

Television

THE BUSINESS MAGAZINE OF THE INDUSTRY

February 1946 Humanities

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January 14, 1946

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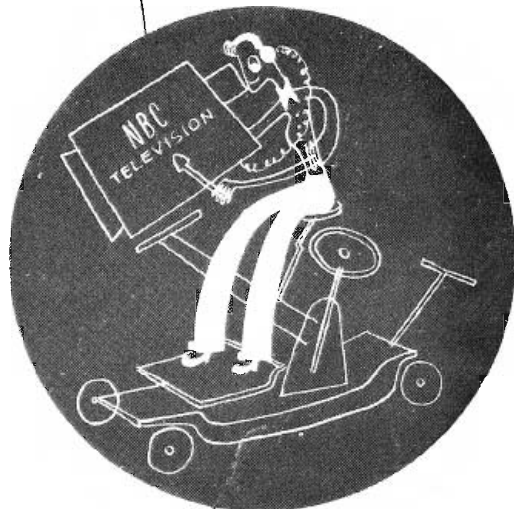
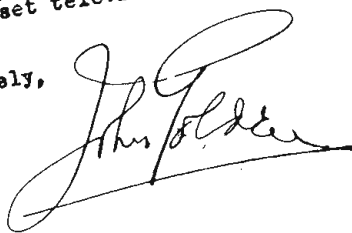
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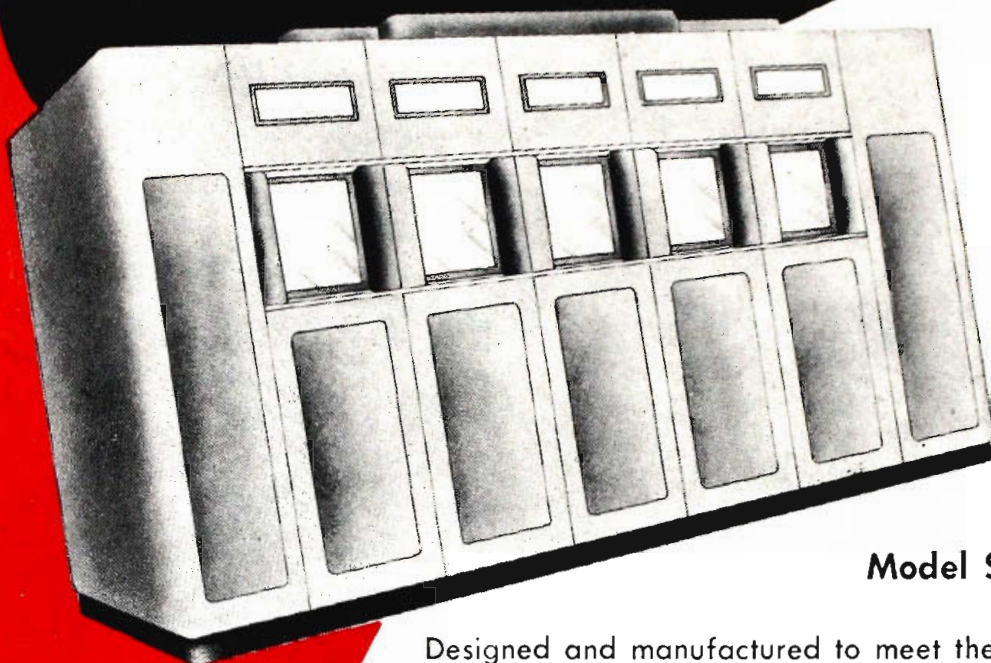
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Television

VOLUME III, NUMBER 2

FEBRUARY, 1946

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Frederick A. Kugel, *Editor and Publisher*
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 T. R. Kennedy, Jr., *Technical Editor*; Jack Kilpatrick, *Patents*
 Lawrence Sweeney, *Business Manager*; Evelyn Hellem, *Circulation Manager*

Just talking . . .

Letters to the Editor is a column which we have wanted to inaugurate for some time. However, the only kind of letters we receive are pats on the back or requests for information . . . none of which would be in the least interesting to our readers. But when one of our regular contributors receives letters of praise we take a certain pride in being able to reproduce them. Here are excerpts from two letters to H. G. Christensen on his film series.

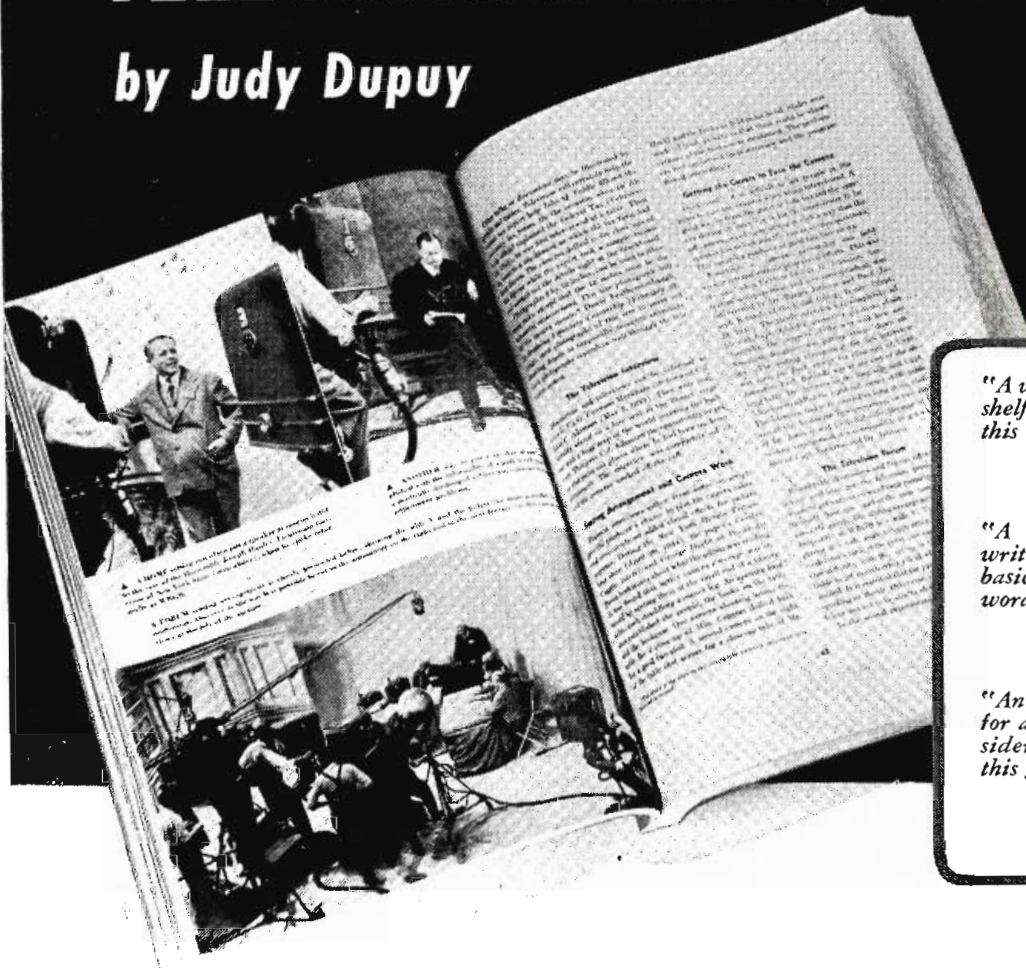
"My congratulations on the splendid article under 'Long Shots and Close-Ups.' In my opinion it is the finest article on the subject."—George P. Allen, Vice-President, Soundies Distributing Corporation of America, Chicago . . . "The two articles on Advertising Agencies and Motion Picture Departments have come in for a good deal of favorable comment here, so much so that we would like to see every account executive in Canadian advertising agencies receive a marked copy. If it is possible, supply us with 500 copies of each of the two complete issues."—E. S. Roberts, Associated Screen News, Montreal.

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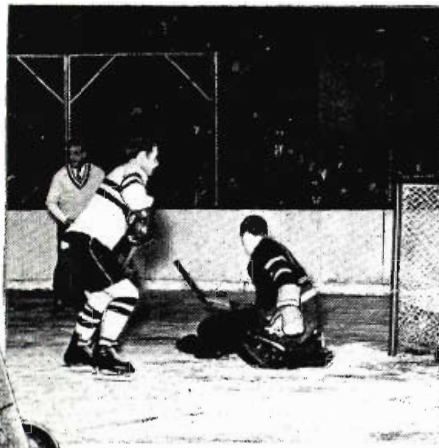
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Washington Hearings Set The Pattern

First round in the battle for television stations in cities where there are more applicants than channels saw the contenders trading data on financial resources, programming plans, technical know-how and experience. This material is presented as a guide for other applicants to follow in the preparation of their data for FCC hearings.

By DOROTHY HOLLOWAY

EYES of at least 100 prospective television broadcasters were focussed on Washington last month where six contenders — Bamberger, Capital, DuMont, Evening Star, NBC and Philco — battled in public hearing (Jan. 21-23) for the Capital City's four video channels.

For at the Washington hearing were laid down for the first time the rules of the game and the pattern which may be followed to a greater or lesser degree in hearings already slated for eleven other markets. Under the skillful direction of FCC Chairman Paul A. Porter, Washington hearings wound up in three days — with an average of three hours of testimony allowed per applicant.

Although both FCC and the video aspirants were plainly "feeling their way," emphasis at the hearings centered on several important "criteria" underlying a television service "in the public interest."

1. Tele pioneering and "know-how" in video programming are definitely assets in competing for a picture channel.

(FCC Chairman Paul A. Porter jokingly remarked at both FM and tele hearings in Washington that FCC didn't

want any "parade of coonskin caps" by prospective licensees. Else, he said, the Commission would be in a position of choosing licensees by the "length of the tail" or their befurred headgear. Despite the quip, FCC lent a sympathetic ear to impressive evidence and pounds of testimony on past experience of pioneers NBC, DuMont and Philco, in both development and program fields.)

2. Applicants must show evidence of financial ability, not only to get a station on the air, but to program it "in the public interest" — with little expectation of a return over the first few years.

FCC's problem here arises out of the fact that cost estimates given by applicants — though generally stratospheric — range over a wide area. Locally owned and operated Capital Broadcasting Company (WWDC) felt particular brunt of Commission's concern over financial responsibility.

Counsel for Capital, however, pointed up the lower operating costs required for a strictly local operation (\$216,000, the first year) by way of contrast to the tab given by NBC for a network-originating station here, which ran up to \$722,000. NBC, Capital and Dumont all

For BAMBERGER:



T. C. Streibert
*President
Bamberger Broadcasting Service, Inc.*



Jack R. Poppele
*Secretary of the Board of Directors
Bamberger Broadcasting Service, Inc.
Vice President
WOR — WBAM*

For NBC:

John F. Royal
*NBC Vice President
In charge of television*



Noran E. Kersta
*Manager
NBC Television Department*



or Other Cities

figured on advertising revenue — though not an overall profit — on their first year's take.

3. A program service, balanced between public service and entertainment, sustaining and commercial offerings — with not too much duplication of present standard broadcast programs — is an important "must."

4. A television program structure geared to "local problems and interests" also appears important in FCC's "behind-the-scenes" deliberations.

Applicants for the Washington market with present or potential network plans (NBC, Dumont, Bamberger and WMAL) made much of the fact they would not only bring the best in program talent from New York and other cities, but would, in addition, weight their program fare with shows of a "local" character.

5. Local residence of directors and acquaintanceship with local program needs are important. In this category, both Capital and the Evening Star Broadcasting Company had the advantage, with NBC's long-time operation of networked standard outlet WRC, also a point in its favor.

6. The "ideal" television licensee would appear to fall somewhere mid-way between the "Wall Street banker and the shoestring operator" — preferably a well-established concern with a good Dun and Bradstreet rating and a history of local operation in the community.

FCC Chairman Paul A. Porter has repeatedly declared that FCC will not tolerate "speculators" or "investment companies" in television. Equally, there appears to be



Paul A. Porter

Former Chairman of Federal Communications Commission

little room for the "peanut-whistle" operator, who had best take his chances in the standard and FM fields.

Bamberger Broadcasting Service, Inc.

Bamberger Broadcasting, 100-percent owned by R. H. Macy Co., had to its credit actual video program expe-

For DuMONT:



Leonard F. Cramer

*Vice President
Allen B. DuMont Laboratories, Inc.*

*Director
Television Broadcasting
Division*



Allen B. DuMont

*President
Allen B. DuMont Laboratories, Inc.*

For PHILCO:

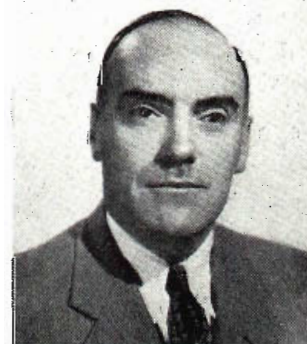
Ernest B. Loveman

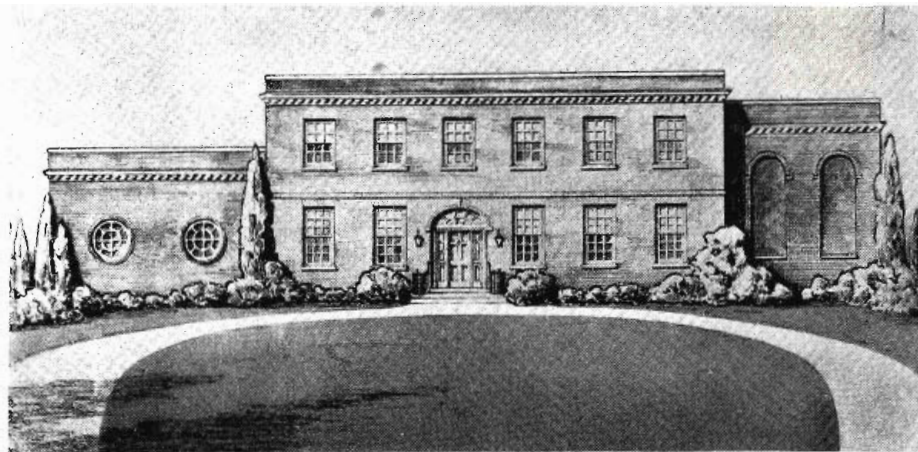
*Vice President
In charge of Philco television station, broadcasting and network*



John Ballantyne

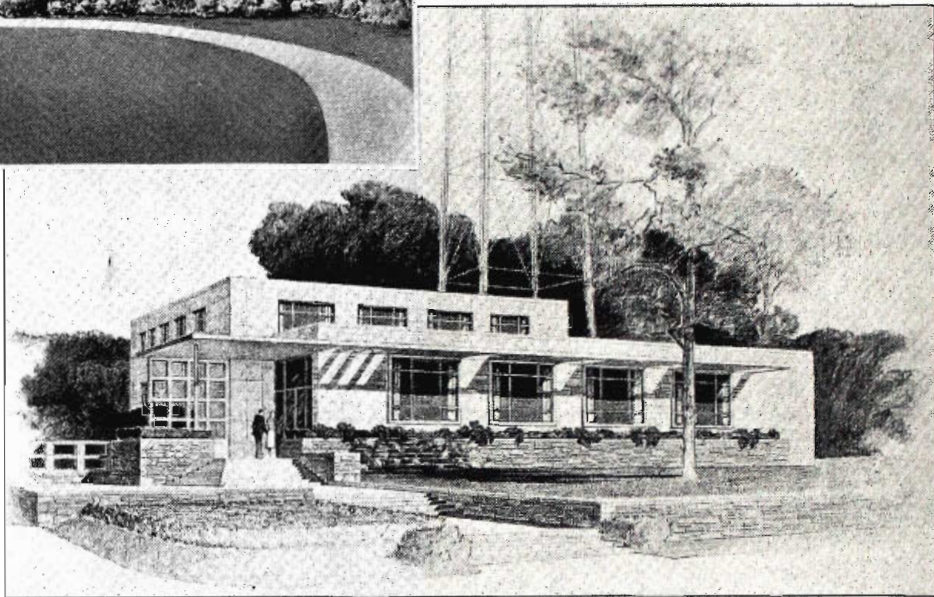
*President
Philco Corporation*





Left: Proposed Philco television broadcast station for Washington, D. C. Land, which has already been purchased, cost \$10,000. Construction cost of the buildings, including paving, plumbing, air conditioning and wiring has been estimated at \$167,281.

Right: Transmitting station and tower for the proposed Bamberger Broadcasting Service, Inc.'s proposed D. C. station. Transmitting plant cost, including cost of land, construction of buildings, technical equipment and installation is estimated at \$238,400.



rience — through 18 months of weekly shows over DuMont's WABD transmitter, supplemented by a couple of months' experience using the General Electric station WRGB, Schenectady.

Bamberger witnesses, while playing up "local" programs, also revealed network tie-in with a company-owned tele station in New York, other Mutual affiliates, and possibly the Yankee Net.

(Interesting speculation surrounds the Washington Mutual set-up, with WOL, the net's D.C. affiliate, definitely committed for an ultra-high CBS-type color transmitter.)

BAMBERGER will drop out of the video race for a Philadelphia station, preferring instead outlets in the Washington and New York City terminals, witnesses for the company revealed at hearings before FCC Chairman Porter. Network operation between the two cities is planned via the A.T.&T. coaxial cables at annual costs of \$60,000. Bamberger plugged for assignment of Tele Channel 5 in Washington, but wouldn't be "too unhappy" if FCC handed them the No. 4 assignment.

Bamberger also had in its favor, D.C. Zoning Commission approval of a desirable uptown transmitter site, and a contract for studios in downtown Washington.

Capital Broadcasting Company (WWDC)

High point of the Capital presentation was its purely local character and a television service, independent of

net affiliation. Weakness of its testimony appeared to lie in its limited finances by way of contrast to the wealthier treasuries of the other five candidates. However, Capital — steering clear of bank loans — said it would rely on owner and ad man, Joseph Katz, for an outlay of \$600,000 over the first three years to supplement profits of standard station WWDC, also earmarked for the television station. Capital's construction and operating figures were considerably under those of Bamberger, NBC, Philco and the Star, and slightly lower than those of DuMont.

Allen B. Dumont Laboratories, Inc.

"More commercial experience" in tele than any other D.C. applicant, a 20-year technical experience, and an experimental station already on the air and ready to provide a "satisfactory commercial service" were arguments advanced by DuMont witnesses in behalf of a Washington grant.

Allen B. DuMont, president, stressed his company's unique interest in television by way of contrast to his competition, whose interests are divided between standard broadcasting, newspapers or department store affiliations. DuMont planned a Washington station as an important "program source" for a proposed 5-station net to include New York City, Pittsburgh, Cleveland and Cincinnati. While DuMont's present experimental transmitter falls short of giving coverage to as wide an area as some of the other companies, DuMont official Julian Armstrong indicated it would provide service to 98.5 percent of the D.C.

Highlights of Washington Hearings

Proposed programming plans played stellar roles in five of the six applications. For an analysis of formats, see **"Public Service . . . Entertainment" — page 8**

Only DuMont and Capital gave their estimates of advertising rates for the D. C. market. For the high points of this testimony, see **Advertising — page 30.**

population in the metropolitan area. DuMont, relying on its "know-how" in tele, expected to operate in the red the first year, with a take before taxes and legal expenses of \$292,800 the second year.

The Evening Star Broadcasting Company (WMAL)

A 100-percent residence among its directors, close program cooperation with the American University, sound financial backing and a history of successful operation in the standard field bulwarked testimony of Samuel Kauffman, Evening Star President. Transmitter will be located on the American University Campus, with studios downtown at a proposed \$1,000,000 "radio city" at 12th and K Sts., N.W. The Star presented no specific program schedules in TV on the theory that tele is a new field and its programs will be molded in response to listeners' preferences and the requirements of public service. The Star, an ABC affiliate, has no present net contract, but may tie up with American or another video-minded net.

National Broadcasting Company (WRC)

NBC, with 14 million dollars already invested in television, and a 16-year experience in tele development, stands on its record for a right to "a coonskin cap."

NBC witnesses presented elaborate and stratospheric cost estimates in support of an FCC grant at the present Wardman Park site, where the company held a construction permit before the war.

Like Bamberger, John Royal, NBC television vice president, stressed that NBC must own and operate its own

station in Washington to realize plans for a coast-to-coast network. NBC's high "program standards" cannot be maintained through an affiliate, it was pointed out.

Like DuMont, the net has equipment on hand to move ahead immediately in the D.C. area. Royal asked FCC to give NBC channel 4 for both its New York and D.C. stations to better cope with problems of "co-channel interference." NBC Chief Engineer Ray Guy estimated that some of the first video receivers would not receive programs above the No. 6 channel.

Philco Products Corporation

Philco, another "coonskin capper," had to its credit a 14-year experience in tele and a unique contribution in the field of radio relay experimentation between Philadelphia, New York and Washington.

In the words of Philco engineer, David Smith, program quality can be improved and costs reduced by the "liberal use of television relaying both locally and on an inter-city basis." Philco is not interested in a net of its own but wants access to programs of other nets. Philco President John Ballantyne estimated his company had spent \$5,000,000 to date in development costs. Company is willing to earmark around \$750,000 to underwrite first year's operation of a D.C. station — the highest figure quoted by any applicant.

Regardless of a decision on its D.C. request, the company will continue its "intensive research in television, both downstairs and on high-definition monochrome and color in the ultra-highs."

ESTIMATES on the number of receivers available in the Washington market over the next few years, varied widely in figures quoted by D. C. applicants. Here's the tally — an informed guess, at best, in each case:

NBC — 10,000 approximately, 1947.

CAPITAL — Ben Strouse, station manager, 20,000 by year-end 1948; Katz, owner, perhaps 100,000.

DuMONT — 3,000 receivers in 1946; 15,000 in 1947; and 25 to 30,000 in 1948.

Scratch Sheet On D. C. Video Applicants

	Bamberger	Philco	NBC	Evening Star	DuMont	Capital
Initial Construction Costs . . .	\$503,400	\$528,423	\$514,000	\$184,550 (equipment only)	\$115,000 (spent on exp. station to date)	\$320,000
First Year Operation	\$547,308	\$748,000†	\$722,000	\$450 to 500,000	\$396,052	\$216,000
First Year Revenue			\$26,000		\$244,465	\$170,000
Personnel-Technical	32	135	—	—	31	40
Program	29					
Hours on the air week, first year	28	41	28	28	28	28
Network Plans?	Yes	No	Yes	—	Yes	No
% Sustaining Programs, first year	100%	40%	—	—	50%	50%
Estimated first year's card rate	—	—	—	—	\$360 hour	\$100 hour
Can be on the air	—	Oct. 1946	Oct. 1946	—	July 1, 1946	—



PUBLIC SERVICE.

Programming plans rated high in the presentations made by the six applicants for D. C.'s four video channels. Here's an analysis of the overall schedules.

By MARY GANNON

WITH the Washington hearings, the first step in the establishment of commercial television on a regular schedule has been taken. This was the first presentation of definite plans for the much discussed — and often feared — 28 hour programming schedule which the various companies had pledged themselves to follow. Here too was each applicant's interpretation of that multiple-faceted term "public service," which the FCC has set up as a "rule of thumb" in judging the type of pictures which will travel over the air waves.

It was clear that "public service" was the star to which the applicants pinned their hopes of FCC approval. And in their weekly programming fare, prime emphasis was given to educational, cultural, news and community interest type of programming over straight entertainment. Ratios ranged generally from 30% to 75%, with the overall picture tipped heavily in favor of public service and community activities.

Interesting too is the fact that while each plan differed in actual working out of the format, the general programming patterns were almost identical. The Evening Star was the lone exception, stating that they felt it premature at this time to present programming plans.

Educational

Under the educational classification, "how-to-do-it" formats rated high on everyone's schedule and were almost

limitless. Those aimed at the daytime housewife audience stress home decoration, food preparation, child care, fashions, household short-cuts, beauty hints, etc. For the more general tastes of a wider viewing audience, scope was enlarged to include instruction in sports, games, hobbies, home gardening, etc. Other fare in this straight education grouping included documentary and educational films, travelogues, trips around Washington itself, and visual presentation of all new developments that affect the lives of the viewers. Literature, history, government information, science were some of the suggested subjects.

Other plans, more tentative in nature, included cooperation with the local schools and colleges. Facilities have been offered to the Board of Education for using television in the school systems by Capital and Philco. The Evening Star has an arrangement with the American University for the construction of a transmitter on their campus with a resultant interchange of facilities, including programming by the dramatic groups. DuMont also has an agreement with New York University under which a half-hour weekly spot will be given over to programming by the various colleges. These shows will be relayed to Washington.

Sports

Plans here were so identical that Chairman Porter best phrased it when he facetiously remarked that the various



. ENTERTAINMENT

sports promoters must have been having a busy time. Too early for the definite stage of signed commitments as yet, nevertheless every applicant quoted the preliminary arrangements they had made to cover sporting events in Washington. These ran the gamut of all professional games, such as basketball, boxing, wrestling, baseball, football, hockey, etc., and included plans to televise local inter-scholastic and inter-collegiate sports as well.

Since this type of pick-up is a fluctuating factor, with various timing and seasonal irregularities, emphasis here was placed on their inclusion as an added attraction. NBC, however, whose mobile equipment and sports coverage has been a big factor in their programming over WBNT, included such telecasts (relayed from New York), as well as local pick-ups in their weekly schedule.

Community Interest

Keying the program fare to the interest of the local audience also received considerable attention in the overall plans. General theme outlined cooperation with all active civic organizations, and local chapters of national federations in visualizing the various projects which engage their attention. Behind the scenes in government agencies, law enforcing departments and campaigns for public safety and health, traffic hazards, crime prevention, etc., as well as tele trips around Washington were also on agendas. Debates and forums on controversial topics between these groups, and inter-scholastic discussions were still another facet of this many-sided angle.

The two local radio outlets, Capital and Evening Star, laid particular stress upon their ability, based on their past experience, to serve the local interests of the com-

munity. However the four "outsiders" — Bamberger, DuMont, NBC and Philco — sprinkled both their afternoon and evening spots with this type of programming fare.

Religious

Religious programs were interjected into nearly all the proposed Sunday programming schedules. Broad conception was based on cooperation with all denominations, on an alternating basis in order to insure equal participation. Plans called for both studio and church telecasts. Under this category comes the telecasting of church choral groups, visual bible stories, vesper services, etc. Here again, to bolster applicants' claims, religious groups were contacted and their promises of cooperation were listed.

News

News telecasts, varying from 5 minutes to a half hour, were featured in all plans. Maps, stills, film, and in some cases "on-the-spot" remote pick-ups, will form the visual background for the studio narrator. Two categories were proposed — a telecast tailored strictly to the local happenings, supplemented by a complete over-all account of worldwide events.

Special Events

Since Washington is the national capital — and tending more and more to be international in character — particular emphasis was given to its importance as a source for televising events of nationwide interest. Bamberger, DuMont, NBC and Philco tied in this point with their

proposed plans for stations in other cities, and utilization of the existing coax link between Washington and New York, as well as the future extension of a relay system throughout the country.

Here again because a special event is not a regularly scheduled occurrence, the proposed coverage of such features was treated as a supplementary service and not incorporated into the weekly program outline. Occasions such as presidential inaugurations, important congressional sessions, parades, arrival of important personages, yachting regattas on the Potomac, etc., were a few of the many features listed in this category.

Entertainment

Proposed entertainment formats included audience participation shows, mysteries, drama, children's programs, musical variety, comedy, community singing, dance programs and quiz shows as their basis. Emphasizing that New York is the talent center, and again tying in their

MIKE ULINE, operator of Washington's biggest indoor sports arena proved to be the most sought after man in the city by Washington's video applicants. Five of the six pounded his door in effort to get tele rights to his shows. When FCC Chairman Paul A. Porter jokingly asked a Philco witness whether he had approached Mike, the answer was: "We tried to, but he was too busy that week," — the same week apparently that other video applicants were "on the ball."

Washington plans with their proposed New York stations, Bamberger, DuMont, NBC and Philco indicated that the majority of their more elaborate productions would be relayed from New York to Washington. Capital dwelt on the local angle, although indicating their willingness to join forces with relaying hook-ups if necessary to give a better service.

Amateur shows also figured in plans, with emphasis placed on the local interest engendered and the opportunities for talented people within the area. Cooperation with the dramatic societies of the various schools and colleges, as well as local groups, was also listed.

Top entertainment features were scheduled for the choice evening spots, with perhaps a 50% general average being a fair over-all estimate on this programming. NBC's nightly programming plans utilized their sports pick-ups four nights a week, three of which were scheduled for relaying from New York. However, all plans included public service features in the evening hours — a point which evidently interested the FCC judging from Chairman Porter's occasional questioning on this point. Kid shows, as would be expected, had the afternoon spots.

Film

NBC gave the greatest emphasis to the inclusion of film in television programming, with a proposed schedule of 5½ hours a week, broken down into features, documentaries, travelogues, newsreels and cartoons. In addition, a NBC-Hollywood tie-up is now in the works for network production of newsreels, features and documentaries, tailored especially for tele. Other applicants also included features and shorts in their schedule, as well as educational and travelogue types. Film, of course, will be blended with live in many of the other programs scheduled.

Time Patterns

With the effectiveness of daytime telecasting not yet established, percentage of time devoted to programs during the day was interesting. Bamberger planned two con-

tinuous hours of programming angled at Washington housewives in their 11 to 1 telecast, continuing again with the evening hours from 7:30 to 9:30. Majority of programs ran fifteen minutes, with others slated for 25, 30, 45 minutes and 1 hour segments.

DuMont allocated a daily 12 to 1 spot, really for experimental purposes to determine the size of the viewing audience at that time, resuming again from 7:30 to 10:30. Programming was divided into half-hour segments.

Capital planned a more irregular schedule, with Sunday hours from 10:00 to 11:30, 2:00 to 3:00; and 8:00 to 9:30, and Saturday hours from 1:30 to 4:00, picking up again from 9:30 to 11:00. Their regular Monday through Friday schedule included an afternoon period from 2:00 to 3:00, with the evening spots from 7:45 to 10:45. Programs were divided into quarter- and half-hour periods.

NBC's afternoon schedule started at 2:00, with a sign-off at 4:00 or 4:30. Evening programming starts at 7:30, with varying sign-offs at 9:30, 10:00 and 10:30. Time segments were half- and one-hour periods, with longer spots scheduled for sports pick-ups.

Philco, with a proposed 41-hour week schedule, set their Monday to Friday spots from 3:00 to 5:05 and 8:00 to 10:35. Week-end schedules varied with morning hours from 9:00 to 11:05 on Saturday and 11:00 to 12:00 on Sunday. Afternoon and evening periods remained the same — from 2:00 to 5:05 and 8:00 to 10:35. One-half to one-hour programs were indicated.

What About the Public?

SO HAVE the first patterns been set. But in the final analysis, the public is always the determining factor in what makes a hit and who hits the skids. Television has been a promise held before them for many years and in the waiting period, their ideas of its potentialities and of the enjoyment they will draw from their own set have grown.

They know little and probably care less about the frequency fight, about channel allocations, about the new techniques that are necessary to programming perfection. They visualize television as radio and motion pictures combined in one glamorous cabinet.

With them, it's the show that will count. It's the show that will put tele over, will boost the sale of sets, will result in an enthusiastic acceptance of the new medium and its corresponding growth.

Public service played a leading role in Washington programming plans. Admittedly television will be a great cultural and educational force. It can, in time, bring events of national interest and importance before people all over the country and the world. But to peg public service squarely in the notch of educational, cultural and community interest fare, to separate entertainment from it and to underplay its importance tends to a specialized use of the medium. While a certain percentage of people are interested in education, in following local affairs, in the activities of their community organizations, even within that group, there is again a subdivision as to where their particular interests lie.

Can television in its early days, with limited stations in each city and small viewing audiences afford such specialization? Are people going to want their television screens to play the role of "teacher" up to 70% of the time as some of the applicants proposed?

In its truest definition, public service is a *service to the public*.

Might it not, then, be a good idea to find out what service the public expects from television programming; and not superimpose an idea of what they ought to have — in the name of public service?

Presented here are two of the program schedules for a week's operations. NBC's plans are based on 28 hours a week telecasting, while Philco's proposals (on page 12) take in a 41-hour week schedule.

National Broadcasting Company Sample Program Schedule for One Week 28 Hours of Operation

Time Afternoon	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2:30-3:00	Washington at Work (remote) (Washington to New York)	Washington Shoppers Guide (studio)	Around the Town (from New York)	Women's Forum	Ladies Matinee	Children's Washington (Washington to New York)	Hockey (from New York)
3:00-3:30	Washington at Work (remote) (Washington to New York)	Meet Your Neighbor (remote)	The World's Great Artists (remote) (film)	America — Vacationland (film & studio)	Feature Film	Teen Age Varieties (Washington to New York)	Hockey (from New York)
3:30-3:55	Short Subject	Feature Film	The Armchair Traveler (film)	International Menus (remote)	Feature Film	Review of the Week in Washington (Washington to New York)	Hockey (from New York)
3:55-4:00	Coming Attractions	Feature Film	The Armchair Traveler (film)	International Menus (remote)	Feature Film	Review of the Week in Washington (Washington to New York)	Hockey (from New York)
4:00-4:30	Hobby Shop (Washington to New York)	Feature Film					Feature Film
4:30-5:00							Feature Film
Evening							
8:00-8:15	In Town Today (studio) (Washington to New York)	News (studio)	Basketball (from New York)	Washington News	Washington Varieties (studio)	Film Short Subjects	Television Newsreel (from New York)
8:15-8:30	In Town Today (studio) (Washington to New York)	Short Subjects	Basketball (from New York)	Film Short Subjects	Washington Varieties (studio)	It's a Fact (film)	Television Newsreel (from New York)
8:30-9:00	Washington Challenges (studio) (Washington and New York)	Boxing — local arena (remote)	Basketball (from New York)	The Week in Sports (film)	Intercollegiate Basketball (remote)	Collegiate Sports (remote)	Dramatic Production (from New York)
9:00-9:05	Coming Attractions	Boxing — local arena (remote)	Basketball (from New York)	Dramatic Series	Intercollegiate Basketball (remote)	Collegiate Sports (remote)	Dramatic Production (from New York)
9:05-9:30	Feature Film	Boxing — local arena (remote)	Basketball (from New York)	Dramatic Series	Intercollegiate Basketball (remote)	Collegiate Sports (remote)	Dramatic Production (from New York)
9:30-10:00	Feature Film	Boxing — local arena (remote)	Basketball (from New York)		Intercollegiate Basketball (remote)	Feature Film	Dramatic Production (from New York)
10:00-10:30		Boxing — local arena (remote)	Basketball (from New York)		Intercollegiate Basketball (remote)	Feature Film	

Philco

Sample Program Schedule for One Week 41 Hours of Operation

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
9:00-9:15						Bible Story	
9:15-10:00						Juvenile Jamboree	
10:00-11:00						Film	
11:00-11:05						News Headlines	
11:00-12:00							Church Service (remote)
Afternoon							
2:00						Sport Show (remote)	Sports (remote)
3:00-3:30	Know Your City (remote)	Know Your Government (remote)	Roving Tele-Interviewer (remote)	Know Your Courts (remote)	Know Your Parks and Playgrounds (remote)	Sport Show (remote)	Sports (remote)
3:30-4:00	Department of Education	Department of Education	Department of Education	Department of Education	Department of Education	Sport Show (remote)	Sports (remote)
4:00-4:15	Tea with Mary Barth Abbott	Tea with Mary Barth Abbott	Tea with Mary Barth Abbott	Tea with Mary Barth Abbott	Tea with Mary Barth Abbott	Sport Show (remote)	Sports (remote)
4:15-4:30	Your Child and Mine	Your Child and Mine	Your Child and Mine	Your Child and Mine	Your Child and Mine	Sport Show (remote)	Sports (remote)
4:30-5:00	Children's Program	Children's Program	Children's Program	Children's Program	Children's Program	Sport Show (remote)	Art Appreciation
5:00-5:05	News Headlines and Coming Attractions	News Headlines and Coming Attractions	News Headlines and Coming Attractions	News Headlines and Coming Attractions	News Headlines and Coming Attractions	News Headlines and Coming Attractions	News Headlines and Coming Attractions
Evening							
8:00-8:30	News	News	News	News	News	News	News
8:30-8:45	Musical Comedy	Aviation Today and Tomorrow	(Reserved for Public Service)	Do You Remember?	Weather	Television Party (studio & remote)	Variety
8:45-9:00	Musical Comedy	Aviation Today and Tomorrow	Hobby House	Men of Science	(Reserved for Public Service)	Television Party (studio & remote)	Variety
9:00-9:15	(Reserved for Exhibits) (remote)	Variety	History of Motion Pictures	The Puppet Players	Pan-Americana	Television Party (studio & remote)	Step Up To The Camera
9:15-9:30	(Reserved for Exhibits) (remote)	Variety	Feature Film	The Puppet Players	Pan-Americana	Television Party (studio & remote)	Step Up To The Camera
9:30-10:00	Quiz	Sporting Event (remote)	Feature Film	Sporting Events (remote)	What's Yours?	Television Party (studio & remote)	Ballet
10:00-10:30	Night Club Previews	Sporting Event (remote)	Feature Film	Sporting Events (remote)	Supper at the Press Club (remote)	Television Party (studio & remote)	Washington Tele Theatre
10:30-10:35	Late News Headlines and Coming Attractions	Late News Headlines and Coming Attractions	Late News Headlines and Coming Attractions	Late News Headlines and Coming Attractions	Late News Headlines and Coming Attractions	Late News Headlines and Coming Attractions	Late News Headlines and Coming Attractions

Television Outlook In San Francisco

Eighth in a series of articles analyzing the video applications in cities where there are more applicants than available channels. FCC has set hearing for San Francisco.

“CALIFORNIA, here we come,” is the song of the television industry now that channels have been allocated and regulations set.

And when you say, “California,” you mean San Francisco—or so the Native Sons will tell you. California, to them, means the Golden Gate and the Embarcadero and the 49ers, not those Iowans and New Yorkers down in Los Angeles.

With channel allocations set, there has been a recent rush to file applications for commercial tele stations in San Francisco, and to date the band-wagon’s full to overflowing. Six seats on the television band-wagon and seven seats applied for.

Radio is represented among the seven applicants by the Associated Broadcasters, Inc., the American Broadcasting Company and Don Lee.

Newspaper interest is reflected in the application of the San Francisco Examiner, a Hearst publication. (Hearst Radio, one of the many Hearst interests, has applications in Baltimore and in Milwaukee.) Dorothy Thackrey, publisher of the *New York Post*, filed an application last month.

Don Lee and Television Productions (Paramount), the two Hollywood operating stations, have also applied for commercial licenses, both, probably, with an eye on that proposed cable link between LA and San Francisco. Another Hollywood entrant is Hughes Productions, one of the Howard Hughes interests. Hughes also has an application for a station in Los Angeles.

The seven applications from San Francisco very nicely reflect the industries who have interested themselves in television, all over the country, namely; movies, radio and newspapers.

San Francisco, or rather the Bay Area, has become the greatest ship-building center in the world. It’s the west coast’s largest port and as our trade with the Orient grows, which it gives every indication of doing, San Francisco will grow with it.

The City itself has a population of more than seven hundred thousand but the Bay section, San Francisco’s retail trading area, has a population of well over two million who, in 1943, spent \$1,710,000,000.

American Broadcasting Company, Inc.

Address—30 Rockefeller Plaza, New York, N. Y.

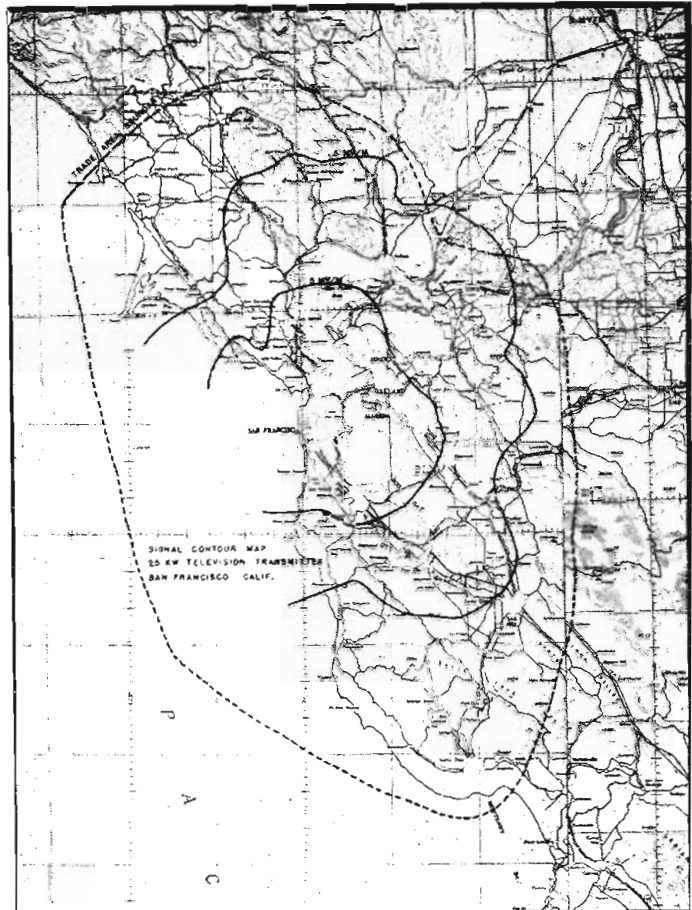
Officers—Mark Woods, Vice-President

Estimated Costs

1. Vis. transmitter	\$ 86,000
2. Aural transmitter plus tubes	64,000
3. Antenna System	18,000
4. Studio Equipment	89,000
5. Studio Lighting	6,000
6. F & M Monitors	3,500
7. Building	30,000
8. Other item	90,000

Estimated Total Costs \$386,500

Equipment—General Electric



Black lines indicate both the primary and secondary coverage in the San Francisco area which can be given by a 25 kw station, assuming that the antenna is 500 feet high and located in the center of the business district. Dotted line indicates the trading area of over two million people. Contour map, courtesy of Allen B. DuMont Laboratories, Inc.

Operation Costs per month—\$13,000 (based on 15 hours weekly)

Channel—#7

Kilocycles—102-108

ESR—3950

Antenna

Height, sea level—4186 feet

Height, ground level—337 feet

Transmitter location—Contra Costa County, California

Power, aural & visual—20 kw—aural; 40 kw—visual

Population—2,482,575

Size of area—28,735 sq. mi.

Engineering Consultant—Frank G. Kear, Washington, D. C.

Misc.: ABC has bids for tele stations in Chicago, New York and Los Angeles.

The Associated Broadcasters, Inc.

Address—The Mark Hopkins Hotel Building.

San Francisco

Officers—W. I. Dumm, President

Estimated Costs

1. Vis. transmitter	\$22,500
2. Aural transmitter plus tubes	12,500
3. Antenna System	7,500
4. Studio Equipment	65,000
5. Studio Lighting	5,000
6. F & M Monitors	2,500
7. Other item	3,000—test equipment

Estimated Total Costs

\$118,000

Equipment—RCA
 Channel #4
 Kilocycles—7,800-8,400
 Antenna
 Height, sea level 734 feet
 Height, ground level 445 feet
 Location—top of Mark Hopkins Hotel
 Transmitter location—Mark Hopkins Hotel San Francisco, California
 Power, aural and visual—aural, 3 kw.; visual, 4 kw.
 Location of Studio—Mark Hopkins Hotel, San Francisco
 Engineering Consultant—Royal V. Howard, Vice-President, Engineering
 Lawyers—Spearman and Roberson
 Misc.—Applicant for new AM station, operators of standard stations KSFO, San Francisco, and International Stations KWID and KWIX, San Francisco.

Don Lee Broadcasting System

Address—5515 Melrose Avenue, Hollywood
 Officers—Lewis Allen Weiss—Vice President and General Manager
 Estimated Costs

1. Vis. transmitter	\$22,900
2. Aural transmitter plus tubes	14,070
3. Antenna System	to be determined
4. Studio Equipment	12,214
5. Studio Lighting	8,500
6. F & M Monitors	1,850

Estimated Total Costs \$54,534
 (plus items to be determined)
 Operation Costs per month—\$12,000 (based on 4 hours weekly)
 Channel—#1
 Kilocycles—50,000-56,000
 ESR—to be determined
 Power, aural and visual—aural, 2 kw.; visual, 4 kw.
 Engineering Consultant—Harry Lubcke
 Lawyers—Dempsey and Koplovitz, Washington; Richard O'Hare
 Misc.—Licensee television station W6XAO, Los Angeles; 4 AM stations—1 FM; KHJ, Los Angeles.

Hearst Publications, Inc.

Address—Hearst Building, San Francisco
 Officers—W. Randolph Hearst—President
 Estimated Costs

1. Vis. transmitter	\$ 86,000
2. Aural transmitter plus tubes	64,000
3. Antenna System	27,000
4. Studio Equipment	89,000
5. Studio Lighting	16,000
6. F & M Monitors	3,500
7. Building	12,500
8. Other item	25,000

Estimated Total Costs \$323,000 plus rent
 Equipment—General Electric
 Operation Costs per month—\$35,000 (based on 4 hours weekly)
 Channel—#4
 Kilocycles 66-72
 ESR—1472.85
 Antenna
 Height, sea level—2735 feet
 Height, ground level—131 feet
 Location—on 50 feet substructure, consisting of a self supporting steel tower. Mt. Tamalpais

Transmitter location—Marin County, leased from Marin Municipal Water District.
 Power, aural & visual—aural 20 kw; visual 40kw
 Population—1,713,807
 Size of area—9000 sq. mi.
 Location of Studio—San Francisco County
 Engineering Consultant—Bille Brothers
 Lawyers—Grove Fink. 1018 Hearst Building. San Francisco, S., California

Hughes Productions (Division of Hughes Tool Company)

Address—7000 Romaine Street, Hollywood, California
 Estimated Total Costs—\$217,450.00
 Estimated Operation Costs per month—\$12,000.00 (based on 15 hours weekly)
 Kilocycles—60,000-66,000
 ESR—740
 Antenna
 Height, sea level—1,500 feet
 Transmitter location—San Mateo County.
 Power, aural and visual—visual 4 kw.; aural 2 kw.
 Population—1,600,000
 Size of area—3,800 sq. miles

Dorothy S. Thackrey

Address—75 West Street, New York, N. Y.
 Officer—Dorothy Thackrey, President and Director
 Estimated Costs

1. Vis. transmitter	\$128,500
2. Aural transmitter plus tubes	64,400
3. Antenna System	28,000
4. Studio Equipment	55,000
5. Studio Lighting	7,000
6. F & M Monitors	500
7. Land	5,000
8. Building	25,000
9. Other item	38,000

Estimated Total Costs \$376,400

Equipment—RCA
 Channel—#5
 Kilocycles—76-82
 ESR—9.700
 Antenna
 Height, sea level—2800 feet
 Height, ground level—150 feet
 Transmitter location—Mt. Tamalpais—12 N.W. San Francisco
 Power, aural and visual—5 kw.
 Population—1,015,000
 Size of area—8,450 sq. mi.
 Engineering Consultant—Lohnes & Culver, Washington, D. C.
 Lawyers—Leo Rosen and Elliott Ruskin of Greenbaum, Wolff & Ernst
 Misc.—Newspaper publisher for past 6 years, and publisher of New York Post and Paris Post. October, 1944 bought WLIB, New York City, and in October, 1945, KYA, San Francisco; has applied for purchase KMTR, Hollywood; FM applications in New York City, Los Angeles and San Francisco; has also applied for TV in New York City. Husband, Theodore Thackrey, Editor and President, New York Post; President of WLIB.

(continued on page 22)

The Status of Theatre Television

To determine the interest in theatre television now, while it is still in the planning stage, TELEVISION conducted a survey of movie exhibitors and operators. 58% of those answering have definite plans for using this medium.

By GILBERT WINFIELD

“HOW will television affect the movie industry?” That’s a question that concerns the whole television industry, equipment manufacturers, movie companies and independent exhibitors.

In order to cast some light on the theatre operation part of this important question, the editors of TELEVISION MAGAZINE have conducted a survey among 350 exhibitors and theatre circuit operators, trying to determine what has been done and what will be done. We found that more than half of the theatre operators who answered are definitely interested in either theatre television or in operating a station of their own.

When asked, “Have you any plans for theatre television?” 58% answered affirmatively, 32% had no plans and 10% didn’t answer.

16% of those who answered had done something about television for their theatres, enlarged their projection booths, made inquiries regarding probable costs or in some way made a positive move; 76% had made no move at all and 8% didn’t answer the question.

Theatre Operators

A very significant fact is the interest on the part of the theatre operators in the operation of a television station of their own. 50% of the answers to the question, “Are you interested in operating a television station?” were a positive, “Yes.” 30% were not interested and 20% didn’t answer.

Following is a list of the theatre operators who have applied for commercial television licenses.

Balaban & Katz, Chicago, operators of WBKB, 90% owned by Paramount.

Comerford-Publix Theatres, Scranton, Pa., in whom Paramount has a minority interest.

Fox-West Coast Theatres, Hollywood, a Twentieth Century-Fox theatre circuit.

Interstate Circuit, Dallas, in whom Paramount has a minority interest.

New England Theatres, Boston, a Paramount circuit.

United Detroit Theatres, Detroit, also Paramount.

The revealing fact here is that Paramount has orientated their theatre exhibitors and kept them more aware of theatre television possibilities than have most of the other major movie companies. But the other film companies are by no means unaware of tele potentialities, although there is no indication at this time of a tie-up with large-screen television.

Movie Companies

The following five major movie companies have filed applications for video stations:

Twentieth Century-Fox has an application for New York.

(continued on page 44)

Society of Motion Picture Engineers' Proposals

IN order to set aside channels for theatre television operation, the Society of Motion Picture Engineers proposed, on Docket 6651, before the FCC, three classes or services of theatre television, as follows:

1. Intra-City Studio Transmitter Station:

- a. 1 fixed studio to transmitter channel (point-to-point)
- b. 1 clear mobile channel (remote pick-up)

2. Intra-City Multiple Addressee Station:

- a. 1 clear channel for private multiple-directive transmission from a single transmitter to a group of specific addressees within the service area of the transmitter.

3. Inter-City Relay:

- a. 1 channel to interconnect cities, for transmission of theatre television programs simultaneously from a number of specific multiple-address stations to a specific theatre or theatres in different cities.

The requests for frequencies for theatre television service include a total of 1500 megacycles in seventy-five 20-mc channels, as follows:

1. 8 contiguous 20 mc. clear channels or a band of 160 mc. from 600 to 760 mc.
2. 7 contiguous 20 mc. clear channels or a band of 140 mc. from 860 to 1000 mc.
3. 15 contiguous 20 mc. clear channels or a band of 300 mc. from 1900 to 2200 mc.
4. 15 contiguous 20 mc. clear channels or a band of 300 mc. from 3900 to 4200 mc.
5. 30 contiguous 20 mc. clear channels or a band of 600 mc. from 5700 to 6300 mc.

The FCC at this time authorized intra and inter-city relay of theatre television programs in the following bands of frequencies (experimental only), 1900 to 2300 mc., 3900 to 4550 mc. 5750 to 7050 mc., 10,500 to 13,000 mc., 16,000 to 18,000 mc., and 26,000 to 30,000 mc.

Problems encountered in remodeling the DuMont Wanamaker studios

Undoubtedly many stations will reconvert existing facilities. Here's an idea of some of the unforeseen problems which they will encounter, and how planning may solve them.

THE question of whether to remodel existing premises or build new television studios will become increasingly important as applications are granted and construction gets under way. DuMont's experience in remodeling the auditorium in the John Wanamaker New York store into a modern group of telecasting studios throws some light on this question of remodeling vs. new building.

Completion of the studio, which is under the direction of William Meyer, architect, is scheduled for March. All of the alterations are being performed by sub-contractors to affect an estimated saving of 15%. While no final figures are available, it is estimated that the final cost of remodeling will come to \$250,000. Located at Broadway and Ninth Street, the new studios are connected by matched telephone wires to the DuMont transmitter at 515 Madison Avenue. The old DuMont studios in this building will be retained, with the Wanamaker set-up an addition to existing facilities.

Drawing on their previous experience, the new studios were planned with an eye to full time programming. Blueprints included studio space enough to handle the demands of a full load as well as facilities for on-the-spot rehearsals.

Change-Over Problems

But, as was to be expected, many unforeseen problems arose that were not included in the precisely drawn blueprints. One of the biggest was the discovery of steel supports and girders in the walls of the old auditorium, which were not indicated in the original plans on file with the Building Department. This unexpected "find" made it necessary to relocate walls and corridors—for obviously girders that supported the thirteen other floors of the building could not be ripped out.

The domed ceiling presented accoustical difficulties. This was solved by the Egg Crate Treatment created by Meyer, which is an ingenious contraption of glass wool in frames, suspended from the light grid.

A major electrical problem was the transfer of power from the Edison Company's service vault in the cellar of the Wanamaker store to DuMont's control panel in the studios. To make this changeover a new 3,000 amp. service was installed. Wiring had to be snaked up through the walls from the basement to the DuMont distribution panel. Ninety outlets, with dual connections, were installed, making a total of 180 strategically placed light ducts. These connections provide 162,000 watts of lighting. All outlets, of course, were placed with careful attention to the demands of proper studio lighting, which requires a minimum of 500 ft. candlepower.

In planning the conversion of the old auditorium, a major difficulty was to provide for circulation of studio traffic. In the old layout the dressing rooms and stage were all located at the front. For television studios, the entire first floor had to be transferred into stages and dressing rooms, with easy and non-interfering accessibility. Passageways had to be laid out to permit uninter-

rupted flow of personnel, props and talent to the proper studio.

One obstacle known from the beginning, was the preservation of the famous organ which is reputed to be one of the largest in the world. Walls were built over it and great care had to be taken to leave the organ intact and accessible for future use. 1,000 square feet of floor space were dedicated to the housing of this beautiful organ.

The blueprints reproduced here show the layout of the two-floored set-up. But more impressive is the total of nine television cameras scheduled for the three studios. This proposed set-up will provide for the most ambitious television programming yet to be undertaken.

First Floor

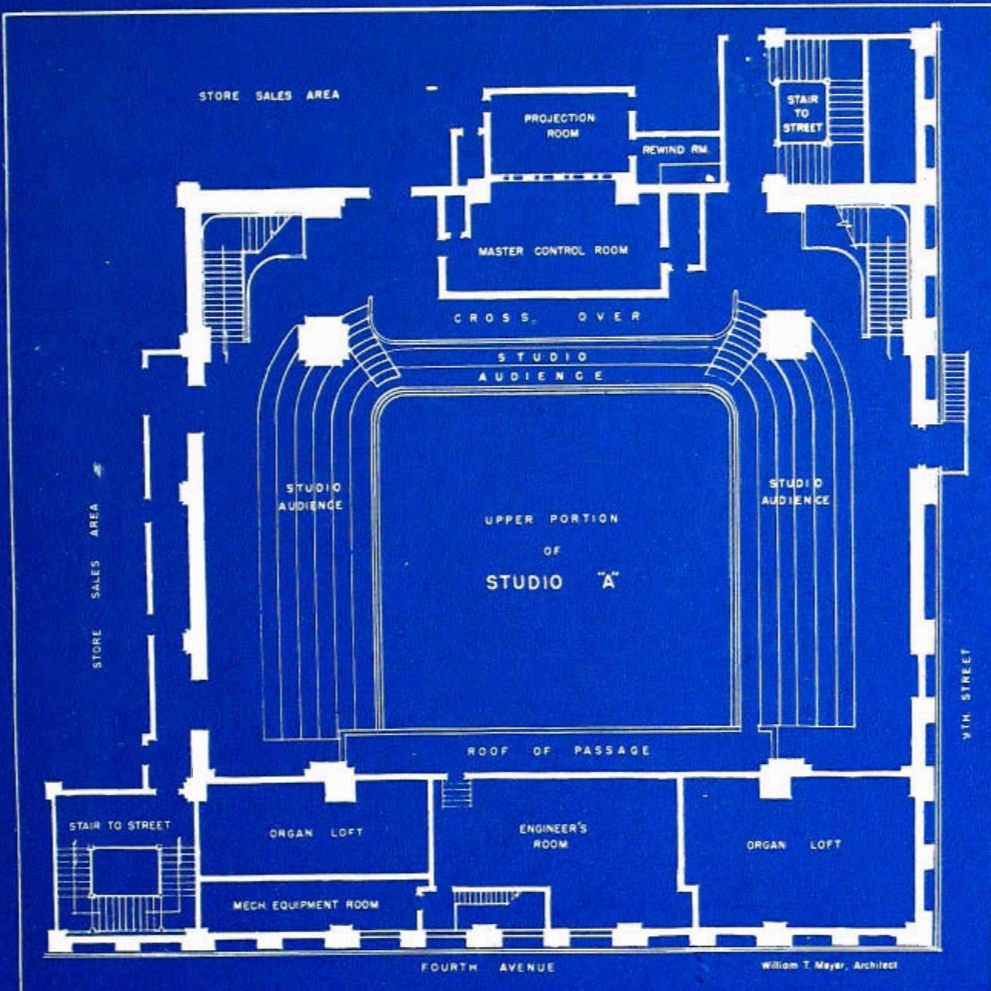
The main studio, Studio A, measures 60 feet by 40 feet 3 inches, with a height of 43 feet. It will be equipped with four television cameras, two of which will be in semi-fixed positions; the other two will be mounted on flexible dollies. It is planned to have rigid pre-set lighting for this studio, with the use of 12 groups of Bird's Eye infra-red equipment. There will, of course, be many flood lights on the floor, to insure ample illumination for all contingencies.

The location of the control room for Studio A (the main studio) was planned to give a complete view of the studio. There is ample space to accommodate all studio and video monitoring equipment, and personnel required to control performance. A large plate glass window in place of a back wall will enable spectators to watch the proceedings, the principle being the same that is employed in maternity hospitals, where the new-born child may be watched through the window. This glass wall will measure about thirty feet in length, and will provide a fine show case for the display of the newest entertainment in the world.

The two smaller studios are planned to accommodate 2-camera productions. Studio C is irregular in shape, measuring about 30 feet across at its widest point, and about ten feet at its narrowest irregularity. Studio D is rectangular, and measures 28 by 18 feet. Both of these studios are serviced by their individual control rooms, large enough to contain monitoring and directing equipment and personnel. At present, plans call for two dolly-mounted cameras in the small studio and three dolly-mounted cameras in the larger studio. Lighting will be the same as Studio A, though on a smaller scale.

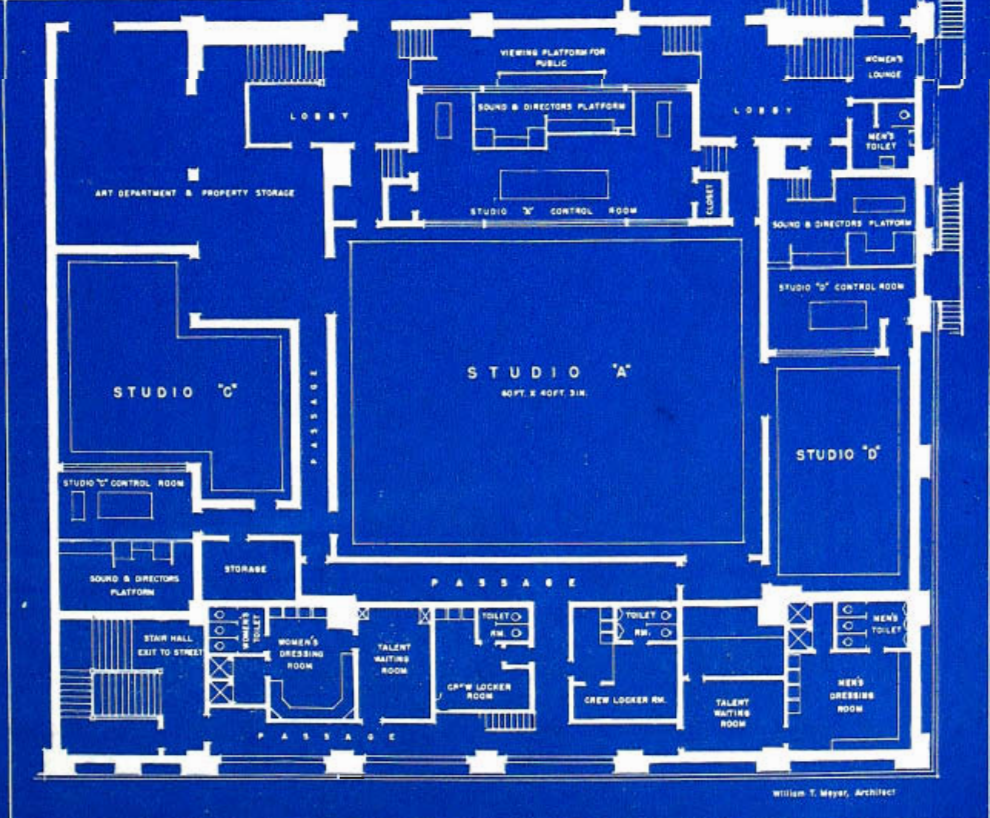
The remaining space on this floor is well-utilized, and will provide for a large Art and Property Department, measuring about 1200 sq. ft., which is located to give easy accessibility to all the studios. No detail has been overlooked to provide comfort for Talent and Technicians. There are two well-equipped Crew Locker Rooms, with lavatories in each. For the Talent there are two dressing rooms, with facilities in each. Two waiting rooms, designed to keep talent rested and on tap is another well-

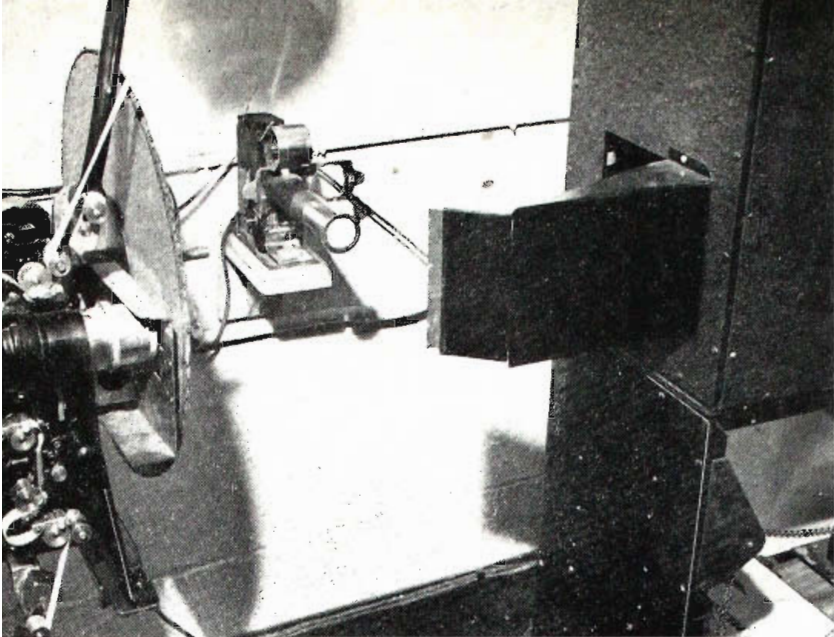
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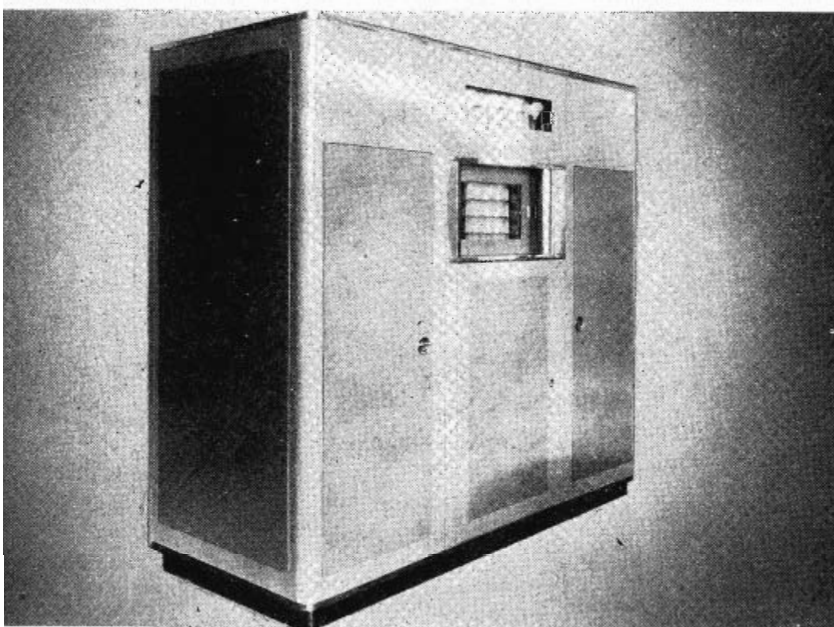
This plan indicates the layout of the first floor of DuMont's Wanamaker Studio. Especially interesting is the placement of control rooms, in relation to each studio. Location of the Art Department and property storage gives easy accessibility to the two largest studios. Note how passageways are laid out to give non-interfering accessibility to all facilities.

Plan of the second floor demonstrates the generous accommodations for the studio audience, and its placement in relationship with the store's sales area. Notice how the projection room is separated from the rewind room. The main studio (Studio A) penetrates the second floor and rises to a height of 43 feet





16mm film and television camera used over W9XZV. 2" x 2" glass slide and film strip projector is in center.



Sherron transmitter above is furnished with ranges of 250W to 50 KW power and individual bays of additional power can be incorporated. Scene below shows the portable boom mike used for the audio pick-up in the WNBT studios. Three cameras were used for this show.



Equipment Needed For

Type and amount of equipment needed depends on the programming plans of each station. Here's an estimate of how little you can squeeze by on and what will be needed for more varied operations.

By SIDNEY R. LANE

ALL connected with television realize that much new equipment is needed before stations can operate on a 28-hour schedule. Much that is in use today is almost inadequate to handle the present comparatively limited schedule. There are instances where studios working with pre-war equipment, have to baby their electronic antiquities with periods of rest and repair. Some have found it necessary to have a two-day cessation in order to be assured of even limited operation. So, when one pops the question to station managers about how much equipment will they need to comply with the FCC 28-hour order, these harassed individuals lean back and ask the question that is on the lips of all who waited for the war's end to bring them satiation from shortages, and begged to be informed when will the equipment be delivered? One manager of a large metropolitan station wept that his equipment was operating by the grace of God, and a bale of wire. Then there were the usual murmurs about strikes, and long stories of the ingenuity of the men who kept them televising though three motors were shot out. It seems that a new class of hero is arising in this reconversion period. Next to taxi drivers who have kept them rolling for five-hundred thousand miles, today's topmost heroes are equipment-starved personnel of television studios. But, despite the wailing and the heroics, we do know that it is a matter of months before enough material will be made to supply these hungry lads. They all have their needs on record, so you ask them to forget the sad immediate and tell you what equipment is essential to handle the 28-hour requirement. There are variations of opinion among the station managers, but there is a large area of agreement which may serve as a guide in the solution of the problem that faces all interested in station management.

How many studios will be required? This whole question is contingent on the programming plans of each station. Cross section of opinion reveals that at least two studios will be needed. Both will probably be in use at all times, because of the necessity for on-stage rehearsals, and the need to pre-test lighting, camera angles, cast placement, mikes, sets, timing, and all the elements that are required for smooth televising.

One station manager thinks that he can get along with only one studio if the program is carefully planned so that there will be no conflict between shows that require rehearsal and those that do not. For example, motion pictures do not require the use of a studio. A motion picture film pick-up on a track which may be moved to the projectors, may be stationed outside of the main studio to save space. However, one studio will work a tremendous hardship, because even with limited programming it has been found necessary to use outside rehearsal halls, at additional expense, for preliminary work. It is essential to have the use of all facilities, exclusive of transmitter, for final rehearsals. If the programming fare is to be finished, more than one studio will be found essential.

Hour Programming

Size of the studios would again depend primarily on the programming plans of the station. Where elaborate productions are planned, requiring the use of many sets, naturally more studio space is needed. A smaller studio suitable for simpler productions, interviews, etc., is suggested to complete the set-up.

Naturally the larger the space the greater the facility. Limited space will work a hardship, because the studio must accommodate technicians, cast, scenery, lighting, etc., and there should be enough room to avoid traffic snarls. Experience has shown that the studio should measure at least 1200 sq. ft.

Height of the studio is another important factor, and while many present studios have a height of 20 ft., some technicians have expressed a desire for greater height. They base this on the ground that greater height will result in better acoustics, and allow for more heat dissipation. They feel that a good height for the studio should be in the neighborhood of 30 ft.

Number of cameras needed in each studio?

Answers range from one to four, depending again on the programming need for each studio. Obviously a one-camera arrangement would be limited to simple playlets, interview formats, news telecast, etc. The cross section of opinion, based on actual studio operation, indicates that a good job can be accomplished with two flexible studio cameras mounted on push dollies. Increasing the cameras to three or four will provide a greater degree of flexibility, and smoother production. As programming scope increases, camera facilities will also have to increase.

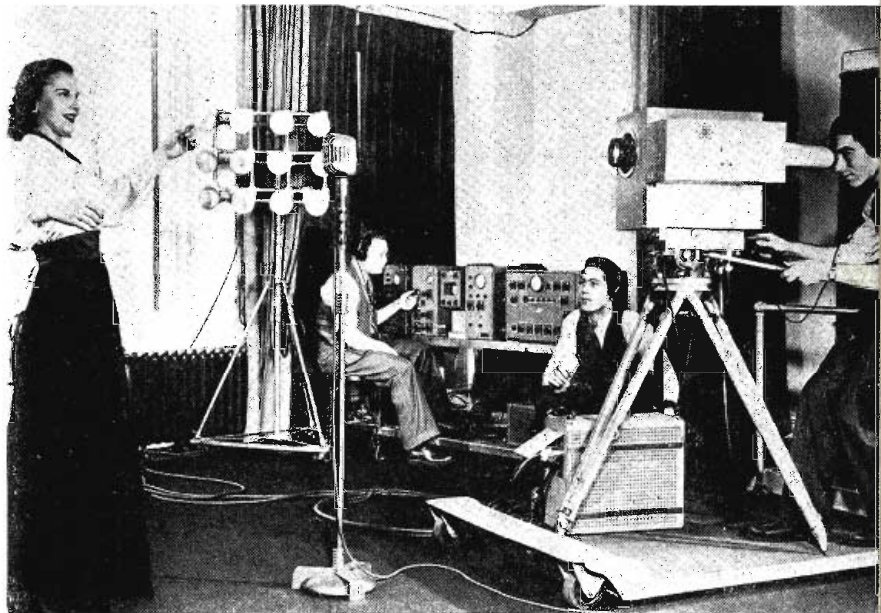
Motion picture equipment needed?

If careful timing is observed either a 16mm or a 35mm projector may be all that is necessary. (For a detailed analysis see Film Projection Equipment in TELEVISION, January 1946.) However, to be on the safe side, it is better to have two projectors, since a good portion of programming will consist of film presentations. Most stations believe that at least six hours of film will be scheduled weekly. Some studios, recognizing the need for creating their own film fare, are planning the acquisition of camera crews who will make on the spot records on film for transmission in the manner of present radio transcriptions. These studio-made films will be economically feasible when they have the added value of use for commercial syndication.

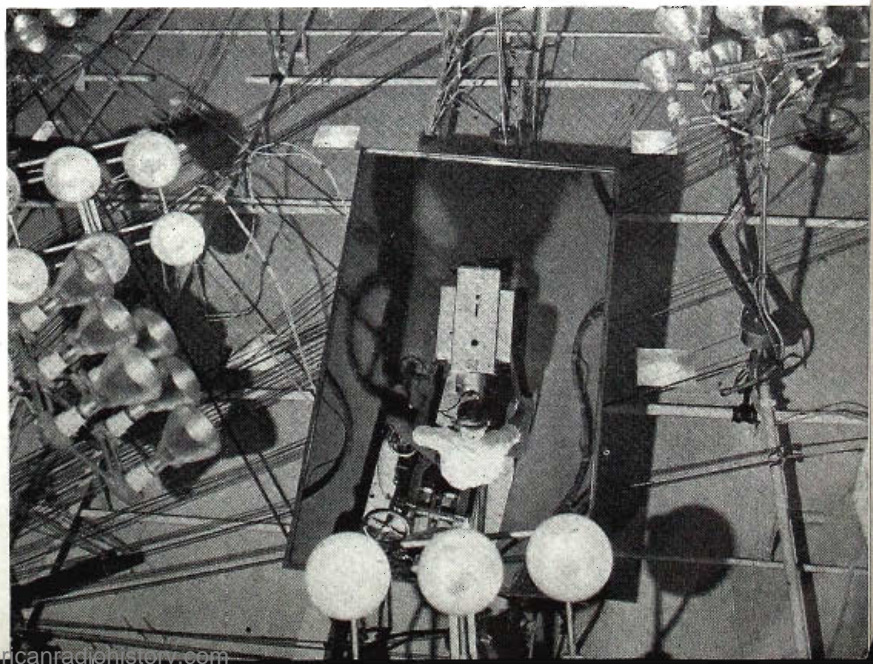
The investment required for motion picture equipment and cameramen can be justified on grounds other than programming. The films will make excellent records for FCC and agency checking. They are subject to careful editing, and can be marketed for general theatre use. Film equipment is obviously very important in the Special Events Department. Studios that do not plan an outlay for mobile equipment, can substitute a crew of cameramen to cover outstanding events.



Two completely equipped RCA trucks were used for televising the Army-Navy game over WNBT. Three cameras were employed



DuMont developed this suitcase type equipment for indoor mobile use. Show below illustrates the intricate wiring of WNBT lighting control system. For the curious, the cameraman in the center is the result of a trick mirror shot





Studio control equipment in use at WABD, DuMont

Mobile equipment? Outdoor mobile equipment equipped with two Image Orthicon Cameras, and a field relay transmitter, plus field audio relay equipment. Indoor mobile equipment may not require transmitter equipment if telephone wire with boosters, or coaxial cable is available. Some companies plan to manufacture completely equipped Mobile Trucks. One station has successfully developed mobile suit-case type equipment to cover indoor sports events. It consists of 2 cameras, 2 camera control boxes, and one master monitor switching unit. All of these units are shock mounted, and are really portable. They have been employed for as much as ten hours of weekly programming, and have given satisfactory service.

Lighting? Estimates for minimum lighting requirements vary from five hundred to one thousand candle power for every square foot, for despite all the improvement that we may expect in tomorrow's camera an enormous amount of illumination is required today. The Image Orthicon, with its great sensitivity to compensate for poor outdoor lighting is not recommended for studio interiors in its present state of development. However, these bugs will probably be ironed out soon and lighting problems will be simplified.

Lights may be of four types: incandescent, Du arc, Mercury vapor or fluorescent. Each type of illumination has desirable and undesirable features. Incandescent lights, while efficient in their color response, create enormous heat, glare, are difficult to handle, and have a heavy replacement cost. Du arc lamps throw less heat than incandescents, and produce a high degree of Kelvin or day-light effect. They burn carbons that require changing or trimming after an hour and one-half to two hours of continual use. Fluorescent light has the advantages of producing cold light, generating 6400-degree Kelvin light, and economy of replacement; they have the disadvantage of bulkiness, and unfocusability. Mercury Vapor light is large and unwieldy, and must have a water-cooling unit for each installation, which frequently separates and floods the stage, thus overcoming any advantage they have in combatting heat.

Lighting units can be fixed or semi-fixed for over-all illumination. Portable fixtures are also necessary for highlighting certain scenes. The problem of heat has been tackled in a unique manner by the American Optical Co. They have developed a glass which can be used in spot and floodlights as a heat screen. The company claims that

this glass will absorb almost 90 percent of the heat, while transmitting 85 percent of the light. Television companies are already experimenting with this new development.

Microphones? It is important to have the right amount of microphones to assure constant audio excellence. Mike requirements differ for each presentation, and while the mike booms afford a degree of flexibility, at least two are essential in each studio. One producer requires six mikes with stands and extension cords, evidently believing in the superiority of fixed, over boom-type audio equipment.

Audio and video control equipment? Each studio should have its own control and monitoring consoles. Amount of monitoring equipment depends on the number of cameras used as each camera is connected to a video monitor tube. In basing requirements for this equipment it must be remembered that final rehearsals require the employment of these controls, and with the stepped-up schedule of 28 hours, careful planning will have to be done to avoid a conflict if only one studio and one set of control equipment is available. Indoor portable control equipment may be used for rehearsals when fixed studio control equipment is not available.

There are many types of control equipment being designed today, and all seem to have as their ultimate goal, simplification of operation that will permit the functioning of the controls to be vested in the hands of the fewest possible technicians. One manufacturer has blue-printed a console that can be operated by one technician and the director.

Another means by which too heavy demand on equipment can be alleviated is through skillful direction, and production. The knowing director, with a thorough understanding of the technical possibilities and limitations of video can accomplish most of his rehearsals without employing cameras, lights, audio equipment, etc., because he has a complete grasp of the essentials of production. He is in the position of the trained conductor who can look at a score, and figure its possibilities in advance of presentation.

It is obvious that the best equipment can fail to deliver unless it is manned by enough skillful people . . . but that takes us into the subject of personnel, which we shall discuss next month.

man with the earphones. He knows just how long it will take one ike to move from here to there, what provision must be made for "transitions" between shows, and is responsible for the over-all organization and workability of the entire studio floor. He cues the prop men in their elaborate moves with title cards and effects, makes sure everything is in readiness before he gives his traditional "go ahead" signal (thumb and forefinger circled—three fingers extended). And he's responsible for the actors and actresses as they do the business laid out for them by the director. He relays all directions from the director to the actors with an elaborate dumb-show of pantomimed signals, "Begin action," "Speed it up," "Slower," "Louder," "Minute to go," "Half-minute to go," "Cut," etc. He carries a script and cue sheet, and on top of all this he tries to keep floor noise down to a minimum. He sometimes throws as many as 200 cues in the course of an evening's transmission, many of which he has hurriedly memorized that same afternoon. He is the main spring of floor operations.

There is the costume mistress—she tends the dressing rooms, lays out make-up for the actors, fits and re-fits their costumes, hustles them to their places during the show, and when they have taken off their crepe hair and grease paint, cleans up their costumes and packs them away.

There are the animators—those nimble-fingered folk who pull the string that whirls the ring that works the thing that animates the charts, maps and cartoons, used in many shows. They can make a tiny plane fly the Atlantic, illustrate the complicated movements of a new world peace organization or make Donald Duck wiggle his tail. They are involved in obtaining and mounting the many still pictures used in programming. They are a strange combination of showman, geographer and puppeteer.

There is the production assistant—she is involved in time sheets, purchase orders, estimates. She keeps records on the movement of properties and supplies in and out of the studio, checks prices on rental of costumes and properties, and can tell you to the minute how much time for each member of the production staff is to be allocated to each show on the schedule. She traces and records the activities of all the others in a concise and business-like way. She is the production man's right arm.

Put Them All Together . . .

So that is the line-up. Here is how it works. The program department cooks up a new idea for a show, and brings a script in to the production man. He calls his art director and carpenter into immediate conference. The number and type of sets, properties and costumes are decided upon, a floor plan drawn, and an estimate of production cost provided. (If it is above the budget, adjustments are made.) An actor's salary is balanced against an additional set of scenery; a fireplace is eliminated to allow the rental of a Louis XV sofa, etc. The plan is approved. The art director draws up plans for the carpenter. Construction begins. A prop list is made and the prop man starts locating the necessary things. Painters paint, the electrician lays out a light plot. Costumes are ordered and fitted. Title cards and effects are made up. Production buzzes. The director meanwhile is casting and directing the show. He is in constant touch with the production man. Changes and compromises develop, additions and subtractions arise. The thing begins to jell. The day of the show the sets are set up. They are propped and lighted. Finally the actors are called in. Ikes and boom mikes come into play. "Facility" rehearsals are on. The action is roughed out. Camera movements are tried. Adjustments are made. The show finally smooths out. Then into the

'dress"—the last chance to polish up details. Everything is ready. Then—air time! Comes the cue. The show is on! Before you know it, it is over. How was it? It is talked about. Post mortems are held. What did we learn?

The director has a chance to think over his next show. He has a week to plan and organize it. But what of the production man? He is already supervising the finishing touches for tomorrow night's show; he is getting together lists and plots for the show on Friday, and his mind is even now occupied with the special problems that will attend next week's schedule. He is often called on to prepare more than forty shows a month, with sometimes as many as 17 prepared shows among them (i.e. those requiring special scenery and props). He heads up a group of highly trained and eager specialists all working at top speed, all having the time of their lives, and all professing a belief in television that a casual observer would find it hard to credit.

Ladies and Gentlemen, I give you the Production Man—the Screwiest Guy in Television.

Television Outlook

In San Francisco (continued from page 14)

Television Productions, Inc.

Address—5451 Marathon Street, Hollywood, California

Officers—Paul Raibourn—President

Estimated Costs

1. Vis. transmitter	}	\$65,000
2. Aural transmitter plus tubes		
3. Antenna System		10,000
4. Studio Equipment		81,000
5. Studio Lighting		5,000
6. F & M Monitors		1,300
7. Other item		40,500—remote equipment

Channel—#4

Kilocycles—66,000-72,000

ESR—14800

Breakdown—outside pick-up26 hours
 studio production.....50 hours
 film24 hours

Interesting is this established program breakdown based on 100 hours monthly.

Antenna

Height, sea level—2841 feet

Height-ground level—241 feet

Location—steel tower anchored to ground

Transmitter location—Sassalito Township, California

Power, aural and visual—aural, 13.6; visual, 27.2

Population—1,656,786

Size of area—primary (within 5 ov/m contour)—

1885 sq. mi.

secondary (within 0.5 ov/m)—6200 sq. mi.

Location of Studio—1000 Market Street, Paramount Theatre Building, San Francisco

Engineering Consultant—L. W. Pett, Field Engineer,

Allen B. DuMont Laboratories, Inc.

San Francisco's hospitality, extended to business and individual alike, will welcome the new television industry while San Francisco's progressive support should soon make of any station located there, a rival of the best.

ONE MAN'S REFLECTIONS

A regular monthly feature by DR. ALFRED GOLDSMITH

It's Later Than You Think

In resuming the pleasant task of presenting in this column what I hope to be timely and constructive comments on the status and trends of television, the writer desires first, to express his hearty appreciation to his co-worker, Dr. Raymond M. Wilmotte, for his interesting and stimulating contribution to a recent issue of this column.

THE somewhat somber dictum which stands at the head of this present issue of the column is believed to have brighter aspects than are usually attributed to it by those who read it, generally, on the face of the sun-dial. Times of lateness are times for vigorous action. And it is really appropriate to point out that, so far as commercial television broadcasting is concerned, it is considerably later than most planners might think.

The governmental situation is rapidly clarifying. The Federal Communications Commission has allocated 13 channels to commercial television broadcasting in a usable portion of the frequency spectrum between approximately 50 and 200 mc; it has indicated the cities or communities to which each of these channels will be available; it has issued detailed rules of engineering and operating practice for the television field. And it has even assigned specific dates at which the operation of commercial television stations is required.

The Commission has also begun its difficult task of assigning particular channels in specific cities to individual stations. It has set hearing dates for the determination of additional channel assignments in other important cities. Practically the only remaining major moot point—the determination of the extent to which Channel 1 (now assigned to television community stations) will also be regionally employed by frequency-modulation broadcasting stations—will shortly be considered and presumably definitely decided. Thus, so far as governmental action is concerned, a large number of commercial and experimental television and broadcasting stations will presumably find ahead of them a clear road and will encounter no legal obstacles to their operation.

Equipment Deliveries

One of the inherent elements of every television station is its transmitter. The commercial manufacturers of television transmitters, when interviewed, have indicated that such transmitters will be available in reasonable quantities during 1946. At a rough estimate, these manufacturers may be able to supply several dozen such transmitters to the corresponding stations by the fall of 1946. These transmitters will be in such diversity of types and powers as should meet the various needs of individual station owners. Here again a major obstacle to television exploitation appears to have been satisfactorily overcome.

But without television receivers offered on a large scale to the public, television broadcasting would proceed at a relatively restricted pace. Fortunately, the manufacturers of television receivers similarly plan to present the simpler types of such receivers to the public in appreciable quantities early this summer, and to offer a wider variety of types of receivers by the late fall. It is clear that receivers will fall mainly into the \$100-\$500 price range, will offer pictures between 7" x 10" and 18" x 25", will be housed in cabinets covering the range from table receivers to the most elaborate consoles, and will present picture quality of an astonishingly superior character as compared to that appearing on the pre-war vintage of television receivers.

Plan of Action

All in all, the prospects for television commercial broadcasting are now bright. This raises the question: What should the prospective television broadcaster be doing at this time? The list of his tasks and opportunities is almost endless, but the

following general examples may be particularly stressed.

Assuredly every television broadcaster should adjust his capital structure to carry the costs of a television station and of its operation during the build-up period while the audience is being acquired and commercial sponsors are being attracted.

The prospective television broadcaster should select the site for his station and secure all necessary municipal and federal approvals of such a site. The detailed plans of his station should be in preparation. He should be in touch with the transmitter manufacturers in order that he may be assured of exceptionally prompt delivery of transmitters. His application for a license should be filed with the FCC.

Personal Training

In addition to these obvious steps, he should now be gathering the members of his engineering staff, training them in their duties and preparing them for the installation and operation work which they must carry out. Nor should he neglect the assembly of his writing and programming staff. These indispensable workers will on occasion have a hard time to find interesting and acceptable material for the television audience. Now is the opportunity to select and to train them in their arduous duties and to work effectively in cooperation with each other—the engineering staff and the studio-operating group.

Needless to say, the operation of a television studio requires additional members who should now be sought. Skilled men in this field are few and far between, and most of the prospective operating staff must be trained by the broadcaster himself. This will literally be a case of "learning to do by doing."

And last but not least, the prospective television broadcaster must give due attention to the commercial operations in which he will be engaged. He must assemble the sale staff, prepare tentative rate cards, and formulate policies enabling the sale of time to sponsors. If he is at

(continued on page 29)

Why

this team could do

There are three reasons why the team of Bell Telephone Laboratories and Western Electric was able to handle war jobs fast and well.

(1) It had the men—an integrated organization of scientists, engineers and shop workers, long trained to work together in designing and producing complex electronic equipment.

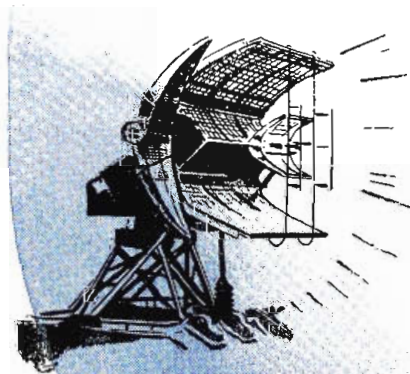
(2) It had unequalled physical facilities.

(3) Perhaps most important of all, it had a long established and thoroughly tested method of attacking new problems.

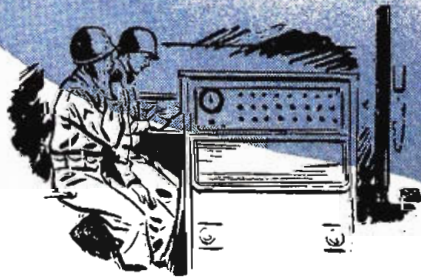
What is this method of attack?

In simple terms, it is this. Observe some phenomenon for which no explanation is known—wonder about its relationship to known phenomena—measure everything you can—fit the data together—and find in the answer how to make new and better equipment.

In the realm of *pure research*, Bell Laboratories has carried on continuing studies in all branches of science with particular emphasis on physics, chemistry and mathematics. Often they have set out to gain new knowledge.



Bell Laboratories and Western Electric teamed up to supply more than 56,000 radars of 64 types—approximately 50% of the nation's radar production on a dollar volume basis.



Bell Laboratories designed and Western Electric produced more than 1600 electronic gun directors and gun data computers which greatly increased the accuracy of anti-aircraft and coast defense guns.



More than 1,000,000 airborne radio receivers and transmitters were furnished by Western Electric to help coordinate attack and defense in the air.



Bell Laboratories designed and Western Electric furnished more than 139,000 multi-channel FM receivers and 74,000 multi-channel FM transmitters for use by the Armored Forces and Artillery.



Bell Laboratories and Western Electric furnished revolutionary carrier telephone terminal equipment in great quantities—all "packaged" for quick installation in the field.

War jobs like these

no immediate prospect of an application in the communications field. Time after time, their discoveries eventually brought about fundamental scientific advances.

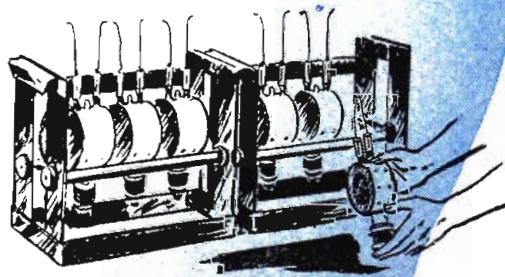
Applying new discoveries

As new discoveries have reached the stage of application, Western Electric manufacturing engineers have always worked closely with Bell Laboratories men to assure a design suited to quantity production of highest quality equipment.

During the war, the capabilities of this unique research and development team expanded rapidly. New techniques were developed—new methods were developed—new ideas were developed—rich with possibilities for the future.

What this means to YOU

Bell Laboratories and Western Electric are once again applying their facilities and their philosophy to the development and production of electronic and communications equipment for a world at peace. Depend on their team for continued leadership in AM, FM and television broadcasting equipment.



Bell Laboratories and Western Electric played outstanding roles in the design and production of magnetrons and other essential vacuum tubes for use in radar and communications.

BELL TELEPHONE LABORATORIES

World's largest organization devoted exclusively to research and development in all phases of electrical communication.

Western Electric

Manufacturing unit of the Bell System and nation's largest producer of communications and electronic equipment.



Setting Up A Talent Training Group

Television is going to demand an almost inexhaustible supply of talent to fill its programming needs. Stations away from talent centers could well use this "waiting period" to organize their talent procurement plans.

By JAMES L. CADDIGAN

WIDELY varying differences of opinion have been voiced in answer to the question, "What percentages of film programs, and live studio productions will be scheduled to complete the daily programming of a television station?" This indicates that the only definite answer at the moment is that there will be film programs, and there will be live studio productions. The film program, delivered to the station in a can ready for projection, does not present, to the future television production staff, the major questions arising from discussions regarding the procurement and development of talent for the live studio programs.

Tele Demands High

In attempting to answer the multitude of questions pertaining to television talent, it is obvious that first consideration should be given to the demands television production technique will place upon such players. In radio the listener uses the audio interpretation of a character as the basis for an individual mental development of that character. He mentally creates the physical characteristics, makeup and costuming of each performer. The entire production is set and dressed to exactly suit the individual theatrical tastes of each listener.

A diminutive player can be cast as a robust six footer, if such a player is equipped with a lusty six foot voice. A performer can "double" for as many characters as he or she has distinctive dialects. The development of suspense, dramatic shock, comedy situations, etc. through the medium of "stage business" is obviously not a part of radio technique. Radio has successfully double cast musical shows without destroying the illusion of the single character. One cast talented in the handling of the musical score has alternated with a second cast talented in the presentation of the book. Radio has been permitted many production liberties that will be denied television.

The video viewer, seated in front of a television receiver, will grant imagination a holiday, and any reaction or emotional response to a production will be developed by what is seen as well as heard. In every respect the player will have to fit the character and possess the talents necessary to a convincing interpretation. The cloth of authentic costuming will take the place of radio's inexhaustible imaginative wardrobe. The repeated video performance of a player will create a monotony not experienced in radio. It is expected that a player in a serial television production will appear in each daily sequence, but the repeated appearance on the video screen of an individual player in five or six different characterizations a week may bring about a frantic dial search for new faces. For the same number of air hours per week television will need more talent than radio, unless television adopts the presentation of longer programs than those familiar to radio.

Staging Sense

The television player will have to be equipped with a sense of timing, in the development of stage business, that is not demanded of the radio performer. The same degree of voice projection demanded of a player by the theatre will not be necessary in the television studio, but the "remote" position of the microphone, "out of the scene," will demand an understanding of this technique. It is entirely possible that voice dubbing will eventually take its place in television's production technique, but "on the scene" double casting, as practiced in radio, cannot be accomplished. The illusion of the single character would be swiftly destroyed if two players alternated in the same role before a video audience. Television will demand players of versatile talents.

The practice of reading a script in radio, and the technique of shooting short scenes, with the added protection of retakes, in motion picture production, does not demand the good "study" that television will require of its talent. A television player will find it necessary to memorize from one to thirty or more "sides" of dialogue, stage business, cues, etc. depending upon the length of the production.

In the theatre a player's movements about the stage is controlled by the physical limitations created by the set, and whatever props and set dressings used. In television the player will have to carry the extra "memory load" of the limitations of movement set up by the restricted coverage of the video camera and microphone boom.

Wide Talent Scope

It is obvious that television will use a wider variety of talents than those required by radio. Dancers, magicians, acrobats, rodeo acts, etc. will fill the talent files of the future television station. Closeup techniques will make possible many formats not adapted to the remote audience position of the theatre, or not suited to national motion picture presentation because of local flavor. Such talents will include artists, sculptors, puppeteers, hobbyists and those indulging in unusual occupations.

In the opinion of the writer, the "telegenic" qualities of a performer will be important only when the character being played demands these qualities of face and figure. Character men and women will most certainly be expected to look the part they are playing and a special events director will never pass up a story for the lack of a telegenic crowd.

A frequently voiced question regarding television talent is, "Where will they come from?" The answer, "From everywhere!" is not too broad to cover the situation. Television is faced with a continuous task of talent development and all possible sources will have to be investigated. An excellent comedian may be laboring over a lathe in a machine shop and can only be discovered through his par-

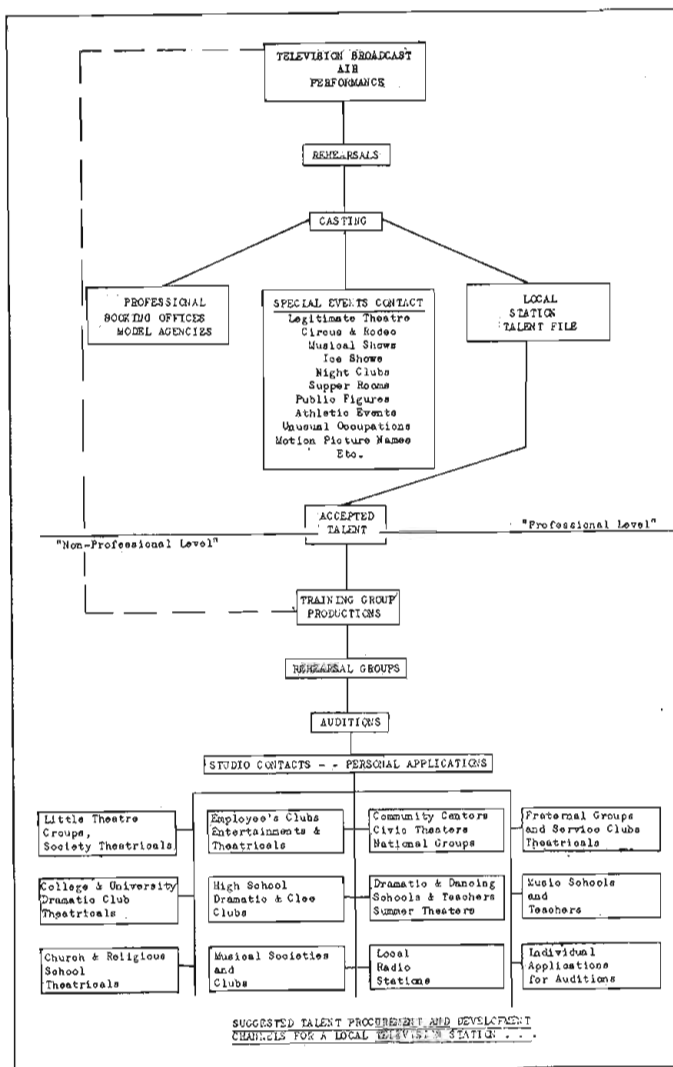
ticipation in an employees' show. A talented dancer may be still a student in a local dancing school. A desired vocalist, may at the moment, be singing in a college glee club and a capable dramatic performer may be now playing with one of the many little theatre groups that spread across the country. The many sources of professional talent, suitable for participation in television productions, are familiar to anyone associated with the allied arts.

Amateur Talent

"Can amateur talent be used in television production?" is another question under frequent discussion. Critics reviewing such talent indicate, that in the majority of cases, this type of performer does not make for a successful show. In my opinion, amateur talent can be used providing such talent receives special handling, sufficient rehearsal periods, and a production technique devised to compensate for their more obvious deficiencies. Before passing amateur talent by, television should remember that in the beginning all talent falls into this amateur bracket, where it remains until discovery and development raise it to a professional level. A television program produced with untrained talent should be so labeled, and any attempt to create the impression that the listener is watching a professional company should be avoided. When possible, the amateur production should be spotted on the daily program schedule at a time that removes it from the possibility of unfavorable comparison with a professional production of the same type. An amateur company should be provided carefully considered material that is well within the limits of their ability to interpret. Material of a dramatic or emotional nature, convincingly handled by professionals, would probably waver dangerously toward the level of farce comedy if attempted by an inexperienced group. Amateur talent should always receive the benefit of the understanding, experience, and guidance of a professional director. Too often an amateur company is surrounded with a makeshift production in the way of scenery, lighting, costumes, makeup, etc. The local television station required to use such talent should provide these productions with the best possible dressing as much of the amateur flavor can be eliminated, and the simplified material made more palatable if such a procedure is followed.

Organization Set-Up

The local television station planning the continued use of live studio shows will find it necessary to organize, and maintain a permanent training group that will serve as a clearing house for all talent auditions, and as a development center for discoveries of promise. Standards of talent acceptability can be set, and when the amateur has graduated to the professional level he or she can be



included in the station's permanent talent file. The local television station must face the fact that it will not be able to prevent local performers, of above average talent, from eventually finding their way to the network production centers. As vacancies occur in the talent roster of the local station, replacements must be ready to fill the gaps, and, in the opinion of the writer, this will necessitate a constant eye being kept on all possible sources of talent in a station's area, as well as maintaining a permanent program of talent development.

Television stations, away from production centers, are not going to be able to assemble talent in a week or even a month before the station goes on the air. Thus, the "waiting period" now forced upon television could be used to excellent advantage in the organization of talent procurement plans for future use.

American Television Society Directory

Just Off the Press

This excellent book furnishes a comprehensive picture of the entire television industry.

Top articles by leaders in the field authoritatively state the views of the many interests in television. Also included are lists of applications for television stations, programming sources, advertising agencies and an extensive bibliography.

The Directory sells for \$5. Either write to us or directly to the Society for your copy.

Long Shots And Close Ups

A regular monthly feature on film production by H. G. CHRISTENSEN

ONE of the questions we were going to work on, according to last month's TELEVISION, was "Why do motion pictures cost so much?"

Do you remember that I said then, no doubt the reader meant why were motion picture costs so much higher in comparison with other media. Well, after checking, it turned out to be the right guess. Going out farther on the limb at that time, yours truly said that some research would be done on the subject and that the result would show that motion pictures would hold their own, both as to costs and results, with that of other media. The said research is still underway and it won't be long now, (maybe the next issue) before you'll be presented with some interesting facts.

In the meantime, another very pertinent question came in; one very closely related to the one above. This can be answered now and really should precede the other anyhow.

Many people have asked it, and here it is:

"Pictures being a rather costly proposition, how can an advertiser produce them exclusively for television's limited audience with little or no sales return to cover costs?"

Brother they can't, unless they're over-burdened with money — but lend an ear. In discussing this the other day with Don Widlund, an authority on the distribution of advertising and commercial films, (theatrically and non-theatrically), he put it very aptly when he said, "television is nothing but a motion picture with radio sound, brought into the home."

Dual Purpose Films

So what? Just this. I've argued for some time now, that with the right pictures, the theatres can be the proving ground, to a great extent, for television. In other words, pictures do not have to be produced exclusively for televising. They can be produced for either theatrical or non-theatrical distribution, or both, returning their costs thru the results achieved — and THEN televised

without the penalty of having to produce dollar sales returns.

Naturally, the first question you'd ask is, what changes would have to be made in order to get the same effectiveness on the television screen and on the theatre screen. Let's analyze this one.

According to Widlund, to be successful, sponsored films in theatres must have the following qualifications:

1. Running time — ten minutes or less.
2. A good story, suitable for the theatre, but one that can carry the sponsor's message effectively.
3. Correct approach to the theatre management. (Here, I'd like to add a note of my own.) If the theatre management, for policy reasons, so desire, they may reject a film which has had satisfactory audience acceptance in other theatres. You've gotta get by the management first.
4. Protection of the client in the writing, direction and production. (Another note.) The best sponsored theatrical films ever produced never mentioned the sponsor by name, but put the "message" over visually which is always better selling, when it can be done.

Now, in what way do these requirements differ for television? I'd say, basically they are the same.

1. The running time will be longer than ten minutes in most cases, but this is no problem providing —
2. The story is good, holds interest and can carry the sponsor's message effectively. Any picture suitable for theatre audiences should be alright for the home — it's the same audience.
3. Approach to management. Just as the theatre management decides on what film-fare they are going to offer their audiences; so will the broadcasters decide as to what they will or will not put on the air. Again, you've gotta get by them first — to get to your audience.

4. And here again the client must have protection in the writing, direction and production of his show — after all, it's his money.

Same Audience

So, to my way of thinking it all boils down to the technical job of producing a picture that will *look as good* on the television screen, as it does on the theatre screen. And I'm one of those guys that believes that the average home television audience is going to think of their "set" as a screen; and aren't going to care much, one way or another whether the picture on that screen is from a live show or a movie. What they are going to care about is, "ON WHAT STATION DO WE GET THE BEST SHOW?"

In addition to theatrical, non-theatrical distribution, and television, there is one more application for pictures of this type — showings to the sponsor's dealers, salesmen, customers and prospects. Here then, is one way of getting started on a television program without asking the impossible — that television results bear *all the freight*.

If you have the type of product that lends itself to visualization and a motion picture producer, or an agency with a motion picture department that understands:

1. The sponsor's needs.
2. How to interpret those needs visually, in acceptable and interesting pictures, that are entertaining.
3. Theatre management policies and requirements for acceptance.
4. Audience reactions.
5. Consumer selling.
6. Various channels of non-theatrical distribution.
7. Handling cooperative dealer programs.

If you have this, you can readily see how it is possible to spend \$15,000 to \$25,000 on a film program, get a full return on your investment, plus a television show at practically no additional cost, except for time. Right here, let's make it crystal clear this is not a plug for movies over live shows or vice-versa. Unquestionably

both will be used, and to what extent is anyone's guess at this time — and time will tell.

Technique Changes

Now what changes in technique will be required to make a commercial film serve a four-fold purpose? Keeping television in mind, two things in particular would seem important — the proper picture density, (contrasts), and the elimination of long shots wherever possible. As far as possible the action should be played in medium shots and close-ups, using long shots only for establishing locations when necessary.

There is one technique that has been developed to high degree by commercial picture producers that I believe can be used very successfully in television — that of having the sponsor's message an integral part of the show. And that should be gotten over visually instead of orally, wherever possible. It would seem to me much less disturbing than cutting in with a mouthy commercial — and certainly selling by demonstration is more convincing.

Take for instance, the feature pictures you see in theatres — they can't help but show you new types of homes, all kinds of different interiors, new furniture, decorations, modern kitchens equipped with the latest in refrigerators, ranges and other features; to say nothing of new cars, latest in clothes, et al. All of this inadvertent selling has a terrific influence on the buying public that has been and will continue to be worldwide.

Surely, television producers and writers are going to have to learn to think visually and make the most of the old proverb of Confucius, that "One picture is worth ten thousand words." The old fellow knew what he was talking about.

Demonstration

Don't forget another very important thing: By *visual demonstration actual proof* can be submitted of many things that now must be accepted on mere statement. For instance, if you claim your refrigerator's deep-freeze compartment holds a certain amount of food, you simply prove it by putting the food into it. This and hundreds of other similar demonstrations should eliminate a lot of verbiage and wear and tear on announcer's tonsils.

One of the best examples of proof by demonstration was done on the television show, "Ladies Be Seated," an audience participation show for "Chef Boy-Ar-Dee" spaghetti, pro-



Above scene was taken during the shooting of a training short prepared by West Coast Studios for Ford Motor Company. Intended for instructing their salesmen in all the selling points of a car, this same type of film also has possibilities for showing to consumer audiences, as it does a better selling job than the average salesman can duplicate. Every detail of an auto showroom is faithfully reproduced in the set to give the necessary authenticity — an important point to remember.

duced and broadcast by the television department of the American Broadcasting Company. *On the radio* it was stated that Chef Boy-Ar-Dee spaghetti could be prepared and served in twelve minutes. That was on radio. On television, at the very start of the program the audience *saw* the spaghetti taken from the package, put in a pot, placed on a stove and started on its way. During the entire broadcast, with all the changes of camera angles, the pot on the stove *was always* in the scene. The climax was, toward the close of the program, when at the end of twelve minutes, the spaghetti was served to the participating studio audience. There was

an integrated commercial that not only didn't interfere with the rest of the show, but certainly did a better selling job than ever could be done by oratorical radio. That's using your noodle to sell spaghetti.

Advertisers can afford right now, to get into television through the commercial picture route and reap dividends at the same time. Of course, no two problems are going to be alike, some products lend themselves better to this medium than others — but no matter what the problem is, there's a solution to yours. Remember pictures are a **UNIVERSAL LANGUAGE** — everyone understands them.

One Man's Reflections (continued from page 23)

present engaged in AM or FM station operation, he must carefully coordinate his future television activities with his present broadcasting activity, to the benefit of each of these. Ingenuity in so doing will reap a rich harvest in later profits and in the avoidance of embarrassing situations. A hundred additional details might be listed, but it is believed they will be naturally encountered in carrying out those suggested.

Future Dividends

The prospective television broadcaster who vigorously and intelligently goes to work on his plans immediately should be one of the leaders of television in future years. It is clear that an excellent black-and-white television service, fully acceptable to the public on the basis of its continuing entertainment value, can now be established.

The gold in the television hills is now open for mining.

ADVERTISING

Capital suggests \$100, DuMont \$360 for hourly tele time rate . . . NBC and BBD&O join forces . . .

DATA presented to the FCC on advertising potentialities for proposed television stations in Washington gave an optimistic, though highly contradictory picture. With the exception of Bamberger who planned a 100% sustaining program the first year, and the Evening Star, who declined to make any premature predictions, all applicants ventured some figures on the estimated D. C. ad revenue.

Philco's programming set-up was based on 60% commercial, with 40% sustaining, although no estimates of

revenue or definite charges for tele time were indicated. NBC estimated the first year's income at \$25,972, but here again there was no breakdown as to percentage of commercial programming or specific air rates. This figure can be assumed to include rehearsal and production charges, sales of package shows, etc., and not necessarily income from sale of time alone.

Most interesting comparison, however, was the proposed DuMont rate of \$180 per half hour for the first year (\$360 an hour), as against Capital's estimate of approximately \$100

an hour. Figuring on about 14 hours of commercial time, Capital estimates a yearly revenue of about \$170,000 (not including rehearsal charges), while DuMont, planning on 13½ hours of commercial time and with rehearsal costs pegged at \$50 an hour, expects a take of \$244,465. With the expected increase in the number of sets, DuMont plans a corresponding rate jump to \$297 a half hour for the second year. Based on about 24½ hours commercial out of 31 hours programming, this would total \$614,732.36.

Leonard Cramer, vice president of DuMont, presented a very comprehensive analysis of the Washington ad market. In basing the proposed advertising rate on the number of viewers per home, he projected a total of 15,075 homes equipped with television by the end of the first year, with 33,075 at the end of the second year. Estimating eight viewers to one receiver, the total audience would consist of 120,600 persons the first year and with six viewers to a set the second year would total 198,450.

To determine the per viewer charge, they averaged a cost falling between radio and magazine display advertising which amounts to .003 per viewer per half hour. In computing the final tele time charge, it was assumed that their Washington station could attract 50% of the audience.

While typical viewing habits cannot be determined yet, Cramer pointed out that it can be safely assumed that there will be small daytime audiences. This factor, combined with a limited number of stations, may easily result in more advertisers than air time. To protect the local and small national advertisers, joint sponsorship programs must be set up. DuMont offered the following sample format as a tele substitution for the spot commercials on radio.

In keeping with their campaign to excite the public about the possibilities of tele programming, NBC ran the ad at the left in the Sunday editions of the New York Daily News, Herald Tribune and New York Times. Idea is to interest people who do not have television sets and to start building a following now for the time when they will be available. Ad size was 1,000 lines.

The Valley Belle SHOWBOAT

at DOG ISLAND LANDING



Du Pont "CAVALCADE OF AMERICA"

presents

"Children of Ol' Man River"

featuring THE FOUR BRYANTS in that
STUPENDOUS PRODUCTION

"UNCLE TOM'S CABIN"

and as an
EXTRA ATTRACTION

"Ten Nights in a Barroom"

POLITE YAUDEVILLE
BETWEEN THE ACTS

CAST OF CHARACTERS

Lillian Cornell as <i>Josephine</i>	Tony Blair as <i>Pa Bryant</i>
Buddy Pepper as <i>Billy Bryant</i>	Eda Heineman as <i>Ma Bryant</i>
Mary Scott as <i>Flo Bryant</i>	W. O. MacWatters as <i>Capt. Rita</i>

also

Bryant's Old Time Minstrels

"A Breath of the Sunny South"

featuring

Tom Fletcher's Quartette	The Alan Hall Trio
Waller's Octette	

DON'T MISS IT!!!

(NBC TELEVISION)

WNBT NEW YORK CHANNEL NO. 1

3 SHOWINGS

Wednesday, January 30th at 4 p. m. and 8 p. m.

Sunday, February 3rd at 8 p. m.

"Children of Ol' Man River" will be presented on Du Pont's "CAVALCADE OF AMERICA" on Monday Evening, February 4th at 8 p. m. — Tune to WEAF, 660 on your dial.

Program would consist of a number of variety acts and an emcee who would act as coordinator. Commercials would be integrated by having a window dresser in the background building a display. At the end of each act, the emcee would go over, criticize the display, which he never likes, while the window dresser explains the product in the ensuing give and take patter. Same thing starts all over with a different product each time. Thus the program keeps its continuity with no obvious breaks for commercials, which DuMont policy favors.

STATION ACTIVITIES

DuMont, New York, has established tentative schedule of rates for air time, and use of the studios in the Wanamaker store. The schedule of rates is as follows:

One-half hour of rehearsal time.....	
Studio A	\$65.00
One-half hour of rehearsal time.....	
Studio C	\$50.00
One-half hour of rehearsal time.....	
Studio D	\$40.00
One-half hour of air time for	
each studio	\$180.00

WBKB's policy governing commercial shows over its facilities are planned on the basis of a 13-week series. For new shows without an established format a minimum rehearsal ratio of 14 to 1 is set. Station is in favor of an established format because, besides effecting a saving in rehearsal time, the advertiser can better evaluate the effect of his advertising through repetition of the same theme in a weekly series.

Advertisers may package the complete program, and bring it to the station as a unit, since there is, at present, no charge for studio use or air time. On the other hand, advertisers may have the entire show produced by the station. In either case the station feels that the final phase of production should be in the hands of a staff director.

According to Captain Eddy, television director of the station, too many advertisers prefer a short commercial spot. He believes that the 20 or 40 second announcement is not suitable for television. He prefers a longer commercial with no time limit if it is woven into the entertainment. When this is done with sufficient skill he sees no reason for limiting the length of the sponsor's message.

COMMERCIAL ACTIVITIES

Interesting stunt was the "Cavalcade of America" televersion of the DuPont radio show over WNBT. Previewed over television before its radio debut, show used the two-barreled promotional punch of adapting radio shows to television and also opened up the possibilities of using video in much the same way as movie trailers are used now.

But even more important from the promotional angle on the network's side was the practical demonstration of amicable agency and network relations. Despite the conflict between agencies and networks over who will have the final say-so on the production of the show, this 50-minute program was NBC's baby, with their television department handling every detail from script adaptation right on down the line. Tying in with their campaign to get the public television-conscious, 1,000-line ads were run in the Sunday Times, Herald Tribune and the Daily News. BBD&O was the agency.

Based on the autobiography of Billy Bryant, famed Mississippi River showboat man, "Children of Ol' Man River" was exceptionally well done.

There was a good framework for knitting a variety of entertainment features into a unified whole. Against the personal life of the Bryants aboard the showboat "Valley Bell," the many acts which the family troupe made famous were performed. Renditions included tap dancing, singing, and gay 90 versions of the old tear-jerkers

Industry Status

THERE are more than 150 applicants for television stations at the present time. Receiver deliveries will start this June and more than 20 transmitters will be delivered in 1946.

The television industry is, at last, under way. How it will affect your position will be impossible to answer at this time. We think you will agree though that it is important for you to keep posted on television now.

Every month TELEVISION Magazine reports on all significant developments in the industry, whether it be:

ADVERTISING
STATION
OPERATION
PROGRAMMING
EQUIPMENT
NEWS
FCC ACTIONS, ETC.

Keep up with television by reading TELEVISION.

Rates

\$3.00 each	5 to 10
\$2.50 each	10 or more
\$3.50	for one year
\$5.50	for two years

TELEVISION Magazine,
600 Madison Avenue,
New York 22

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On Call from the Largest Stock Shot Library

FILMS FOR TELEVISION . . . scenes of every description . . . backgrounds . . . unusual effects . . . current and historical events . . . scenic . . . dramatic . . . educational . . . INDEXED for speedy, efficient service. New materials constantly added. Special service exclusively for Television.

ELBERT S. KAPIT, General Manager.

GENERAL FILM LIBRARY, INC.
1600 BROADWAY · NEW YORK 19, N.Y.
CIRCLE 6-6441-6442

YOU NAME IT—WE HAVE IT



"Uncle Tom's Cabin" and "Ten Nights in a Barroom." Particularly good entertainment was the harmonica trio and the singing octette. Grand finale, which on the personal side was reached when the Bryants finally made Broadway, was the minstrel show.

Camera shooting made the most of every scene and close-up shots were extremely well handled with no dis-

tortion. Of course, due to the Petrillo ban, recordings were used for the musical accompaniments. These effects were well dubbed in and the vocal synchronization on the part of the singers well handled.

Staging effects were excellent, with seven scenes being used. Although it's the show that counts, and home viewers will not be expected to make al-

lowance for studio limitations, it was amazing how in the cramped facilities at WNBT, such an elaborate production could have been so well staged. Which points well for the future of tele when such limiting factors no longer exist. Film clips showing the show boat on the river gave the necessary sense of authenticity to the production, and the clever use of these clips, together with the hand bills of different performances denoted the passage of time.

Commercial was limited to the DuPont trademark, and off-screen announcement of the DuPont slogan at the beginning and end of the program.

N. W. Ayer has signed a 26-week contract with WABD on behalf of Waltham Watch Co. for the 9 P.M. time spot, according to Don McClure, tele director at the agency.

Biow Co., Inc. has increased the Bulova Watch time signals over WNBT. Formerly given at the opening and closing spots on Monday and Thursday, schedule has been extended to Saturday nights. When sports programs are televised, three time signals will be given. Number will be limited to two for other programs. Contract is for twenty-six weeks and commercial includes both film and animation. Agency is Biow Co., Inc.

William Esty is experimenting, under the direction of Kendall Foster, with the possibilities of 16mm films for tele. They are seeking an entertaining presentation that will embrace variety, short comedy and "How-to-do-its" for their potential television clients.

The Fair Store over WBKB, Chicago, has been continuing their experiments with a weekly program called "Let's Go Teleshopping." Format features commercial presentation wrapped in a story.

One program was built around the well-known trials of a male shopper with a huge gift list. His difficulties were solved when the store's personal shopper quickly, and interestingly presented a string of live models who featured fashions, perfumes and other gift possibilities. The touch throughout was kept light but informative, with clear statements about prices for all merchandise. The audience was invited to order over the telephone.

No mention is made of department locations, since they feel that most teleshopping will be done via the telephone. In an attempt to conform to the desires of the Chicago viewing audience, the Fair is planning the addition of programs other than those dealing with direct merchandising tie-ups. They have scheduled Moulton Kelsey, news commentator, for an early appearance.



Fair Department Store experiments with video over WBKB stresses merchandise facts, although using a dramatized format. Scene above uses a display setting to demonstrate a sun-lamp. In the scene below, a commentator off-set describes the merchandise as salesman indicates the details. The man at the left is not in the camera range, as he is shown later in a separate scene. This set-up shows how space can be utilized to provide quick camera switching from scene to scene.



Ruthrauf & Ryan, over WBKB, Chicago, presented a program for Acrobatic Shoes designed to appeal to children. The show was viewed by classes in the two schools equipped for television, while one class saw the program at Marshall Field & Co. (the Chicago outlet for Acrobatic Shoes). Kids' reactions are now tested and correlated to form the basis for future planning in presentations to youth.

Alfred J. Silberstein-Bert Goldsmith, Inc. has renewed the Botany contract over WNBT for another twenty-six weeks. As before, the commercial will be cartoons on sound films.

J. Walter Thompson presented over WRGB for Pond's a show designed to catch the attention of the junior miss. Under the direction of the well-known beauty consultant and lecturer, Mary Stuyvesant, local high school girls, demonstrated how to be attractive and charming. The teenagers were analyzed as to face, figure, clothes, posture, manners, hair, and make-up. Right and wrong were indicated by using the participants as examples. Opening shot was a blow-up of the Pond's label, which was exposed for five seconds, after which mention of sponsor was kept to a minimum, with only a one sentence verbal plug during a demonstration of make-up removal. Commercial was gained mainly by keeping the sponsor's product on a dressing table throughout the show. Length of program was 20 minutes, which Norman Rosen, agency's television director, decided was a good length to sustain interest throughout.

CURRENT SPONSORS

WNBT (NBC), New York:

Botany Worsted Mills, weather reports through Alfred J. Silberstein-Bert Goldsmith Inc.; Bulova Watch Co., N. Y., time signals through the Biow Co., N. Y.; Elgin Watch Co., time signals through J. Walter Thompson Co., N. Y.; Esso Marketers, Victory Parade through Marshalk & Pratt Co.; Gillette Safety Razor Co., Boston, "The Cavalcade of Sports," remote boxing matches through Mazon, Inc., Detroit; RCA Victor Division of RCA, N. Y., "The World in Your Home," film program through J. Walter Thompson Co., N. Y.; Waltham Watch Co., Waltham, Mass., film and time through N. W. Ayer & Son, Inc., N. Y.

WCBW (CBS), New York:

Elgin Watch Co., time signals through J. Walter Thompson Co.

WBKB (Balaban & Katz), Chicago:

Commonwealth Edison, "Telequizi-



Scene above is from the Pond's cosmetic program presented over WRGB by J. Walter Thompson. Make-up appropriate for teenagers and tips on how to apply it were given by Mary Stuyvesant, above, center, beauty expert, during a televised program on charm and personality for the high school crowd. Program, fashioned after a beauty clinic, used six high school girls with individual problems of grooming. Demonstration included proper hair styling, correct posture and carefully applied make-up to highlight each girl's best features. Scene below is from the Cavalcade of America program, "Children of Old Man River," produced by WNBT for DuPont and B.B.D.&O. Colorful showboat story had a cast of twenty people and used seven sets. Good camera shooting gave the effect of space and crowd scenes, as shown below, even though limited in studio space.



als," direct; Fair Department Store, "Let's Go Teleshopping," direct; and Schwartz Radio and Television Co., Chicago, "Magic from Aladdin's Lamp," series of magic shows, direct.

WRGB (General Electric), Schenectady:

Pond's Cosmetic Program, through J. Walter Thompson.

Both WPTZ, Philco, Philadelphia, and W6XYZ, Television Productions, Hollywood, were off the air during January and February to make the necessary channel changes. WABD, DuMont, New York, off the air since September 20th, have many agency contracts lined up although no definite date for scheduling programs has yet been set.

PROGRAMMING

Superimposition tricks add punch to tele ballet . . . list of regular features growing . . . amateur groups.

BALLET

WCBW's current series of ballet and modern interpretative dance programs have hit some high peaks in tele techniques, due to their expert direction and their excellent choreography. In fact, this form of entertainment often gains through television screening for good camera shooting utilizing dissolves, sharp angle changes and superimposition can give greater dramatic impact to a sequence — interest-adding tricks which a studio audience misses.

Primary rule in planning a program of this kind, according to Paul Belanger, CBS dance director, is for the choreographer to work with the director in planning the entire show. They can then incorporate in the suggestion of plastic images she is creating in her dance, some turns which can be pointed up by dollying in for close-ups, be dramatized by superimposition, or be emphasized by dissolves, long shots, etc.

Next step is for the director to be thoroughly familiar with the musical parts, and to cue his camera shooting to emphasize the musical ideas which are carried out by the dancer. There must be a constant adjustment of the camera angle to the dance. If the dancer is doing a turn, and the music has a turn written into it, it can be pointed up by a pictorial shot with the cameras cutting in or dissolving for a better picture. Where high points are hit, emphasis can be given through dissolves and sharp angle

changes. If there are lots of nervous jumps, they can be intensified by cutting from camera to camera. In tele shooting, cuts mean jolts for there's a split second of blackness, practically indiscernible to the viewer, which serves to emphasize the quickened tempo of dancer and music.

Picture composition has been particularly good in these series, achieved mainly through the clever use of superimposition. To obtain these effects, Mr. Belanger uses one camera to catch all the basic dancing, with the second camera free to rove around and pick out good shots. A closeup lens on camera two picks up the details and adds to the clarity of the image.

Third most important factor is for the dancers to know the exact angle at which the camera is focused every moment. From the first rehearsal, the director must call out the camera cues to the dancers so they can memorize all camera action. Only by doing this, can they stay in camera focus and time their dance for momentary pauses to give the cameramen time to move in. Rehearsals on the fifteen minute ballet programs take from four to five hours.

Typical of these programs were "Summer Time" and "Tain't Necessarily So," with choreography by Pauline Kroner. "Summer Time" proved so popular that it was repeated twice over the station. (The

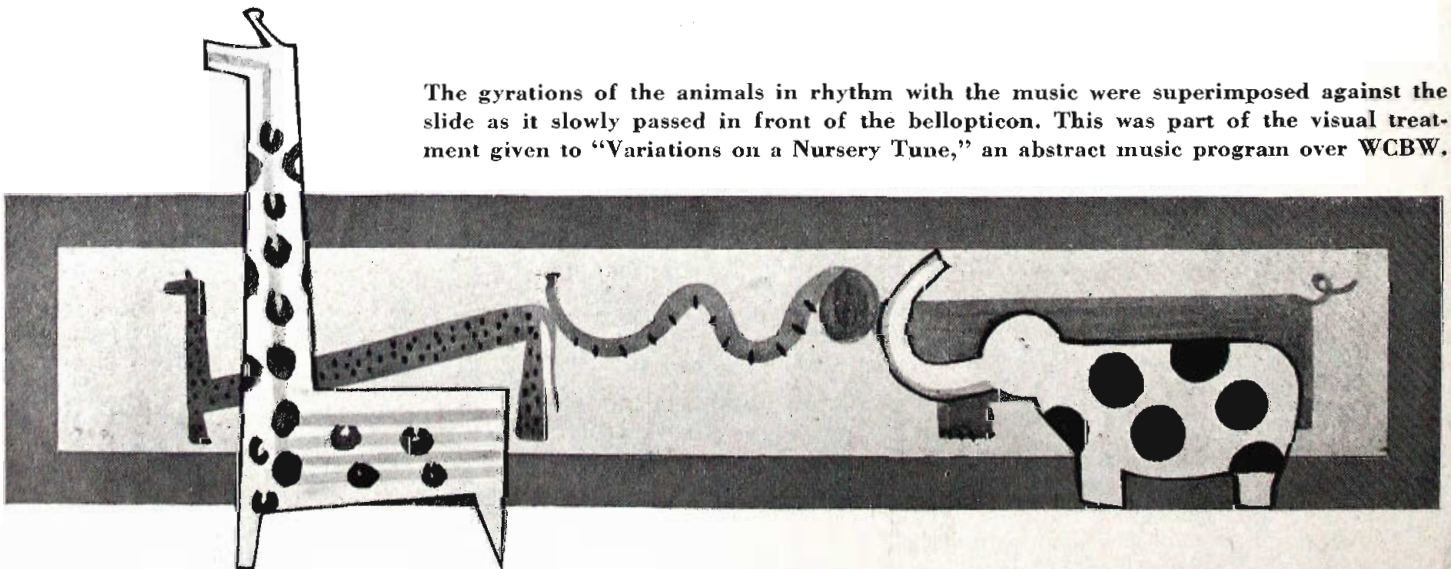
accompanying pictures and illustrations describe the techniques used.)

"Tain't Necessarily So" was another deft blending of excellent choreography and expert direction. Highly developed camera techniques of cutting in and superimposition heightened the effects for the televiewers.

Interweaving of art and dramatic narration gave a novel touch to what would otherwise have been a straight ballet program. Theme centered around three types of love — that of a young girl in spring; the older woman who realizes that today's pleasures may well be tomorrow's sorrows and the jitterbug group, which was broken down into four parts. Show opened with an artist sketching a young girl on a park bench, as the narrator explained the motif, then cameras dissolved to the girl. Ballet was done to "It May As Well Be Spring," with most of the dance interpretation done on the bench. Camera concentrated mostly on close-ups as much of the motion was done with the head and shoulders. However quick cut-ins picked up the full length view when needed.

Camera cut back to the drawing board with the sketch of the older woman dissolving into a superimposition of the living model over the drawing. This number was extremely well handled, with a narration of Korngold's "Love Song" cued in to emphasize the tempo of the music

The gyrations of the animals in rhythm with the music were superimposed against the slide as it slowly passed in front of the bellopticon. This was part of the visual treatment given to "Variations on a Nursery Tune," an abstract music program over WCBW.



and the dance. Most effective shot was the whirling dancer, coming in from the far corner of the set, as the camera dollied in to meet her, winding up in a close-up shot. To cue the cameraman, the director counted the musical tempo as the camera moved in.

Jitterbug number had four interpretations—all done by the same girl who changed expression and rhythmic interpretations to suit each character. Flashbacks to the artist and the superimposition of the dancer over each sketch were used for change of pace between the four numbers, titled "Susan's A Bit Shy"; "Jean Shakes Her Hair"; "Betty and Harold Close Their Eyes"; and "Jill Jives."

ABSTRACT MUSIC

WCBW'S "Variations on a Nursery Tune" was another in their series of abstract music programs. Idea in back of all these programs is to interpret music into visual terms and to achieve an approximate synchronization of the images to the score. Main emphasis is given to translating the tempo of the music, not the meaning.

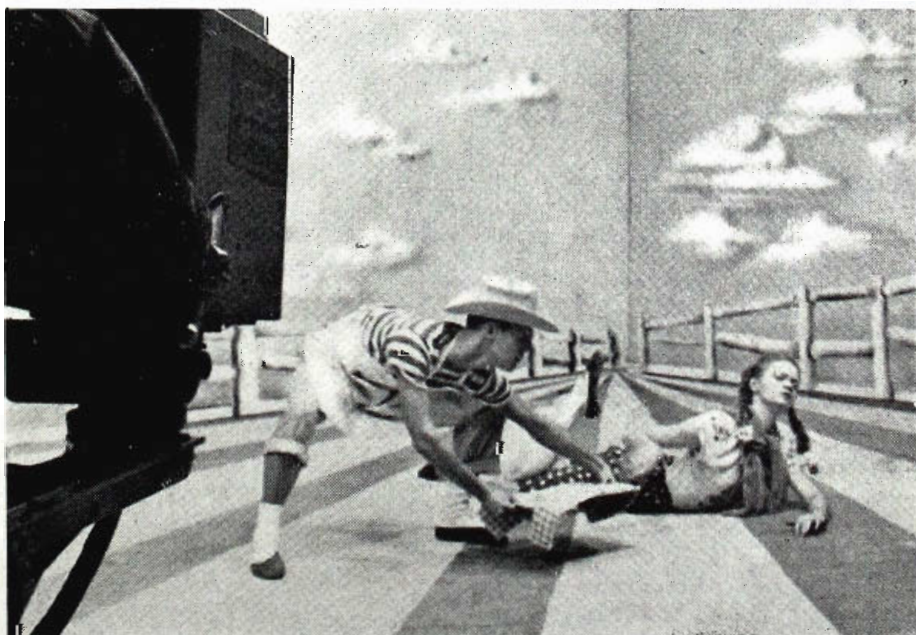
Done to the tune of "Baa, Baa, Black Sheep," show opened with a superimposed shot of a little girl playing a toy xylophone. Musical score was then picked up by a recording and visual interpretation was given by means of toy trumpets, elephants, giraffes, balls, soldiers, cannons, soldier hats, chickens, etc. In some sequences, the turn-table revolved with the individual cut-outs, moving in tempo with the music, superimposed. In others, sketches of the animals were moved through the Belloptican slide, with quick superimposition of the cut-outs made. But particularly effective was the "ghost" effect of the cut-outs gyrating around in a black void.

Technical effects here were particularly interesting. For the first time, director Belanger, tried the "ghost" effect. The turn-table was covered with black cardboard. The working area for the operator was erected at right angles to the table top with space cut in the form of a cross for the operator, who wore black gloves and judge's robes. Black background was put around the working area and the cut-outs were mounted on black cardboard so no light could get through.

Designs in the series are done by Georg Olden.



"Summertime," an original ballet based on the music from Gershwin's *Porgy and Bess*, gave viewers an opportunity to see the possibilities of television ballet, which to some appeared better than regular stage presentation. Upper photo illustrates silhouetting one character, while the others remain in clear focus, creating a superimposition not possible in a more limited medium. Other photos demonstrate the possibilities of sudden camera angling resulting in better composition.





Action got pretty rough in "The First Year" with the hero-husband and jilted swain coming to blows. Picture above shows the start of the fisticuffs, which finally ended with the wife-tossed vase knocking the husband out by mistake. This was another in WNBT Sunday night series of full length plays.



Here's the "love interest" in "Johnny Came Home," presented over W6XAO. Shallow side flats were used in constructing this corner of the living room set.

AUDIENCE PARTICIPATION

ABC recently began two new series on WRCB. "Play the Game" has an extremely informal atmosphere, being played as a house party, and is based on a charade format. Viewer participation and interest is secured by sending special cards out to people with the advance program notice explaining the program and asking them to send in charades. The program features "name" stars, with each guest given a problem to act

out. If the other participants guess the answer, the person sending it in gets \$1.00; if no one guesses it, the award is boosted to \$5.00. The program is unrehearsed, except for camera positions. On the half hour program, there's time for five or six stunts.

ABC has given a new twist to the familiar quiz format with "Topsy Turvy," now being presented over WRCB. Keynote is set with the opening — a 16mm. film strip run upside

down with the title superimposed over it. Opening remark is "Good night," which of course is corrected and tied in with the topsy turvy theme. Further emphasis is given with parodies on the titles of different shows, such as "Ladies Be Seated" twisted into "Gentlemen Stay Standing"; "King for a Day" into "Queen for a Night," etc. Two characters, Topsy and Turvy, together with the emcee, keep the local contestants toeing the line.

AMATEUR AND PROFESSIONAL GROUPS

W6XAO has worked closely with various amateur and educational groups in their area, chief among them being army hospitals, the Pasadena Playhouse and the University of California. This cooperative attitude on their part in the exchange of information on tele techniques has resulted in some first class amateur shows being televised over the station.

Particularly interesting is the recent presentation of the University of California's extension division. This group has been studying tele techniques, with particular emphasis on script writing. Top three scripts were submitted to Harry Lubcke, television director at the station, and "Mother Be Good," a one act comedy, was selected for presentation. The cast was made up of members of the group.

Clever production technique was the blending of a film sequence showing an exterior scene with a regular live interior shot in the studio. This film sequence was made by other members of the group using the same players as appeared in the live performance.

Story centered around a girl who was afraid that her returning soldier sweetheart might not approve of her mother's modern ways. Comedy note was introduced by a "put up job" on the mother's part, resulting in the two becoming good friends and girl getting boy.

W6XAO also presented "Johnny Came Home," a comedy playlet on the ex-GI who comes marching home to find that life in the old home town doesn't quite come up to his foxhole dreams of it. This program was another in the series which the group from the Pasadena Community Playhouse has presented over this station.

WBKB's presentation of "Walk with Me" was presented under the auspices of Stage for Action, a nation-wide dramatic group comprised of leading actors, writers and producers in all phases of the theatre. Dealing with the problems of the re-

turned veteran, it was adapted from the radio drama, first presented on CBS' "Assignment Home" series.

REGULAR FEATURES

WBKB's current series, "The Sporting Scene" features Joe Wilson, the station's sport announcer. Different phases of the sports picture are covered, with guest stars invited to enact various events, such as the varsity teams of Northwestern and De Paul Universities who demonstrated proper cage techniques. The history of basketball was depicted through dissolves showing kids playing earlier versions of the game. Station reports enthusiastic fan mail from the Chicago viewers.

WCBW tested another experimental format with their new series, "You Be The Judge." Based on famous lawsuits of the past, scene is set in a courtroom with three judges from the studio selected to preside over the trial. Two lawyers represent the plaintiff and the defendant, with professional talent used to enact the other roles. Opening program made a strong bid for viewer interest, with Edward Stasheff, as clerk of the court, addressing the home audience directly, explaining the set-up and inviting them to make their decision

along with the judges. The studio judge who comes closest to the original court decision receives a \$25 victory bond as prize. First case selected to be televised was based on a court fight to determine who owned a pearl found in an oyster—the restaurant owner, the host at the dinner, the girl who ordered the cocktail, or the person who found it. Problem was a good choice because it was so far removed from the more obvious legal cases, and sustained viewer interest until the decision was given.

WNBT's current series, "In Town Today," is based on an informal interview format. Typical of the guests who have appeared before the mike are members of a USO entertainment group, who did their specialties of dancing, singing and drawing. An army general described the surrender of 80,000 Germans and narrated the films which he took of that defeat. Particularly good dovetailing were the sequences from "Diary of a Sergeant," which led into an interview with a soldier who had lost both hands. Scene cut from the film to the veteran in the studio, who demonstrated his manual dexterity.

Capitalizing on the sensational announcement that the moon had been contacted with radar signals, WNBT

brought the five scientists responsible for the amazing feat before televiewers. The men discussed their work on the project, using films and slides to show how it was accomplished.

WCBW's weekly series, "Draw Me Another," has developed into an entertaining, interest holding spot, featuring as it does "name cartoonists" who do their stuff for the video viewers. Production technique is well worked out, with the cameras moving in for a close-up of the artist's hands at work—and to people who have no skill along these lines, their performance holds a fascination. Format itself is well integrated and smoothly paced. Typical example includes a well known cartoonist as emcee, and two guests, shown at their drawing boards. Interview pattern gives their background with samples of their cartoons shown for visual interest. Each cartoonist demonstrates how he gets his inspiration and how he starts to work. Here the camera moves in for a close-up.

Typical wind-up is a stunt, with the audience shown a cartoon in a weekly magazine and the artists told the caption only and asked to draw whatever it suggests to them. Cameras go from one drawing board to an-

Left: Johnny sheds his uniform in "Johnny Came Home," the comedy playlet on an ex-GI, presented by the Pasadena Community Playhouse over W6XAO. Right: Town Crier opens up the "Town Hall of the Air" program, in a simultaneous radio and television broadcast by ABC over WRGB in Schenectady.



other, and the audience is then shown the three different ideas developed from the same suggestion. While there's no commercial tie-in, showing of the magazine and the mention of its name does make a good commercial of the integrated type and shows the possibilities that even such a limited time plug would have over video.

RADIO ADAPTATIONS

ABC, continuing their experiments with the adaptation of radio programs to television, gave a video version of "Town Hall of the Air," simultaneously with the broadcast of the program. Its high audience interest for air listeners is the heated arguments in which the participants

avoid blurring or off-focus angle shots as speakers were introduced by the moderator, audience was picked up until speaker was in place before the mike. This was a one-time shot by the network over WRGB. The show is slated to be repeated again, as a straight tele program.

WBKB also presented a video version of "Meet the Stars," an NBC radio show. Special studio audience, composed mostly of middle-aged housewives, met the guest star and exchanged a lot of easy chatter with the emcee.

VARIETY

W6XAO spiced their "Round the World" variety show, a program of songs, folklore and dances, with an

on the video bill was the card manipulation of Mel Cardo. Card tricks and palming sleight of hand can be well highlighted by close-up shots and the quality of magic holds interest.

DRAMA

WNBT's presentation of "The First Year," adapted from the Broadway stage hit of the 20's, was another in their series of full length productions, with a running time of one hour and twenty minutes. Program was continuous with intermissions, which characterized their earlier tries along this line, omitted. Staging problems were simplified with only two living room sets required. Change of scene and time element was neatly handled by using film clips, showing the four seasons, as a bridge. Comedy concerned a young couple and the trials and tribulations of their first year. Lines were, for the most part, very amusing and well acted out.

Biggest flaw was in the camera action and the composition. The cameras came in for too many close-ups on the person who was speaking, with just the arms of the others showing. This is bad in any scene, but with the speeches aimed at convincing the silent party, audience interest was more centered in seeing the effect it was having, not on the speech itself. And a sleeve shows no expression! Seating arrangements were also bad, with backs to the camera where it could have been avoided. Close-ups were very close — with the resultant distortion. (In fact the beads of perspiration could be seen rolling down the hero's face and the front of his shirt was dark with the sweat he worked up under the lights — a distracting factor to home viewers.)

WNBT's production of "Angel Street," given a cast of Broadway talent and good direction, resulted in an excellent video translation of the script which had previously been produced on Broadway and in the movies. Based on a psychological murder theme, the drama built to a gripping climax. Interesting here was the camera action which closely followed the mood of the script. Long shots and medium close-ups were used in the beginning of the play, but as the emotional pitch mounted, dramatic close-ups heightened the tension. The 19th century set gave authenticity to the period character of the show and added to the mood interest.

One incongruous note was the quartette singing songs of that era which was used as the opening and closing devices. Evidently meant to key the audience to the period, it did not seem to fit in with the serious theme of the play.



Emcee of "Topsy Turvy," an ABC production over WRGB, lives up to the title of the show by having husband and wife don the wrong nighttime attire. As this is an audience participation show, audience is placed within camera range.

become involved — a factor which was intensified over television, as the four speakers grabbed for the mike in an effort to expound their particular theories. Each of the panel of four spoke for five minutes on the subject, with rebuttals entirely extemporaneous. Video version was rehearsed beforehand with a dummy cast in order to get camera positions and to make for a smoothly produced show. Three cameras were used. One camera was trained on the audience to pick up their reaction, two cameras on the speakers to get different angle shots, and to maintain good pace and interest. In order to

international flavor. In the line-up was a South American dancer; four small Chinese girls who sang English translations of the "Purple Bamboo Lullabye," with the American touch added by a collegiate chorus. Poland was colorfully represented by a group of dancers in native costumes. Interest was given to an Old Russian fairytale by having the narrator dressed in an authentic 17th Century Russian costume.

WBKB brought night-club ventriloquist Bob McElroy before their cameras with his two "Loquacious Lilliputians," Lord Cecil P. Dillingwater and Shorty Long. . . . Also

CBS discusses uhf color transmission at IRE . . . RCA describes new tube developments . . . new patents.

IRE CONVENTION

PLAYing host to capacity crowds, the Institute of Radio Engineers convention (held January 23rd to 26th), featured nine papers in the television seminar.

CBS Papers

Spearheaded by Dr. Peter C. Goldmark, television director of CBS, five papers on the ramifications of television transmission in the ultra-high frequencies were presented by Columbia Broadcasting System's engineers.

According to Dr. Goldmark, initial tests with the recently installed ultra high frequency television transmitter, built for CBS by Federal Telephone and Radio Corporation, have been successful in the transmission of wide band tele in the uhf range, using equipment and power suitable for commercial operation. The band width of the picture signal is ten million cycles per second. CBS designed and built the receivers used in the test.

The transmitter, weighing 12,000 pounds, is contained in ten standard cabinets and is operated from a central control desk. New high power tubes, employing a water cooled design, are used. Power supply for all the units is contained in the cabinets. Both the sound and visual program are sent over the same transmitter simultaneously.

Dr. Goldmark further stated that with this transmitter, less than 1/5 the power is needed to send out a picture signal equal to the most powerful television transmitter now operating in New York. When the installation of new antennas is completed, this radiated signal will be increased to five times its present power.

Ghosting and reflections from high buildings have also been eliminated in the uhf band by a simple adjustable receiving antenna. Interference from automobile ignition, diathermy, etc., is banished as these cannot penetrate the ultra high frequencies.

Because of the short wave length involved — about two feet at the 490 mg. frequency — adjustable parabolic reflectors, about 6' long by 18" wide are used. Due to their focusing

qualities, unwanted signals are screened out and only the desired signal transmitted, Goldmark explained.

The Design of Camera and Studio Control Equipment for the transmission of high definition color and 1029 line black and white images was described and illustrated by James J. Reeves. The conversion of the standard 24 frame into the 120 cycle rate and the use of color film pick-ups were the first steps. This was done through the synchronization of a constant slotted disc containing five lenses, each equipped with a color film. Infra-red, water cooled light safeguards the film filters. Slides of the equipment, lenses, control panel, total channel, focusing coil around the dissector tube, etc. were shown and their functions explained.

Sight and Sound On One Carrier was described by Kurt Schlesinger. Audio and video multiplex operation and the various forms of multiplex modulation were outlined. Transmitter and receiver circuits were illustrated and explained and results of the recent tests with the Federal transmitter, which simultaneously transmits sight and sound, were pointed up.

The New Ultra-High Frequency Television Receivers, developed in the Columbia Broadcasting System's laboratories were described by Harold T. Lyman. Standards prescribed were for color tele receivers in the 480 to 920 mg. band, with both low and high power, with sight and sound combined on one carrier and inexpensive enough to be practical.

One model uses a 10" tube, encased in a cabinet 25"x23"x26", with a 15° front tilt for easier viewing. Distortion is low. Red, green and blue filters are used and the color disc is enclosed with shock lining. Tubes used are by General Electric and Sylvania. Synchronization of color disc is effected by a synchronized motor or with overdrive and magnetic brake.

In the projection model, the viewing screen is 15¼x21". Schmidt optical lens system is employed and a 5" cathode ray tube used. Red, green and blue color discs are used. Tubes

were developed by General Electric and the CBS laboratories.

Ultra High Frequency Television Transmitters and Antennas were discussed by Robert Serrel of CBS. These transmitters embody tubes developed during the war and utilize a 10 mg. modulation bandwidth. At present a temporary antenna covering a semi-circle in the horizontal plane is being used with the Federal Transmitter. However this will be replaced with a ray-shaped design for the purpose of gaining in the vertical plane.

Through their tests, CBS has found that reflections can be separated and a perfect signal received from reflections which result in a satisfactory picture. In the uhf range, shadows are not serious and pictures can be received in densely built-up areas.

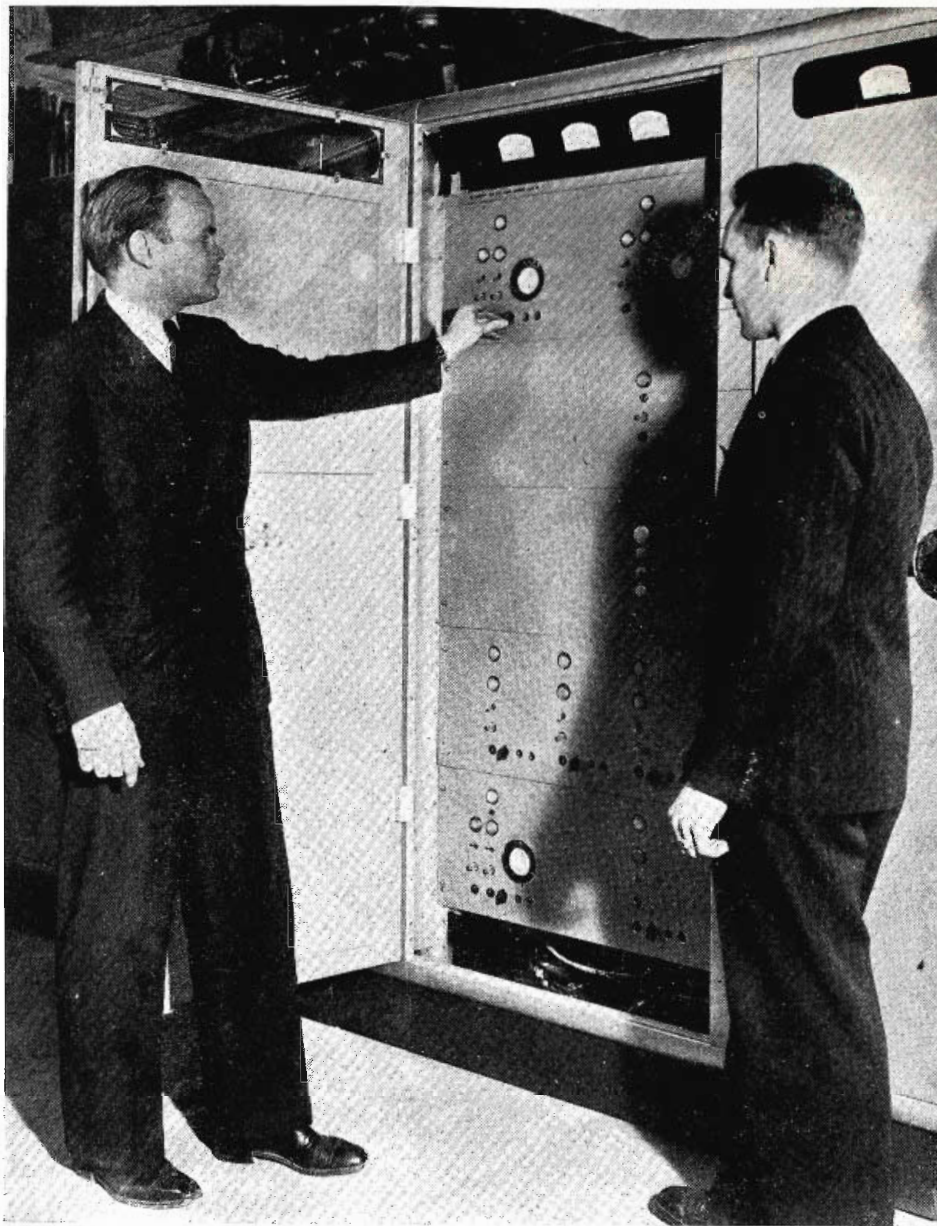
RCA Papers

RCA technicians took over the second half of the session with the presentation of four papers.

Electrooptical Characteristics of Television Systems was discussed by O. H. Schade of the RCA Victor Division. Premising his remarks on the fact that the optical and physiological capabilities of the human eye should be a determining factor in performance standards for television systems, good quality, high resolution and no brightness distortion are essentials. He pointed out that color television speeds up the scanning system to where it needs two to three times as much light pulse. Thirty to forty-five times the scene illumination is needed to transmit color in comparison to black and white.

Significant value for image detail and contrast, the electrical channel width, and signal-to-noise ratios are derived from the threshold visibility of picture detail and random brightness fluctuations.

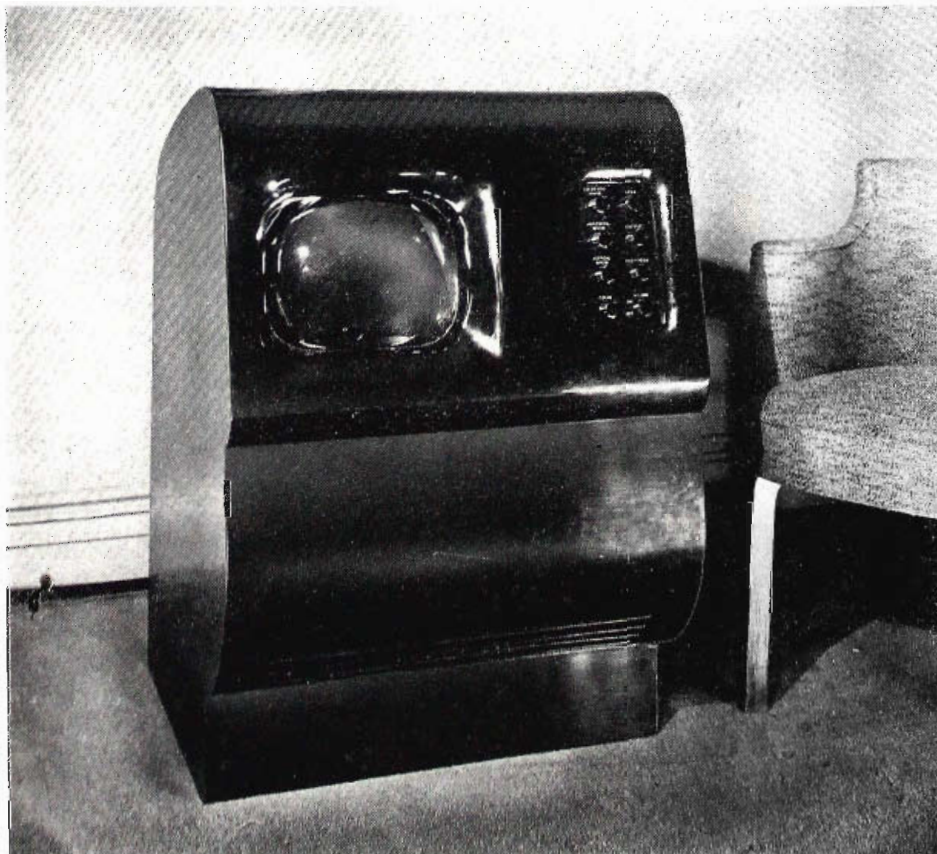
The optical requirements and processes of developing electrical signals in television cameras for monochrome or color transmission were also examined to establish relations and comparative values for signal-to-noise ratios and the required light flux.



The Image Orthicon, A Sensitive Television Pickup Tube was explained in a paper by Albert Rose, P. K. Weimer and H. B. Law, RCA Laboratories. This tube, which was first announced to the public last October, can pick up scenes at one-hundredth of the illumination previously required, and operates stably at all light levels. It is particularly suited for mobile units, as more laboratory work is required before it can be used for studio operation. These features were attained by incorporating with the orthicon an electron multiplier, an electron-image section and a two-sided target. (Complete details on this tube are in November TELEVISION.)

Improved Cathode-Ray Tubes with Metal-Backed Luminescent Screens were described in a paper by D. W. Epstein and L. Pensak of RCA Laboratories. Most recent step for increasing light output is through an application of a metallic layer to the beam side of a fluorescent screen. This method can increase the contrast by three to ten times. The material must be thin, smooth, mirror-like and opaque, must be strong enough to withstand the electron beam, durable for processing of tube, must be inert chemically. Aluminum has been used most successfully. Tests with such tubes show increased light output, improved contrast, elimination of secondary emission difficulties, and, under appropriate conditions, the elimination of ion spots.

A Kinescope for Home Projection-Type Television Receivers was described by L. E. Swedlund, RCA Victor Division. The development of a large size screen for home viewing presented many problems to be solved, primarily because of the need for operating at relatively high voltage. An 18" x24" size was wanted and there is even the possibility of a black screen for contrast in a lighted room. Chief difficulties were encountered in developing new insulation and fluorescent screen principles. An electron-transparent, light-reflecting aluminum film applied to the back of



New high power transmitter of commercial design, manufactured and installed by Federal Telephone and Radio Corporation, is used in the CBS demonstrations of ultra-high frequency, high-definition color television. Specially designed and built by CBS engineers for ultra-high frequency operation, this receiver (lower left) has a 10-inch tube, magnified through curvature of a glass pane to approximately the size of a 12-inch tube. (Full details of the CBS experiments were described at the IRE convention, reported on page 39.)

Professional Directory

RING & CLARK

Consulting Radio Engineers

WASHINGTON, D. C.

Munsey Bldg. • Republic 2347

Frank H. McIntosh

Consulting Radio Engineers

710 14th ST., N. W. ME. 4477

Washington, D. C.

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Washington, D. C.

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1319 F Street, N. W. District 4127

JOHN J. KEEL

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Consulting Radio Engineer

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CONSULTING ENGINEER

597 Fifth Avenue New York

Phone PLaza 3-4150

MAURICE T. GROEN

FILM PRODUCTION EDITING

CUTTING SCRIPT WRITING

10 Rockefeller Plaza New York 20, N. Y.

Phone COLumbus 5-6216

the fluorescent screen resulted in an outstanding gain in light output and performance. Unfortunately, however, it is very difficult to produce such a film. While the commercial department was willing to try it, the manufacturing department will still have to solve many problems before it can be produced.

EXHIBITS

Among the booths at the I.R.E. winter technical meeting were many interesting exhibits devoted to tele-

vision, radio and FM. It is hard to draw a line between these closely allied fields, when reviewing the equipment on exhibit, and say which is devoted to television, because they are all contributory. Almost exclusively devoted to television were the following exhibits:

American Telephone and Telegraph Company's exhibit featured a graphic presentation of the Bell System's proposed facilities for television networks, a large animated map of the system's coaxial cable and radio

relay routes in service or under construction, and a complete auxiliary repeater of the type used on coaxial cable systems.

DuMont had an interesting presentation of the different types of television tubes, ranging in size from 7 inches to 15 inches.

General Electric showed a new television camera cable which contains all the necessary connections between camera and controls. They also exhibited several types of television tubes, most important of which

was the 5TP4 Cathode Ray Tube, which is designed to utilize the aluminum backing of the large sized screen receiver.

RCA Victor displayed the new RCA Projection Kinescope, and the Image Orthicon. Also of interest was the RCA Antennalyzer, which employs 52 electron tubes, and using mathematical principles, produces dial readings for the best location of directional radio antenna.

Remington Rand demonstrated the Vericon television pick-up system, an adoption of the war-born need for an airborne, lightweight, compact, automatic, television system.

Sherron Electronics Company displayed the equipment of their station W2XDK, a shiny, modernistic, and efficiently compact presentation that is designed to provide flexibility, and economy of operation. Sherron display included television transmitter studio control console, master control board, transmitter control console, audio control console, and television test equipment.

PATENTS

Virtually all patents having anything to do with television are now handled by examining divisions in Washington. Division 16, which handles the great bulk of television patent work, moved back to the Capital City from Richmond last month. Division 7, which handles optics, also returned to Washington.

The return of the electrical divisions to Washington is in line with the promise made by former Patent Commissioner Conway Coc, who said divisions concerned generally with similar arts would return to Washington in groups. The chemical and electrical divisions will be the first such groups to leave Richmond.

Emile C. Guedon, of Audubon, N. J., won No. 2,390,216 on apparatus for controlling and regulating the amount of light which is permitted to enter an optical system influencing a television camera tube (application for patent April 27, 1944, four claims allowed, assigned to Radio Corporation of America).

The problem of protecting the sensitive photo mosaic of the iconoscope or Orthicon tube has occupied inventors in the field of television for a number of years. Under the influence of high intensity light, particularly during non-scanning periods, mosaics deteriorate and produce unsatisfactory results.

This patent covers a shutter mechanism which is normally closed in time periods when scanning operations do not take place. It is completely open during scanning. Provision is made for opening the shutter upon applying voltages to the camera tube and its control system. When the camera ceases to operate by virtue of a removal of the power supply voltages, the shutter device closes automatically and thus precludes all possibility of light from external sources reaching the camera tube. The assembly as a whole operates through magnetic coils, and is carefully balanced to assure accurate operation.

Thomas T. Goldsmith, Jr., of Cedar Grove, N. J. won No. 2,391,090 on a device for monitoring received television signals (application for patent June 21, 1941, two claims allowed, assigned to Allen B. Du Mont Laboratories, Inc., Passaic, N. J.).

In carrying out this invention, a cathode-ray tube is provided for receiving a television picture signal, and a vacuum tube is connected in parallel to it so that a composite

mixture of the incoming picture signal and a local blanking signal can be monitored on an oscillograph.

An inverted signal is obtained through a one-stage amplifier, and is passed through a direct current inserter which controls the reference level from which modulation occurs. This yields a wave form which is opposite in polarity to the conventional wave form. This latter wave form is delivered by means of a connection to the grid of the bright cathode-ray tube, thus providing the grid modulation to this tube for producing a bright reversed polarity television picture on the screen.

The direct current inserting diode maintains a direct current level for maximum white, with means for modulating always toward black from this level. The conventional tube with a picture of positive polarity has a direct current inserter for maintaining a constant black level with facilities for modulating toward the white.

Friedrich Ernst Fischer, Zurich, Switzerland, received Nos. 2,391,450 and 2,391,451 on a cathode ray tube system hooked to a separate light source (application for the former patent May 11, 1940, nine claims allowed, patented in Switzerland Nov. 8, 1939; application for the latter patent June 10, 1941, 13 claims allowed, patented in Switzerland June 11, 1940).

The cathode ray tube featured in No. 2,391,450 has at least two ray-deflecting systems and a flat screen which is deformable by static electric forces within successive elemental areas to provide a number of lens surfaces. This screen has a conducting electrode and a separate light source from which light is projected, by lens and mirror systems, to the cathode ray tube and thence through an objective lens to the projection screen. The system as a whole is laid out so that no light from the separate light source reaches the projection screen from raster elements.

Under the second patent, apparatus is provided for producing television pictures through a cathode ray tube and separate light source by means of a moving liquid film in the path of the cathode and light rays. This film may be deformed by the cathode ray into different refracting areas in accordance with the changing characteristics of the cathode ray.

Neither of the Swiss patents was assigned.



CHARLES DENNY

FCC and the industry have been fortunate in having three well qualified chairmen in a row—James L. Fly, Paul A. Porter, and recently appointed Charles R. Denny, Jr. Although the industry regretted the resignation of Paul Porter, they can be assured of another top chairman in Mr. Denny. Charles Denny started in government service in 1938

for the Department of Justice and switched over to the FCC in 1942. General counsel of the FCC since October, 1942, 33 year old Denny had the sizeable job of representing the legal interest of the FCC before the Congressional committees and supervising Commission work on all problems, such as the chain broadcasting regulations case. Mr. Denny was appointed commissioner March 30, 1945.

WASHINGTON

Tele hearings planned for eleven cities . . . two new commercial applications filed for California.

WITH the Washington hearings destined to set the pattern for subsequent actions in other areas, the FCC has scheduled hearings in April, May and June for eleven markets where the number of applicants exceed the channels allocated. There is the possibility, of course, that hearings will be unnecessary in the event of withdrawals in the less hotly-contested second-string cities.

New York, with seven channels, has twelve applicants and three licensed commercial television stations—WNBT (NBC), WCBW (CBS), and WABD (Allen B. DuMont Laboratories, Inc.).

Present contenders are American Broadcasting Co., Inc.; Bamberger Broadcasting Service, Inc.; Bremer Broadcasting Corp. (Newark); Debs Memorial Radio Fund, Inc.; Palmer K. & Lois C. Leberman; Marcus Loew Booking Agency; News Syndicate Co., Inc.; Philco Radio & Television Corp.; Raytheon Manufacturing Co.; Sherron Metallic Corp. (Huntington); Twentieth Century-Fox Film Corp.; Westchester Broadcasting Corp. (White Plains); and WLIB, Inc. Metropolitan Television, Inc. withdrew their application in favor of the ultra high frequencies.

Los Angeles, also with seven channels will have thirteen contestants in the ring. There are two experimental stations operating in the area — W6XAO (Don Lee Broadcasting System) and W6XYZ (Television Productions, Inc.). Other applicants are: American Broadcasting Co., Inc.; Earl C. Anthony, Inc.; Walt Disney Productions (Burbank); Consolidated Broadcasting Corp., Ltd.; Fox West Coast Theatres; Hughes Productions, Division of Hughes Tool Co.; Metro-Goldwyn-Mayer Studios, Inc.; National Broadcasting Co., Inc.; The Times-Mirror Co.; Warner Bros. Broadcasting Corp.; and Dorothy S. Thackrey.

Philadelphia has ten applicants for its four channels, plus one licensed commercial station — WPTZ (Philco Radio & Television Corp.). However, Bamberger has signified their intention of dropping their Philadelphia application if their request for a Washington station is granted, which would give a nine to four ratio. Other applicants include Wm. Penn Broadcasting Co.; Pennsylvania Broadcasting Co.; Philadelphia Daily News, Inc.; The Philadelphia Inquirer; Seaboard Radio Broadcasting Corp.; WCAU Broadcasting Co.; WDAS Broadcasting Station, Inc.; Westinghouse Radio Stations, Inc.; WFIL Broadcasting Co.

Detroit has five channels and six applications. These include The Evening News Association; International Detrola Corp.; The Jam Handy Organization, Inc.; King Trendle Broadcasting Corp.; United Theatres Corp.; and WJR.

San Francisco-Oakland area has seven claimants for its six channels. (See "Television Outlook in San Francisco," page 13.)

Pittsburgh will have to choose four out of the following five applications — Allegheny Broadcasting Corp.; Allen B. DuMont Lab., Inc.; Scripps-Howard Radio, Inc.; WCAE, Inc.; and Westinghouse Radio Stations, Inc.

Cleveland has a total of five channels with six applicants lined up. Allen B. DuMont Lab., Inc.; National

Broadcasting Co., Inc.; Scripps-Howard Radio, Inc.; United Broadcasting Co.; WGAR Broadcasting Co.; and WJW, Inc. are all in the line-up.

Baltimore's three channels have four takers — Hearst Radio, Inc.; Maryland Broadcasting Co.; The Tower Realty Co.; Jos. M. Zamoiski Co.

Providence has the Outlet Co. and The Yankee Network, Inc. vying for their one channel.

Harrisburg is in the same position with WHP, Inc. and Keystone Broadcasting Corp. angling for its sole channel.

Lancaster, with one community channel, has two applicants — Lancaster Television Corp. and WGAL, Inc.

NEW APPLICATIONS

Two applications for commercial stations and one for an experimental station were filed with the FCC last month. Commercial interest was shown by Dorothy Thackrey with her applications for stations in Los Angeles and San Francisco. (Full data on San Francisco application, page 14.)

LOS ANGELES

Dorothy S. Thackrey

Address—75 West Street, New York, N. Y.

Officer—Dorothy Thackrey, President and Director

Estimated Costs

1. Vis. transmitter	\$128,500
2. Aural transmitter plus tubes	64,400
3. Antenna System	28,000
4. Studio Equipment	55,000
5. Studio Lighting	7,000
6. F & M Monitors	500
7. Land	16,000
8. Building	25,000
9. Other item	38,000

Estimated Total Costs \$387,400

Equipment—RCA

Estimated Operating Cost per month—\$25,000 (based on 28 hours weekly)

Channel—#5

Kilocycles—76-82

ESR—11,365

Antenna—Los Angeles County

Height, sea level—5800

Height, ground level—150 feet

Transmitter location—Mount Wilson, Los Angeles County

Power, aural and visual—5 kw.

Population—3,218,100

Size of area—11,700 sq. mi.

Location of Studio—Los Angeles County

Engineering Consultant—Lohnes & Culver, Washington, D. C.

Lawyers—Leo Rosen and Elliot Ruskin of Greenbaum, Wolff & Ernst.

Misc.—Newspaper publisher for past 6 years, publisher of New York Post and Paris Post. October, 1944 bought WLIB, New York City, and in October, 1945, KYA, San Francisco; has applied for purchase

KMTR, Hollywood; FM applications in New York City, Los Angeles and San Francisco; has also applied for TV in New York City. Husband, Theodore Thackrey, Editor and President, New York Post; President of WLIB.

EXPERIMENTAL

Kansas State College of Agriculture and Applied Science

Address—Manhattan, Kansas

Officers—Milton S. Eisenhower, President

Channel—#1

Kilocycles—44-50, also, 500-510 mc; 900-910 mc.

Antenna

Height, ground level—100 feet

Transmitter location—College Campus

Power, aural & visual—200 w—aural; 100 w, visual peak 400 w, visual

Misc.:—Owns KSAC, Manhattan. College operated W9XAK, an experimental tele station from 1932 to Pearl Harbor; then permitted license to lapse. This is a new application for the same operation. Studio equipment on hand. College has authorized \$7,500 for a year.

Problems Encountered In Remodeling DuMont Studios (continued from page 16)

thought out touch. These rooms are provided with intercommunicating systems for quick "calls."

Second Floor

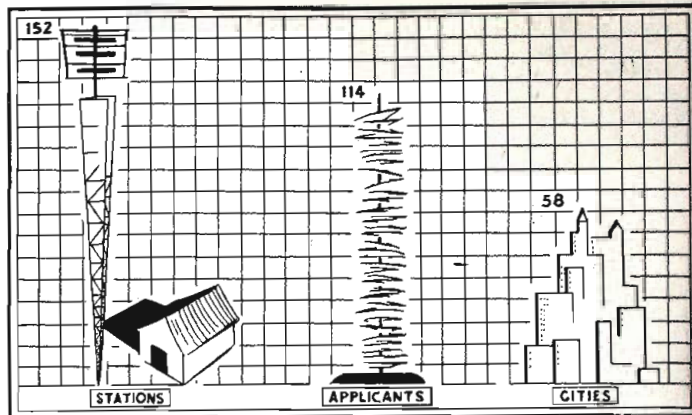
The second floor is cleverly laid out to provide an inviting entrance through Wanamaker's Radio and Television Department, which is a good merchandising tie-in for the store.

Audience seating arrangements are being installed for the comfort of about six hundred people. That this audience will not lose the complete video and audio production as it is presented to the home viewer, eight "jeeps" will be mounted in strategic places. This method will permit spectators at the studio a view of titles, camera effects, films, and background material, which would otherwise escape their attention.

Another portion of this floor is given over to the important Projection Room, which measures roughly 20 by 30 feet. This room had to conform to the requisites of the Administrative Building Code of New York (Section C 26,760). This section is only applicable to the showing of 35mm film, which will in all probability be widely employed in tele showings. Adjacent to this is the Rewind Room which is half the size, and is well-placed to avoid interference with the projection equipment.

The Master Control Room is 30 by 15 feet and is placed in a good spot at the hub of operations. On the opposite side is the Engineer's Room, and the mechanical equipment room located between the organ lofts.

LOCATING a television studio in a department store will undoubtedly have many ramifications. There is a strong possibility that Wanamaker will soon install an intra-store television set-up, using DuMont equipment. Then, too, advertising merchandise from a store, and having the facilities for so many people within a store to see the presentation is another plus value, which should increase store traffic. It provides a natural meeting ground for manufacturers and retailer.



What's Being Done About Theatre Television? (continued from page 15)

M-G-M has an application from Los Angeles and through the Marcus Loew Booking Agency they have applied in New York and in Washington.

Warner Brothers have filed for Los Angeles.

Hughes Productions have applications in Los Angeles and San Francisco.

Television Productions (Paramount) has an operating station in Hollywood (W6XYZ) and has also applied for San Francisco.

The activity of the exhibitors and theatre operators might take many aspects, all of them pretty obvious. An exhibitor could operate his tele station in the same way as a radio broadcasting station, selling time and transmitting to anyone in his area who had a receiver. He might also sell a specific program to a theatre or theatres alone, or send it to his own chain of theatres.

Theatres may operate showing a combination of film and tele. The telecasting of a major sporting event might see theatres selling tickets, at a boosted price of course, for a viewing of the fight or whatever the event might be.

Equipment

Both DuMont and RCA have patents on equipment which might be the answer to large-screen television problems. The method involves filming the picture off the face of a special cathode ray tube. As the television picture is filmed, the strip of film is automatically developed and dried and in only one and one-half minutes is ready for use in the regular film projector. Rumors are that the Paramount Theatre in New York is now equipped with this device and probably by August of 1946, will stage a public demonstration.

The Rauland Corporation, RCA and the Scophony Corporation of America are the three companies who, to date, have declared any plans for manufacture of theatre television equipment.

The present status of large-screen projection equipment is, to quote one of the companies' execs, "... in such a state of flux that we would not be prepared or would not care at the present time to give out any price or technical information."

This reluctance is understandable in view of the technological improvements accomplished during the war and in view of the labor and price control situation. Also, large-screen projection is by no means perfected. The problem of highly-concentrated light, which is necessary for projection, has not yet been solved.

TELEVISION IN REVIEW

TELEVISION FIRST

Another video first was chalked up this month with the opening of the Washington to New York coaxial cable. As previously reported, the three New York operating stations — WNBT (NBC), WCBW (CBS), and WABD (DuMont) will each share in using the cable two nights a week. American Broadcasting Co., who will resume using DuMont facilities when the new Wanamaker Studios reopen, also trying to arrange for use of the facilities.

No charge is being made for this service as A. T. & T. looks upon it in the nature of an experiment and hopes to learn a lot about the exact way of handling the cable, switching of it, etc. They will draw from the experience of both sides in setting up their future policies. Right now, the coax is not equipped for quick reversal but they hope to have it developed by spring. Eventually Baltimore and Philadelphia will be included in the relaying coverage, but at present terminal facilities are needed in both cities. The Philadelphia terminal, used for transmitting the Army-Navy game, was moved to Washington.

The original debut scheduled to televise President Truman's address to Congress was cancelled when the speech was not given in person. Since it was felt that the opening of this line was an event of social significance, and that the first pictures out of the Capital City should transmit a program of public interest, first telecast over the line was held until Lincoln's Birthday.

Opening program on the link was a huge success both from the technical angle as well as the interest-holding fare, presented. Since this was a joint telecast, the station patterns of WNBT, WCBW and WABD followed each other at start of program. Opening shot was the Capitol dome, with the camera panning down over the building and picking up the six "guests" as they came down the steps. Each of the representatives was interviewed, and although only one camera was used, action did not seem static probably because each man stepped into the camera, with the group in the background, thus reversing the technique of the camera closing in on the individual. All spoke of the significant part television will

play in bringing national affairs closer to their constituents. Paul A. Porter, then FCC chairman, predicted that approximately \$6,000,000,000 will be spent for television, and FM in consumer goods in the next few years. Senator Raibourn, speaker of the house, stated that the next time they have a joint session of the house, such as to hear an address of the presi-

dent, television cameras will pick up the event inside the House of Representatives.

At the conclusion of the interviews, program shifted to W3XWT, DuMont experimental station in Washington, where an explanation of the coaxial cable installed by the A. T. & T. was given. Film inserts were used to show the laying of the cable.

Another ad in the WNBT campaign to interest the public NOW in television programming. Idea is to reach the people without sets and to make them conscious of what NBC's WNBT is doing with television. This 1000 line ad ran in the New York Times, Herald Tribune and Daily News on the morning of the telecast.

First Washington-New York Television Broadcast to be made at noon today via the new coaxial cable

Today at the same moment that thousands witness the special Lincoln Memorial ceremonies in Washington, thousands more in New York will watch the impressive ceremonies in their own homes... through the eyes of television.

Featuring interviews on the steps of the Capitol with Senators McKeller, Wheeler and White, Representative Rayburn, and Paul Porter, Chairman of the Federal Communications Commission... and a tradi-

tional Lincoln's Birthday program arranged by the American Legion... this history-making telecast will be climaxed by General of the Army Dwight D. Eisenhower laying a wreath at the base of the late President's statue in the Lincoln Memorial.

New RCA IMAGE-ORTHICON Television Camera to be Used

Among the seven television cameras located at all points of interest will be the new super-sensitive RCA Image-Orthicon camera, which will make it possible to televise General Eisenhower in the Memorial portico's shadow.

The first of a regularly-scheduled inter-city series, this telecast will be carried over the American Telephone and Telegraph Company's new 225-mile-long coaxial cable

to the Long Lines Building in New York, to be seen and heard over station WNBT (NBC), in New York City, and over station WRGB (General Electric), in Schenectady.

If you own a television set, invite your friends to enjoy this historical television broadcast with you.

NBC TELEVISION

WNBT NEW YORK

NATIONAL BROADCASTING COMPANY
A SERVICE OF RADIO CORPORATION OF AMERICA

Highlight of the program however centered around the ceremonies at the Lincoln Memorial. Off-screen narration gave the details of construction as the cameras slowly covered the imposing edifice. The guards of honor and the Marine Band were picked up as the ceremonies were explained. General Eisenhower's arrival with the presidential wreath to lay at the foot of the statue was perhaps the best bit of tele shooting. Cameras caught his emergence from the car, followed his brisk gait through the crowd-packed stairs, and then, switching to the image orthicon, followed him into the memorial. Ceremonies ended with the general's departure and an excellent pictorial shot of the Washington Monument taken from inside the Memorial.

But there were a few interesting spots that weren't in the evidently carefully planned program which probably added immeasurably to the enjoyment of tele viewers. First break came when General Ike, was asked to place the wreath again so that newspaper cameramen could get a good shot of the ceremony. This the general did with all the solemn dignity that characterized the original gesture. Then later, there was the timid man who went to cross in front of the camera as it was focused on the Washington Monument, suddenly remembered and darted back. But not so the flag carrying woman, who stomped straight across the camera's path. And of course there was the inevitable fellow who had to dart in front of the camera, turn and mug for a moment — "he got on television!" Incidents like this add to the immediacy of television — give the home viewers a feeling of being there.

All three companies cooperated in the production of the telecast, with NBC and CBS sending mobile equipment and DuMont using their experimental station in Washington. CBS equipment was used at the Capital, with NBC's set up at the Lincoln Memorial.

Big problem would seem to be — now that the relay line is in, how can the stations use it? Neither CBS nor NBC have a studio in Washington. Although NBC has a camera in the House to pick up special sessions, this would of course be daytime programming. As yet DuMont's studio which is nearing completion has limited itself to test patterns and a few experimental broadcasts. No definite plans on a regular schedule have yet been made, but it can be safely assumed that all special events, at any rate, will be sent to New York.

NBC'S PROGRAMMING PLANS

As NBC's future programming plans take shape, it's clear that they do not intend to snub either the stage or the screen in borrowing on their experience as entertainment mediums. First important announcement was made by John Royal, NBC tele vice president, before the FCC in Washington when he stated that the net planned to use Hollywood facilities in filming their own movies for television showings. This fare would include documentaries, travelogues, shorts and newsreels. Although rumors ran rampant as to which movie company would get the contract, Royal has definitely stated that NBC will play the field rather than tie up with any one company. To further strengthen their Hollywood interests and to prepare for their applied-for Los Angeles station, a television department has been set up in Hollywood, headed by Harold J. Bock.

Following through on their recent experience with full length stage shows, NBC announced a cooperative venture with the Dramatists' Guild. Under this arrangement WNBT will produce full-length plays written for Broadway production by members of the Guild. Arrangement has a couple of interesting angles. First, because of the limited number of plays which are accepted for production on the legitimate stage, it will increase the market for script-writers — and give the net a wider selection of material. Second, the project entitled "Broadway Pre-View" will show television audiences premiere performances of plays which may later make Broadway.

NBC's television department will work with the author in making any necessary revisions for video presentation. Casting and production will also be done by the net who will assume all costs.

On the "public service" side of the fence, WNBT has also set a definite date for the start of their educational series in cooperation with the New York City Board of Education. Originally scheduled for last fall, experimental programs to test the effectiveness of video as an educational medium will get underway in April when WNBT goes back on the air over Channel 4.

Titled "Your World Tomorrow," the weekly educational series will be produced with the cooperation of the NBC University of the Air. In addition a staff of writers who have broad scientific knowledge, combined with experience in radio and television, will also be built up.

Emphasis will be on new scientific

developments which will directly affect the viewers. Among the first televised programs will be "The Mighty Atom," an explanation of atomic power; "Jet Propulsion," and "Huff-Duff, the Radio Detective." Programs will be flexible, and will include unusual laboratory demonstrations, dramatization of historical events, outside field pick-ups, including a visit to the Smithsonian Institute in Washington, and extracts from educational motion pictures.

To test the effectiveness of video education, groups of students will view the programs at NBC, and answer questionnaires to test their reactions. These will be analyzed and used by NBC for improving program content and techniques.

CBS ANSWERS SOME QUESTIONS

In keeping with CBS's policy of informing the public on television is their series of questions and answers on high-definition black-and-white and color television, which follow station announcements. The audience is invited to send in their questions and usually two are answered on each program. Most recent questions queried whether high-definition black-and-white and color could be received on the same set; whether there would be more or less interference in the uhf range. Answers gave the technical facts briefly and simply. Most significant though, is the answer to continued use of sets in both systems. Answer was "No. When high-definition color television comes in such sets will become automatically obsolete. That is why Columbia Broadcasting System has been arguing for color television now — rather than waiting for a later date when the change-over from low frequency black-and-white would entail an almost prohibitive expense."

RADIO WRITERS STUDY TELEVISION

The Radio Writers' Guild has tackled the problem of writing for television, spurred by the realization that knowledge of the medium is essential if they are to bridge the gap between audio and video. The FCC's 28 hour requirement, they realize, will soon cause a demand for material, which can only be met by craftsmen with know-how.

A committee headed by Norman Rosen, television director of J. Walter Thompson, has formulated an extensive program to indoctrinate radio writers with the video virus.

The writers group, which is made

up of radio's biggest names, is planning to take members behind the scenes of live productions. They will be shown the technical and creative sides of tele-production. Station and agency tele personnel have signified willingness to cooperate.

Group members will write experimental scripts as part of the curriculum, best of which will be produced over local stations. All material accepted for production will be paid for.

Though similar to educational moves taken by the engineering and technical unions in explaining the new medium to their members, this action by the Guild is the first step in the direction of getting creative-production personnel on the know-how ball. Open only to members in good standing, this promises to be one of the most valuable of the Radio Writer's Guild's undertakings.

TELEVISION ENGINEERING COURSE IS LAUNCHED

American Television Laboratories has launched an intensive two-year training course for television engineers in their Chicago offices. This program will be conducted under the G.I. Bill of Rights. Course will consist of fifty weeks of training a year, twenty-five hours a week. Three fifths of the time will be spent in actually working with equipment. Requirements for the course are a high school education, plus a good background in math.

While the school has DuMont equipment at present, other types will be included in the set-up when available. School feels it can give a plus service by having their students interviewed and hired for jobs about three months before the completion of their course. Intensive training during the final quarter would then be given each man on the particular type of equipment which the station uses.

During the war, the American Television Laboratories trained about 10,000 men in war specialist jobs.

INTRA-STORE TELE DEMONSTRATION

Intra-store television demonstration in the New York area was scheduled for the Gertz Store in Jamaica for the first week in February. Equipment was installed by Bill Still, operator of the experimental station W2XJT which he built himself for a cost of approximately \$20,000. Unfortunately, however, technical difficulties were encountered in the synchronizing generator and picture transmission was intermittent for the greater part of the week-long showing.

Gertz ideas for intra-store programming seemed to hold much promise, with their schedule broken down into straight selling demonstrations, ten minute comedy-dramas with the commercials integrated, public service programs and, following their policy of bringing "name" personalities to the store, fifteen minutes of entertainment. In addition a 1½ minute spot was given each day on "hard-to-get" merchandise, such as sheets, nylon raincoats, etc. Programming was under the direction of Video Production Associates, with Dr. Miriam Tulin as head of the staff and Barbara Jones, Elizabeth Lee and Harriet Gould, as associate producers. The programs, shown to the press, and viewed through the glass enclosed walls of the studio, were very well done.

Demonstration was a big promotion for Gertz, notwithstanding the failure of the video. Five sets were installed throughout the store in key traffic spots and one in the window, and the crowds came. A studio was built in the toy department on the fourth floor, with one side glass enclosed. Announcement was made at the start of the program that due to transmission difficulties, the picture might not be clear and one store official stated that the people then rushed to the studio.

It is unfortunate that the system did not function perfectly for Gertz, capitalizing on some of the now-known errors of the RCA-Gimbel demonstration last fall, had many new angles to test in their experiment, such as open receiver sites, unadvertised specials, varying programming formats, etc.

However one cannot help but wonder what the effect has been on the public who came to see television — and saw an indistinct, blurred picture on the screen instead. The great majority have never seen television and "technical difficulties" to them probably bring up memories of the early days of radio when the batteries always went dead at the most interesting moments. How many of those present when the transmission was faulty went away with the thought that "television isn't here yet"?

Rumors are, however, that Gertz intends to counteract this impression with another intra-store demonstration and have already applied for equipment from one of the major companies.

Rates for Personnel Column: Minimum \$1.00 — 10¢ per word. Count 3 words for box number. Payable in advance.

Address box numbers to Television Magazine, 600 Madison Avenue, New York 22.

PERSONNEL

POSITIONS OPEN

Manager for television station. State complete qualifications. Broadcast experience preferable but not necessary. Reply will be held in complete confidence. Box M 11.

Program director. Must have theatre and film experience. Give complete information on background past five years. Box M 12.

POSITIONS WANTED

***Radar specialist** with more than two years of experience in operation and maintenance, graduate of Carnegie Institute of Technology (majored in Stage Production and Design) three years with the Pittsburgh Playhouse, experience in summer stock, anticipate quick release from the Army. Box K 43.

Engineer, interested in television station operation. Now chief engineer of 250 watt midwest station. Box M 13.

***Three years experience** in stock, acting and directing. Past four years in the army. Locate anywhere. Box M 14.

Make-up specialist combining the ability to write skits, desires opportunity to affiliate with station, or television production unit. Box M 10.

***Young, ambitious Princeton Grad,** just released from active duty as a Naval Lieutenant wishes a job in any capacity, so long as it affords an opportunity in television. Box G 76.

***Television script writer** vet. wants script writing and production-direction job. Experience and references on request. Box K 44.

***Alert veteran** with sales, publication and AA experience wants television sales or contact position. Box K 45.

***Veteran.**

EDITORIAL

COLOR TELEVISION

With CBS' color demonstrations going full blast, a review of television in color is again of interest. Question is not one of color vs. black and white, but evolves around the time when ultra-high frequency tele is commercially feasible. And CBS' demonstrations, while admittedly transmitting good color pictures, has not seemed to change the battle lines which have been drawn up over the past few years. Most of the industry, led by RCA, still stick to their original stand — that electronic color television is the answer and that it will take at least five years to perfect it. In answer to CBS' cry of obsolescence of sets in the present frequencies, the challenge is tossed back that electronic television is the final answer — and what about obsolescence of the color sets geared for a mechanical system in favor of an electronic system? On the other hand, CBS claims that high frequency color is here now and in "all their years of experimentation with color reception the filter wheel has proved even more dependable than the purely electronic equipment."

We feel it timely to again point out editorially that black and white television is here commercially now. Naturally color adds a definite plus to black and white, and when it does come, and it will come some day, the public will in turn buy color receivers. It is our considered opinion that they will buy black and white readily in face of the possibility of this obsolescence.

In every industry, each year brings new models, new improvements. That continued progress is the core of American merchandising and production. Television has been a promise of "tomorrow" too long. Now is the time to get going.

LARGE SCREEN TELEVISION

Because of past advertising and present trade announcements, the public and trade are expecting large screen television. The large screen television which they will see possibly by the second half of 1946 will not satisfy them. Definition is blurred at the edges and projection pictures seem to have a grey veil suspended over the picture. On the other hand, direct viewing receivers which are scheduled for delivery by the summer are very satisfactory. The picture quality is excellent.

It's about time the industry reexamined the state of projection, i.e. large screen television. A large percentage of set manufacturers have announced plans to both the trade and the public to produce projection television receivers giving a picture approximately 16" x 22". Obviously, large screen television should be preferred to pre-war pictures of approximately 8" x 10". However, it is our sincere belief that projection television has not reached a sufficient degree of perfection for marketing to the public. Projection television, as demonstrated by set manufacturers, does not stand up in either definition or brilliance to direct viewing receivers. Manufacturers are only making their selling task more difficult by plugging the large screen receivers.