Every Sunday night, NBC televiewers see Ipom and Minit-Rub commercials on the "Bristol-Myers Tele-Varieties" program.

Bristol-Myers and their agency, Young and Rubicam, are among the major advertisers and agencies now participating with NBC in the production and presentation of effective commercial television programs. Today's combined imagination, creative talent and programming skills are building techniques that will win results from tomorrow's greater television audiences.

NBC Television

NATIONAL BROADCASTING COMPANY - 30 ROCKEFELLER PLAZA - NEW YORK
A Service of Radio Corporation of America
efficient operation by a minimum of personnel! That is the achievement of the improvements both in technical details and design which distinguish Sherron Television Studio and Transmitting Equipment. Unnecessary controls and duplication of executive supervision are eliminated... All Sherron equipment is designed, developed and manufactured to the individual manufacturer’s specifications.

A cordial invitation to visit our factory is extended to all IRE members attending the IRE convention.

Television Transmitter

This unit is manufactured to furnish ranges of 250 watts and upwards, and in power ranges coinciding with power tube development. Individual bays of additional power can be incorporated as needed. Except where additional bays may be required, however, the complete unit can be controlled by a single licensed operator.

Master Control Board

This unit includes five video channels, or as many as desired. It also includes dissolving, shading, blanking controls. Simplicity of design enables the master control board to be operated by a single technician. A sync generator and monoscope are integral parts of this unit.

Audio Control Console

In this Sherron unit all controls are centrally located. Under usual conditions, a single control operator can meter and monitor the aural program with complete ease. Ordinarily, this unit may be adjacent to the studio control console. Thus, the control operator may receive aural instructions from the program director or, if remotely located, by inter-communication.

Studio Control Console

This unit is especially designed to afford exclusive control to the program director in charge of the broadcast. The director need not be a technician. His sole concern is the quality of the broadcast. He does not operate the controls but transmits his instructions, by inter-communication, to the master control and studio camera men.

SHERRON ELECTRONICS CO.

Division of Sherron Metallic Corporation

1201 FLUSHING AVENUE • BROOKLYN 6, NEW YORK
April 7, 1927 . . . in the New York auditorium of Bell Telephone Laboratories, a group of telephone people and their guests sat looking at a glass screen.

There, clearly discernible, were the features of Herbert Hoover, then Secretary of Commerce, as he spoke to them from Washington—his voice and image carried 225 miles by wire.

Next the group witnessed a program of visual entertainment, originating from Bell Laboratories' experimental studios in New Jersey and flashed across the intervening miles by radio.

Television—by wire and radio—was born.

The demonstration was a tribute to the vision and skill of telephone scientists and engineers—another milestone in the progress of world communications.

From this beginning twenty years ago, the Bell System has worked closely and constantly with the television industry in the development of new and improved transmission facilities.
Television
THE BUSINESS MAGAZINE OF THE INDUSTRY
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Television today is clearer, sharper, and brighter—thanks to the improved kinescope, or picture tube, perfected at RCA Laboratories.

The Picture Tube that brought "life" to television

The screen on your home television table model receiver is the face of a large picture tube. And the skater you see on the face of the tube is the identical twin of the skater being televised.

Pioneering and research in RCA Laboratories led to the development of this tube which allows none of the original realism to be "lost in transit." It reproduces everything the television camera sees, shows you every detail, keeps the picture amazingly lifelike and real.

An RCA Victor television receiver brings you all the action, drama and excitement that you’d enjoy if you were at the event in person—and on top of that it’s all brought to you in the comfort of your own home...you don’t have to move from your favorite chair.

RCA Laboratories has made possible outstanding advances in every phase of television. And for television at its finest, be sure to select the receiver bearing the most famous name in television today—RCA Victor.

Tele Decision Imminent

FCC Chairman Charles R. Denny's promise of a speedy decision (made at the close of the Washington hearings, Feb. 13) on the color vs. black-and-white controversy has been interpreted widely to mean that the Commission will have settled the issue once and for all sometime in March.

FCC staffers appeared to feel little additional evidence had been placed before the Commission in the final round of hearings here over and above the actual demonstrations in New York City. Exceptions to this view were, of course, the reports on four-days of field testing CBS color pictures within a 25-mile radius of New York City, testimony on the function of the human eye and voluminous "guessedimates" on color costs and on 1947 production of black-and-white sets placed in the record by the Radio Manufacturers Association and the FCC itself.

The feeling is general that FCC Chairman Charles R. Denny, Jr., and his engineering colleague, E. K. Jett will keynote FCC reaction to the color request. Both Denny and Jett followed closely the engineering details and technical smoke screens raised by both parties to the controversy.

Philo's Vice President in charge of Engineering—capable David Smith—turned out to be a most effective protagonist for the black-and-white forces—particularly in his cross-examination of Professor Hecht, CBS's "surprise" witness. Perhaps most interesting, though, was evidence offered by Paramount VP Paul Raibourn on the functions of the eye, and what amounted to counter-testimony by Professor Selig Hecht of Columbia University. Professor Hecht, a not very modest gentleman, classified Raibourn's testimony as "sheerest irrelevancy." Not one to mince words, he also accused DuMont's Dr. Thomas Goldmark of being impressed with the magnitude of his computations.

The antagonism created by Professor Hecht did not help CBS at all. His testimony was considerably weakened when, under examination by Chairman Denny, it developed that he had never seen black and white sets outside of a New York dealer's, and had not viewed either the new Philco monochrome receiver or RCA's demonstration of simultaneous color. In answer to the "sheerest irrelevancy" claim, Mr. Raibourn submitted fifteen papers by other experts in bio-physics, many of which disagreed with Professor Hecht's theory on the functions of the eye.

A gold medal for fast comeback went to Mr. Raibourn. In his testimony he attempted to show that program content and not color was the primary factor in entertainment. This point was illustrated by offering as evidence a magazine with a cover girl in four colors. Mr. Raibourn pointed out that this picture would not hold his interest nearly as much as a black and white shot of a rather attractive young lady in a particularly alluring dress. At the conclusion of his testimony, CBS attorneys asked Raibourn whether he thought the picture he preferred would make suitable television programming. The retort, "It depends purely on your own experience, and how your mind runs" literally brought down the house, and resulted in Commissioner Denny's asking whether anyone else dared to cross-examine Mr. Raibourn.

CBS Stand

CBS' final stand may best be summarized by Dr. Peter Goldmark's statement:

"When I first appeared before the Commission in connection with this hearing, I pointed out that the standards proposed by Columbia now provide an excellent color television service which can be made available to the public immediately, and that the standards provide the utmost flexibility so as to allow ample room for future improvement and permit the establishment of a truly universal color system. "None of the testimony, demonstrations or cross-examination questions which have been introduced in the record since that time have caused me to alter that statement. On the contrary, I believe that all that has transpired in connection with this hearing has confirmed my statement."

Dr. Goldmark took issue with the conclusions of RCA, Philco and DuMont on brightness and flicker, color breakup, fidelity, definition and fringing. Dr. Goldmark directly disagreed with the RCA cost estimates. He pointed out that only Bendix, of the ten manufacturers surveying, had access to all of CBS's development plans and diagrams, and that great strides had been made in the simplification from the first color receiver made by G. E., which contains 47 tubes to the one Bendix now proposes to manufacture with only 30 tubes. In concluding his testimony Dr. Goldmark emphasized the following four points:

"Color television under the proposed standards is already performing better than did black-and-white when it was commercialized. "All of the equipment necessary for a highly satisfactory commercial color television system has been developed and tested. "The standards proposed by Columbia impose no practical technical limitations on future developments. "Color television requires the same period of commercial development that black-and-white has enjoyed to realize its full capabilities, and this can only happen after commercial operation of color television stations has been authorized by this Commission."

As pointed out here previously there was very little new evidence offered. Therefore, these final hearings have been reported more from the angle of recapitulation of the positions of the companies rather than any detailed report on propagation characteristics, brightness versus contrast, and so forth.

RMA Stand

The opposition to CBS's petition can best be summarized by the following RMA testimony as offered by W. R. G. Baker:

1. On establishing a color television service, it must be determined if the performance of the system is adequate for all practical conditions; if there is sufficient freedom for the development and design of equipment, and whether or not the system basically provides the possibility of improved performance as the service develops.
Selling through Television

Below are the preliminary sketches for a television commercial.

Finished up, transferred to film, and co-ordinated with a spoken commentary, sound effects, and music... you have an unusual and hard-selling part of a television broadcast for Trushay.

Young & Rubicam is now producing television shows for The Borden Company, Gulf Oil Corporation, and for Bristol-Myers' Minit-Rub and Trushay.

By establishing a television department several years ago, Young & Rubicam anticipated the use of this new medium; has built a firm foundation of knowledge about audio-visual entertainment...

And, even more important, about audio-visual selling.

Young & Rubicam, Inc.
Advertising - New York Chicago Detroit San Francisco
Hollywood Montreal Toronto Mexico City London

March, 1947
CONTROL!

Only MOTION PICTURES give you Control

Showmanship Control

—vital on TELEVISION programs

Q. What guarantees perfect lighting—absolute focus—flawless dialogue?
A. FILM!

Q. What makes possible repeat performances of universal quality—identical selling messages—selective marketing?
A. FILM!

Q. What eliminates costly rehearsals—telephone line charges—time zone differentials?
A. FILM!

In TELEVISION...FILM removes the question mark!

Now available for sponsorship... exclusive Teiereei Series.
In 13, 26 or 52 week installments.

Write for details and arrange for private screening.

Send for booklet:
“Film—The Backbone of Television Programming.”

WASHINGTON

(Continued from page 4)

In comparing the sequential and simultaneous systems, the RMA Engineering Department believes the simultaneous system is superior on the following points:

a) Compatibility
b) Freedom from flicker
c) Freedom from color fringing
d) Freedom from color break-up
e) Greater freedom from limitations on color reproduction
f) Provides the opportunity for the public to obtain more television service at a lower price.

These points were dealt with in detail by RCA’s Engstrom and Philco’s Smith.

2. A black-and-white system of television is now rendering service. Quantity production of equipment, particularly receivers, is underway. It is estimated that over 2,000,000 black-and-white receivers can be sold during the next three years, assuming reasonable market conditions. In establishing a color system, we believe that it is of vital importance to consider the effect of the color system on the present black-and-white service, the public, the manufacturers who are building black-and-white equipment, and upon those interests who will operate the transmitters and produce programs.

There is under consideration a sequential system which we believe will result in maximum obsolescence. There is also proposed a simultaneous system which is compatible. By a “compatible” color system, we mean one having an arrangement of radio channel utilization such that a black-and-white receiver designed for present standards may, without substantial internal changes, but by use of a frequency converting means at its input, accept a portion of the color transmission and reproduce from this a picture in monochrome. Such a system permits the manufacture of a semi-universal receiver capable of producing a monochrome picture from transmissions on both hands at the minimum cost to the public.

With the simultaneous system the black-and-white service may continue to grow. When the color service is introduced, these two services can develop side by side without obsolescence. The public will determine whether both services will continue or whether one will supplant the other.

(Continued on page 9)
Serving through Science

"U. S." ENGINEERED RUBBER SERVES TELEVISION

Manufacturers of equipment—builders of stations—and owners of telecasting facilities—already use many U. S. Rubber Company products. When planning expansion and new designs we invite you to call on the experience and special "know how" of U. S. Rubber Scientists and Engineers for all problems and applications requiring rubber.

Two U. S. Rubber Co. Shows Now Regularly on Television

"Campus Hoopla" 8:00 to 8:30 pm each Friday WNBT, New York

"Serving Thru' Science" 9:00 to 9:30 pm each Tuesday WABD, New York

Plus Special Events and News Casts

UNITED STATES RUBBER COMPANY
ROCKEFELLER CENTER • NEW YORK 20, N. Y.
STATIONS: KTTV, Los Angeles Times station, hopes to be on the air by the end of '47 or early '48. Original plans for building the studio in Pasadena in conjunction with their arrangement with the Pasadena Playhouse, have been postponed until present construction situation eases. However, building will start immediately on a Times-owned site in downtown Los Angeles, to be followed later by studios in Hollywood and Pasadena. Particularly interesting is the training program scheduled to get under way this month. Two-image orthicon cameras have been delivered, and the station will be well along in promotion-wise. Placed in the floodlitg lighted patio of the Pasadena Playhouse, candid camera pictures of theatre-goers in the foyer have been taken, generating quite a bit of excitement and interest in the medium. A small studio in the Pasadena Playhouse school building is being completed, and closed circuit production in camera-testing programs and training personnel during the building period ahead for KTTV will be carried on. Course is a three year proposition, with the fundamentals stressed the first year, seminar and laboratory work the second year, including participation in TV sustaining shows; and the third year specialization in TV, with apprenticeship status on the staff. This group will conduct the work of the Playhouse Television Workshop, which will do extensive research on programs and on production technique for the medium. Program is under the direction of David Creedwell, Times Program Director, and Ray Monfort, Times Chief Engineer. WREN, with a $120,000 grant in Buffalo, sponsored a television demonstration in conjunction with RCA-Victor, at the Mid-West Sports and Boat Show. A mobile television unit, complete with cameras, controls, and relay equipment, picked up such events as billiard tournaments, logrolling and canoe-tipping contests, and a beauty contest, which were relayed to television receivers throughout the area. Any show was under the direction of Joseph A. Jenkins, Production Chief of RCA-Victor Promotion Department, and Edward J. Wegman, Assistant Program Director of WREN. WHAS, Courier Journal in Louisville, has plans for constructing a single, large television studio with associated rooms in connection with their new studio building. However, completion date of the studio is indefinite at the present time. WTMJ-TV, Milwaukee Journal Co., will put their recently delivered field pick-up equipment into use at the Milwaukee Home Show scheduled for March 15th to 22nd. Programs will be feed by cable to exhibition booths to give viewers an "in the home" environment. Training program for staff members is now underway and proposed plans include permitting tentative sponsors to experiment with the equipment, plan productions and supervise shows. DuMont higwigs, aware of their operational shortcomings are revamping their staff so that when station reopens (probably around April), an improved programming schedule can go into effect ... ABC's live program at WPTZ terminated last month, with hockey ending on the 4th. Last scheduled program on WKBK is a one time slot for General Mills (pick-up of the championship pool and billiards tournament). Paul Movrey, ABC tele chief, now on the State Department junket to Uruguay, made arrangements with WAPA, San Juan, to have on call the services of film cameramen for special event coverage in Puerto Rico. Similar meetings will be held with other stations in South America. AUDIENCE STATISTICS: Accurate records on increasing television audience is proving something of a problem. Figures now given for New York by NBC are about 14,000 sets. By CBS, about 9,000. Philadelphia estimates 2,000; in Chicago, the number has gone over 1,000. In the Schenectady-Troy-Albany area, the figure given is about 300. In Los Angeles there are now about 300 sets in the area, with T day set by RCA for March. DuMont distribution is also scheduled shortly for the Coast area. In St. Louis, the launching of television by RCA in cooperation with KSD-TV met with an enthusiastic response. About 100 receivers were installed in hotels, department stores and other public places, and about 300 receivers were put on sale. General Electric also plans to have sets on sale in the area shortly. In Detroit and Washington, the station is expected to be on the air by the time of the initial launching of television in these cities. WPTZ has organized its own system for keeping an accurate tally by means of its mailing list. Before a television viewer is added to the list, they insist that the person supply them with information on the type of set, name of manufacturer, size of screen and where purchased. In return, the viewer is given a tentative schedule for the week. Their records average about 125 new names a week, which they believe covers practically all purchases of sets in the area. So far, two dealers have cooperated with the station in sending in customers' names and they expect to extend this cooperative arrangement in the future. Despite the jump in receivers from 758 when their rate card was first put into effect, the station has no immediate plans for increasing their time charges. However, the WKBK rates, set up on an audience basis, will increase as of March 15th, now that the station has topped 1,200 viewers. WKBK has made arrangements whereby the organization handling the installation of receivers furnishes the station with the names and addresses where installations have been made. They are authenticated by phone calls through their regular program surveys and names thus obtained are put on the program mailing list. In this way, the station is able to give the exact figure on number of sets operating in the Chicago area. As soon as a new set manufacturer comes into the field, they plan to set up the same system. Discrepancy in the New York figures may be attributable to the fact that NBC has included in their tally the 5,000 viewers which were on their mailing list in July, 1946, plus production figures of the various companies. CBS figures are taken from the RCA reports. TBA has set up a committee to keep an official record and an organized program will be put into effect shortly. ADVERTISING: Top advertising news of the month was entry of General Foods into television, with the purchase of facilities on all three New York stations. (Story, page 31) ... Opening of KSD-TV in St. Louis generated much television enthusiasm advertising-wise, with 12 new advertisers cooperating in the opening week program. No rate card has been set up as yet, programs being handled on a barter basis ... 42 advertisers were on television last month. (For list and brief description of format, see page 33.) Standard Brands' withdrawal from television came as a surprise to trade. After spending approximately $500,0000 on the medium since their entry into the TV company is taking "a hiatus," according to Donovan Stetler, advertising manager of Standard Brands. (Story on page 38). Despite CBS-raised color issue, monochrome New York station WCBS-TV has intensified advertising efforts to increase commercial time. Radio Sales, spot broadcasting division of CBS, has been named sales representative for the television outlet. Announcement made by George L. Moskovic, commercial manager of WCBS-TV, said that the step marked integration of fully trained sales organization with the new medium. Importance of research was stressed by J. L. Van Volkenburg, general sales manager of Radio Sales, who stated that they would work closely with the CBS Television Audience Research Institute under Doctor Horton. TRAINING PROGRAM: Over 700 salespeople in the New York area have been given a training course by Bruno—New York, RCA wholesalers, on selling television receivers, with particular emphasis on the points which interest the customer. At the end of the course, which was conducted by David Greeke, a 33-question quiz was given, with marks averaging slightly better than 81%. Questions covered such points as how many stations are now operating in New York, how many the city will eventually have, the effective range of the present time, average operating cost of electricity per hour for a receiver, picture size, network plans, existing networks, etc. Television
Also covered were such points as obsolescence of RCA receivers when color television is made available, whether it is necessary to darken the room in order to see the program, quality of reproduction, high voltage, the costs, and the home owners' policy. It is expected that the attendance of dealers and salespeople will exceed 1,000.

Shopping Report in December TELEVISION, "How to Buy a Television Set", which exposed the lack of knowledge of salespeople, was said by Gerald Kave, general sales manager of Bruno, New York, to be an additional stimulant for them to conduct these training meetings.

ANTENNAE PROBLEM: Special committees to combat the recent ruling of some New York reality companies barring television antennae on apartment houses, have been set up by TBA. One committee is rounding up information on all types of antennae in an attempt to standardize sets and antennae outlets, in order to simplify the problem. A second committee, on publicity, is arranging a meeting with the reality owners in order to compromise their feelings on the subject.

HERE AND THERE: On a recent Sunday night, when the WNBT transmitter developed trouble, over 30 calls were received at NBC from irate set owners. Best complaint of the night, though, was the fellow who called up and said: "What are you sending out down there? You're ruining my television set! First I got green spots, then I got red spots—now it's beginning to smell funny." Maybe there is something in smellovision after all!

Care with which Philco is guarding its much talked about projection set was evidenced by its arrival at the DuMont studio to be photographed for the forthcoming spread in Life on television. Model arrived in an armored car, protected by armed guards and was put in a bank vault for safekeeping over the weekend! Credit Ted Lucas, Philco publicity man, with that one!

ORGANIZATIONS: Interest in television on the West Coast was hyped last month with the election of officers of the Academy of Television Arts & Sciences, headed by Edgar Bergen as President. The new officers included: First Vice-President, Ronald C. Oxford, Executive Producer of KFI television; Second Vice-President, Mark Finley, Public Relations Director Don Lee Television System; Secretary Maria Drake, Bergen-Cuning Television Productions; Recording Secretary, O. A. Engstrom, science department, Glendale City Schools; Treasurer, R. A. Montfort, Director of Television, Los Angeles Times; Recording Secretary, Don McNamara, Telefilms, Inc.; Secretary to Treasurer, Joseph Kay, NBC; Executive Coordinator, Syd Cassid, Ver Halen Publication. Purpose of the organization is to bring together all persons interested in development of the new video art.

TBA's newly formed committee on affiliates discussed such problems as equipment manufacture, tubes, film production and manufacture, talent, advertising and networks at their first session. Committee gives affiliate members opportunity to take more active part in TBA plans.

One of the most extensive programs for people interested in television is now being conducted by the American Television Society. ATS now offers its members a training course in which actual studio equipment is used (courtesy of Farnsworth). A television workshop where plays are now produced and shown over DuMont station and a series of monthly meetings where various phases of television are discussed by men active in the field are features of the course. Program is directed by Bud Gamble.

Washington (Continued from page 6)

3. In considering a color television service, the time required before such service may become available is important. The RMA Engineering Committees have completed schedules for the availability of apparatus and for the availability of a color television service for both the sequential type and the simultaneous type. The difference in time is not of a sufficient magnitude, being of the order of four, (4) years for the sequential system and five (5) years for the simultaneous system.

The RMA Engineering Department recommends that the Federal Communications Commission deny the petition of the Columbia Broadcasting System. It further recommends, because of the importance to the industry and to the public, that emphasis in the development and introduction of a color television system should take into account the matter of compatibility. Further, that the standards when adopted should include provisions for adequate performance and the basis for improvements in performance as the system matures.

The following companies concurred: Crosley, Colonial, Emerson, Galvin, RCA, DuMont, Stromberg-Carlson, Farnsworth, Hazeltine, Philco and General Electric. Bendix did not concur, and Federal did, with reservations. Field Tests—Philco, RCA, DuMont were unanimous in their indictment of the CBS color pictures as a result of four days of testing within 25 miles of the CBS transmitter itself. CBS Bill Lodge defended the demonstrations and questioned the good faith of the testers. Edward Allen, an FCC engineer, participated in the tests as an observer but did not testify. Philco's F. J. Bingley told the FCC the CBS pictures were not visible in 7 out of 8 test locations; DuMont's T. T. Goldsmith said the tests proved his long-held thesis that the ultra-highs were useful only for line-of-sight transmissions.

Comparative Cost Data—RMA figures and those inserted into FCC's hearing record by General Electric showed that both the RCA and CBS color sets would cost well over twice as much as comparable black-and-white units. Bendix and G. E., both of whom have worked on test receivers for Columbia, quoted prices for quantity production in the $1,500 range. G. E., for example, said production of from 10,000 to 100,000 CBS sets would find prices pegged at $1,770 each. The lowest figure mentioned for mass production was $1,343. This is the price for a color receiver comparable to the 10-inch screen black-and-white receiver which retails for $400.

Production Forecast

Over 2,000,000 monochrome sets will be produced in the next three years, RMA figures show. An FCC survey, based on returns from 19 out of 33 companies queried, shows approximately 450,000 sets due in 1947. About 357,000 of these will be turned out in the last quarter of '47. Estimates from Philco and several others known to be tooling for TV production were not included.

Pending Applications

FCC has cleaned its decks of all but 16 pending television applications. These are as follows: the five Paramount-controlled bids: the five bidders for the New York market, which FCC Chairman Charles R. Denny "hoped" to have decided by March 1; two Don Lee bids on the West Coast; one Ft. Industries, for Toledo, O.; the Daily News' request for Philadelphia, held up pending more information; ditto for the newly filed application from the Southern Radio & Television Corporation in Miami, Fla.; and a request for a change of frequency for Havens & Martin Co., Richmond.

March, 1947
Inside and out, Farnsworth quality is evident. When you see today's television on a Farnsworth—you see it at its best.

Television is no longer in rehearsal. It is here, now! And when you see the clear, bright, highly defined pictures of modern day television as received on one of Farnsworth's table or console models, you know that today's television is outstanding.

For two decades Farnsworth has pioneered in advancing television from a promise to a fact. The technical accomplishments of Farnsworth engineers—from the original development of the electronic television system to practical television as we know it today—have made history.

Superb modern designs characterize Farnsworth's current line of television receivers that, in addition to television sight and sound reception, include standard radio and/or frequency modulation. Some models also combine the deluxe Farnsworth record changer for complete television, radio and phonograph service in one instrument.

These instruments offer the same superior performance that has become synonymous with the Farnsworth name in every branch of its electronics activity. Farnsworth Television & Radio Corporation, Fort Wayne 1, Indiana.
TELEVISION broadcasting is essentially a blue chip business. Most of the present station applicants estimate operation and construction costs over $1,000,000 annually. Somewhere along the line, though, stations must and will be built and operated for $500,000 and possibly less.

Obviously, any estimate at this time must be largely speculation, and although fairly detailed cost schedules are presented here, they are merely set forth as some basis for arriving at the $500,000 figure.

Programming

Naturally, the programming operation would be a simple one. It would be primarily based on films, mobile pick-ups, and limited studio operation. In many cities along the Eastern seaboard, arrangements undoubtedly will be made to pick up programs from the New York station. This naturally would account for an important part of the local station's programming. Or where this relaying is not possible, networking will probably be done by filming of major programs, probably off the cathode-ray tube and shipping the canned programs to local stations. The first few years of live programming will emanate almost solely from dual use of mobile equipment. The usual local sports and special events will come in for their full share of programming. Added to this is a limited studio operation for interviews and possibly simple audience participation programs.

Films and live commercials limited to a one set, simple operation can effectively take care of local advertising.

Equipment

Equipment for the station can be purchased for approximately $200,000. Operation cost for the first year will approximate $151,900 (Schedule A). Obviously operating costs are in direct proportion to programming out-put. It is conceivable that after three years of operation when revenue according to our estimates will reach $731,000, that provisions will be made for live studio origination. This would involve investment in additional equipment of probably $100,000. This figure would depend entirely on how extensive the studio operation would be. Operating costs at this time would go up at least $50,000.

Revenue

On the accompanying chart we have endeavored to estimate operating expenses and revenue over a five year period. For illustrative purposes, we have chosen Boston for our hypothetical television station. For Boston, with one channel still unapplied for and network facilities between New York, Philadelphia and Washington available shortly, would be the perfect set-up for the $500,000 station. To do this it was necessary to estimate the number of receivers that would be sold in the Boston area, and combine that with television's potential effectiveness. The sale of receivers is based on the estimate of manufacturers' production and on surveys as to the percentage of people who plan to buy television receivers. While it is true that the present minimum price of some $250 for a receiver is quite high, in 1929 when the average price of a radio set was $150, four million receivers were sold. It is conceivable that 25,000 television re-

A TELEVISION STATION FOR $500,000

By Frederick A. Kugel

March, 1947
receivers can be sold during the first year of operation. This is only 2.8% of the 890,000 radio owners in the Boston area.

The next step would be to arrive at a logical rate charge, and here we are forced to turn to present broadcasting rates, but find practically no scientific basis. For example, a leading radio station in Boston with a trading area of two and one quarter million people and 890,000 radio owners has a night time half-hour rate of $333. On the other hand a leading Hartford station with a trading area of 502,000 and 158,000 radio owners, has a night time half-hour rate of $240. However, we have had to start somewhere and we have taken the arbitrary figure of .0015 per listener as a fair radio rate for a night time half-hour program.

**Plus Factors**

In television other factors besides coverage and effectiveness must be considered. If that were not the case, there would be very little reason for advertising on television the first few years of operation due to its limited circulation. Prestige, promotional value, the tie-up of franchises, special events and programming experience all go to make a plus for television advertising in the early years of operation.

The National Broadcasting Company's New York television station WNBT with only a few thousand receivers in the area has a half-hour rate of $600. In spite of this apparently high cost, Standard Brands, Bristol-Myers, Borden, Ecco, Gulf, RCA, Firestone, U. S. Rubber, Gillette, Botany, Buleva, Elgin, and others have actively advertised on WNBT. WNBT for some time now has been averaging over seven hours of commercial time each week.

In setting up rates for television the premise must be accepted that television is a more effective advertising medium than radio, with its addition of sight and action. And obviously television must also be a more effective medium than magazines, for here television adds action and sound. There have been many claims as to how much more effective television actually is. An interesting test was made as far back as 1940 by the National Broadcasting Company and the Standard Oil Company of New Jersey. 100 New Yorkers were selected for the test. 50 of this group owned television receivers. They were given a questionnaire covering the various points featured in Esso's advertising during a certain period.

The television set owners were able to answer correctly 42% of the questions asked. The non-set owners were able to answer only 4%, although they were subjected to the same information in Esso's newspaper and radio advertising. More recently tests by the Goodyear Tire and Rubber Company using three of the country's top research organizations, have conclusively demonstrated to them and their agency N. W. Ayer the tremendous advantage television has over other media in sponsor identification.

**Rate Set-Up**

Taking the arbitrary figure that we set up of .0015 we again arbitrarily multiply this by four, a conservative estimate of television's plus effectiveness. This would give us a television rate of .006 for half an hour. Surveys have consistently shown that there is an average viewing audience of five persons for every television receiver. This is considerably higher than radio, and the situation will undoubtedly hold for many years to come. However, television will naturally compete with other advertising media. Therefore we will use the larger audience per set as a plus factor in sales, but we will not compute this factor in our rate charges. Multiplying the 25,000 receivers by .006 we arrive at a half hour night time rate of $150 for this area.

Standard broadcasting figures show that throughout the country an average of 60% of a station's total time is sold. There is no reason why television should not be able to reach this percentage of commercial time, in spite of the fact that television will probably not be used for as many hours a day as radio. It is conceivable that the top audience hours of television would be one hour around breakfast time, another hour in mid-afternoon, and from 5-10 at night, which on a weekly basis adds up to 49 key hours per week. If 60% of this time were sold, 29½ hours would be income producing. Certainly after five years of operation television should be able to reach this goal.

**Network Facilities**

Getting back to the first few years of operation, the Boston station in the interest of economy and good programming would undoubtedly make arrangements for an affiliation with a New York station for as much network time as possible. And where networking facilities are not available, films of major programs will be used. Of course there is a strong possibility that the New York station would charge for the programs. However, because of a net's interest in building a network, probably only a nominal charge would be made, so as to help the local station build an audience.

On the other hand the local station's mobile operation will probably have a percentage of special events and sporting programs, which will make good network programming, and would be piped to New York. Consequently it is our feeling that very little money will be expended for programs by the local stations in network operations during the first few years.

Doubling up of personnel, wage rates in smaller cities, concentration on budget programs and the intangible pioneering spirit and aggressiveness can make a $500,000 station not only possible but a necessary link in supplying television to the country.

**Schedule A**

**Operating Expenses—First Year**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief engineer</td>
<td>$5,200</td>
</tr>
<tr>
<td>Assistant engineer</td>
<td>3,000</td>
</tr>
<tr>
<td>Assistant engineer</td>
<td>2,500</td>
</tr>
<tr>
<td>Mobile men</td>
<td>10,000</td>
</tr>
<tr>
<td>Projectionist</td>
<td>3,000</td>
</tr>
<tr>
<td>Apprentice</td>
<td>2,000</td>
</tr>
<tr>
<td>Program manager</td>
<td>5,700</td>
</tr>
<tr>
<td>Assistant</td>
<td>2,500</td>
</tr>
<tr>
<td>Announcer</td>
<td>2,500</td>
</tr>
<tr>
<td>Station manager</td>
<td>5,200</td>
</tr>
<tr>
<td>Secretaries (3)</td>
<td>3,500</td>
</tr>
<tr>
<td>Porter</td>
<td>1,500</td>
</tr>
<tr>
<td>Relay rental</td>
<td>$46,900</td>
</tr>
<tr>
<td>Programming</td>
<td>60,000</td>
</tr>
<tr>
<td>Power</td>
<td>25,000</td>
</tr>
<tr>
<td>Promotion &amp; travel</td>
<td>7,500</td>
</tr>
<tr>
<td>Office Overhead</td>
<td>10,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$105,000</td>
</tr>
<tr>
<td><strong>$151,900</strong></td>
<td></td>
</tr>
</tbody>
</table>

*The costs of radio relay facilities or coaxial cable are completely unknown at this time. The $60,000 estimate above is purely conjecture but has been used by some of the New York applicants on present costs of coaxial facilities between New York and Washington.*
The estimates on these pages are set forth purely as a basis for determining the possibility of a $500,000 operation. For example, no allowance has been made for depreciation. Obviously, wage scales will vary with the locality. Production costs might be higher, depending on program plans, music rights, news service charges, etc.

### SCHEDULE B
#### ADDITIONAL EXPENSES—SECOND YEAR

<table>
<thead>
<tr>
<th>Position</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>10,000</td>
</tr>
<tr>
<td>Advertising manager</td>
<td>5,000</td>
</tr>
<tr>
<td>Additional promotion and overhead</td>
<td>5,000</td>
</tr>
<tr>
<td>Secretary</td>
<td>2,000</td>
</tr>
<tr>
<td>Programming</td>
<td>25,000</td>
</tr>
</tbody>
</table>

**TOTAL** for the year: $47,000

### SCHEDULE C
#### OPERATING EXPENSES—THIRD YEAR

<table>
<thead>
<tr>
<th>Position</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>15,000</td>
</tr>
<tr>
<td>Chief engineer</td>
<td>7,500</td>
</tr>
<tr>
<td>Assistant engineer</td>
<td>5,000</td>
</tr>
<tr>
<td>Assistant engineer</td>
<td>3,000</td>
</tr>
<tr>
<td>Mobile men (3)</td>
<td>15,000</td>
</tr>
<tr>
<td>Mobile engineer</td>
<td>3,000</td>
</tr>
<tr>
<td>Projectist</td>
<td>5,200</td>
</tr>
<tr>
<td>Assistant</td>
<td>3,000</td>
</tr>
<tr>
<td>Program manager</td>
<td>5,200</td>
</tr>
<tr>
<td>Assistant</td>
<td>3,000</td>
</tr>
<tr>
<td>Program director</td>
<td>2,500</td>
</tr>
<tr>
<td>Script writer</td>
<td>2,500</td>
</tr>
<tr>
<td>Announcers (2)</td>
<td>6,000</td>
</tr>
<tr>
<td>Advertising manager</td>
<td>7,500</td>
</tr>
<tr>
<td>Salesman</td>
<td>5,200</td>
</tr>
<tr>
<td>Station manager</td>
<td>7,500</td>
</tr>
<tr>
<td>Assistant</td>
<td>5,200</td>
</tr>
<tr>
<td>Promotion manager</td>
<td>5,200</td>
</tr>
<tr>
<td>Lighting technician</td>
<td>3,900</td>
</tr>
<tr>
<td>Stage hands (3)</td>
<td>5,000</td>
</tr>
<tr>
<td>Carpenter</td>
<td>3,000</td>
</tr>
<tr>
<td>Scenic designer</td>
<td>3,900</td>
</tr>
<tr>
<td>Porters (2)</td>
<td>4,000</td>
</tr>
<tr>
<td>Secretaries</td>
<td>14,000</td>
</tr>
</tbody>
</table>

**TOTAL** for the year: $143,300

### SCHEDULE D
#### ADDITIONAL EXPENSES—FOURTH YEAR

<table>
<thead>
<tr>
<th>Position</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic manager</td>
<td>3,900</td>
</tr>
<tr>
<td>Special events manager</td>
<td>3,900</td>
</tr>
<tr>
<td>Film manager</td>
<td>3,900</td>
</tr>
<tr>
<td>Program director</td>
<td>3,000</td>
</tr>
<tr>
<td>Script writer</td>
<td>3,000</td>
</tr>
<tr>
<td>Advertising salesman</td>
<td>3,900</td>
</tr>
<tr>
<td>Additional assistant to station manager</td>
<td>3,900</td>
</tr>
<tr>
<td>Secretaries</td>
<td>4,200</td>
</tr>
<tr>
<td>Programming</td>
<td>25,000</td>
</tr>
<tr>
<td>Overhead</td>
<td>10,000</td>
</tr>
<tr>
<td>Promotion</td>
<td>5,000</td>
</tr>
<tr>
<td>Travel</td>
<td>5,000</td>
</tr>
</tbody>
</table>

**TOTAL** for the year: $75,000

### SCHEDULE E
#### ADDITIONAL EXPENSES—FIFTH YEAR

<table>
<thead>
<tr>
<th>Position</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>5,000</td>
</tr>
<tr>
<td>Advertising manager</td>
<td>2,500</td>
</tr>
<tr>
<td>Station manager</td>
<td>2,500</td>
</tr>
<tr>
<td>Program manager</td>
<td>2,500</td>
</tr>
<tr>
<td>Programming</td>
<td>25,000</td>
</tr>
<tr>
<td>Promotion</td>
<td>5,000</td>
</tr>
<tr>
<td>Travel</td>
<td>5,000</td>
</tr>
<tr>
<td>Overhead</td>
<td>10,000</td>
</tr>
</tbody>
</table>

**TOTAL** for the year: $57,500

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### EQUIPMENT INVESTMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment</th>
<th>Operating Expense</th>
<th>Receivers</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>$200,000</td>
<td>$151,900</td>
<td>25,000</td>
<td>$169,000</td>
</tr>
<tr>
<td></td>
<td>5kw transmitter includes complete monitoring, test, basic lighting, studio and field audio equipment, two 16mm. film projectors, two-camera mobile unit, relay link, installation, truck, and provides $25,000 for building.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td>$50,000</td>
<td>$198,900</td>
<td>75,000</td>
<td>$481,000</td>
</tr>
<tr>
<td>3rd</td>
<td>(Two cameras, etc.)</td>
<td>$360,300</td>
<td>100,000</td>
<td>$731,000</td>
</tr>
<tr>
<td>4th</td>
<td>100,000 (Studios)</td>
<td>$435,300</td>
<td>150,000</td>
<td>$1,118,000</td>
</tr>
<tr>
<td>5th</td>
<td>(Replacements, additional cameras, etc.)</td>
<td>$492,800</td>
<td>150,000</td>
<td>$1,118,000</td>
</tr>
</tbody>
</table>

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March, 1947
ORGANIZATIONAL set-up of Young & Rubicam is a typical example of how an agency can fully utilize all of its specialized facilities for television. Headed by William E. Forbes, manager of the television department, agency has been producing four television shows a week—Bristol Myers’ “Tele-Varities,” Gulf’s “CBS Television News” and “You Are An Artist,” and Borden’s “I Love to Eat.”

Agency’s aim is to build a television department slowly and to use the resources of its over-all organization. Right now they have a number of people who are devoting a substantial amount of time to television. Y & R fully realize that television requires a specialized technique; that it is going to require top talent and ability to put it over, and that the last place to economize is on the quality of the show and the caliber of the personnel. On commercials, for example, they are breaking in their best radio commercial writers on television. And first step in that training is the trick of thinking in pictures as well as with words.

Inter-Department Set-Up

Close cooperation between the various departments involved can be illustrated by the work done on the Bristol-Myers show, which is produced for the agency by Wes McKee.

Station relations set-up is handled by Carolyn Turner who takes care of facilities negotiations with NBC. She, in turn, reports to Carlos Franco who heads up the station relations department. In charge of talent is Cy Pitts, who calls on other members of the program development department for whatever assistance is required. Function of the program development department is the creation and development of program properties, such as script, format ideas, etc. Mrs. Sylvia Dowling is in charge of the commercial writing department. Realizing the obvious and important place of visual selling in television devicing, handling, etc., full use is made of the art department to obtain the best visual effects. Walter Nield heads up this section. They also have close liaison with their motion picture department, headed by Jack Barry, and call upon them whenever counsel is required. Eleanor Kilgallen handles the casting department.

In addition, the research department, headed by Dr. George Gallup, has been conducting qualitative experimental research projects.
Bristol-Myers Program

First step in deciding the Bristol-Myers program started with the discussion of the advertiser's problem in television, and revolved around selection of station or network, program format and commercial approach. Each member of the group was given a particular assignment to work out and the development of the program was underway.

Selection of a network time position resulted in a slot on WNBT every Sunday. Fact that they had a modest budget and wanted to experiment with various types of commercials on film led to the choice of the Mrs. Carveth Wells film travelogue series, titled "Geographically Speaking." Twenty-six week contract was signed and series ran from June 9 to December 1.

Spotlight was then turned on the commercials. Basic idea was to keep away from the straight plug and to put an effective selling message across in as entertaining a manner as possible. They believed that by giving the viewer as much entertainment as they could, they would gain more then by handling it straight. But all this had to be fitted into a limited budget which did not permit expensive animation or the use of live talent. Solution was worked out with a series of cartoons or stick drawings, plus devices designed to give the effect of animation. Drawings were filmed by NBC, from blow-ups of the originals, and the film was timed to the copy. Commercial commentary was voice over. Agency worked about four weeks ahead of program date.

In preparing the commercials, Mrs. Dowling wrote the script and then she and the artist worked out the cartoons. Copy was kept as short as possible so that the pictures could be moved quickly, thus eliminating any viewer tendency toward boredom which would have resulted from looking at one picture too long. Some of the quasi-animation tricks tried included a head meeting a hand to sneeze—done simply by lowering the drawing of the head and raising the drawing of the hand to meet it. Same idea was used to show the menthol vaporizing effect of Minit-Rub, with a cloud rising up to envelope a stuffed-up head.

Throughout the series a comic approach was stressed—really an ideograph idea with the cartoons frequently used to complete the announcer's oral plug. No time limitations were set—the opening one usually ran from 1:15 up, occasionally hitting three minutes. On the end commercial, some of the pictures used on the opener were again shown and a recap done with a different punch line. These usually ran about 30 seconds.

Sample Script

Here's a sample script used on Trushay:

**FIRST COMMERCIAL**

**Video**

Little Red Riding Hood . . . cute

Snap in mother giving Red the bottle

Red walking in woods with bottle

Snap in man with wolf's head

**Audio**

*Announcer:* This is the story of Little Red Riding Hood—the way you never heard it! One day Little Red Riding Hood's widowed mother said:

*Woman:* Take this bottle of Trushay to your Grandmother's house.

*Ann.*: Which Red Riding Hood did . . .

But on the way she met a wolf: (whistle)

Red pointing to Grandma's house

Wolf looking at Red . . .

Red holding Trushay

Trushay and sign beforehand

Girl dusting

Girl washing dishes

Girl washing undies

Trushay and shield

Wolf talking to Red Riding Hood

Red extending hand to wolf

Wolf kissing Red's hand

then snap in big flaming heart

*Man:* Where are you going little Red Riding Hood?

*Ann.*: Said the wolf.

*Girl:* I'm going to Grandma's house with this bottle of Trushay.

*Ann.*: Said Red Riding Hood.

*Man:* And what pray tell is Trushay?

*Ann.*: Said the wolf.

*Girl:* Trushay is the Beforehand Lotion—a really new idea in hand lotions.

*Ann.*: Said Red Riding Hood.

*Girl:* You use it before you do housework . . .

*Girl:* Before you do dishes . . .

*Girl:* Before you do light laundry . . .

*Girl:* 'Cause Trushay guards hands—even while they're in hot soapy water . . . and so helps keep them soft and smooth and lovely.

*Man:* Trushay really does that?

*Ann.*: Said the wolf.

*Girl:* (romantically) Well hold my hand and see.

*Ann.*: Said Red Riding Hood.

*Ann.*: Which the wolf did! . . . WOW!

Here's a scene from the first "live" commercial on the Bristol-Myers Tele-Varieties. Girl pantomimed off-screen instructions on the use of Trushay in amusing fashion.
Red and wolf in clinch, hearts all around

Red with hearts around her talking to mother

Woman rushing out door—holding on to hat with one hand—pushing Red away with other.

SECOND COMMERCIAL

Video

Hand sequence into hearts

Trushay and sign beforehand

Girl doing dishes

Girl doing undies

Trushay and shield

Woman listening at door

Woman, wolf and Trushay bottle taking a your hands if you begin bow.

Audio

Ann.: Those lovely hands of Red Riding Hood really did something to him and before you knew it, they were kissing and kissing and kissing.

Ann.: Well! When Red Riding Hood finally returned and told her mother what happened—her mother said:

Woman: If that's what happens—I'm taking that bottle of Trushay to Grandma's house myself!

 Исключительный программный блок

Remember you want men to go (whistle) when they hold your hands.

Then get Trushay the beforehand lotion.

And use Trushay before you do dishes.

Before you do light laundry.

'Cause Trushay guards lovely hands from roughness and dryness—even in hot soapy water.

So the next time you hear the wolf at your door

Let him in . . . he'll love

Ann.: Those lovely hands of Red Riding Hood really did something to him and before you knew it, they were kissing and kissing and kissing.

Ann.: Well! When Red Riding Hood finally returned and told her mother what happened—her mother said:

Woman: If that's what happens—I'm taking that bottle of Trushay to Grandma's house myself!

Recently concluded Borden show, "I Love To Eat", ran for 26 weeks over WNBT. Featuring James Beard, cooking expert, cooking lesson format gave agency an opportunity to experiment with different types of commercial appeals.
As anticipated, they found that people with television or stage experience are best, even for these few minutes. Agency's problem is to cut down on the time spent on commercial rehearsals. However, problem will probably solve itself as greater experience is obtained in the medium. On the sets to be used, agency gives NBC's Facilities Department a rough idea of what they want and they carry on from there.

As the program consists of three acts, running for fifteen minutes, only one commercial is used. This follows the second act and usually runs from one minute and thirty seconds to two minutes. Product identification is obtained at the beginning and end of the show with a poster display.

Experimentation on these live shows has included such techniques as off-screen announcement, with the cast pantomiming the actions; just people doing things without any talking except when it is really needed; a combination of pantomime to off-screen instruction on the use of the product and conversational patter between the cast; and, then, the usual stunt of people putting the idea over by their conversation and actions.

Here's a sample script on Ipana:

Ray: "In the interest of all parents, we now present our version of the Children's Hour. (Girl about ten sitting in chair in living room reading a book. All you see is book, "Our parents and how to handle them." Camera dollies back until you see girl just as Ray finishes his speech.)

You see we believe fathers and mothers ought to pay more attention to their youngsters. Every parent ought to sit down and have a heart to heart talk with the kids—you'll learn plenty! (Mother walks into room.)

Mother: Susan! Why aren't you doing your homework?

Susan: Oh, I'm not going to do it anymore.

Mother: And why not?

Susan: It's not fair. We kids do all the work, and the teacher gets paid for it!

Mother: Oh Susie, don't be silly.

Susan: Well, anyway, my homework's finished.

Mother: Then go on in and get washed and get ready for bed.

Susan: Oh mother, do I have to go to bed?

Mother: Now Susan, you know better than that—(She points arm in direction of door. Girl reluctantly gets up and walks out door. Mother picks up book—looks at title, shakes head but then with much eagerness starts to read.)

Mother: Oh alright.

Mother: Well Susie, what is it?

Susan: I want to show you what I learned in school today. (Mother holds Ipana in hand. Closeup of Ipana)

Mother: But honey, I taught you to brush your teeth with Ipana years ago.

Susan: But teacher says there's more to it than just brushing. (Susan washes hands and then she puts some Ipana on fingertip and massages gums.)

Susan: Now watch.

Mother: What in the world are you doing?
Susan: I'm massaging my gums with Ipana. (Then drinks some water and with back turned rinses.)
Mother: But why?
Susan: Teacher says I should. She says gum massage helps keep my gums firm and healthy.
Mother: Oh?
Susan: And firm gums are what help keep my teeth bright and healthy... and makes my smile beautiful. See? (She makes with a toothpaste smile. Then takes towel and dрапes it around head and strikes a glamorous type pose.)
Mother: Just like a movie star!
Mother: Now don't tell me teacher told you that, too?
Susan: No—but she said whenever we brush our teeth we should always ever so gently massage our gums. You ought to try it Mommy—it's very good for you, too.
Mother: Alright Susie—now go on up to bed. (Susan takes towel off head, puts it on sink, kisses mother and goes out.)
Susan: Goodnight Mommy.
Mother: Goodnight Honey. (Mother picks up after her—puts towel on rack, toothbrush on stand, starts to close Ipana tube, but stops and looks at it.)
Mother: (musing) What will they teach them next? (She slowly puts Ipana on fingertip and looks in mirror and massages gums, putting tube, by the way, in place on sink where camera can dollly to big closeup of tube and as it does Ray says:)
Ray: AND she wasn't fooling you Mother. Today in schools all over America, children are taught the proper care of their teeth and gums just as Susie showed you. Why don't you make it a daily habit to use Ipana and massage—huh?"

Gulf Programs

Gulf sponsorship of the CBS News started on June 13th over WCBS-TV in the 8:15 to 8:30 spot on Thursdays. Recently the NBC program “You Are An Artist,” with Jon Gnagy was added to the schedule in the 9:00 to 9:10 slot on Thursday over WNBTV.

Gulf-CBS News is visualized by charts, cartoons, stills, film and in handling the commercial Y & R have tried to keep it compatible in style with the rest of the program. Selling approach is factual, with as much emphasis as possible. Commercial writers Charles Cassidy and Ken Redford and producer Dave Levy confer with Fred Rickey of CBS and the drawings are usually made by CBS so that visual handling of the commercial will not conflict with that of the program. When drawings are completed and okayed, rehearsal is held—in all the agency men and the station meet three times (original conference, okay on art work and rehearsal on commercial). Copy is kept brief and commercial, which runs about a minute and a half, is worked in about the midway point. Brief end commercial has a localized approach—with stills shown of a “Good Gulf Dealer” within touring radius of New York, accompanied by off-screen announcement of his name and location of the station, plus an invitation to stop off and see him. Gulf disc is used for the standard opening and closing. Agency works about a month to a month and a half ahead on the show.

“You Are An Artist” is an art lesson format, featuring Jon Gnagy. Idea here is to integrate the commercial as smoothly as possible into the show. Agency and Gnagy discuss the formats three or four weeks ahead—he plans the idea of the show and they fit the commercial into it. Here are a few typical examples of how a service station plug can be worked into an art format.

Theme of one show concentrated on the ball shape basic form (combined to make a cocker spaniel, an upset tub, a cake of soap and some puddles on the floor). About half way through the show Gnagy's comment that the ball shape reminded him of something else, gave a lead-in to the commercial. On another sheet of paper he sketched the Gulf disc, lettered in the words and gave a very brief invitation to look for the familiar sign, etc. Silent plug was given a few minutes later when he picked up the same sheet—with the Gulf disc—to demonstrate another point which could be applied to the drawing in progress.

In an industrial landscape scene, complete with heaps of rubble, the cone shaped form got the play. To illustrate it, Gnagy had some sand on the desk which he heaped into a cone shape. This gave the springboard into the plug—the sand representing the amount of dirt which seeps into a motor during the year.

Standard opening and closing is used—Gnagy sketching the Gulf disc, and a credit at the end.

Borden’s Programs

In selecting the NBC program, “I Love to Eat,” featuring James Beard, Young and Rubicam felt that it was the type of program compatible with the many things they wanted to do of an experimental nature with Elsie, with food and with various types of commercial devicing on the Borden’s family of fine foods. Cooking format, such as this, proved a very logical place to try a great variety of commercial approaches.

Commercial writer Jeanne Crump, producer Wes McKeel, and Bill Forbes conferred with James Beard and picked the menus from his suggestions. Although a few recipes included Borden’s cheese, advertising theme was mainly institutional with Elsie, the famed Borden cow, getting the play. Format of the show—with the first part given to preparation and the food then put on to cook—offered a natural break for the commercial, for that’s the time when any cook has a few minutes to spare. Slides of Elsie and Elmer, and live commercials, were tried in many variations, with the time running from a minute and a half to two minutes.

In addition to the regular weekly feature, three special shows were telecast—audience participation, variety and drama—in line with their plans to try integrating the commercial into different program formats. On both the “Let’s Celebrate” (participation) and “Borden Entertainers” (variety) shows, NBC used their image orthicon equipment for the first time in a studio show. By televising these shows from a large radio studio they were able to pick up the large audiences which are essential in giving these types of programs a natural spontaneity.

Commercial on these shows was limited mostly to mention of the product when the prizes were awarded—with star billing given on the audience participation show, to Elsie, who made her television appearance in person.

Summing It Up...

Young and Rubicam has chalked up a sizable record of television activities. They have experimented with live and film; have bought package shows and developed their own formats. But most important they are building a sound framework of experienced personnel on which they can base their future operations.
STATION OPERATIONS

BACKED by Paramount dollars to the tune of some one hundred millions in assets and an exceptionally large cash potential...

With Paramount's facilities, entertainment know-how and a reservoir of talent, ranging from their contract starlets to the stars, to be made available...

KTLA is potentially one of the strongest stations in the country, not only for Los Angeles, but as a key station and a future Paramount network.

Facilities

At present, studio is located in a completely reconstructed building across from the Paramount lot. Studio space is 65'x75'x25', with control room 20'x24'. General idea is to keep the main studio as flexible as possible with movable partitions used, when necessary, to break the main studio into small sections. New three studio station is scheduled for construction as soon as present limitations and shortages ease.

On the equipment side, station boasts six iconoscope studio cameras, all of which can be used for daytime remote work; two iconoscope film pick-up cameras and four image orthicon field pick-up cameras. Complete film projection, remote relay facilities, incandescent lighting equipment (floods, junior and senior spots) are also on hand to complete the set-up.

Mt. Wilson transmitter is located on Mt. Alta at an elevation of 5800'. Tower and antenna, built by Paramount television engineers under the direction of Klaus Landsberg, stands 75' above ground. Special heating facilities for the antenna will keep it operating under severe snow and ice conditions. Telecasts are sent by sharp radio beam from the studio to the transmitters, where they are reamplified and rebroadcast over the entire Southern California area. Propagation tests have shown a coverage up to 150 miles, with the signal reaching Santa Barbara in one direction and San Diego in the other.

New super turnstile antenna is now ready for erection on Mt. Wilson. This will increase the power output to about 30 kw signal. No shutdown is envisioned, present plan being to erect the new antenna and merely switch operations from one to the other.

Specialization of Personnel

Training of production and engineering staff has been highly specialized—and this is particularly true of personnel whose job it is to introduce showmanship into different types of performances. To quote Klaus Landsberg, "The best man to produce a comedy pro-
FOR SEPARATE TV STATIONS — the RCA Super Turnstile diplexed to transmit aural and visual signals simultaneously (eliminates need for extra antenna).

The extremely wide-band, high-gain characteristics of this antenna make it an ideal choice for your new television station. Three sizes are available to cover all metropolitan channels.

The outputs of both the aural and visual transmitters are fed to the diplexer unit which, in turn, feeds the separate signals in correct phase relation to the North-South and East-West current sheets of the antenna.

In this way the need for a separate sound antenna is eliminated. In effect, you get twice the gain for a given height.

Best of all, installation is easy. The antenna, pre-tuned at factory, comes complete with all fittings and transmission lines. Feed points and end seals are at a minimum. There is no need for special broad-band coupling networks of any kind at the top of the tower.

Three-section Super Turnstile. The center pole is self-supporting and may be mounted on top of a suitable building, mountain or a supporting tower similar to that used for standard-band broadcasting antennas.

The high-frequency model of the RCA diplexer. The concentric line elements of this unit form a bridge circuit with the Super Turnstile radiators acting as balanced impedances shunted by equal reactances in series with the diplexer. The visual transmitter is connected push-pull; the aural transmitter push-push. All possibility of cross-talk is thus eliminated.
Systems for Television

**2** FOR COMBINATION TV-FM STATIONS (certain powers and channels only)—a Super Turnstile triplexed for simultaneous broadcasting from same antenna.

This broad-band antenna can often be successfully used for FM in the 98-108 mc band while simultaneously transmitting TV pictures and sound.

Such double use is possible because of the gradual way the input impedance changes with frequency. At frequencies near the television range of the antenna, the impedance is satisfactory for FM use. At frequencies farther from the television range, the impedance is good enough so that the transmission line can be matched with networks without affecting the impedance at TV frequencies.

A diplexer and a triplexer are used. All three signals are effectively isolated to prevent cross modulation and fed to the antenna in correct phase relation. When required by impedance or pattern considerations, a pair of matching networks at tower-top level completes the system.

Standing waves determine the FM power that can be handled. The TV-FM frequencies must be checked to determine whether operation will be within the rating of the transmission line.

Combinations that generally apply: TV channels 2 and 3 with an FM input up to 3 kw; channels 4-6 with an FM input up to 10 kw; and channels 7-13 with an FM input from 3 to 5 kw.

**3** FOR COMBINATION TV-FM STATIONS (all powers and channels not covered by 2)—a diplexed Super Turnstile plus an RCA "Pylon."

This antenna system answers the need for a limited space installation providing maximum coverage of both FM and TV broadcasts at high-power outputs. It is particularly suitable for tall, slender buildings.

Television broadcasts are diplexed into the Super Turnstile; the revolutionary new RCA "Pylon" radiates the FM signals.

The "Pylon" antenna, incidentally, is just about the last word in simplicity. One size of radiator (the cylinder) covers the entire FM band. There are no separate radiating elements to complicate connection. Tuning is not required. Handles up to 50 kw with safety. Height for height, it has more gain than any FM antenna now on the market!

All of the systems shown here . . . engineered along with RCA transmitters and fully co-ordinated with them . . . are designed to assure brighter, clearer, steadier telecasting and—for FM-TV station combinations—truer "FM quality." Complete "specs" are now available. Your inquiries are welcome. Write Dept. 79-B.

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**TELEVISION BROADCAST EQUIPMENT**

**RADIO CORPORATION of AMERICA**

**ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.**

In Canada: RCA VICTOR Company Limited, Montreal
gram, is not necessarily the best man to direct a variety or musical show, and almost never is he fit to direct drama.”

A well trained program research staff acts as liaison between the program and technical department. Each member is thoroughly versatile with the necessary techniques needed to make a television show a success, understands the technical facilities and how they may be used to best advantages. While production and direction is left to the man whose specialized ability is along those lines, the program research staff nevertheless guides the technical details. It is their job to know the scope of video—rather than the limitations—and to keep the engineers or “technical director” from saying “It can’t be done.” In Landsberg’s opinion, television has been hampered by the negative approach and an awareness of limitations, rather than the positive approach of making full use of what is available.

Same emphasis on showmanship is seen in their requirements for a cameraman. They do not want a cameraman whose specialty is fixing camera cable breaks or repairing mechanical defects. Main requisite is experience in still and motion picture photography and an appreciation and knowledge of picture composition. With this background, he can concentrate on framing the best picture that can be obtained.

The engineering department is divided into three groups—transmitter operators, studio operators, and maintenance and development engineers. All of them have a thorough knowledge of all equipment used, but a strong dividing line is drawn between operators and development engineers.

**Usual Production Procedures**

Staff meetings are held each week to review operation problems, experiences of the past week and to discuss future programs, personnel requirements, etc.

While there is no set procedure of putting a program into the works, this policy is generally followed. One man from each group is assigned to every program. At the first meeting, the producer explains his idea for the show, or if a basic script is on hand, details his production ideas. The writer and art director go on from there, prepare the material in rough form and a further meeting is held to discuss it with the producer.

Program research member and the director (if the producer is not directing himself), attend the next meeting at which the show is whipped into final shape, and a script prepared for the first rehearsal. And the one cardinal rule at KTLA is that there can be no change after any but the first rehearsal. Policy was aimed at eliminating the confusion which would reign if the show was being continually revamped. It is their feeling that it is better to have a well done show, with minor flaws, than to have a “perfect idea” which no one can possibly appreciate.

No set ratios have been worked out for rehearsal time—feeling is that no standard can be set as yet and rehearsal required for each show is still an individual problem.

**Motion Picture Techniques**

Motion picture techniques figure largely in their production. Idea here is to produce action through camera work, lighting, backgrounds, etc., rather than letting the sole action be that of the performance on the stage. Again to quote Klaus Landsberg, “A television receiver must provide more than a look at a legitimate stage. Therefore each camera move, cut, fade, or dissolve, and each lighting set-up must tie into the performance and lend to it drama and action. The job of a television director is very much like that of the motion picture editor or cutter. Camera staging, dollying, panning, fades, dissolves, etc., should not be used as technical gadgets but only to pace the show and more entertainingly tell its story.”

When it comes to props, station has access to the Paramount warehouses and usually by specifying a catalogue number can obtain the basic furniture and units needed. Motion picture technique of photographic backgrounds and background projection is also used.

**Commercial Procedures**

KTLA will put the least possible curb on sponsored shows, with the agency free to select the producer. All available facilities—including production, writing, art-work and engineering—will be offered to the agency in
producing any show they wish. In all cases, the program research staff will assist them. Station has also developed several shows suitable as packages for various sponsors, among them “Shopping at Home” and “Hits and Bits,” a variety program. However, the length, format and time placement of a commercial must adhere to station standards.

Their own experimentation has shown that instructional “how to do it” programs rate higher in audience appeal when they combine entertainment with information. Feeling is that the straight demonstration program is best suited to daytime viewing hours. Appeal of their “Shopping at Home” program, they feel, has been due mostly to the new and novel merchandise demonstrated.

Under the recently issued rate card, a token charge of $100 per half hour is made by KTLA until such time as there are 1,000 receivers in the Los Angeles area. After that, live studio rates will be $400 per hour and $280 per half hour; film rates $300 an hour; $225 for a half hour. On rehearsal charges, cost is $25 per half hour for a live show and $15 for film studio time.

George Shupert, Paramount television executive, feels that the first sets in Hollywood will be in the hands of the top people in motion pictures—the people who actually set the styles and the pace for the rest of the country. If they can be sold on a product by use of a visual means and start using it in pictures, impact on merchandising would be terrific. Thus 1,000 sets in the Los Angeles area may be more profitable than 20,000 or 30,000 elsewhere.

Set sales are scheduled to start in March in the Los Angeles area, with both RCA and DuMont distribution slated for the end of the first quarter.

Programming Plans

Due to go into effect as soon as the viewing audience in the area warrants it, is the 40-hour weekly programming schedule, outlined at the hearings. Banishing the blue sky kowtowing to the much misinterpreted “public service” angle, 48% of their programming will be entertainment; with 26% devoted to news and special events and the remaining 26% to educational and religious programs.

Program analysis of the fare offered by WABD, WNBT, WCBS-TV (New York) and WBKB (Chicago) over the last few years, plus a critical attitude toward their own work, have given them some general guide posts for future planning.

Rating sheets have shown that audiences place drama in first place, followed by participation and news. Variety and personality shows also rate high. While art, ballet and music have a specialized appeal, they feel such programs should be included because of their cultural contribution. Educational shows are hard to gauge, again dependent on the individual interests of the viewers, but feeling here is that they should also be part of a well balanced schedule. As for travelogues, experience shows that such features, when combined with personalities or novelty, gain in the human interest that makes other formats rate high.

On educational programs, facilities have been offered to the Los Angeles Board of Education to use television on a cooperative basis. School authorities would have access to the station in order to study dramatics, engineering, advertising, market research, script preparation, etc. Station, in turn, is tentatively planning telecasts for school beaming which would also include trips to shrines, museums, industries, etc.

Extensive use of remote equipment is planned, with 41% of the programming in that category. 18% is allotted for studio productions, plus 20% for combined studio and film fare.

Although their programming schedule only calls for 21% of film, nevertheless they believe that motion pictures will be used extensively before the network lines go through. Their own plans envision using specially prepared or selected films, covering a wide range of formats. Repeated use of films in other localities or at different times over the station makes for economy of operation too.

Past and Present

As WXYZ, operations were started in September, 1942 with a regular bi-weekly programming schedule inaugurated on February 1st, 1943. Schedule was greatly accelerated this fall with the arrival of the image orthicon cameras and the inclusion of football,
DRAMA

Recent shows vary from 1/4 to 1/2 hour segments with production kept simple

Series of weekly 1/2 hour dramatic shows have been on WCBS-TV schedules lately—one of the more recent being “Till Death Do Us Part.” Theme centered around the jealous older husband of a beautiful young wife, whose suspicious mind led him to attempt poisoning his wife and murdering her doctor friend. Script was highly improbable and continuity jumpy—but combine that with the leading character who called his wife Sylvia one minute and Cynthia the next and the result was ludicrous. What were really three different scenes were merged into one, with no break in between.

First was in the living room between husband and wife; other in the hall outside a musicale between wife and doctor with husband overhearing. Then back to the living room again with the doctor locked in the closet, the husband giving his wife a poisoned drink, and each alternately “dying” until the wife left to run to the village. Husband unlocked the closet door, his bound victim told him that the drinks were switched, the wife returned with help and as the husband sank to the floor, either dead or dying, the two go into each other’s arms.

There was nothing to denote the passage of time; no indication of how the doctor got into the closet—or how he could see how the drinks were switched. Better attention should also have been paid to set details. First time the closet was opened to get a coat, viewers saw an absolutely blank space. Sound effects were terrific—wind has become a standard part of a television murder—and this one had the noisiest wind to date when the window or door was open.

For the third year, WNBT presented excerpts from “Abe Lincoln in Illinois,” this time in cooperation with the American Theatre Wing. Scene chosen centered around Lincoln’s reaction to Anne Rutledge’s death. Setting was a cabin and play opened with two older friends of Lincoln—a man and wife—discussing him and his love for Anne, joined later by another friend. Lincoln then arrived to inform them of Anne’s death. Lines were highly emotional and required top acting ability to put them over.

Reviews of recent shows . . . carelessness, improbable scripts mar many productions.

Chicago and New York Boards of Education have given concrete evidence of their interest in television. Left: “Minor Opinions” features youngsters of the Gary Public Schools giving their viewpoint on their “problems” over WBKB. Right: “Junior High School Quiz” brings two different schools each week before the WCBS-TV cameras. Visualization of quiz problems is worked out by the students according to brochure prepared by CBS staffers and Board of Education members.
truck." Camera shots were confined mostly to medium close-ups, with occasional long shots. While play was amusing, and certainly not offensive in the broad sense of the word, nevertheless choice of subject matter might not be 100% acceptable. It would be a matter of a station knowing its viewing audience and its particular locality in determining whether or not such a theme would be suitable. Play was produced by Eddie Sobol.

PUBLIC SERVICE

WRGB continues with “Farm Spotlight” series; “Your Town” regular feature at KTLA

Farm soil conservation was the theme of “Down to Earth,” presented over WRGB as part of their “Farm Spotlight” series. Ten minute segment was dramatized, with comedy note added by the farmer’s wife, who didn’t seem to understand what all this talk on soil conservation between her husband and the government agent was about. And when they asked for her washboard to demonstrate a point, she just thought them plumb crazy. Visualization was given through use of slides on soil erosion, and a small plaster working model of a farm, with water flowing down the hillside.

Boy Scouts of America program was aired over WPTZ at the suggestion of the Boy Scout Headquarters in Philadelphia—idea being to attract as many boys in the area to the Scouts and to interest the older ones in being Scoutmasters. Script was written by Scout officials and cast included 12 scouts, a scoutmaster and a patrol leader.

Seven scenes were used to show the various steps in scout craft, starting with the initiation of Chick who had reached his twelfth birthday and was to be inducted as a full-fledged Scout. Investiture stand, with the candles burning was set up and camera picked up the Scout oath as the boy repeated it. Chick brought along a buddy who wanted to join the scouts, and tour around the troop headquarters gave the lead-in to several demonstrations. Semaphore and Morse signaling was further visualized by cards flashed on the screen to spell out the message. Demonstrations of first aid, fire-by-friction, and Indian wrestling followed. Segment closed with a camp fire scene and the Scouts singing. Fifteen minute program required about an hour and a half combined dry and facilities rehearsal. Sam Stewart of the WPTZ staff directed.

Recent civic issues on the Los Angeles presents “Your Town” program over W6XYZ (KTLA) included a forum discussion of “City Plans for 1947” and “Streamlined Transportation,” revolving around new trackless trolleys, new coaches, and new speedier routes.

Program is visualized by charts, small scale models of the points under discussion, maps, etc. Leading civic figures participate in the discussion.

SPORTS PICK-UP

WCBS-TV does good camera job

Basketball and hockey have been the main sports pick-ups on a sustaining basis over WCBS-TV. Station does a good job on the camera coverage, with the play brought into sharp focus through a majority of close-up shots. Night that the Duke and Duchess of Windsor were in the audience, commentator Bob Edge mentioned their presence frequently and the cameraman, by practically standing on his head, got a good shot of the two watching the game. (Seems as if they were seated directly under the camera). CBS color pitch has extended to

In conjunction with Boy Scout Week, specially written play detailing the activities of the Scouts was produced over WPTZ. Scene above shows the induction ceremony of a full-fledged Scout, given by the Scoutmaster.

FILMS FOR TELEVISION

Bring first class comedies, dramas, novelties and many educational subjects to the television screen. 35 MM & 16 MM PRINTS of the highest laboratory quality are kept in perfect condition for televising at any time.

A FILM FOR EVERY PROGRAM

Sponsored programs find great tie-in values in our subjects.

SEND NOW FOR:

Film lists and complete data on available subjects to:

TELEVISION DEPARTMENT

March, 1947
sports, with emphasis given to the
color of the uniforms “which, of
course, you can’t see on a black-
and-white receiver.” References are
pointed enough to cause a good bit
of tittering in the CBS viewing
room. Well, CBS does a good job
on sports in black-and-white. We
haven’t seen it in color.—so we can’t
say.

Four to six cameras will be used
by NBC for televising the 77 home
games of the New York Giants next
season. According to John Royal,
engineers are currently experimen-
ting at the Polo Grounds to deter-
mine the best possible location for
the cameras and for monitoring
and other equipment. Special view-
ing monitors will be provided for
announcers so they may better cue
their commentary to what the view-
er is seeing on the telescreen. $50,-
000 was the price paid for the
rights.

NEWS—SPECIAL
EVENTS

W6XAO sets up
coverage:
WNBT “firsts” on
tele-newsreel

Special event coverage at
W6XAO recently included the film-
ing of the Tournament of Roses Parade and the Los Angeles Golf Tournament. Station has arrange-
ment with Telefilm, and under the
direction of Don McNamara, who
heads up the television department,
company is set up for fast handling
and quick processing. Tournament
of Roses Parade, for example, was
filmed in the morning, developing
and editing were completed by late
afternoon, a narration outline
worked up, and the 16 minute film
went on the air, with live narration
at 6:45 the same night. (Print of
film was rushed through and put
on an eastbound plane for showing
at WABD). Four day golf tourna-
ment was edited to 8 minute treat-
ment, with narration recorded on
the film.

Expanded coverage of news is
planned by Jon Lee station. Source-
es of information include telephone
tips to the station as well as the
Mutual Don Lee network newsroom
editors who have the service of UP,
AP, INS, and, of course, the local
news service. In addition to
their tie-up with Telefilm, Inc., sta-
tion owns a 16 mm. camera which
they can send out late at night or
at awkward periods when time is
of the essence.

CBS News is a program which
really utilizes television. It imme-
diately shows up all the advantages
that television has over other media
of information and entertainment.
It has “illustrated immediacy.”
For example, this particular night
President Truman’s budget pro-
gram was analyzed simply and un-
derstandably by the use of a crayon
and chart by the commentator.
Other events covered in the 15-
minute news show were both film
and live. Film shots, while not up
to newreel standards, were good.

High spot of the program was an
interview with Senator Wagner’s
son who is housing commissioner
for New York City. If television
can continue to produce govern-
ment officials who will candidly dis-
cuss their problems and aims, they
will accomplish a public service
and a new interest in government
never before known in this country.

NBC television newsreel is a reg-
ular bi-weekly feature over the
station (sponsored on Monday
night by Esso). In addition to
news and human interest films, re-
cent offerings have included such
“firsts” as Marshall’s induction as
Secretary of State and the arrival
of Viscount Alexander, which were
taken by the NBC television film
crews. Also shown for the first
time in this country were Adolf
Hitler’s home movies taken around

Berchtsgaden. Films were found
by the U. S. Army and NBC short
was edited from more than 4,000
feet of film released by the Army.

VARIETY

Pop-up cartoon de-
vice used to intro-
duce variety seg-
ments

New device for variety shows has
been developed by Video Associates
in its “Personality Previews” pack-
age show. Fifteen minute format
consists of two variety entertainers
and one graphic artist. As intro-
duction, background details of each
personality, are described and vis-
ualized by a series of cartoon pop-
ups. These are extremely well done
and quick pacing of cartoons and
commentary gives a quasi-ana-
mination effect. Cartoons have been put
on 16 mm. film, and a 35 mm. film
of the newsreel type is used for
the standard opening. Build-up in-
creases viewer interest in the per-
former, particularly im p o r t a n t
when “big name” talent is not used,
and as the name is given at the
end, a quick camera dissolve picks
up the entertainer in the studio.
Last show in the series, which
were presented over WRGB, in-
cluded modern dancer, Helaine
Blok and Roy Johnston, bass-bari-

Using an illuminated animated map, for visualization, late skiing information is
telecast every Thursday night over WRGB. A small lamp lights to show each
ski location on the map, a movable illuminated line shows the best route from
Schenectady to the spot, and animation superimposed on chart shows weather
conditions. Program is directed by Patrick Kidder of the WRGB staff.
tone for the entertainment, with Robert Mackintosh, costume designer and Madame Berthe, in the middle segment.

Combined fashion and variety show keynotes the "Saturday Revue" on WCBS-TV. Typical example of the various techniques tried was in the ski lodge program, which highlighted winter resort clothes and introduced the Fred Astaire instructors in the new Swing Trot dance. Ski lodge setting was used and fashion was integrated with the resort idea by having the models engaged in various indoor games. Off-screen announcement called the models from the games to show the clothes they were wearing, and complete description was given as the models pirouetted and followed other instructions in showing off their costumes. Tying up with the large newspaper ads of the opening of the new Fred Astaire dance studio, five couples, all instructors at the school, danced the Swing Trot. Off-screen announcement was carried over into this segment too, with a few brief comments on the dance. However, second time through was supposed to be a lesson for the home viewers and although the camera did catch the leg action, more verbal instruction or slower movement on the part of the instructor was needed to put the home instruction idea across. Paul Belanger directed for CBS.

Note the close grouping of the four people in the scene below, taken during a performance of "Highway," presented over W6XAO, Don Lee, Los Angeles.

EDUCATIONAL

"Junior High School Quiz" good format for school-station programs

Regular weekly "Junior High School Quiz" over WCBS-TV has again changed its opening. Now, in an informal peek into the classroom manner, the camera pans around among the students for a few minutes as they answer questions, followed with the title superimposed over the scene. Show is then officially opened by Edward Stasheff and Dorothy Clark of the Board of Education who very briefly explain what the program is about. Students from two different junior high schools each week prepare the quiz questions from the syllabus with visualizations done under the direction of faculty advisers. As these youngsters are not trained in radio or television work, their oral participation is limited to answering the questions. Mr. Stasheff, veteran television showman as well as educator, asks the questions, keeps the program moving swiftly and does the ad libbing, thus eliminating any awkwardness or amateurishness on the youngsters' parts. Visualizations of problems are very well done and camera work is improving, with good close-ups taken so that the viewer can clearly see the question. Problems are tricky enough to keep an adult viewer interested and guessing too.

Program is a natural for other stations to use as a pattern in cooperating with local educational groups. But here again its success is due to the pre-planning and cooperation between the CBS staff and the Board of Education which resulted in a brochure detailing visualization ideas and giving specific instructions on size, preparation, etc. And again we stress that while show is put on by amateurs, it's not amateurish because the bulk of the lines are not carried by inexperienced and untrained youngsters.

POLITICS ON TELEVISION

First paid political telecast by candidate on WBKB

Interview format was worked out for the television campaign speech of Alderman Bertram Moss, who is seeking re-election in Chicago. Bob Elson, network announcer, and Moss were seated in easy chairs in front of the fireplace, with Elson asking the questions and Moss answering them without recourse to script. Program was visualized by showing photographs of G. I. temporary housing on the University of Chicago campus; news pictures of opening of 55th Street bus line; newspaper clipping blowups to show his stand on various issues, etc. This initial program could well set the pattern for future uses of television as a campaign weapon. Show was directed by Kit Carson of WBKB.

CURRENT

Sewing program, "Teen-Agers Take to the Thimble," was presented by WBKB. William Van Hagey organized the group and demonstrated the draping and cutting of a simple dress design. Balance of the segment was a fashion show with the teen-agers modelling the clothes which they had made.

Help on income tax problems is slated to be tackled by WNBT, with two programs scheduled prior to the March 15 deadline. Three deputy collectors and the Commissioner of Internal Revenue will appear and answer questions from money-earners in the different income brackets. Charts and tables will be used to simplify the income tax forms and to visualize the program.
STANDARD BRANDS
Cancels both shows on WNBT

Cancellation of the Thursday night "Hour Glass" show and fifteen minute Sunday night segment, "Dancing on Air" ended, temporarily at least, Standard Brands' television programming. Rated video's biggest spender on a consistent basis, company spent almost $200,000 since they debuted in the 8 to 9 Thursday night spot May 9th over WNBT. According to Donovan Stetler, advertising manager of Standard Brands, they are taking "a hiatus," with no plans to resume. Current trade comment indicates, however, that the comparatively small circulation which television has is partly the reason for the withdrawal, plus the fact that company feels they can draw upon the experience which they have gathered at a later date.

"Hour Glass" was a variety format. Sunday night show (8 to 8:15) featured "Face to Face," a cartoon format, which was recently succeeded by "Dancing on Air" (review of which follows.) No option on time spots, considered top viewing hours, has been held by the company. NBC reports that several advertisers are interested in sewing up the vacated time, but mention no names.

In the "Dancing on Air" show, commercial comes about the halfway mark with the emcee and girl assistant, in this particular seg, making a cup of coffee and drinking it. Again we say that the plug is just that—overdone, too many adjectives, not natural enough for easy conversation. Demonstration idea of making the coffee and drinking it is good. But cut down some of the chatter.

"Dancing on Air," recent successor to "Face to Face," is a combination dancing and dancing lesson format, featuring the Fred Astaire instructors. Opening with a full

Top: U. S. Rubber sponsored pick-up of the Stork Club festivities which were broadcast over WABD. Bottom: "Hour Glass" show over WNBT boasts video's only chorus line.
length shot of dancing couples, camera then picked up emcee Ed Sims, who briefly discussed the origin of the waltz. Next sequence was the Viennese Waltz to Strauss, followed by a gay 90 version, with couples in costume. Instructional angle was worked in by introducing a couple who had difficulty with the waltz. Dance instructor took each one and showed them the basic steps. Finale was the introduction of the Adele waltz.

Show has good possibilities but several minor flaws which spoil it at the moment. First and foremost—a dance program, particularly one aimed at teaching the viewer, must show the legs. Why then a concentration of medium close-up shots from the waist up? Particularly bad point was in the instruction portion itself when the female instructor wore a long skirt which hid her legs entirely. Idea wasn’t to see a skirt gracefully swaying—it was supposed to put over the basic steps of the waltz. Another incongruous feature were the two “studio guests” who were supposed to turn into expert waltzers from the studio instruction. It was obvious that they were pre-rehearsed.

Agency is J. Walter Thompson.

THE FAIR

“Clue-mercials” recently introduced as new commercial technique

“Tele-Chats,” fifteen minute news program over WBKB, has recently inaugurated “Clue-mercials” to put the commercial plug over. Television viewers get a look behind the screen at some article—a pressure cooker for example—while members of the studio audience are called up and given a series of three clues to guess the hidden article. Five dollar merchandise certificate is given if they win on the first try, dropping to $4 on the second and $3 on the third. If they fail to identify the merchandise, they get a $2 certificate. Store feels this is a painless method of putting the commercial over, by giving the selling points and introducing some action into it at the same time. Letters from viewers asking them to jump the segment to a half hour bear out their contention that program clicks.

Originally, format was a straight fifteen minute commercial when it started in the fall of 1945, changing over to ten or twelve minutes of news and interviews with people in the news and three to five minutes for commercials. In addition to news, all changes in the WBKB program for the coming week are announced under the copyrighted title, “Tele-Scoops.”

Good promotion stunt is their presentation of pioneer certificates to television set owners in the area.

U. S. RUBBER

Video programming includes special events plus 2 weekly programs

Latest in the parade of special events being sponsored by U. S. Rubber Company was the National Sportsmen’s Show from Grand Central Palace. Three time pick-up was done over WCBS-TV in 45-minute segments. Besides the hunting, fishing, camping and other sports equipment on display, show featured open competition and exhibitions. Majority of events were picked up at the swimming pool where two image orthicons were stationed.

Films for Television
Specially Designed
to PAY THEIR WAY . . .

Far-seeing advertisers, now extensive users of “radio”, are finding that the most effective, the most economical way to break into television is by means of FILMS. Mr. H. G. Christensen, vice-president in charge of our Television Department, will be glad to show you how such films, as planned by Caravel*, can be made to pay their way—and show a profit.

* Back of Caravel is twenty-five years of “know how” in visualising sales facts in an interesting and entertaining manner.
BRISTOL-MYERS

"Party Line" program plugs Ipana and Vitalis on CBS

Bristol-Myers' Party Line over WCBS-TV depends mainly on the oral plug for the commercial—with the usual angle of giving a box of the products as a gift to the contestants. Visual treatment, however, is given with slides of both the Vitalis bottle and the Ipana tube at the beginning and end. Show is a combined studio and home viewer quiz, with some stunts angled directly at the lookers-in. Phone rings on the set and while the stunt is in progress, the phone number is occasionally superimposed over the picture. Variety note was integrated with the format, by having a magician pose as one of the contestants and then do his stuff for the viewers. Camera action was good in this spot, with clear close-ups of the prestidigitator's hands so you could really see what he was doing. Agency is Doherty, Clifford and Shenfield.

SEARS

"Visiquiz" format changed to hypo viewer interest

Format change in the "Sears' Visiquiz" program, weekly half hour show over WPTZ, has recently been made. Previously the studio contestant selected the name of the home viewer from a group of cards and a call was placed by the station to their home. Now the studio contestant and the emcee portray the quiz questions and the home audience phones in their answer. This has made it possible to ask much more difficult questions—for example, the studio contestant went through a skating motion, the sound effect was "The Skater's Waltz," with the question being the name of the composer. Nine out of ten replied Strauss, but the correct answer was Waldteefel. Change keeps home viewers' interest at a higher peak than formerly and switchboard at WPTZ is busy throughout the half hour program, with calls coming in from viewers.
many miles away. Sears’ mail response has been heavier since this innovation. As reported previously, one program chalked up 1800 busy signals at the WPTZ switchboard, with about 40 calls getting through. Account was recently switched to Ray Nelson.

GENERAL FOODS

Tele entrance marked by tie-up with three New York stations

Importance which General Foods attaches to television as a potential advertising medium is evidenced by the time which they’ve sewed up on the three New York stations. Schedule calls for split sponsorship of the Dodgers’ games with Ford on WCBS-TV, a claim on two hours a week on WNBT and five weekly weather reports on WABD. Set-up gives them facilities on all three New York outlets and ranks them high on the big spenders’ list.

No products have been announced yet but deal will probably be split among three agencies—Young & Rubicam, Benton & Bowles, and Foote, Cone & Belding.

BORDEN

Dramatic show third in Borden’s experiments with different formats over WNBT

In line with their policy of experimentation with different formats in order to learn various ways of handling the commercial, Borden presented Ben Hecht’s “Miracle in the Rain.” Dramatic show was exceptionally well done, both from a production and entertainment standpoint. The story concerned Ruth, a lonely young girl, with an invalid mother, who met Art, a soldier, one rainy night in New York. For five days before he went overseas, the two lived in a world of their own, with Ruth’s faith unshaken that he would come back. Notice of his death shook Ruth deeply, and she finally found solace by “talking to St. Andrew.” Climax comes when the girl contracts pneumonia, and hearing the rain in her delirium, goes out to meet the boy. The next morning she is dead, with the Roman coin she had given him as a lucky token clasped in her hands. With only two or three people at a time in the scene, camera pick-up and grouping of cast was simplified.

Production-wise the show was very well handled. A narrator was used to bridge the time elements and to describe Ruth’s feelings. This was particularly effective when the camera picked up Ruth lying in bed thinking over her encounter with the soldier, and then cut to him in the living room reenacting the particular incident she was remembering. Scene in the church was also exceptionally well done, with the right amount of silence necessary to build up a dramatic impact. Lighting effects were well handled here, with the proper balance of highlights and shadows. Films of New York were also used to describe their gay whirl around the city, while the narrator described her feelings. Success of the play again pointed out the advantage of a good script, a well-trained cast and minute attention to production details.

Commercial was in very good taste and not obtrusive. Opening showed sketch of Elsie with the words “Elsie presents” followed by a brief film using the stop-motion technique, with the various Borden products coming to the front. End commercial was a slide stating that the program had been presented by Borden’s. Agency is Young & Rubicam. Show was directed by Wes McKee of the agency and Roger Muir of NBC.

DUMONT

DuMont’s minute film commercials are an example of a good video plug. Theme of one shows a young man calling for his girl on a stormy night—their date being for an open air concert. But plans were speedily changed and they sat by the DuMont Teleset instead. In another, a man is nervously smoking a cigarette as he watches a horse race, with the camera coming back to show that he is seeing it over television. Wind-up on both strips shows the features of a particular set, as it is demonstrated. Selling points in the films combine the entertainment appeal of television with the practical features of the sets themselves.

FORD

“Parade of Sports” sponsorship over WCBS-TV has included basketball, hockey, Silver Skates finals and the Dog Show. Minute film commercials were used and commentary on the sports introduced Ford in an unobtrusive, natural manner.

Dog show pick-up was well handled, alternating between shots of the ring where the dogs were being paraded and interview between CBS’ Bob Edge and Mrs. Hoyt of the Dog Show. Patter between the two brought out many interesting features of the show and of the dogs, and some of the leading canine entrants were brought up to the television camera and good close-up shots taken. Mixture of what was happening with “behind the scenes” was good.

ATLANTIC REFINING

Comic strips concerning the doings of Phil A. Delphia and family, put the commercial plug over in the Atlantic Refining Company’s sponsorship of the Penn basketball games over WPTZ. (Cartoon strip and accompanying dialogue on next page.) N. W. Ayer’s tele director Don McClure worked with
WPTZ staff to devise a method whereby movement could be gotten into quickie commercials at time outs, etc. Result was that the signs, like the little service man carrying the Atlantic furnace oils banner, the Atlantic phone number, etc., are picked up by one field camera and superimposed over field shots, such as a pick-up of the clock, the crowd, etc. Inexpensive cartoon idea was devised by Dick Rose.

This commercial for Atlantic is given two or three minutes before second-half tap-off.

1. Before the game gets under way again, let's see what's going on at our neighbors'.

I've an idea they'll be spending a quiet evening in their cozy, comfortable home.

2. Yes...sure enough...the old pipe and slippers routine for Phil. Playing hookey from the kitchen, I'll bet! Wonder what Bobby and Sue are up to?

3. Oh, oh. Can't you just hear 'em: "Daddy...read us a story!" Well while Phil reads to 'em about a cute little feller from the Land of the Frozen North—he's just take a look over his shoulder (breaking off) and...

4. Well—it seems that little Iggy Eski-mo simply can't get used to the cold weather up at the North Pole. His Mamma and Papa, and his little brothers and sisters all like the snow and ice. But little Iggy? (Negative) uh-huh! He's cold!

5. Iggy hears it gets pretty warm down south...so here he is, getting all ready to hit the road. And say—would you look at the things he's taking with him! Little Iggy's no dope!

6. Well, well, well...just look at the trouble. The whole family in tears at the parting! Even little Iggy! He doesn't really want to leave home. It's just that he gets...so cold...way up there at the North Pole.

7. "Well, I know, Daddy!" Sue breaks in. If Iggy had heat in his house like we have in ours, he could just go inside and get warm!" An' y'know—maybe Sue's got something there! But...she's used to the warm, steady heat of Atlantic Furnace Oil...so it might work out something like this...

(PAUSE)

8. His igloo has all melted down, but then, Iggy loves to swim...and he'd have the only steam-heated swimming pool at the North Pole, I'll bet!

9. Time for bed now...and here comes Peggy to take Bobby and Sue upstairs and hear their prayers.

So...let's run along—back to the Pennsylvania–basketball game. But remember—for a tankful of clean-burning, triple-refined Atlantic Furnace Oil...

10. Call Howard 8-9000 (triple beat) or your neighborhood Atlantic Furnace Oil distributor!

Television
CURRENT ADVERTISERS ON ALL STATIONS


Bemis Bag Co.—Film. KSD-TV opening week. Agency, Gardner Advertising Co.

Borden Co.—"I Love to Eat!" WNBT, Friday. Fifteen minute cooking program. Relayed to WRGB. (Now concluded).


*Guerin—Time spots. WCBS-TV. Agency, McCann-Erickson.


*Capers Company—WABD, Wednesday. Half hour dramatic show.


Missouri—"Rural Host." KSD-TV opening week. Half hour dramatic show presented by the St. Louis Community Playhouse.


Philadelphia Electric Co.—"Television Matinee." WPTZ, Monday, Wednesday, Friday, 2 to 3. Three-part hour show, with two live segments on food preparation and fashions, etc., and one on film.


Rain's Ice Cream—Weather reports. WCBS-TV, Thursday and Sunday. Agency, Doherty, Clifford and Shenfield.


Shell Oil Co.—"St. Louis U-Okahoma Aggies basketball game." KSD-TV opening week.

St. Louis Fashion Creators, Inc.—"All American Gallery of Fashion Preview." KSD-TV opening week. Half hour format.


Southwestern Bell Telephone Co.—"The Telephone Hour." KSD-TV opening week. Half hour film program.


Wannamaker's Department Store—"Wannamaker Presents." WABD, Wednesday. Half hour shopping merchandise program, presented in cooperation with various manufacturers.

FUTURE PLANS

Gimbel Brothers is planning to renew their series on WPTZ, Philadelphia, it's rumored. Former weekly half-hour show, "All Eyes on Gimbel's" averaged better than a 3% sales return.

Swift & Co. has an option on Jinx Falkenburg-Tex McCrary package, "The Homemakers' Club." Although a day-time show program may debut in the evening hours, deal was arranged by McCann Erickson.

Kelvinator is also scheduled for a home economist, how-to-do-it series probably over WNBT. Nash and Knox are also on the list for tele debuts. Geyer, Newell & Ganger handle all three accounts.

Duane Jones have four one-shot scheduled which will go on over WABD when the station reopens.

BBDO are working on a couple of one shots to be presented on the "John Wannamaker Presents," weekly half hour show over WABD.

*WABD temporarily off the air. Will probably resume about April 1st.

March, 1947
WITH H. G. Christensen's Long Shots and Close Ups series starting again next month, we thought it might be a good idea to refresh ourselves on motion picture terms.

A reel is one thousand feet of 35 millimeter film. The running or screen time of one reel is eleven minutes.

A reel of 16 millimeter film is four hundred feet. The running or screen time is also eleven minutes.

16mm vs. 35mm

Therefore, one foot of 16 mm equals two and one half feet of 35 mm film.

16 mm film is about half the width of 35 mm, while the actual size of the picture on the film itself is one fourth the size of 35 mm. To be sure of quality, it is best to shoot on 35 mm and make 16 mm reduction prints.

If you see a 16 mm print projected, don't think the picture was necessarily shot on 16 mm. Nine out of ten black and white 16 mm pictures you see were shot on 35 mm and reduced in printing to the 16 mm size. This reduces print costs and increases the showing possibilities of the picture through the use of portable 16 mm sound projectors. Another advantage of 16 mm prints is that a picture as long as four reels, 1600 ft. or 44 minutes running time, can be put on one large reel—thereby permitting uninterrupted showing on one machine. In theatres, which use 35 mm projectors, the limit is 2000 feet per reel, or 22 minutes, necessitating the use of two machines and changeovers every two reels. Portable 35 mm projectors only handle 1000 foot reels, unless especially built for the larger capacity reels.

All Kodachrome pictures are shot on 16 mm size. The average feature is from six to seven reels of 35 mm film.

Motion Picture Terms

Background Projection—This is a studio set-up whereby the desired background is projected through the rear of a special screen while the live action takes place in front of the screen. By photographing both set and background together a couple may be seen dining on a terrace (a set in front of the screen) overlooking the Bay of Naples which is a projected background in motion.

Cut—A straight cut is one where one scene directly follows another without any optical effect between them.

Dissolve—one scene fading out as another fades in, the action in both for an instant overlapping or both being visible on the screen for a short time.

Dolly Shot (ds)—A scene where-in the camera moves steadily forward from a long-shot into a closer-shot; or moves backward from a close shot to a long shot, designated as "dolly in"—or "dolly back."

Dubbing or re-recording—The combining of several sound tracks into one, such as adding music and sound effects to an already recorded dialogue or voice-over track.

Dutch Angle—Any shot which is purposely somewhat distorted by placing the camera very low and shooting from, or shooting on an oblique angle.

Follow-shot or Running-shot—This is a shot where a car or an actor is actually following or walking into the camera. If a couple are walking down the street: the camera is directly facing them at a specified distance which is constantly maintained while the actors walk forward, the camera moves backward at identically the same speed through a scene or series of scenes. Uniform distance maintained at all times (action follows camera).

Freeze Frame—Where one frame or single picture of a motion picture is held still, without motion for an interval—and then resumes motion.

"Lip sync" or dialogue—The recording of actual dialogue or voice at the same time the person or persons are being photographed.

Montage—A number of full screen scenes one following another in rapid succession connected by dissolves, wipes or other optical effects. Also a number of changing scenes on the screen at the same time, each one occupying a part of the screen so as to form an overall pattern in constant movement.

Pan or Pan Shot—Camera remains in one location but is swung sidewise from either left or right to follow any cross screen action.

Swing Shot—Same as above only the sidewise movement of the camera is so fast as to blur the intervening objects during the actual swing. This is an effect used when it is desirable to quickly establish the relationship of two separate groups or objects on the same set.

Tilt—Camera remains in one location but is tilted either up or down to follow action.

Top Shot or Crane Shot—Looking down from above on interior studio set. Usually made from a crane.

Travel Shot—Camera moves along as though alongside person walking down a street or elsewhere.

Voice Over (vo)—This is off-screen narration where voice only is heard, but speaker is not seen.

Wipe—Wipe away. The effect of quickly "peeling" off one scene and revealing another. There are many variations in this, top to bottom, side to side, rotary, and so on.

Zoom Shot—This is an effect shot obtained by the use of special lens equipment enabling the cameraman to get the same effect as a swing shot except the direction is "in or out," i.e. forward or backward. The camera however can remain stationary.

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Lighting for Television

By Ira S. Glick — Head, Stan Ford Associates

ONE can say with complete accuracy, that no important advance has been made in lighting for television since first attempts at scanning a scene were made many years ago. Television lighting still stands where photographic lighting was in 1849 and stage lighting in 1889, at the threshold of artistic development. Yet this new medium, which could draw on the accumulated knowledge of its parent fields, and has had time to do it, does nothing but sit and sob over the sad state of studio lighting.

This statement may seem like a frenetic accusation, but when one reviews the history of purposeful illumination, and investigates the status of television lighting today, one can only wonder—who are the blind leading the blind? Today's television technicians and self-styled lighting experts treat the studio as though it were an amphitheatre, not an art form. Any light source which would deliver vast amounts of wattage was and is seized upon and installed; “shadowless lighting” is the phrase, and as a result the average television stage had and has no modeling, no depth and makes no call to the senses.

Small Flood Lamps

A typical cause is the type of fixture which employs small flood lamps similar to those used for window display purposes. While this unit is capable of heavy wattage; edge diffusion has an erratic pattern, the angle of spread is less effective than that of an effectively designed stage flood light, many bulbs must be maintained instead of one, light leaks from the rear of each bulb and the unit is clumsy and inefficient for its size, one such unit having a maximum of .09 incident candlepower per watt at seven and one-half feet, in contrast to some units half its size, and with half its heat, which have .22 incident candlepower per watt at the same distance.

This flood lamp system is concerned only with bouncing enough illumination off the subject to get a picture on a television receiver and so separating the multi-light sources of the unit that shadowless lighting is nearly achieved. Not to completely decry this unit, it can be used for basic illumination providing that its advocates realize that this is only one step in lighting a television stage. And considering the basic inefficiency and heat projection of this system, it can at best be only adequate, never effective nor efficient.

Three Elements of Lighting

Lighting in any art is a tool and needs must be handled gently with care. Those handling it must remember that three types of lighting must exist at the same time. First is basic light for visibility. Second comes scenic light, illumination which sets the tempo of reaction, be it high key or low key, festive or somber. And last is specific illumination or lighting for characterization. This last is the source which in most cases has been relegated to limbo by today's technicians—perhaps by inability to control or gauge it.

To restore television lighting to an art, new technical applications of illumination are required. Remote control systems capable of moving fixtures, controlling iris diaphragms, and pre-setting light concentrations and locales are needed. Light towers, mobile motor-powered, scaffolds of tubular construction, bringing to the television stage the flexible powers of the theatre light bridge, are needed. Foot lighting is inconsequential, since it grew from the fact that early stages had no other place to put their wicks and oil troughs. Front lighting has long since superseded foot lighting.

Dimming Devices

Dimming devices, so far sworn off because of the belief that lowering the power of a lamp and consequently the color temperature caused a difference in iconoscope response, must be re-investigated. The results have yet to be learned, for certain limited experiments have shown that the lowering of color temperature in dimming is nearly imperceptible to the iconoscope. At the point where color temperature changes seriously, illumination level is nearly at the threshold of iconoscope sensitivity.

Experiments with auto-transformer dimming units on AC current were attempted in a limited fashion. The camera was focused on a test chart which included a color range and a gray scale range. A 750 watt spotlight was used to light the test chart, and an auto transformer cut in between lamp and power source. Light was cut down to the lower threshold of visibility as ascertained on an electronic viewer which duplicated a home receiver. Apparent shift of monochrome values on the color spectrum could only be observed in two cases. At the lowest point of dimming, yellow lightened almost imperceptibly and blue deepened slightly.

Projected Color Spots

Another line of investigation should be set up to consider the use of projected color by spot and flood lights as an adjunct to television lighting. Every color has its grey scale equivalent, so why not obtain a grey scene not by underlighting, or by lowering electronic controls, but by projecting a brown or green light on the scene?

In this matter of projected color and grey scale equivalents, certain experiments have been attempted, using the pocket color guide published by International Printing Inks. Over a hundred color specimens were matched with grey scale equivalents running from white to black in eight increments. As would be expected, many duplicate values were found; but to list a complete eight tone series:

1 31-93-8 light lemon
2 12-70-14 med. orange
3 2-30-12 red brown
4 5-45-10 brown
5 60-47-11 french blue
6 7-20-4 choc. brown
7 76-28-12 marine blue
8 80-20-12 navy blue
It should be remembered that these ink samples are printed on coated stock and have a high value of reflectivity, and therefore monochrome values of projected color may vary very well vary with the texture of the reflecting surface. While some may believe that the difference in reflectivity of the various colors prompted the grey scale values, it was in some cases distinctly traced to color response.

**Light Reflection**

In certain other experiments, meter readings were taken at mosaic and at camera lens to determine over all range of reflected light as directly compared with electronic signal strength. Technical manuals state that 1 to 5 candle power at the mosaic is signal range. The experiment carried on with equipment in use revealed that effective picture strength meter readings at a 3.5 lens ran from 12 candle power to 30 candle power. Above those figures variations in the grey to white range disappear and in the lower power range blacks flare because of insufficient light. Equivalent mosaic readings were from .75 of a candle power to just over 2 candle power.

Although no one could call light sources in television today anything near effective, the true fault is not in the source—but in the technique and application of illumination. Enough light exists in most studios to satisfy the nearly insatiate demands of the electronic engineer, but the results of this undirected flood of light is to render the stage formless and drearily lacking in any sense of depth.

**Heat Control**

Studio stages must be lit effectively and without heat. Heat can be conquered by many devices—absorbent glass, air or water cooled light sources—or by adopting a light source which does not project as much heat as it does illumination. Admittedly one accompanies the other—but not necessarily in such an equal ratio as exists in some studies.

Dismissing heat is an engineering problem—but the proper placement of lights so that modeling and depth can be achieved without situating them so that camera will not cut off illumination by moving between source and subject is an art problem.

**Suggested Solution**

As a possible solution to this problem of intelligently applying purposeful illumination in a television studio the following plan might be followed. Taking certain factors for granted such as an adequate amount of money, a forty by eighty foot studio with at least twenty foot ceilings, a very adequate lighting system could be developed.

Lighting equipment itself should only be installed after an exhaustive series of tests of existing stage and photographic lighting and every installation will have its own peculiarities until stages are standardized.

The acting area theory of the stage should be adopted and lights so mounted that every acting area receives illumination coming down at 45° and diagonally from each of four corners and light from directly above and from the front. Additional lights should be mounted for washing out shadows if so desired. Spotlights and beam projectors should be wall and ceiling mounted so that activities on any acting area can be effectively high lighted.

Permanent fixtures alone are not sufficient—floor lighting is needed for scenic effects and effect lighting on actors or sets.

Mobile light towers, powered by electric motors which are suitably shielded, and so constructed that cameras may dolley between the supporting legs, could be used for specific and modeling illumination. Should more sensitive camera chains come into popular use, the theory of application would remain the same; wattage of units would merely drop.

All lights permanently mounted on walls or ceilings would be controlled by a lighting director seated at a control console. By use of Sel-syn motor systems or electronic equivalents, console control could make these various fixtures raise and drop their beams and swive to any desired azimuth—so lighting any area of the television stage. Floor lighting would be by assistants working under his direction.

**Control Features**

Control characteristics built into this console would be:
1. The ability to change size of iris diaphragms mounted on spotlights.
2. The ability to frame spotlights for limming acting areas.
3. The ability to remotely activate solenoids which would kick color frames over and back on all ceiling and wall lamps.
4. A master control for moving all lights in unison.

5. A panel area where physical movements of lamps can be preset and actuated for any later scene at the press of a single control, then released for individual trimming.

6. A panel area for dimming controls which would include preset characteristics.

7. Microphone and speaker jacks for communication with floor and light tower stations.

An adjunct to this console would be a small panel carrying remote indicators for foot candle meters mounted at each camera so that light could be built up or dropped down as the cameras dolly in and out, continually achieving the best possible illumination. The lighting director would have at his side the engineer in charge of electronic shading, since certain emotional effects which cannot be achieved by television lighting can be achieved through electronic controls.

Another device which could be constructed to light small sets is composed of a basic lighting unit holding at least four flood bulbs. This unit could be built into any bridge arrangement much in the manner of the old fashioned tinker toy blocks. Its side supports would be castored, and the two sided and roofed picture frame lighting bridge could be wheeled to and from any set.

Both these and the mobile light towers could be power fed from automatic take-up reels set into ceiling mounts and take-up power extensions. These reels would keep light cables off the floor and so allow for increased camera flexibility.

**Stage Devices**

Consideration should be given to use of stage devices such as Linnebach lanterns and effect projection machines. Provided that no spill light from upstage acting areas falls on the backcloth, these standard stage effects should come through the like clearly. Stylized backgrounds could be projected as effectively as painted backdrops, and moreover succeed one another as fast as a switch could be closed, or dissolved through one another by use of Variacs.

These devices and suggestions are all well and good—but must be translated into action if television lighting is to achieve maturity. They are no quiet, sterile concepts—they are concrete concepts and entirely feasible projects.

A step forward must be made—
# Professional Directory

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Address</th>
<th>Phone</th>
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<tbody>
<tr>
<td>RING &amp; CLARK</td>
<td>Consulting Radio Engineers</td>
<td>WASHINGTON, D. C.</td>
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<tr>
<td>FRANK H. McINTOSH</td>
<td>Consulting Radio Engineers</td>
<td>710 14th ST., N. W. ME. 4477</td>
<td></td>
</tr>
<tr>
<td>McNARY &amp; WRATHALL</td>
<td>Consulting Radio Engineers</td>
<td>National Press Bldg.</td>
<td>DI. 1205</td>
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<tr>
<td>JANSKY &amp; BAILEY</td>
<td>An Organization of Qualified Radio Engineers</td>
<td>DEDICATED TO THE Service of Broadcasting</td>
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<tr>
<td>WELDON &amp; CARR</td>
<td>Consulting Radio Engineers</td>
<td>WASHINGTON, D. C. 1605 CONNECTICUT AVENUE</td>
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<td>COMERCIAL RADIO</td>
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March, 1947
and a consequent revision of all that has gone before in video lighting—if justice is to be done to the work which directors, producers and actors bring to the television stage of today and tomorrow.

For, "Somewhere in the theatre, switchboards, cables, spotlights... and lamps in the hand of a playwright, may be as articulate as fine verse, as menacing as a thunder cloud, and their use as disconcerting to his fellow playwrights as a challenge from Shakespeare."* "Scenery Now and Then" by Donald Oenslager

**

** patents**

Color Transmitting System

The Wilson patent, No. 2,413,623, on which 11 claims were allowed, was assigned to Hazeltine Research, Inc.; application was made for the patent May 2, 1941. This invention came as the outgrowth of efforts to overcome disadvantages in color systems where over-all color balance was attained by color filters of fixed characteristics in separate optical paths. These systems required delicate adjustment of the relative amount of light transmitted, a cumbersome job which often resulted in improper compensation at the receiver.

The patented system provides a single signal-translating channel, which translates several signals individually corresponding to particular colors of the image being reproduced. The operating characteristic of this single channel is changed in accordance with the color corresponding to the signal being translated. Means are provided for adjusting the gain of the signal-translating channel.

A color screen having red, green and blue filter sectors is mounted on the shaft of a motor at the receiver in synchronization with corresponding color-changing apparatus at the transmitter. This motor, operated on alternating current, also cyclically controls the gain adjustment for the signal-translating channel.

Color Transmitter

The Schade patent, on which 45 claims were allowed, was assigned to Radio Corporation of America; application originally was made in January, 1941.

This invention is based on transmitting and receiving systems utilizing charge storage pickup tubes for producing television pictures in natural colors through successive transmission of image field signals generated by scanning an area on which images in selected primary colors are formed. Thus, light from an object may be projected on the area through successively displaced colored filters to develop video signals representative of the colored light passing through the filters.

The color video signals representing the component colors, when received, produce colored field images which are superimposed to produce field patterns when viewed through corresponding filters at the receiver.

The Schade patent also relies on a single channel communication system, but here the system is so constituted that signal energy is developed through a signal charge storage type of electron beam scanning pickup tube (the Iconoscope or Orthicon), upon which a light image in different primary colors is impressed in a predetermined sequence. The persistence of charge sometimes noted in these tubes is minimized under one feature of the invention.

Means are provided in the system for controlling signals representative of the individual color fields, or varying them in amplitude, by providing a standard reference level for white light. It is held that this permits colors to be obtained which are faithful to the original image. The non-uniformities such as variations in spectral sensitivities of a single pickup tube or between pickup tubes.

Color System

Zworykin won No. 2,415,059 on a color system aimed at unusually accurate registration of color scanings, increased accuracy of scanning deflection, and the reduction of light losses (14 claims allowed, application for patent Oct. 13, 1944; assigned to Radio Corporation of America).

This patent represents an improvement in the additive tricolor tube patented by H. W. Leverenz as No. 2,310,863. (Feb. 9, 1943). In this tube, the target is formed of luminescent strips adapted to produce red, green, and blue light when activated by a cathode ray or electron scanning beam. Under the Zworykin patent, these strips are traced lengthwise by a cathode ray beam which is signal modulated so that the modulated beam represents a signal which would have been produced at the transmitter by light of a color corresponding to the color developed at the receiver.

The scanning beam is maintained accurately and instantaneously for each line of scanning on only one of the luminescent strips of the color series during each scanning operation. Means are provided to remedy accidental distortion, and the strips are scanned so rapidly that the color sensation at the receiver is of a properly synchronized color image.

** Improved Reception**

Thomas L. Gottier, Princeton, N. J., won No. 2,414,228 on an improvement in television receivers designed to prevent "blooming" on the receiving screen (two claims allowed, application for patent Sept. 29, 1943; assigned to RCA).

In the reception of television signals, noise disturbances often occur simultaneously with video signals. If these disturbances extend in the direction of black, the effect is not too noticeable; but if the noise disturbances go toward whites, their presence produces annoying white spots on the screen of the receiving tube. When such noise signals reach an intensity exceeding the normal intensity of the image signals, "blooming" results in the form of a bright spot on the screen caused by halation and some defocussing of the cathode ray beam.

To eliminate this distortion, the Gottier patent offers a biased unilateral conducting device, the bias applied to the system so that signals within the normal deviation range may be passed thereby, while signals which exceed normal deviation are blocked and their transmission prevented. The device hinges upon a circuit arrangement based on limiting the extent to which the control electrode of the electron gun structure may be driven in a positive direction relative to the cathode of the gun structure.

Another device designed to reduce distortion was patented by George W. Nagel, Catonsville, Md., as No. 2,414,546 (four claims allowed, application for patent Jan. 6, 1942; assigned to Westinghouse Electric Corporation).

This invention is aimed at improving the deflection of cathode rays for a linear time axis. In television sweep circuits, electromagnetic deflection coils often are pre-
vided to maintain a constant velocity of the cathode ray and to speed the ray back to its original starting position after each complete movement. An alternating saw-tooth wave flows in the deflecting coils and creates an alternating magnetic flux transversely of the electron stream. This must build up slowly and steadily while the cathode ray moves across the screen and must return rapidly at each complete traversal of the ray.

The creation of such uniform magnetic fields has been handicapped by the tendency of the magnetic circuit to distort the wave shape originally applied. Further, distortion in the necessary vacuum tube amplifier also adversely affects the ultimate wave form required for deflection purposes.

To reduce this distortion and other distortion, the patented circuit provides means for coupling the output circuit of the amplifier with a preceding stage in such a way that a voltage of inverse phase may be applied as a corrective voltage component.

**Recording Device**

Harry Carter Milholland, New York City, received No. 2,414,319 on a motion picture camera adapted to record television programs on moving picture film (13 claims allowed, application for patent May 10, 1945; assigned to Allen B. DuMont Laboratories, Inc., Passaic, N.J.).

Ordinary motion picture cameras cannot be used for photographing television pictures directly from the screens of a cathode ray tube for several reasons. Synchronization is such that no picture at all might appear on some frames, half a picture on others, and only a chaotic row of dots on others. One factor is that light emanates constantly from every point on a picture being photographed under normal motion picture conditions; in television, light emanates only in successive lines of luminous points on the cathode-ray tube screen.

The standard television transmitting and reception is 30 frames per second. The standard motion picture speed is 24 frames per second. To synchronize these conflicting speeds without developing flicker, this patent covers a 72° arcuate shutter driven at high speed in constant synchronization with the television image being photographed and with the film speed. The film actually is exposed for 33 1/3 thousandths of a second while the shutter intermittently shuts out light for 8 1/3 thousandths of a second. The film and accompanying sound track thus obtained may be displayed in any standard projector.

**Transmitting Tube**

Harold B. Law, Princeton, N.J., was granted No. 2,414,881 on a television transmitting tube with a concave secondary electron emitter (11 claims allowed, application for patent June 24, 1943; assigned to RCA).

The patent covers a tube structure in which an electron beam is electrostatically focused upon a concave target, scanned over the target preferably from a center of deflection more remote from the target than its center of curvature, to develop a stream of electrons modulated in accordance with an optical electrostatic image replica on the target. This modulated stream then is directed to a concave secondary electron emitting electrode, where the intensified electron flow is collected to develop an intensified signal. The highly sensitive apparatus is suitable for use generally with reflection-type optical systems utilizing secondary electron emission phenomena.

**KTLA Station Operations** (Continued from page 23)

ice hockey and such special events as the parades, religious services, etc.

Station now averages between 18 and 22 hours a week and has recently completed 25 consecutive days of telecasting. Plans call for boosting the time pattern to 35 hours by the end of the first year of commercial operation.

**Future Expansion**

A staff of about 100 is estimated to be required for a 40-hour week programming service. This however will be built up over a one to two year period. Twenty-eight are listed for general administrative—general manager; engineering supervisor; program manager; sales manager; office manager; program research director; news editor; film editor; publicity; four development engineers; two electricians; five secretaries; two guards; two porters; two telephone operators; two guides. There are ten in the program preparation department—three writers; art director and assistant; two carpenters; a costumer; librarian, and music director. In a supervisory capacity are the studio facilities engineer; remote facilities engineer, and a remote program director.

Nineteen would be needed for each studio and control room—producer; director; assistant director (stage manager); technical director; two video control operators; sound control operator; three camera operators; two light operators; two microphone boom operators; two camera dolly operators; floor assistant; studio maintenance engineer, and announcer.

In the film pick-up studio, a projectionist; a video control operator; sound control operator, and a technical assistant are listed.

A total of 13 is required for the mobile unit—assistant program director; technical director; announcer; two transmitter operators; two video control operators; sound control operator; microphone operator; two camera operators; a maintenance engineer, and a truck driver. (If both mobile units are used simultaneously, one of the studio and control room operating crews will be used to operate the second unit).

At the transmitter, the chief transmitter operator and maintenance engineer; an assistant transmitter operator, and a relay receiving operator will make up the staff of three. At the relay transmitter, just a transmitter operator and maintenance engineer, and an assistant transmitter operator will be required.

**Estimated Expenditures**

Estimated operating costs for one year under competitive commercial conditions is pegged at $896,000, with no commercial revenue assumed. Break-down of figures shows $10,000 allocated to technical maintenance and repairs; $10,000 for miscellaneous expenses (telephone, telegraph, etc.); $300,000 in salaries (50 to 100 people). $576,000 has been allotted for programming costs, which include talent, broadcast rights, to sports and other events, news services, costumes, props, set construction, etc. This figure is based on an estimated hourly operating cost of $300 with 30 to 40 hours of programming per week.
Straight-Line Television Production

The ideal aim of many factory planners is to arrange for what is termed "straight-line production." The raw materials, under such a plan, may come into the factory from a railroad siding and be unloaded on a platform. Leaving the platform, they pass in as nearly straight and short path as possible, to the point where the first step in fabrication is carried out on such raw material. From this point, the materials pass successively over short distances and along as direct routes as can be arranged to the various stages in fabrication, assembly, testing, packaging, and shipment. The aim is to have a great number of articles go through a direct and short path when passing through the required series of stages in the plant. Detours, stoppages, long routes, and the like are anathema to the factory organizer or director.

Selection and Assembly

It is not meant here to intimate or contend that the production of television programs is strictly a production process analogous to normal factory procedures. Admittedly, elements of inspiration, showmanship, and enterprise are basically involved in television programs. These cannot easily be made matters of entirely routine opera-

Yet there is a solid underlying layer of resemblance between television programs and other continuously demanded products. By cleverly selecting and assembling the common elements of the various programs and systematically developing them in the studio, production may be made somewhat less costly than would be the case if every new program were regarded as an entirely unique problem, to be solved in its own way without regard to past experience and available procedures.

Admittedly, artistic value, variety, and public appeal must be retained in television programs. But need not and should not be changed each time a new program is presented.

There must be program types; and the variations which give novelty and appeal must be restricted in the number and scope. Unless this is done television may become an uneconomical and most impracticable enterprise. Consider, for example, the ingenuity with which a program art, namely motion pictures, has utilized its old stand-bys: the conventional Western (or "horse opera") as its most dependable and perpetual asset. The trusty friend, the sneering and ominous villain, the clean and unsuspecting hero, the defrauded and charming heroine, the galloping horses, and the unlimited supply of pistol ammunition. The scenery angle of production is susceptible to similar economical treatment.

Routine Programming

Television can well afford to take the lesson of the motion-picture field to heart and to develop the types of individual picture and serial programs which the audience is trained and willing to accept with pleasure as a routine matter. The plots can be changed in detail, the scenery can be partly modified.

Even in educational, special dramatic plays, and comedy programs, there are many ways of introducing novelty without changing every element of the show. Great artists will be guests in television and will add spice and variety. Programs will be broken up into segments of definite length in the successful processes of economical production.

There will be for some time a delicate balance and possible clash between stereotyped repetition of programs on the one hand and shortages of personnel, talent, and writing ability, on the other hand. More program experimentation will be necessary to find the middle way; but it is certain that this can be found. And upon the success of all concerned in finding it will depend, in large measure, the economic success and public acceptance of television broadcasting.
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