally set for television broadcasting were based largely on previous motion picture experience and follow along these lines:

Picture detail—While the present standard television band width provides a picture resolution to a slightly less degree than present-day, fine-grain 35 mm. prints, the resulting image is detailed and clear.

Reproduction of motion—Television



Large screen television for theaters demonstrated in 1931 at New Yorker theater on 15' x 20' screen projected from 60 foot distance. (RCA Photo.)

standards provide for 30 pictures per second, as compared to the motion picture standard of 24 pictures per second. *Flicker*—By the process known as interlacing, the picture frequency in television is increased to 60 per second, which is ample to provide flickerless screening.

Brightness—Theater screen television approaches motion picture theater standards with highlight brightness ranging up to four-foot lamberts.

One of the major problems in the development of a large-screen theater television projector was that of producing adequate screen brightness. In dealing with this, it was found that the brightness of the image on the kinescope (electronic receiving tube) could be increased considerably by raising the voltage on the tube to as much as 70,000 volts. By designing a tube, capable of withstanding this voltage and providing a suitable power unit for the tube, an extremely bright image was attained.

Next came the task of transferring this bright image onto a motion picture screen. The very best f:2 projection lens was capable of reproducing only 3.75 per cent of the available light. The RCA research group borrowed the principle of the Schmidt astronomical telescope, used

for viewing stars at enormous distances, and adapted it for large-screen television.

Increased Picture Brightness

The completed model consisted of a large spherical mirror which picked up the light from the face of the kinescope and projected it toward the screen through a large lens which served to correct aberration due to the mirror and also served to form a sharply focussed image upon the screen. By use of the Schmidt principle, the amount of projected light was increased from 3.75 per cent to 25 per cent and the results obtained were comparable to the brightness of a motion picture.

In developing large-screen television for the home, RCA makes use of an improved high voltage projection tube. Other innovations include an adaptation of the Schmidt optical system, a new type of plastic viewing screen, and an automatic frequency control circuit.

Reproduction of the images on the large screen built into the receiver cabinet is made possible primarily by the special optical system. It consists of a bowl-shaped mirror and molded plastic lens of special design which delivers to the back of the viewing screen about six times

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“TELEVISER”

11 WEST FORTY-SECOND STREET, NEW YORK 18, N. Y.

as much light as could be obtained with a conventional f:2 movie projection lens.

In an RCA advanced development model, the cathode ray receiving tube is mounted face downward in the lower part of the cabinet, with the bowl-shaped mirror below it and facing upward. Light from the face of the tube is reflected upward from the mirror through the plastic lens to a flat, inclined mirror near the top of the cabinet, from which it is thrown upon the back of the viewing screen. The vertical mounting makes it possible to install the entire receiver and optical system in a cabinet not much larger than a standard radio console.

Quality of the pictures is enhanced by an automatic frequency control which eliminates picture distortion caused by “noise” interference. Another improvement is a new translucent plastic viewing screen. Special features incorporated in the design of the screen provide even distribution of light over the image area and proper distribution of transmitted light within the normal viewing angle. The screen assures a picture of maximum brightness and natural light contrasts.

On May 9, 1941, a demonstration of theater television for more than 2,000 theater folk, motion picture distributors, sports authorities and others was staged by RCA. Onto a big screen in the New Yorker theater came a procession of television shows that included live talent productions and motion picture film transmitted from the NBC television studios at Radio City. From Madison Square Garden came exciting views of a championship prize fight, accompanied by the clamor of crowds and other sound effects reproduced with utmost realism. Subsequently, a baseball game at Ebbets Field in Brooklyn was televised and flashed upon the big screen, to the amazement and enjoyment of the spectators.

A New Industry

Though delayed by the war, theater television has created a fascinating prospect of a new industry. It heralds the linking of playhouses of the nation into television networks that may transform any village theater into a Yankee Stadium, a Madison Square Garden or a Metropolitan Opera House.

With victory over Japan, television will be ready to bring before our eyes top-ranking news events, shows and educational features on magic screens of truly satisfactory size and clarity.

"TELEVISION HIGHLIGHTS"

(Continued from page 6)

for another 52 weeks. . . . Television will supplement the newspapers, radio, theatre, and movies, but will not replace them, George E. Markham, manager of WRGB, Schenectady, N. Y., told a television symposium group at the University of Michigan, Ann Arbor. . . .

Television bids fair to become the most effective and widespread means of mass communication yet developed by the human race, John F. Royal, NBC vice president, in charge of television, declared in a recent issue of the Magazine, "Finance." . . . Plans for the first full-fledged television field tests in the New York metropolitan area using higher frequencies as proposed by the FCC allocations will be conducted by NBC in collaboration with RCA Labs, Dr. C. B. Jolliffe, vice president in charge of the RCA Labs., announced. Tests were to be made atop the Empire State Bldg. with a new television transmitter capable of five kilowatts of output power at 288 mc. . . .

* * *

WPB released 116 television kits made and owned by the Andrea of Long Island City, N. Y. Priced at \$79.95 without tubes, 30 were immediately sold to the research labs of the North American Philips Co. The rest went mainly to civilian ex-servicemen. . . . The zoning Board of Washington, D. C., denied the Bamberger Broadcasting Company's application to locate a television tower and transmitting station in a residential area there on the ground that it would adversely affect property in the neighborhood. The case attracted national attention because of the same problem faced by others in cities all over the nation. High ground is needed for satisfactory television towers and this usually lies in outlying sections of big cities. . . . Ex-Gov. Wm. H. Mills, of Vermont, became a member of the FCC on July 23.

* * *

An application was filed by the Allen B. DuMont Laboratories, Inc., Passaic, N. J. to erect and operate a portable mobile experimental television relay station in the

480-920 mc. region for experimentation. . . . Syracuse University, at Syracuse, N. Y., contracted with General Electric for post-war delivery of an "Intra-Tel" system of wired television, Chancellor William Pierson Tolley announced. The equipment will be used to conduct various classroom teaching experiments as well as teaching television programming and other techniques. . . . The Board of Education of New York City and NBC's television department have prepared plans to launch the first comprehensive experiment in the adaptation of television to the classroom education according to a joint announcement by Supt. John E. Wade of the New York School system, and John F. Royal NBC television executive. . . .

Ben Feiner, Jr., program assistant for WCBW, NY, was named assistant of television programs. . . . Philco was granted permission by the FCC to operate an experimental television station in the 480-920 mc. band. Location is to be at Wyndmoor, Pa. Philco also received permits for three experimental video stations to test microwave television relay equipment at New York, Washington, and Philadelphia. . . . The lowest priced television home receiver yet publicly demonstrated was shown by the Viewtone Company of New York at a Press Conference. Priced at \$100 retail, the set is equipped with a seven-inch flat faced tube which produced a 4 x 5 7/8-inch image. . . .

With the war ended, television now has its green light. . . . "Viewtone's \$100 midget television sets were placed on public demonstrations at Hearn's, New York Department Store. Other stores also getting ready to carry television receivers. . . . Irwin A. Shane, TELEVISER's editor-in-chief to address the Junior Board of Trade, Washington, D. C. on September 20, to be followed by talks in Cleveland, Chicago, St. Louis, and Cincinnati. . . . TELEVISER's 1st Annual Television Institute to be attended by radio, advertising, and retail executives.

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"1946 FORECAST ISSUE"

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OUT NOV. 15!

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Televiser

JOURNAL OF VIDEO PRODUCTION, ADVERTISING & OPERATION

11 W. 42 St., N. Y. 18, N. Y.

"A Solution to Some Television Problems"

By LEE DE FOREST

TWO schools of thought, the visionary and the realistic, are attempting to forecast the economic development of television. Among the former, and quite understandably so, are the television engineers, who have become so obsessed with the magic of their new art that they recognize no difficulties save those of an engineering nature. They are justifiably excited over the amazing possibilities of this new field which they have toiled to create. And they are inclined to feel that as they have coined the currency, they are best qualified to direct its expenditure.

Not only has the engineer constructed iconoscope cameras and their dollies, but he delights in operating their intricate cumbersomeness, their sensitive shading controls, plotting their angle shots, arranging the successive sequences as the plot of the televised drama unfolds. And much of the present crudities of our nightly television spectacles may be laid to this eager ineptness.

However, this present initiation period will soon pass. Before long those directing commercial television will realize the wisdom of bringing in the skilled cameramen, trained by years of motion picture experience, and the director from the same school, men who have had long tutelage in the art of public entertainment on screen or stage. And by the same token, when masters in these older arts are invited to direct the growth of this newest art, they will be prompt to recognize the inherent limitations of the television studio equipment and its complicated procedure.

In the long run, when two hours of continually varied, high calibre, perfectly enacted drama and comedy must be undeviatingly supplied, night after night throughout the year, the television program director will look longingly towards the refreshing freedom enjoyed by his former associates in their motion picture studios, where scenes are shot in any convenient sequence, where rehearsal time is notably abbreviated by the brief shots, where costumes, make-up, locales can be properly arranged, where all errors

whether of dialogue, acting, or lighting can be corrected by repeats and the film cutter, and where, above all, the result can be tried out in a studio preview, without added cost.

Needed: More Cameras!

Lest the reader judge that the actual difficulties in properly staging a live act television program have here been exaggerated, let me cite passages from an ably written article by a former assistant program manager of a leading television station.

... Program directors are described as artists struggling with elaborate technical equipment necessary for televising the subject material they create. To hold the viewer's continuous attention, the camera must supply the movements which his eye cannot make, either by moving toward or from the subject, by following a moving subject, or by changing the view point. This last requires the use of a second camera, whose picture must be framed, focused and checked by a director before it can be broadcast. Experience has shown that at least one and a half minutes is needed to do this, and it must be done

while the viewer is watching another picture. But in both motion pictures and television the maximum duration of a view point, without loss of viewer's attention, is about one minute.

"In current film practice the average length of a shot is 10 to 15 seconds. Since a second camera cannot be correctly prepared in this time interval, at least three cameras are essential. Although any combination of two alternating view points can be shown while a third is being set up, the pattern of changing these view points must be continually repeated, thus 1, 2, 1, 2; then 3, 2, 3, 2; 1, 3, 1, 3—becomingly excessively monotonous.

"Thus we find a need for 4 to 8 cameras, adding enormously to studio confusion, increasing the margin for error, since each camera requires one or two operators. The present equipment, even employing the maximum of six cameras, is too cumbersome to present subjects with any visual rhythm, to which the film picture has long accustomed us as essential to satisfying programs.

"In order to create a visual rhythm of presentation," continues our authority, "the program director must have a variety of view points at his command." without



A horse and horseman bring a bit of the West to audience of west coast television Station W6XYZ

TELEVISER

waiting for new set-ups.

"Therefore, it is desirable to have from 15 to 30 cameras, (italics mine) mounted and fixed in positions predetermined by the director. Present television cameras are too bulky and heavy to be used in this manner, with the possible exception of follow shots."

Picture also the long battery of control panels, the snarls of stiff co-axials, the mass of monitoring desks, the corps of skilled control men, all under constant supervision of one or more master directors, who must combine high technical skill with stage artistry!

And in 15 minutes that show is done. An entirely new cast, new scenes, new director must be ready instantly, probably on a different stage requiring a new battery of cameras; for remember, there can be no noise of shifting and replacements if the next intricate drama is to go on the air after a brief minute for station announcement.

It all would seem to sum up to an appalling crescendo of technical and economic impossibilities, if the ever increasing demands for more and better television fare are to be satisfied.

The solution to it all lies in the relatively simple procedure of first filming your dramas, your comedies, your musical shows, thereby obtaining infinite freedom of procedure, and (even more essentially) a permanent, perfected product, which can be subsequently televised from every transmitter, thereby offering your production more opportunity for a comfortable and recurring, profit.

And this feature of wide broadcasting by film summons again the much discussed problem of "telechaining," whether with radio relays, or co-axial cable.

Network Television Impractical

As I have attempted to show in one of my Hollywood Reporter articles, the prospects of television demand ever becoming so colossal that the Telephone Company can afford to surrender a good proportion of its proposed trans-continental co-axial telephone cables to television transmission, are definitely not bright. Were there no other means for broadcasting our principal television programs, we might hope that in time the public demand would make possible the profitable payment of such huge tolls. But, primarily, the one feature of "simultaneity" will never be so New York, Philadelphia, Baltimore,



Dorothy Hart, American Broadcasting Co. starlet, faces the WABD television cameras

compelling as to warrant this. The complete lack of "immediacy" in every popular film picture annihilates this argument, save for those exceedingly rare events of natural importance, which almost never transpire during night televising hours.

Avoiding the excessive cable tolls are two methods: radio relays and film transportation. Let us realistically examine the engineering features of radio relay systems, with main emphasis on the economics involved.

RCA has been engaged in radio relay development for some 20 years. This includes five years experience with an unattended radio relay system in commercial service between New York and Philadelphia. Recently a trial television linkage system has been inaugurated, extending from Philadelphia to Schenectady and comprising five relaying stations. It is as yet too early to definitely determine what percentage of reliability of service, or what percentage deviation in test pattern reproduction has been attained, or can be invariably relied upon over this comparatively short time.

Relay Impossible?

Competent engineering talent has, however, investigated the theoretical possibilities of really long distance television relay transmission, beginning with a hypothetical 500-mile chain linking Boston, resultant ghost images in the final pic-

Washington and some of the smaller cities along this route. Smooth spherical earth was assumed, with the knowledge that rolling country would cause variations in repeater spacings and tower heights, resulting in probable increase in the system requirements beyond those calculated.

Assuming that reflectors ten feet in diameter would be required at each end of a link, and that each link should be not greater than 50 miles in length, 9 relay towers, each 480 feet in height would be required, to give a 50 decibel over-all signal-to-equipment noise ration in each relay receiver, with a modulation band width of 5 m. c. This relay frequency is assumed as 1000 m.c. (wave length 0.3 meter).

Each of these 10 repeaters in cascade adds its quota of noise to the final signal-to-noise ratio, calling for receivers and transmitters practically noiseless save for the unavoidable thermals. Any noise in the initially transmitted picture will appear in the final, plus some possible ten additional, originating in the several cascaded receivers and transmitters. In other words, the chances of disturbing noises are here multiplied 18 times. In addition, if anywhere along the line there chance to be a reflecting or diffracting object, fixed or flying, we will have one or more picture. We assume, of course, that each of

the 18 intermediate amplifiers and transmitters functions 100 per cent, without appreciable distortion. Any such distortion present in the early steps of the system will be continued, maybe amplified, in each succeeding stage. The chain is no stronger than its weakest link. Also the failure of one stage from any cause will totally interrupt the reception of every receiver fed from the terminals.

In some sections of the United States, a chain of 10 or more 480-foot towers, each supporting eight or more 10-foot parabols could offer no small tornado liability. Storm insurance, if at all possible, would be highly speculative. Insurance of picture continuity still more so. Thus when we picture a chain of fifty such elaborately equipped lofty towers as demanded for trans-continental instantaneous television, the realistic mind reels, and the generous hand of the Treasurer lies palsied!

In figuring the initial cost of a multiplicity of such lofty lighthouse structures as the optimistic architects have already projected, each well scabbed with huge paraboles, designed to withstand all the storms that blow, plus the annual upkeep, the engineer is compelled to call on various services other than multiple television conveyance, to show even a hypothetical chance of profit. Facsimile, FM, aviation services, turnpike truckage radio, nay, even the problematic yen of the wayfarer to pay cash to climb 500 feet for a view of the horizon—all these adjuncts and accessories are invited to help sustain the overwhelming interest and upkeep

charges demanded by long-distance television.

Visionary Planning?

Still less deterred by any thoughts of profit and loss, comes now a maker of tubes to outline a dream as fantastic as any tale from the Arabian Nights. Having apparently obtained a topographical map of our Western States, this giant among our optimists has selected for his fell purpose every high peak in the Cascades and the Sierras for a television relay tower—Mts. Hood, Baker, Ranier, Shasta, Lassen, Tamalapias (relatively an ant-hill), Whitney, San Gorgonia—sublimely ignoring the fact that most of these summits are wholly inaccessible six months each year, are located in forbidden U. S. National Parks, and are mostly hundreds of miles from any city. Such minor details, however, deter naught; the grandest conceivable purpose to which such noble peaks could be dedicated is unquestionably to sell our west coast millions on the incontestable merits of Sweetheart Soap, or the spirit-lifting value of "Nature's Spelled Backward."

But to descend from yon mountain heights to the uninviting plane of plain, common-sense economics, is it not gradually becoming evident that television, if it would ever pay its own way to profits, must rely to a large and ever larger extent on film transmission?

For thus only can the high class perfected type of screen entertainment, by top talent enacted, be broadcast to our waiting millions.

SPECIAL EFFECTS

Flying dust or bullets are generally activated by the common mouse trap. If the effect requires that a bullet strike the wall above the hero's head showering him with dust, the effects man may bury a mouse trap in the wall and after filling the hole with broken plaster and fine powder; seal it with paper. A long trip-wire off stage to release the spring mouse trap is all that is needed to activate the device. A window can likewise be shattered by hiding a mouse trap in the window sill. The mouse trap can be set to throw a lead pellet at the window pane, previously cut to make it shatter easily. Lamps and jars on a shelf can be broken in a similar manner and without exposing the cast to actual gunfire or fear of injury.

A further variation of miniature work and special effects is found in title work. Illustrative of this usage would be the televised hands of the alchemist opening the cover of an ancient book on the pages of which are displayed the title copy of the telecast. Other examples of this variation of "mini-stages" would be puppets and advertising displays.

The ingenuity displayed in this field is equalled only by the demands made upon it by the producers. It is, therefore, a requirement that the personnel working in this field develop their own bag of tricks, so that they may always be able to pull the proper rabbit out of the hat at the behest of the director.

—William C. Eddy

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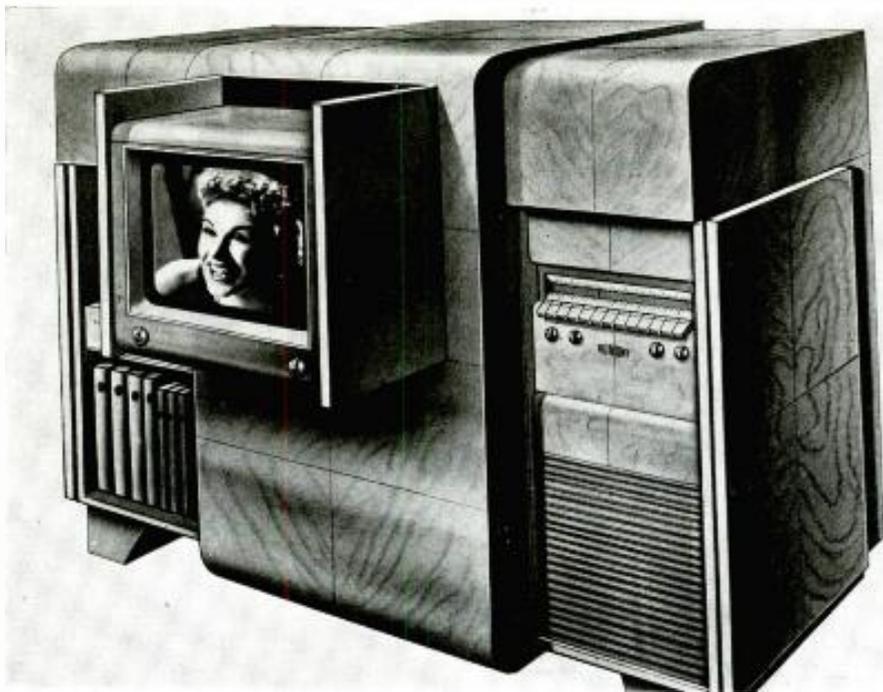
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3: ADVERTISING AND MERCHANDISING



A DuMont Direct-Viewing "Tele-Set."

How to Purchase Your New Television Receiver

By STANLEY KEMPNER

IF YOU intend to be one of the 200,000 lucky persons who will be a proud owner of a television receiver by the Summer of 1946, there are several things you should know in order to avoid disappointment.

Undoubtedly several questions have been bothering you. The most frequent one heard is: How soon can I get a set for my home?

Manufacturers themselves have been unable to answer this question. All of them have been 100 percent engaged in war production, making radar and other electronic equipment. Recently the War Production Board gave permission to those manufacturers to manufacture radios and television receivers without restrictions.

Reconversion Slow

Because of shortage of components, such as tubes and wood for cabinets, reconversion has been slow. However, as military requirements are eased, the com-

ponent and cabinet manufacturers will turn their productive facilities to the necessary items, and thus ease the bottleneck to civilian output. By Christmas, therefore, television receivers should start rolling off the production lines at an increasing and satisfactory pace.

That no less than 200,000 television sets will have been sold and installed in American homes by the Summer of 1946 is the prediction made in a monthly bulletin published by the Grey Advertising Agency, Inc., of New York. The figures are not based on any survey or plans but are the absolute conviction of the advertising people that reconversion in the industry will move much faster than anyone believes or admits.

Most television manufacturers have expressed an opinion that receivers would be on the market from six months to a year after the "green light" is flashed by the government. However, several have stated that they would have sets available very shortly after they got their authori-

zation or all restrictions were eliminated.

From all the available evidence, it is safe to say that should the manufacturers be able to obtain the necessary components, and wood for cabinets, the figure of 200,000 for sale by the Summer of 1946 would not be far from wrong.

The sale of these sets, however, will be in those areas where television transmission facilities are available. At present only five such centers exist. They include New York, Philadelphia, Chicago, the Albany-Schenectady-New York area, and Los Angeles.

20 Stations Operating

There will be a minimum of twenty television broadcasting stations in operation by late next year as against the nine presently on the air, if still another prediction of the Grey Advertising people comes true. Wherever those additional stations are built, television receivers will be on sale in those localities first. If you are fortunate to live in one of those communities, you will be among those privileged to participate in the purchase of the first video sets which will be offered for sale.

The second question most frequently asked is: How much will a television set cost?

Prices quoted range from \$100 for a 5 inch tube, showing the picture by looking directly at it, up to \$1500 for an elaborate set which projects a picture 16 x 22 inches in size.

However, the average set will probably be priced at about \$295 and show a fairly large and satisfactory picture. Prices, of course, will depend on what you want to buy and are willing to spend. You will be able to buy a good receiver for a low price or a custom-built job in special cabinets for \$1250 to \$1500 and probably higher. Your taste and pocketbook will decide which set will be installed in your home. However, it is well to point out that, as a result of wartime standardization and "know-how," the receivers put out by reputable manufacturers and sold through established retailers will be technically perfect and will give satisfactory performance regardless of price.

No matter how little or how much you pay for a receiver, it always well to remember that you never can get a retailer or manufacturer sell you something at a loss. If such offers are made: beware! You get only what you pay for!

If you buy your television set from an established dealer, furniture, chain or department store, and/or from a reputable manufacturer, then you can set your mind at ease. You will get a fair deal—a good, fine, or excellent receiver which will give you the best service and picture available.

Another problem usually is that of: How can I tell which television set to buy?

The answer to the previous question can do for this one too. Confidence in your retailer and manufacturer are your only guidestones to the purchase of a good television set. If either, or both, are reliable and honest, you can place complete confidence in their offerings.

Proper Antenna Necessary

There is one problem which most of us are unfamiliar with—that of installing the antenna. Most of us who own a small portable, midget, or table radio usually have plugged it into the electric wall socket and run a wire to the radiator as a ground. Some of us have simple aerials which cost very little or which we put up ourselves. However, in the installation of a television receiver, we face new and entirely different situations.

In the installation of television receivers the proper antenna is a necessity. Successful installations will result from attention to details and can only be done by expert servicemen. (Note the plural.) For installing a television antenna will require the services of two men, one at the receiver and one on the roof at the antenna site.

Unless the antenna is placed at the exact ideal spot on the roof, your video reception will be unsatisfactory.

The Dipole form of aerial is generally satisfactory; it consists of two metal rods, each approximately five feet long and placed on a line with each other. Extreme accuracy in the length of these rods is usually not necessary and, if the receiver is located very close to the transmitting station, it may be found advisable to cut down the length of each rod.

Whenever possible the Dipole should be erected so that it is in line of sight

with the transmitter. This does not mean that no signals can be secured where a direct view of the transmitter cannot be obtained. Surprising results are often secured on these high frequencies and no concise rules are possible. If the location is on a street having heavy traffic there may be considerable noise level due to automobile ignition systems. In this case the antenna should be located to the rear of the building and away from the source of noise as far as possible.

On apartment house roofs there are other problems. A master antenna for the building is necessary. Sometimes, it may be necessary, due to location, to use two antennae to receive two different stations, and as many more as there are broadcasting transmitters in that particular locality.

Cost of installation of the antenna will vary, depending on the labor involved. It may take two servicemen ten minutes, half an hour or several hours to install one antenna, depending on the individual situation. There is no advance knowledge of whether or not your particular installation will be an easy or tough job. Reflections and other ethereal obstacles can only be ascertained by patient and skilled servicemen. Many times they will labor for hours to find the ideal location so that reception will be perfect when received on your set.

You will not be disappointed if, before shopping for a television receiver, you are prepared to accept the fact that the video set will be sold on one of the two following conditions:

Conditions

1. The cost of the installation will not be mentioned to you when buying the receiver, inasmuch as the charges already have been incorporated in the selling price.

2. The cost of the set will be quoted plus an additional service charge for installation, which will vary, since it is to be based on the individual problems besetting the servicemen in setting up your particular antenna.

Naturally, in many cases, the cost in either case may be either higher or lower than that of your neighbor's, or friend's. In many instances you may even pay an overcharge of a few dollars if the cost is incorporated in the selling price and your installation happens to be a simple one. On the other hand, you may benefit in

savings by the fixed charge, if your installation happens to be one of those perplexing and difficult ones which occur frequently. However, in the long run the costs will average themselves out. Whether or not you save or lose on the average installation will, in a sense, depend upon what method you chose to buy your set (if that choice is given to you), and will be determined only by your willingness to gamble beforehand on the fact that yours will be the simple installation. Again, it may not!

The final question should be: Will the seller or manufacturer stand behind the installation once all charges have been paid?

The answer is an emphatic *Yes!*

The television industry is new and has a long and prosperous future ahead. Its existence depends on its ability to sell its product successfully, at the lowest possible prices, to the greatest number of people. All this is to be done through the cooperation of people like you—the consumer. Good will is the cornerstone of any industry—and certainly the television industry will more than go out of its way to earn and keep that good will.

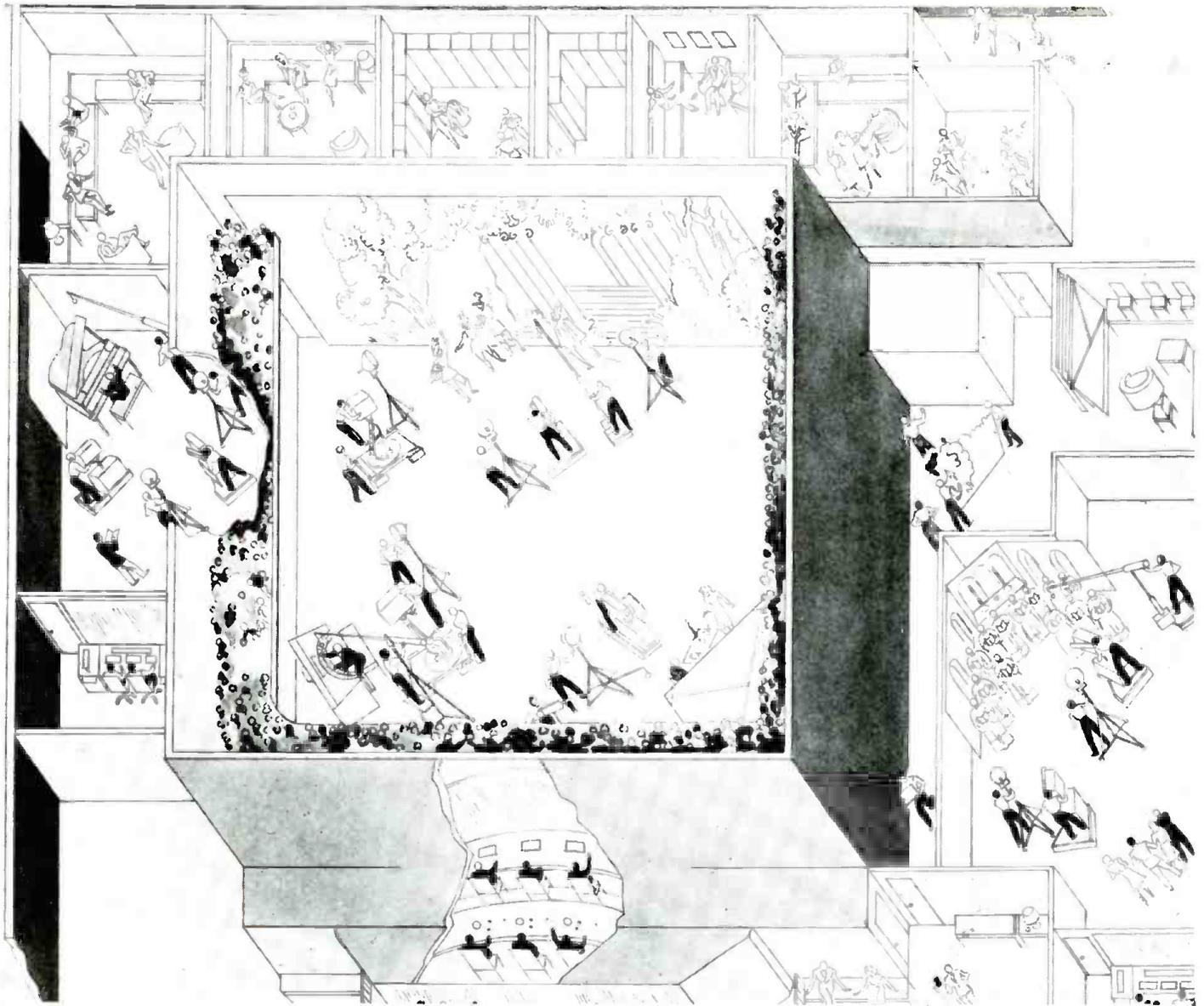
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THE DUMONT-WANAMAKER BOMBSHELL

ONE day last month a bombshell was dropped in New York television circles. It was the announcement of DuMont's deal with Wanamakers to locate three WABD studios in the 500,000 cubic-foot auditorium on Wanamakers second floor.

To DuMont, the deal gives that organization much needed studio space, helping relieve the crowded condition existing at WABD's uptown "Studio B."

To Wanamakers, the deal means:

(1) Being the first department store in the country with a broadcast television station on its premises;

(2) Having a traffic-getting, publicity-

obtaining, prestige-building feature of extraordinary magnitude;

(3) Having the use of Du-Mont's television equipment and studio facilities for intra-department, intra-store broadcasting of Wanamaker's merchandise during the daytime hours when WABD is not on the air.

To television, the deal means Wanamakers becomes the national test-tube for intra-store television and department store video in general.

Here are a few facts regarding the operation:

(1) The Wanamaker studios of WABD expect to be in operation by December 15th, work having already begun

on the auditorium; (2) the main studio will be 50x60 sq. feet, with a 50-foot ceiling, and the two smaller studios will be approximately 20x35 and 25x38 sq. ft. (3) A seating capacity of 800 is planned. (4) Cost of the new studios is expected to be well over a quarter-million dollars. (5) All newly designed DuMont equipment, including nine new cameras and four boom mikes, will be placed in operation. (6) The transmitter at 515 Madison Ave. will be linked with the downtown studios by telephone line and ultimately by coaxing cable with Wanamaker's Philadelphia store. (7) The new studio will be manned by a crew of approximately twenty.

3 Ways to Keep Down Tele Advertising Costs

by MURRAY M. SPITZER

*Advertising Manager, Hecht Bros.
New York City*

ANYONE who has written or produced or directed a television show will tell you it's the "hottest" thing since the printing press was invented. Every advertising man will agree to that. Here is a medium which literally lifts prosaic merchandising into dynamic drama. No newspaper or magazine advertising, whether in black or white or full color, can match a live presentation via television. An ad created by the best layout artist plus the finest art that money can buy remains static against video competition. Nor can radio advertising, with its aural appeal, compete with tele-advertising. It isn't even fair to compare these two media with television. The best features of radio and newspaper advertising are combined and used in video as we know it today.

Television will not displace the advertising media retailers now use, but will take its position alongside radio, newspaper, magazine, direct mail, and all the other forms of advertising. Each has its definite function, its definite audience, its definite advantages. Each will be utilized to create sales, build goodwill and give the public the service it wants. Of course, the retail advertiser strives continuously to use these media at the lowest possible advertising cost.

It is this "cost of advertising" that is causing gray hairs among those who wish retailing to lead in the use of television.

Keeping Costs Low

When a retailer analyzes the expense of a video show, he may be inclined to shake his head negatively as far as adopting that media for his store. He can't be blamed for thinking that way. However, let's examine the ingredients that make any video show. Keeping the cast to a minimum, say four, there must also be included the director, writer, producer, customers, scene designers, etc. Quite a crew! Without considering the time charges at

all, the retailer would have a nice juicy bill to ponder. How will a retailer meet the costs of all these artists and technicians? How can he meet their demands? What about the resultant expenses that are inevitable? How can he keep the "COST OF ADVERTISING" low?

And the answers to those questions as they apply to you may be in the following methods.

One way of keeping the "cost of advertising" low will be through the aid of national manufacturers. These manufacturers will contribute part of the cost because good business sense dictates aid to the man who sells their goods. Even now these manufacturers are planning increased co-operative merchandising and advertising with retailers. They know that existing stores see expanded trade; that returning servicemen opening new businesses will need their rich knowledge and experience in order to sell more goods and give better service. And as for television as a sales aid, these manufacturers will sponsor "tele-troupes." These troupes will travel from city to city appearing in department stores as demonstrators and representatives of the company. They will also perform on the local television stations, naturally plugging the product and the local distributor. To illustrate: Westinghouse prepares its full line of home appliances and plans to present the merchandise in a musical video show. The entire troupe then becomes known as the "Westinghouse Video Players."

Splitting Expenses

Arrangements then are made for a promotional itinerary wherein the stores and Westinghouse split expenses. When the Westinghouse Players arrive in his city the retailer furnishes a section of his home furnishings floor for them. There, the Westinghouse display receives promotional prominence and the products are demonstrated. In his advertising, the retailer announces the arrival of the

"Westinghouse Players" together with the date of the musical video show. All media are called into play: newspapers, radio, direct mail, etc. The production is finally telecast. Then, the retailer sits back and waits for the customers to rush in or swamp him with orders.

Prior to, and during the war, there were a great many manufacturers who planned this kind of co-operative promotion. They also presented invaluable sales and display hints, and made advertising allowances to stores which sold their products. This kind of cooperation will doubtlessly be greater than ever in the years ahead.

Video Spot Announcements

A second method of keeping costs low will be a promotional idea borrowed from radio broadcasting and adapted for television. Since radio spot announcements proved very successful why shouldn't the retailer find telespot announcement just as successful? Very likely the retailer will take five minutes of each day at a certain hour and bring the public his sales highlights, as is being done right now by R. H. Macy's. Perhaps a pretty girl will talk about several related fashion items and show them off (to good advantage, no doubt). Or, a young man may demonstrate how the store will re-upholster and fix the customer's living room suite at a right price. There are innumerable suggestions and innumerable items to fill five minutes interestingly. In any event that telespot will perform the function of "selling" either merchandise, a department, or the store.

A third method of keeping telecosts low is the presentation of merchandise in a dramatic manner, combining an interesting story with merchandise.

Undoubtedly there will be other ways which retailers will keep their cost of advertising low. They must and will find these ways. I earnestly hope that the industry will not commit in television the faults it committed in radio. Retailers must first understand television. Then they will realize its tremendous potentialities. It is an advertising and sales medium that is as personal, if not more so, than a direct across-the-counter sale, and therefore must be handled carefully. Wisdom and care in planning will keep costs low and turnover high.

(Continued from page 29)

formers, and therefore the "electric" give-and-take between cast and audience cannot be built up in the same way. Possibly this may be offset to some limited extent by the presence of a studio audience, but in any case the performers must play for the cameras (unseen audience) since that is the important group. Failure to observe this rule will kill any program, no matter how good it may seem in the studio. A form of give-and-take may be achieved by the presence of a studio audience plus a skillful handling of cameras and microphones to exploit television's characteristics of intimacy and "being in two places at one time." This will aid the performer in his timing of audience reaction and provide the home audience with a mass-audience reaction, but whether this synthetic form of give-and-take can ever approach that of the "live" theatre seems doubtful. The research departments of the television networks can look forward to years of fun trying to evaluate it.

Viewed by Small Groups

Unlike a stage play, which can be seen only by going to a theatre, television will be viewed largely by small groups of people in the privacy of their own homes. They will be subject to the inevitable disturbances of the home: phones ringing, children yelling, a disagreement about which program to view, neighbors visiting. They will also be subject to the psychological difference of being at home instead of in a crowd—and because of the physical difference involved they will be able to stretch out in their favorite chairs, take off their shoes, enjoy a drink, a smoke, and other luxuries of the living room—not the least of which will be the privilege of switching to another program if the first one drags. And—it will all be free, unlike the theatre or the movies.

Television rejects many purely theatrical conventions. Most noticeable is "theatre style" acting. If an actor uses theatre technique, projecting voice and gesture as he would to get over the footlights and up to the balcony, the result is ludicrous on television. All forms of mannerisms are exaggerated by the microphone and camera, particularly when in close-up.

A theatrical convention which is most ineffective in television is the traditional theatre method of staging a play, framing it inside a proscenium arch and viewing it from one angle. This method of staging has been tried over and over and over on television, and it just does not work.

Early motion pictures went through the same phase, both in silent pictures and when sound pictures came in, and until the mistake was recognized the results were sad. This convention, nevertheless, was slavishly copied in most early television shows without any apparent attempt to discover if it is worth copying, if it is even a really good convention in the theatre.

In all fairness to some early directors it must be pointed out that this practice was forced upon them by poorly designed studios. In other cases it has been used simply because inexperienced directors could not think of any better method.

"THE AUDIENCE REPORTS . . ."

Three studios in the East utilize a similar method of obtaining and studying audience reactions. Each week, stations WRGB, WABD, and WNBT send out post cards with a listing of each day's program and space for the audience to rate each show. On the cards is also space for general remarks.

According to the reports, viewers are weary of seeing old films; and watching films repeated many times. Typical comments have been as follows: "Too much duplication of films"; "More modern films, please!"; "More up-to-date material"; "Give us cowboys!" There also seems to be a need, as yet unfilled, for more children's programs.

The viewing public seems aware of good production technique as these comments indicate: "Excellent entertainment"; "Reception is good; technique is commendable"; "Scenic effects clever." And they also are sure of what they don't want: "Commercials are too long"; "Still no improvement—forget the ham!"; "Skits should have more action"; "Less nonsense and more fashions"; "More studio programs." As indications of what the audience does like, the following comments are typical: "Audience participation programs rank high in our estimation"; "Would like to see more variety shows . . ."; "We enjoy light opera and operatic music very much."

Still other comments have been: "Get more old bar-room plays and more love stories and jazz programs." "Wrestling—an awful fake!" "This program is better than listening to the radio only." "Our 11-months-old baby watched the

Still other cases may have arisen out of this thought process: theatres have a proscenium arch to frame the picture of the scene, television sets have a frame around their screens; therefore since there is a "proscenium arch" on the front of your television set, why not use theatre techniques!

To limit oneself to a comparatively fixed viewpoint seems the wrong way to go about things, especially when one remembers that cameras can, and should, be highly mobile and flexible, and when one remembers the fundamental characteristics of television.

program with great interest." (*All-Mendelssohn choir program.*)

"Why do you change the focus so often?"

"Good show except for going off the air."

"Husband had guest who was only interested in the insides of set."

"Am only sorry that my brother, who likewise shares my interest in television, couldn't be here to see this eventful broadcast."

WNBT had a legion of faithful viewers on V-E Day, with one man sitting through 13 of the 14 hours of the record telecast. Portions of his three-page letter included:

"If it were to happen again, I'd gladly sit through another thirteen hours of such fine and completely planned service."

"The street scenes from the Astor, why there were so many plain faces in that crowd, that if we had known some of the people, I'm sure we would have recognized them!"

Other comments about the same V-E Day coverage:

"We enjoyed the festive scene in Times Square and although we are shut-ins—we imagined we were there."

WRGB-Schenectady is the only television station that has done any more with audience reaction cards than group the ratings of shows. Qualitative breakdowns, as reported in the Spring issue of *TELEVISER*, have given them a good idea of what their audience is like and what it wants. Many television people, especially agency personnel, are requesting similar breakdowns of the New York listening audiences and elsewhere.

TELEVISION PROGRAMMING AT WABD

(Continued from page 17)

The United States Rubber Company has been responsible for some of the most elaborate and successful programs ever presented on television. For one of these a gigantic tank was constructed in the studio large enough to float a huge five-man life raft. For another, a full-size carriage was but one of many gigantic properties integrated into a unique experiment in which tableaux were woven together with a musical theme.

Other commercial shows presented over WABD were sponsored by General Foods, Kirkman Flakes, Park & Tilford, Boots Aircraft Nut Co., Procter Electric Company, Schutter Candy Co., Winthrop

Shoes, the DuBarry Success School, Alfred Dunhill products, John David, Waltham Watch Company, Chesterfield, *Esquire* Magazine, Carter Personal Products Company, Rival Dog Food, Hunt Club Dog Food, Arrow Shoes, Knox Hats, *Mechanix Illustrated*, Triangle Publications, Henri Bendel clothes, Miles Laboratories, Durez Plastics, Pal Razor Blades, National Peanut Council, International Shoe Company, Flatter Knit Hosiery and numerous others.

Not all the advertising agencies and advertisers participating in early commercial programs over WABD were from New York. Westheimer & Co. of St. Louis, for

example, brought to the station programs starring many of Broadway's principal actors, and some of the most elaborate dramatic and musical presentations in DuMont's history.

Ever since the first variety shows of the station were broadcast back in September, 1941, by Klaus Landsberg, now general manager of W6XYZ, WABD has produced an increasingly varied and advanced assortment of television program material which has, cumulatively, afforded the station staff and others a rich knowledge of the potentials of television as an educational, entertainment and advertising medium.

"ADAPTING TELEVISION SCRIPTS"

(Continued from page 15)

Superimpose or dissolve to girl's face in a cloud of smoke, her lips very obviously saying, "Joe" . . . "Joe" . . .

Dissolve back to Joe.

He shakes his head from side to side, rubs his eyes, blinks and looks around. He grimaces as if the last drink really got to him. He puts his head down again.

[DREAM MUSIC UP AND UNDER.]

Camera pulls back and the whole set is revealed, the girl standing in the doorway. She is young, pretty, fresh. Joe raises his head, looks over his shoulder at the girl and clinging to the Girl holds out her hands still farther and opens the door wider. Joe takes her hand hesitantly and walks in.

Know Technical Limitations

A knowledge of technical limitations is important for any writer who plans to do adaptations. He should be thoroughly familiar with the floor plan of the studio in which his work is to be produced. He should plan his script carefully and know enough about the focal depth of camera lens always to visualize the "ikes" in position to pick up important details of characterization or "planted props."

Be it the creation of original material or an adaptation, the television writer must always be aware of the limitations

of the medium with which he is working. Certainly this knowledge will influence the choice of the material to be adopted. For example, the televising of a choral scene from a musical comedy with twenty or thirty actors on stage at the same time would not be very feasible. In order for the camera to encompass such a scene each of the performers would be reduced to Lilliputian size on the tiny screen we have today. The effect of thirty stentorian voices booming at the viewer from thirty singers apparently the size of a man's thumb would be ludicrous.

Number of Characters

The problem of the number of characters to be used effectively in a scene arose in the adaptation of a "pin-up" scene also from the G-eyed issue of *Mademoiselle*. The short story from which the sequence was adapted made use of no less than fifteen characters each of whom was established not through dialogue but by third person exposition. The number of characters was cut from fifteen to six (this number was quite comfortably handled by the cameras since the characters entered one at a time and were grouped in a way that allowed a series of three shots). The dramatic content of the story was altered to allow characterization through dialogue and "business."

The illustration offers some evidence of the way small sets or flats and a judicious use of cameras makes possible the staging of fairly elaborate and realistic television productions. To know how this can be done is the "categorical imperative" of a writer for television.

"LIGHTING"

(Continued from page 32)

Gargoyle and his Christmas Bird." The edges of the picture will considerably lessen its dramatic impact. Flare and noise can and should be washed out by adding light in the right places and only in sufficient quantities to effect correction. Carefully done, such illumination will not destroy the overall effect and will greatly increase picture quality.

There is no necessity for program and engineering requirements to be incompatible as far as lighting is concerned; the needs of both can and should be filled in order to achieve a finished product. Even with the advent of more sensitive tubes, the same care must be taken to prevent our pictures from becoming dull and inexpressive. In the meantime, the viewing public is judging the merits of television by what they see now, so now more than ever, the importance of correct lighting should not be minimized.

4: REVIEWS, SCRIPTS AND VIEWS

MAGAZINES:

"TELEVISION DIRECTORY," by *Richard Manville and Patricia Murray*. *Printer's Ink*, July 6, 1945, and July 13, 1945. 2 parts.

An important summary for every television enthusiast and anyone in the field. It consists of a listing of advertisers, agencies, stations, producers, organizations and publications in the television field—comprising everyone who has anything to do with the business. Each listing gives complete information—name and address, top personnel, past experiences in the field and future plans. Crammed with facts, figures, and notes, the summary is a must, and a handy thing around the office.

* * *

"HOW WILL TELEVISION 'AUDITION' PROGRAMS FOR SPONSORS?" By *George H. Plagens*. *Printer's Ink*, July 20, 1945.

George H. Plagens, CBS-Hollywood Sales Promotion Copy Chief sets forth several practical methods for possible television time sponsors to "audition shows." There is of course the possibility of producing a regular show for the prospective advertiser's benefit. There are also films, but while both these methods give the possible sponsor the best idea of what a tele show might be like they are time-consuming and expensive procedures Mr. Plagens suggests rather the sound-slide film package—"an adequate, reasonable vehicle . . . for presenting the salable features of any television show." The sales promotion or art department of any studio can, with a little expansion of equipment and personnel, prepare these "still talkies" and projection machines are portable and available.

Another device for sales promotion might be the use of a tele script "illustrated with sequence sketches and photos," making an "adaptable, graphic illustrated scenario package." For the possible sponsor will want to see what a television show will look like, and what it can do for him.

"Once video sales promotion operations have included the presentation of the il-

lustrated scenario pitch, the sound-slide film package, and the canned audiview talkie, then expansion into the costly field of live audiviews may be considered." A good point.

* * *

BROCHURES:

"OPPORTUNITIES IN RADIO AND ELECTRONICS FOR RETURNING SERVICE MEN," by *Brigadier-General David Sarnoff*. *Dept. of Information, Radio Corporation of America*, N. Y. C. 1945.

Brigadier-General Sarnoff has written a handy brochure for anyone interested in the job possibilities in radio or electronics, designed primarily for the serviceman. An appendix in the back of the 28-page booklet shows how members of the various armed services should go about finding jobs or getting further training in the wide fields. A 4½-page bibliography of suggested reading comprises a valuable aid for servicemen and television enthusiasts alike

Electronics is a big field and the bulk of the brochure is devoted to fairly complete discussion of what kind of jobs are and will be available. Sarnoff wisely stresses the value and need for further study and education for the serviceman (via the "G.I. Bill of Rights"). But most importantly he points out that "aptitude is the key to success." Intense interest and natural ability are absolute necessities.

Television, he says will be "the big show of the future," employing thousands of "technicians and artisans, business men and industrialists . . . producers, cameramen, directors, musicians, film experts, scenic designers, dramatists, playwrights, actors, beauticians, stylists, engineers, advertisers, merchandisers, and many other skills."

* * *

"OPTICAL NOTES FOR THE TELEVISION CAMERAMAN," by *Harry C. Milbolland*, *Development Engineer*. *Allen B. DuMont Laboratories*, 1945.

The laws of the television lens are multifold, but invariable and in a clearly illustrated 12-page booklet the cameraman or future cameraman is given an explana-

tion of the various laws of physics which govern the behavior of the lens. Simply written, it is ABC of the camera lens—with definitions and explanations easy enough for the laymen to follow. As the camera governs the picture on any television show, the booklet might be recommended for many producers and directors for their better understanding of the limitations of today's cameras. Depth of field and depth of focus are also considered in relation to physical optics..

* * *

"INTRA-TEL SYSTEMS — TELEVISION BY WIRE FOR DEPARTMENT STORES" *Electronics Department, General Electric, Schenectady, N.Y.* May 1945.

A 16-page profusely illustrated promotional piece in yellow and blue should be of interest to every department store even remotely interested in television. How television may be applied in department store, how it will increase sales volume, how installed and the staff needed are all covered. Most importantly, the initial cost and yearly operating expense is clearly broken down. The last two pages are devoted to suggestions and pictures of possible merchandising presentations.

* * *

"PREVIEW OF THE FUTURE—THE CHEF BOY-AR-DEE TELEVISION PROGRAMS." *Electronics Department, General Electric, Schenectady, N. Y.* June, 1945:

Chef Boy-Ar-Dee has put out a picture pamphlet on their series of experimental telecasts at WRGB last spring. In cooperation with the American Broadcasting Company, Hector Boiardi, the spaghetti dinner king, made a double debut on May 13—as television actor and as first sponsor of "Ladies, Be Seated!" Text describes background of the show, and pictures illustrate Johnny Olsen at work, with good shots of audience reaction. Beulah Karney, food authority of the Chef Boy-Ar-Dee radio show "What's Cooking" helped with the commercial success of the venture. For those who didn't see the telecast, the booklet is a graphic illustration of how it was handled.

Copies of the above Brochures, Booklets and Articles May Be Secured by Writing the Readers' Service Bureau, Televiser Magazine, 11 W. 42nd St., N.Y.C.

"DEPTH OF FOCUS" » » » » BY THE EDITORS

WITH the Japanese phase of World War II finally at an end, let's see how quickly television can get under way as a going industry!

Television was long considered a great postwar industry. "Postwar" is now at hand and conditions have never been more favorable for the construction of television stations throughout the country. Technical standards have been set; the "freeze" on station construction and on equipment is no more; manpower and material will soon be available in great abundance.

Now it's up to the industry itself—to the equipment manufacturers and the applicants whose licenses have been granted. It's up to them to start America's new billion dollar industry off to a flying start, to get construction of new stations under way as soon as possible!

* * *

IF the problem of networking is solved by stratosphere-flying aircraft, as proposed by Westinghouse and the Glenn L. Martin Co. in their plan utilizing planes (the size of B-29's) as "repeater stations," the infant television industry should mushroom to truly gigantic proportions in very short time. Such a network would place television five to ten years ahead of the progress timetables of but a few months ago.

The proposed stratosphere network plan presents the breathless possibilities of the immediate networking of television programs . . . that is, as soon as sufficient stations are established throughout the country (fourteen strategically placed stations would be enough) and as soon as a sufficient number of receivers are in the hands of the public.

Should networking facilities become an immediate reality, with the resultant ability to transmit programs from Hollywood and New York, the sale of receivers should receive a tremendous boost, far greater than would have been possible under the heretofore proposed methods of program syndication, with their leisurely three-to-five year goals.

All that remains now is for the sponsors to prove the feasibility of their revolutionary plan.

* * *

ANOTHER impetus toward immediate television progress was registered recently when a \$100 "midget" television receiver was demonstrated for the press last month.

The availability of such low-priced television receivers, right at the outset, augers well for an immediate rapid growth for television, a growth which is essential if the video-industry is to furnish employment to thousands of homecoming veterans in the immediate future.

The advent of low-priced radio receivers proved vital in establishing aural-radio as a truly great American industry, with 60,000,000 home receivers now in the hands of the listening public. With midget video-sets available at only \$100, television should soon equal radio's impressive figures.

Will the appearance of \$100 television sets on the market seriously affect the sale of higher priced units? Many believe not. People with higher incomes will continue buying the higher-priced sets, ranging in prices from \$300 to \$1500.

THE TBA recently named a chairman of the Awards Committee, bringing to our minds the "inadequacy" and "inequity" of television awards in general as they have been made in the past. We are hoping that the future "awards" will recognize, not just television stations, (regardless of merit) but some of television's deserving writers, actors, producers and directors as well. Many of these people, especially the television actors and performers, have given much to television, working hard under unfavorable conditions for little or no compensation. Shouldn't their efforts be recognized? Shouldn't the work of some of our more enterprising independent producers be recognized, many of whom have made a substantial contribution toward developing new production techniques? Shouldn't some of our television writers, most of whom receive little or nothing for their original work or adaptations, be considered for these awards?

The American Television Society recently had an opportunity to recognize such television talent, the talent upon which television's future artistic progress is dependent. A perusal of ATS Awards fails to disclose a single award to a Patricia Murray, an Eleanor Dennis, a Bud Gamble, a Bill Still, or any other independent contributor to the "advancement of television." Why?

If the ATS Awards are to become the "Oscars" of television, let them be just that! Let the ATS begin to recognize the contributions of individuals, many of whom are ATS members, while the TBA recognizes the contributions of television stations and television engineering.

* * *

MANY readers wrote indignant letters concerning Westbrook Pegler's infamous tirade against the television industry, letters refuting Mr. Pegler's charge that television will be a "crude and expensive disappointment" for a long time to come. Would Pegler have placed the horseless carriage, the flying machine, and atomic physics in the class of "crude and expensive experiments?"

* * *

NOW that the war is over, how much longer will America's advertising agencies withhold their support of television? Only a handful of agencies in New York, and none in Chicago, have been farsighted enough to sponsor television programs, to set up television departments, and to start giving agency personnel an opportunity to learn about the new medium.

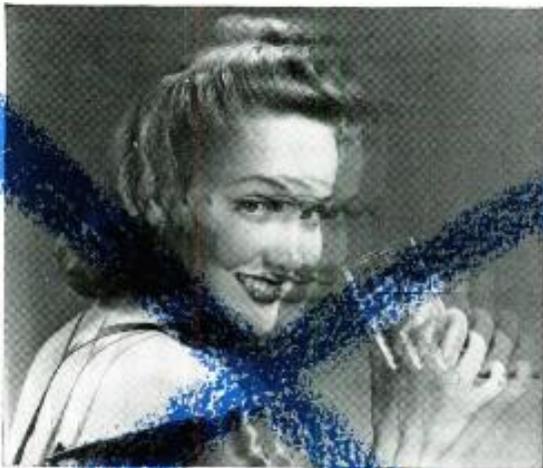
If the time was ever ripe for the advertising agencies to make their "plunge" into television, the time is now. They'll find the stations ready and eager to assist them, help them get started in this new advertising medium, which incidentally, is said to have ten times the sales-impact value over any other advertising medium.

* * *

TELEVISER enters its second year of publishing with this issue. As we believe television is here to stay, we look forward to a long and exciting future.

Television's Great Problem *Solved at last!*

TELICON "INTRA-VIDEO" SYSTEM INSURES TROUBLE-FREE RECEPTION IN LARGE CITIES



Television Ghosts Banished!

Easily three-quarters of potential purchasers of television sets dwell in urban areas. The majority of them are tenants in multi-family apartment houses. Echo or ghost images due to waves reflected from steel frame buildings, bridges or other elevated structures cause havoc in the television picture on the screen. A number of television receiving antennas operating *independently* in close proximity to each other—as would be the case on a roof of an apartment house—are bound to mar still further the ultimate result on the viewing screen.

This problem, which has been vexing television engineers for some time, has found its solution in the Telicon "Intra-Video" System. It is the result of time, thought and effort on the part of Telicon, members of whose organization comprise some prominent pioneers in the field of pre-war television development. Telicon "Intra-Video" has removed the final obstacle in the path of successful commercial television.

The Telicon "Intra-Video" System (patents pending) makes possible, for residents in multi-apartment houses, satisfactory trouble-free reception from *all* television transmitters in their area. *All signals—from each transmitter—picked up by a special antenna arrangement, then individually amplified and "cleaned up," will be fed through a single co-axial cable and distributed (without inter-action) to as many outlets as desired.* Pickup of the FM band is included for good measure.

Telicon "Intra-Video" installations require but little space in the building. They require no more attention than the electric lights on the staircase. Cost to landlords—and tenants—will be more than reasonable in light of the service to be performed.

A written inquiry will place you on our mailing list for further details. • TELICON CORPORATION
851 Madison Avenue, New York 21, N. Y.

TELICON

Television Designed with Vision

AM & FM CRYSTAL CONTROLLED RADIO • PERFECTO-VISION RECEIVERS • CRYSTALS

...*"Television's greatest play to date"**

VARIETY MAY 30, 1945



"Dr. Herbert Graf did a terrific job merging still pic, a choir under the direction of Bob Shaw and narration of the story . . . He built a half-hour Holy Week session which took every beholder right to church . . ."

BILLBOARD

"Fred Coe again did a swell job for the juves in a quiz which NBC called Fizz Quiz . . ."

BILLBOARD

"If anyone ever asks us where to go to learn how to present a video show, we're going to suggest that he consult NBC's producer, Edward Sobol, and Director Ronald Oxford . . ."

BILLBOARD

It makes a television station practically whistle at its work, to read the kind of reviews **WNBT** gets from the critics.

If there is any *one* reason why NBC gets kudos like these, it is probably that fifteen years of pioneering in the development of television have concentrated a mighty high percentage of television "know-how" in the NBC studios.

That is why people expect NBC to produce the finest television shows. That is why you can count on NBC to meet every opportunity television presents, and to solve every problem you might put in our hands.

NBC TELEVISION

WNBT NEW YORK

NATIONAL BROADCASTING COMPANY
A SERVICE OF RADIO CORPORATION OF AMERICA

*The **WNBT** Presentation of Robert Sherwood's "ABE LINCOLN IN ILLINOIS"