

Television Digest

with ELECTRONICS REPORTS

PUBLISHED WEEKLY BY RADIO NEWS BUREAU • WYATT BLDG. • WASHINGTON 5, D.C. • TELEPHONE STERLING 3-1755 • VOL. 9: No. 49

NATIONAL LIBRARY DEC 1953

December 5, 1953

In this issue:

Tape TV—Era of 'Electronic Photography,' page 1
13 Cities Definite for Color by Jan. 1, page 3
10 CPs, 3 Dropped, Allocations Changes, page 4
Portland, Me. Gets VHF; 3 Others Start, page 5
Spokane's KXLY-TV & Los Angeles' KLAC-TV Sold, p. 6

Telemeter's Impressive Commercial Debut, page 7
Transmitter Shipments & Upcoming Stations, page 9
Inventory Drop Buys Hopes of Trade, page 10
When Will Hollywood Open Film Vaults? page 13
Weaver New NBC Pres.; Robt. Sarnoff, Exec. V.P., p. 14

TAPE TV—ERA OF 'ELECTRONIC PHOTOGRAPHY': In the burst of speculation about future of TV tape, unleashed by RCA's brilliant demonstrations in Princeton Dec. 1-2, it's sometimes forgotten that initial and major purpose of tape is to record color TV.

Tape opens many enticing avenues, but its first job is to provide color TV with a fast, cheap, good equivalent of black-&-white kinescope recordings and film made specifically for TV. While it is possible for TV networks, stations and film producers to make color film and kines, the technical and economic difficulties loom so great -- as compared with black-&-white -- that something else seems mandatory. And tape looks like the answer to an industry's prayer.

One of tape's many missions is to relieve TV industry of dependence on the relatively few color film processing laboratories in the country. Since RCA officials expect tape to reach commercial stage in 2 years, it will be ready by time it's really needed -- when distribution of color sets has become significant.

To illustrate enormous savings in money foreseen, RCA says that tape should cost only 5-10% as much as color film for same program, 10-20% as much as black-&-white film. These savings are made possible through elimination of film processing and through re-use of tape almost indefinitely, by magnetic "erasure".

Savings in time are equally impressive, perhaps more important. After program is put on tape, it can be telecast as fast as it can be rewound -- in minutes. Tape simply eliminates film developing and all it connotes in terms of cost, time and introduction of picture-degrading factors.

Elaborating on costs, research v.p. E.W. Engstrom said it's RCA's guess that tape apparatus would cost about same as film equipment. Actual tape itself, if used only once, would cost more than equivalent film stock. Add cost of processing film, unnecessary with tape, and cost is about same. Then, considering re-use of tape -- up to 25 times or more -- tape becomes 10-20% of monochrome film, 5-10% of color film. To illustrate flexibility of tape, Dr. Engstrom said it seems almost impossible to produce color kines fast enough for delayed network broadcasts.

* * * *

What is the status of tape as of today? We can't recall ever having seen a development so highly refined in a first public demonstration. Both black-&-white and color recordings were shown -- both on color receivers. No black-&-white sets were employed. In our opinion, the black-&-white was better than most kines and as good as some film; comparison was somewhat difficult in that all black-&-white, even live programs, have less quality on color tube. Dr. Engstrom termed results "better than the poorest kines, not as good as the best."

Color was very acceptable, though clearly not as good as live or the Technicolor film we saw in Los Angeles (Vol. 9:45). Comparison here was direct, same scene being shown live and from tape simultaneously.

How color tape compares with color kines, we don't know. Only color kines we've ever seen were made by Navy, using CBS field-sequential system, and projected on screen (not telecast) during 1949-50 color hearings (Vol. 6:12). Results were good under those conditions, considering capabilities of field-sequential system.

Sound on tape was so good, comparable with audio of live telecast, that it acutally increased observers' impression of picture fidelity.

Considering tremendous strides to date, it's not unreasonable to expect tape eventually to produce pictures completely indistinguishable from live pickups.

One important step remains to be taken. Though black-&-white tape is now ready to be fed through station and telecast, color tape isn't. However, both RCA chairman David Sarnoff and Dr. Engstrom emphasized that there's no obstacle in sight and that telecasting color tape is "just a job of doing it."

* * * *

Next comes question of impact on film industry in this "era of electronic photography," to use Gen. Sarnoff's phrase. For TV film producers, tape will be quite significant. When stations are equipped for tape, there will be no reason at all to put TV programs on film. Furthermore, TV film makers must immediately question advisability of producing color film now -- if stations are to be equipped with tape reproducers rather than color film scanners.

TV film men have a great deal to ponder, in next few years, about obsolescence of equipment, learning production techniques with "electronic photography," etc.

For producers of feature film for theatre exhibition, impact is considerably less. Cost of film stock and its processing is small fraction of cost of making a picture, about 8-10%. Big factors are salaries, scenery, travel, etc. However, if a director records scenes on film and tape simultaneously, he can check tape immediately, needn't wait for film "rushes" next day or so. Savings in salaries, minimization of weather vagaries, etc. could be substantial.

If pay-as-you-look TV ever develops into something big, tape could mean a lot to movie producers. It might then be desirable to put show on tape for box-office TV, on film for theatre exhibition.

Effects on exhibitors are in more distant future, Dr. Engstrom said. He visualized day when tape would have quality high enough to project theatre pictures comparable with 35mm film. It's manifest, however, that it will be a long time before tape offers exhibitors such great economic advantages that it will justify the investment in tape reproducers and theatre-TV projectors.

Also in the future is possibility of equipping home TV sets to record programs. Another home use visualized by Gen. Sarnoff is the taking of home movies with a recorder and small TV camera such as vidicon unit.

* * * *

How does RCA tape work? Dr. Engstrom gave a few details. Tape is ½-in. wide for color, ¼-in. wide for black-&-white, runs at 30 ft. per second (vs. 1¼ ft. for sound tape). Made by Minnesota Mining & Mfg. Co., it uses same magnetic material as sound tape. Reels are 17-in., contain 5 minutes of program. H.P. Buetow, pres. of MMM, told us tape is not difficult to make, said "it's pretty much a standard tape." He says tape engineers haven't been too successful in making many copies but "we're working with people who believe they know how."

Current goals, Dr. Engstrom said, are to reduce speed to 20 ft. per second and less, and to put 15 minutes of program on a 19-in. reel.

Black-&-white is recorded in 2 tracks, one for picture, other for sound. Color has 5 tracks -- one for each color, one for sync, one for sound. Color signals were fed directly to respective color guns in picture tube, sync circuits and loudspeaker. Bandwidth is 3 mc. Still remaining is task of extending the response beyond 3.6-mc color subcarrier and combining signals into NTSC specifications.

Dr. Engstrom revealed little about heart of techniques, except to mention use of new type of recording heads and extreme constancy of speed -- latter achieved with servomechanisms and other complicated equipment. Whole equipment is in 3 racks about 7-ft. high -- one with the reels, one for recording, one for reproducing.

Program came from studios of WNBT, New York, via temporary AT&T microwave. To avoid distracting audience by program content, performance was limited to activity of only one person, actress Margaret Hayes.

Programs recorded a few days previously, both black-&-white and color, were first. Then came live color on both sets; during this phase, which was being recorded in Princeton, one receiver was switched to tape so that audience could watch both live and tape simultaneously. Noticeable in tape was some reduction in resolution, plus slight change in colors and tendency of picture to jiggle a bit.

Huge audience of top newsmen applauded spontaneously several times, bubbled over with questions -- and their stories reflected tremendous enthusiasm. Unfortunately, reporters for New York dailies were mute because of newspaper strike.

* * * *

Large audience of movie executives attended afternoon session Dec. 1 and reacted very much the way newsmen did. Despite the unknowns tape presents to their industry, they applauded vigorously.

We recalled the doleful remark we heard after one of the Hollywood color showings -- "This is the end" (Vol. 9:45) -- when we heard quip by one big chain operator: "This is more frightening than Spyros" -- referring to the flamboyant Spyros Skouras, pres. of 20th Century-Fox.

Scanning the audience, we saw: Nicholas Schenck, Joseph Vogel & Edward Manix, MGM; David Selznick; Wm. Goetz, ex-Universal; Loren Ryder, Paramount; Herbert Barnett, pres. of SMPTE; Wm. P. Kelley, Motion Picture Research Council; Harry Kalmine, Warners; Sol Schwartz, RKO; Edward Cooper, Motion Picture Assn.; Jack Clark, Technicolor; Dr. C. J. Staub, research director, Eastman Kodak; Joseph Hazen, Wallis-Hazen; Frank Cahill, Warners; Alex Harrison, 20th Century -- among others.

Also attending the second showing were CBS pres. Frank Stanton, with major stockholder Leon Levy and onetime stockholder Isaac Levy.

* * * *

We asked Eastman Kodak v.p. Edward P. Curtis to evaluate possible impact of tape on kines and TV film. He said merely: "We don't know. It was an extremely interesting laboratory demonstration, but a lot of work needs to be done before it's commercial. Assuming it becomes commercial, I'd say it has a potential of replacing kines, but I don't know about film."

No one has made color kines yet, except experimentally, Curtis said, adding: "I'd hope kines could be made better in color than in black-&-white."

Technicolor pres. Herbert T. Kalmus foresaw no adverse effect on his company's business, though he did say tape could "reduce the amount of photographic film that will be used in the TV business" and produce savings by enabling directors to view scenes immediately after shooting.

Credited with development was team under Dr. Harry F. Olson and William D. Houghton, including Maurice Artzt, J.T. Fischer, A.R. Morgan, J.G. Woodward and Joseph Zenel. Dr. Olson is famed for work on speakers and microphones.

Credit for first public showing of tape goes to Bing Crosby Labs (Vol. 9:1), though RCA is first to show color. We didn't see Crosby demonstration, but some who did tell us that RCA's work is considerably more advanced. Not that others have been asleep, either. GE, for one, is known to have made progress.

13 CITIES DEFINITE FOR COLOR BY JAN. 1: Our story listing first cities to get color (Vol. 9:47) was confirmed this week, with one exception -- Pittsburgh. AT&T has definitely promised to deliver NBC-TV's colorcast of Jan. 1 Tournament of Roses from Pasadena to the following 13 cities and stations, no others:

Los Angeles, KNBH; San Francisco, KRON-TV; Salt Lake City, KDYL-TV; Denver, KFEL-TV; Omaha, WOW-TV; Chicago, WNBQ; Toledo, WSPD-TV; Cleveland, WNBK; New York, WNBT; Philadelphia, WPTZ; Wilmington, WDEL-TV; Baltimore, WBAL-TV; Washington, WNBW.

What complicates situation is fact that stations can receive certain amount of color signal over the networks, even if AT&T doesn't do a thing to its facilities

leading to those stations -- provided there's only microwave, no coaxial, from the origination point to the stations.

Quality of this "uncorrected" color is something else. Engineers say that 50-65% of color burst can get through ordinary microwave. This gives fair color in some instances. However, if phase is not corrected, color loses varying degrees of fidelity. Yet, picture of 50-75% color quality can be obtained by adjusting chroma control on receiver. This is how WTMJ-TV, Milwaukee, got Nov. 22 Colgate Comedy Hour in color, first commercial colorcast (Vol. 9:48).

Even though AT&T doesn't spruce up its facilities to such stations as WTMJ-TV, by Jan. 1, there's nothing to stop them from telecasting color received if their transmitters have been equipped to do so. How many stations will be so equipped and plan to transmit color by Jan. 1 is unknown.

With so much attention on Jan. 1 show, it's sometimes forgotten that about a dozen affiliates of other networks in the 13 cities have priorities for RCA color equipment, too -- as high as that of NBC affiliates, or higher. Therefore, it would not be surprising if CBS pulled a big color whingding on or before Jan. 1.

NBC-TV has no plans, meanwhile, to feed network any more commercial color programs, like Comedy Hour, until FCC approval of compatible system is obtained. Though actual commercialization of color will come about 30 days after the system is approved, networks and stations will have no trouble getting FCC to waive rules to permit commercial colorcasts before new rules are legally effective.

Date of FCC approval is still anyone's guess. Commission discussed color Mon. Nov. 30, meets again on it next week, probably Thursday-Friday. Again, chances are against approval next week -- but it's getting mighty hot. All anyone at FCC can say is that it can come any time now. There is no fixed target date.

At the manufacturing and trade levels, meanwhile, color demands greater and greater share of attention (see p. 11).

10 CPs, 3 DROPPED, ALLOCATIONS CHANGES: In exceptionally active week, 10 CPs were issued by FCC, along with 2 initial decisions. At same time, 3 uhf CPs were surrendered, while several important allocations changes were made final. The CPs:

Clearwater, Fla., Pioneer Gulf TV Bcstrs., Ch. 32; Miami, WMIE, Ch. 27; Lexington, Ky., WLAP, Ch. 27; Bloomingdale, N. Y., WIRY, Ch. 5; Cleveland, O., WHK, Ch. 19; Jackson, Tenn., WDXI, Ch. 9; Provo, Utah, KOVO, Ch. 11; Richmond, Va., WTOB (Winston-Salem), Ch. 29. Educational grants were Cincinnati, Greater Cincinnati TV Educational Foundation, Ch. 48; Oklahoma City, Okla. Educational TV Authority, Ch. 13.

Initial decisions were awarded to WDAE, Tampa, Ch. 13, and WDAL, Duluth, Ch. 3. WDAL received approval when opposition dropped out, but WDAE was favored after fight with Orange TV Bcstg. Co. and Tampa TV Co.

In Tampa case, Examiner Cooper favored WDAE-Tampa Times because of "superiority of experience, local ownership, and integration of ownership and management." Examiner also felt it would have better staff, build and operate the way it said it would. He said that Orange TV couldn't possibly operate as promised, and he asserted that W. Walter Tison, owner of WALT and largest stockholder of Tampa TV (20%), had done poor job of operating AM.

* * * *

CPs dropped this week were: WIBM-TV, Jackson, Mich. (Ch. 48); KIT-TV, Yakima, Wash., (Ch. 23); WMIL-TV, Milwaukee (Ch. 31). Carl Haymond, holder of Yakima CP and operator of vhf KMO-TV, Tacoma, told FCC uhf isn't suited to Yakima, immediately filed petition asking assignment of Ch. 2 or 3 to Yakima. WMIL-TV, Milwaukee, dropped CP same day Commission finalized assignment of Ch. 6 to suburban Whitefish Bay, filed application for the new channel.

In assigning Ch. 6 to Whitefish Bay, acting on petition of WISN, Commission rejected argument of WCAN-TV (Ch. 25) and UHF Assn., stating that no licensee is entitled "to a 'freeze' on changes [in allocations] because of a possible adverse effect on private commercial interests."

In complicated Wisconsin-Minnesota allocations squabble, Commission ended up by rejecting proposals to add Ch. 10 or 12 to Duluth and Ch. 10 to Virginia, Minn.

Final setup: add Ch. 13 to Bemidji, Minn. and 12 to Ironwood, Mich.; substitute Ch. 11 for Ch. 13 in Fargo, N.D. and Ch. 33 for Ch. 12 in Iron River, Mich. In another action, FCC added Ch. 7 to Carthage, N.Y.

Indianapolis Ch. 8 situation erupted this week when Crosley dismissed application, leaving WISH free for grant, and filed immediately for Ch. 13. This stirred Midwest TV Corp., applicant for Ch. 13, into asking FCC to review its dismissal of Crosley Ch. 8 application, dismiss it with prejudice instead, barring it from applying for Ch. 13. Midwest claims that Crosley should have informed Commission of its intention to file immediately for Ch. 13, said Crosley is "trifling" with FCC.

PORTLAND, ME. GETS VHF; 3 OTHERS START: Three small-town outlets, 2 of them uhf without network affiliations, plus first vhf in Portland, Me., comprise this week's list of new starters -- making total of 332 now operating, 218 of them vhf and 114 uhf. They are first changes that should be made to log of all operating stations and CPs which we published as an 8-p. Special Report last week. Latest starters:

WCSH-TV, Portland, Me. (Ch. 6), after intermittent tests, got RCA 25-kw transmitter on regular test patterns Dec. 1, and gen. mgr. William H. Rines, of pioneer Rines hotel and radio family (Congress Square Hotel & WCSH, Portland; WRDQ, Augusta; WLBZ, Bangor) reports excellent reception in southern, western and central Maine and western New Hampshire. It's Portland's second outlet, first being Frank Hoy's WPMT (Ch. 53) which started in Aug. (Vol. 9:35), next to come being WGAN-TV (Ch. 13) due in Feb. New station uses 6-bay antenna on 300-ft. Blaw-Knox tower atop 420-ft. Blackstrap Hill 8 mi. due north of Portland. Asst. gen. mgr. is Jack Atwood, program director Arthur Owens, chief engineer Daniel H. Smith. It becomes NBC basic outlet, has base rate of \$250. National rep is Weed.

WJDM, Panama City, Fla. (Ch. 7), first outlet in the long reach of northern Florida between Jacksonville & Pensacola, got test patterns going Dec. 1, goes commercial Dec. 6 with ABC & CBS service. Owned by construction man J.D. Manly, it is managed by Mel Wheeler, who will also be gen. mgr. of upcoming WEAR-TV, Pensacola, due on air before end of this month. George Blackwell is commercial mgr. and James Smith chief engineer -- both also doubling at WEAR-TV, though the latter station is under separate ownership. WJDM is RCA equipped, has base rate of \$140, is represented nationally by Hollingbery. *

WBLN, Bloomington, Ill. (Ch. 15), oft-delayed, finally got regular testing under way Dec. 1, begins programming Dec. 6, has elected to remain independent with no network affiliation, reports owner Cecil W. Roberts, who also has string of 5 AM stations in Missouri & Kansas. Base rate is \$200 and, reports Mr. Roberts: "We will begin operations definitely in the black on purely local and regional business." GE equipment is used throughout. Jerrell Henry is mgr. There is no national rep.

WRAY-TV, Princeton, Ind. (Ch. 52) is another small-town outlet starting off with no network affiliation, going on schedule Dec. 6. It's located only 26 mi. due north of Evansville, Ind., where Ch. 62 WFIE has been operating several weeks, as is Ch. 50 WEHT, across Ohio River in Henderson, Ky. Chicken farmer Ray J. Lankford is owner; Robert L. Epstein, gen. mgr.; Warren Wittekind, program director; Ray Shigley, chief engineer. Equipment is RCA. Base rate is \$250. Rep is Walker.

New England uhf "network" gets first technical and programming test Dec. 14 when 3 Massachusetts stations carry same film program via off-the-air pickup. Sparkplug of plan is Ansel Gridley, gen. mgr. of new WWOR-TV, Worcester (Ch. 14), who met this week with representatives of 5 other stations to discuss possibility of 6-station regional tieup. The 3 stations carrying initial trial program will be WWOR-TV, WHYN-TV, Holyoke-Springfield (Ch. 55) and WTAO-TV, Cambridge-Boston (Ch. 56). Film will originate from WHYN-TV, then will be followed by newscast from WTAO-TV. Other stations showing interest in plan are WATR-TV, Waterbury, Conn. (Ch. 53); WMGT, Adams, Mass. (Ch. 74), due on air this month,

and upcoming WNET, Providence, R. I. (Ch. 16). Gridley visualizes not only films but local live programming of regional interest as network features. Most programs, he anticipates, would originate from WWOR-TV, since it's centrally located and could feed any of the other stations directly—but programs could originate from any participating station. If plans work out, he says, special advertising rates will be set for the net — "in fact, we've already had some inquiries from regional and national advertisers." Meanwhile, WMGT became third uhf station to sign to pick up and rebroadcast sports programs from New York's WPIX, others being Scranton's WTVU and Bethlehem's WLEV-TV (Vol. 9:45).

Personal Notes: E. C. Page, Washington consulting engineer, has returned from 6-month honeymoon trip to Okinawa and the Philippines, where he supervised completion of Voice of America's 1000-kw "beam" transmitters; he and his bride, the former Virginia Erwin, also a radio engineer, made the return a round-the-world flight . . . Michael Dann, ex-asst. to Pat Weaver, named NBC-TV network program mgr., succeeding Jack Rayle, now producing new noon-1 p.m. *Home* show, counterpart of 7-9 a.m. *Today*, starting Jan. 18; Dann reports to Tom McAvity, director of TV programs . . . Lloyd George Venard, pres. of O. L. Taylor Co., rep firm recently taken over by Raymer, resigns as of Jan. 1 . . . Wayne Kearn, ex-asst. gen. mgr., named mgr. of KGMB-TV, Honolulu, in separation of TV-radio ordered by v.p. C. Richard Evans; Melvin B. Wright, ex-merchandising mgr., named mgr. of KGMB (AM) and K. C. Wong becomes office mgr. . . . Edward Lamb, owner of WICU, Erie, and holder of CP for WMAC-TV, Massillon, O., as well as publisher of *Erie Dispatch*, with his new exec. v.p. J. Howard McGrath, ex-Attorney General, were guests of honor at a cocktail party Nov. 29 given by Washington bureau chief J. Lacy Reynolds . . . Will Baltin, recently in consulting work after leaving Screen Gems Inc., joins International Telemeter Corp. (pay-as-you-look TV) as aide to exec. v.p. Carl Leserman at Los Angeles plant . . . Wm. Robinson, mgr. of WLWA, Atlanta, elected pres. of local chapter, Sons of the American Revolution . . . Robert E. Holt named program mgr. of WSTV-TV, Steubenville, O. (Ch. 9), due on air by Dec. 10 . . . E. S. Coatsworth, ex-CBLT, Toronto, named CBC film procurement officer . . . Barry McDonald, ex-mgr. of CBI, Sydney, N. S., named asst. to CBC director of programs Charles Jennings . . . George T. Fry, Kenyon & Eckhardt v.p. and ex-ABC network radio sales director, elected to board of agency . . . Don Blauhut, ex-TV-radio director of Spector and Peck agency, joins Edward Kletter Assoc., N. Y., in similar capacity . . . James A. Silin merges adv. firm bearing his name with Boston's John C. Dowd Inc., now is Dowd v.p. and associate of firm's New York branch, Dowd, Redfield & Johnstone Inc. . . . Maurice E. McMurray, ex-CBS, NBC & C. E. Hooper, named sales mgr., WJBK-TV, Detroit . . . Kal Ross, N. Y. sportsmaster, named director of operations and asst. to gen. mgr. Lou Poller at WCAN-TV & WCAN, Milwaukee . . . Paul A. Walker, ex-FCC chairman, has opened law office in 401 Warner Bldg., Washington; Metropolitan 8-1899.

— □ —

New FCC personnel reporting for duty in last few weeks, mostly in Broadcast Bureau, include 5 attorneys and 6 engineers. Attorneys: Charles Finley, ex-Treasury Dept. and Govt. Employees Insurance Co., to renewal div.; John H. Bass, ex-FTC, to hearing div.; Arthur J. Schissel, ex-House Ways & Means Committee staff, to TV div.; Edward Brown, ex-private practice in Cody, Wyo. (previously also in San Diego, Pensacola & Wisconsin Dells, Wis.), to hearing div.; Earl Walck, ex-private practice in Washington, to hearing div. Engineers, all coming from FCC field offices and all assigned to TV div.: Robert Ochs, Detroit; Clarence F. Heister, Kansas City; Mark Greenblatt, New York. Coming to common carrier div. from New York field office is Sidney Kessler; to field headquarters from Norfolk, Hilary H. Hayes.

Jay Strong, ex-Maxon and Gibraltar agencies, one-time with WABD, New York, died Dec. 1 in N. Y. His widow, Mrs. Doris Strong, is secy. to E. M. Johnson, MBS vice president.

Edgar W. Hopf, killed recently in accident while climbing Mt. Shasta with group led by Jon Lindbergh, was color TV research engineer at Stanford Research Institute.

RED INK operators both, Spokane's KXLY-TV (Ch. 4) and Los Angeles' KLAC-TV (Ch. 13) fetched handsome prices in sale deals for which transfer papers were filed with FCC this week. Spokane outlet (CBS) which began operating last Jan. and shows deficit of \$81,296 for 9 months ended Sept. 30, was sold for \$1,750,000 along with profitable KXLY radio (5 kw on 920 kc, CBS). Los Angeles independent, a consistent loser since it was founded in 1948, with deficit of \$273,419 for 10 months ended Oct. 31, was sold for \$1,375,000 without its AM counterpart. Blackburn-Hamilton handled both deals.

Buyers of KXLY-TV & KXLY are Northern Pacific Television Corp., 57½%, and Northern Pacific Radio Corp., 42½%—both with same officers and stockholders: Joseph Harris, chairman, 45%, ex-N. Y. insurance man, one of major owners of Motion Pictures for Television Inc.; Norman Eisenstein, pres., 45%, N. Y. investor, who owns half of Kiddie Coat Inc. (clothing mfr.) and various other enterprises; Richard E. Jones, v.p. & gen. mgr., 10%, recently mgr. of DuMont's WABD, N. Y., and before that mgr. of Storer's WJBK-TV, Detroit; James B. Harris, secy.-treas., son of Joseph Harris and an MPTV v.p.; Alex Alexander, director, 50% owner of Kiddie Coat Inc., owner of Miami's Hyde Park Hotel and various other enterprises; C. D. Randall, director, Spokane attorney.

Sellers get \$50,000 down, then \$450,000 on FCC approval, remainder in installments over 7 years. They are Symons Bestg. Co., 50%; Bing Crosby, 47.6%; Dr. Joseph Lynch, Robert P. Porter & Mahlon Rucker, local friends of Crosby's, 2.4%. Symons Bestg. Co. is 49.6% owned by E. B. Craney, Montana broadcaster; 33.23% by Mrs. Burton K. Wheeler, wife of the ex-Senator from Montana; 16.37% by John L. Wheeler, son, now a Pasadena attorney; .8% by Wm. Marshall, Spokane. Combined capital investment in the stations was \$449,414.

Buyer of KLAC-TV is Copley Press Inc., which proposes to change its call letters to KCOP and to operate it in conjunction with its string of Los Angeles County dailies: *Alhambra Post-Advocate*, *Burbank Daily Review*, *Culver City Star-News*, *Glendale News-Press*, *Monrovia News-Post*, *Redondo Daily Breeze*, *Venice Evening Vanguard*. Company also owns 60% of *San Pedro (Cal.) News-Pilot* and half of KSDO, San Diego independent AM. It also owns Illinois dailies *Aurora Beacon-News*, *Elgin Courier-News*, *Joliet Herald News*, and publishes *Springfield (Ill.) State Register* under 15-year lease. Its pres. is A. W. Shipton.

Seller is Mrs. Dorothy Schiff Sonneborn, publisher of the *New York Post*, who has operated it at loss ever since it was founded—this year's loss said to be lowest of any year. Her son Mortimer W. Hall is mgr., presumably will continue to manage highly profitable KLAC radio (5 kw D, 1-kw N on 670 kc, independent). Payments include \$100,000 down, \$300,000 on FCC approval, \$975,000 in 29 notes of 4% payable quarterly.

— □ —

More remote pickup channels for TV use were proposed by FCC this week, which revised its proposals of Nov. 1952 to meet industry objections. New proposal (Public Notice 98624) would make available for TV auxiliary use, assignable on case-to-case basis, 10 channels each in 1990-2110 mc & 2450-2500 mc bands, 8 in 10,500-10,700 mc and 20 in 12,700-13,200 mc bands. Channels would be available to broadcasters and common carriers providing auxiliary service to TV stations. Commission dropped its proposal to stipulate polarization for each channel. Also dropped was plan to set aside 3 of the channels exclusively for common carrier use. In separate notice (98625) FCC proposed separate allocation of exclusive channels to common carriers for TV pickup and other uses. Comments on both proposals due Feb. 15.

TELEMETER method of pay-as-you-look TV had its commercial bow Nov. 28 in Palm Springs, Cal., accompanied by appropriate Hollywood hoopla. Of 351 homes connected to community antenna closed-circuit system, 73 were equipped with coinboxes into which viewers could drop \$1.35 to watch premiere of *Forever Female*, starring Ginger Rogers, while exhibitor Earl Strebe charged moviegoers \$1.15 to see it in his theatre.

Viewers also had opportunity to pay \$1 to watch Notre Dame-USC game same day, microwaved from Los Angeles—only telecast of game permitted.

In addition to cost of specific programs, subscribers pay \$4-5 monthly for regular community antenna service supplying signals of Los Angeles stations, plus \$21.75 for lease of coinbox.

Next movie is *Moon Is Blue* (\$1.10 at home, 80¢ at theatre), then *Flight to Tangiers* and *All The Brothers Were Valiant*. All major movie producers are reported to have made their features available, except 20th Century-Fox which is said to be weakening.

Premiere was eminently successful, attracted heavy contingent of movie executives, stars and press. Included was patriarch Sam Goldwyn who reiterated his faith in fee-TV: "I've believed for years that paid TV must come—and this is a historic event. And if some exhibitors have to go out of business, well, that's as bad as some producers going out of business. Nobody has cried about that."

Telemeter's experience in Palm Springs in next 6-12 months or so should go long way toward proving or disproving subscription-TV proponents' claims of enormous potential for the service. International Telemeter Corp. officials feel they have good cross-section of public among their subscribers, though resort town itself is hardly an average community.

Telecasting Notes: "Gratuities Are a Growing Menace to TV Costs" headlines an editorial in Nov. 30 *Advertising Age*, which observes: "A danger flag is flying from the LaBrea tar pits to Radio City that threatens ultimately to bring an investigating committee to the TV industry. It is the bribe or payment to crews for a job they are already paid handsomely to perform. If you don't pay, there are diabolical slowdowns that add to the costs" . . . As all rackets do, this sort of thing started innocently enough when radio engineers or assistant directors were occasionally rewarded for an outstanding job, the producer personally paying anything from \$10 to \$50 a week. Then, when TV came: "First the technical director hit the producer for the kickback [and] for \$25 a week he would see that all went well. The networks didn't like this but they didn't do anything to discourage it, either. Most people paid off. There were stories about what happened to those who didn't—missed shots, bad cues, carelessness. If somebody had been tossed out right then and there into the cold cruel world, it might have stopped but, like all unclean acts, it spread. The stagehands, cameramen, lighting men, makeup girls and boys, dressers, pages, stage managers etc. *ad nauseam* heard about the handout and greed ran rampant" . . . In Hollywood, *Advertising Age* adds, this doesn't seem to go on in the making of films or in the commercial film studios—perhaps "because the dignity of the job there and the uniformly high salaries have had years to standardize the social status of the line workers." Advertisers and agencies are told *they* pay the bill, in final analysis—"a large client can be paying as much as \$500,000 a year for this luxury"—and warned: "If we don't fix it somebody else will" . . . Big, wealthy *Washington Star*, though its WMAL-TV isn't much of a money maker, is building a \$250,000 TV-radio workshop for American U, Washington, which offers credit courses

Telemeter exec. v.p. Carl Leserman made no mention of petitioning FCC to permit boxoffice TV on regular stations, stating that the 250 community systems in country, alone, can provide substantial market. He said he's considering wiring Glendale and Burbank, Cal.

Seeking to calm exhibitors, who have most to fear from fee-TV, officials of Telemeter and Paramount Pictures (which controls Telemeter) said they are considering system of franchising exhibitors to share in financing, operating and profit from pay-as-you-look. Commission now has petitions from 10 uhf grantees, asking approval of principle, but has given no indication when it will consider matter. Speculation is that it will come up next spring.

Coincident with premiere, film trade press buzzed with reports that other studios and exhibitor groups—such as Warners, 20th Century-Fox, Fabian—have become convinced they must get into the new field.

Since only 3 groups have promoted their particular systems—Telemeter, Skiatron, Zenith—word is that movie groups are going after Skiatron because other 2 are already amply financed. Such speculation ignores the certainty that many other systems and techniques will be brought out—if and when it appears that subscription TV will amount to something big.

It's inconceivable that CBS, RCA-NBC and ABC, for example, would fail to come forth with their own methods. In community antenna field alone, Telemeter has potential competitor in Jerrold Electronics Corp. Latter has supplied equipment to 80% of community systems, and pres. Milton Shapp says he has developed subscription system with many advantages over Telemeter. Shapp operates several conventional community setups himself, including Williamsport, Pa., which he says will reach total of 4000 subscribers in next few weeks.

in its dept. of communication headed by Willett Kempton; WMAL-TV transmitter is on campus . . . WFTV, Duluth, city's first TV outlet, has leased new building opposite Hotel Duluth, will shortly sever studio arrangements with WEBC . . . Denver's new KOA-TV (Ch. 4), due to start sometime this month, has made tieup with *Denver Post* whereby it gets exclusive TV use of newspaper's photos and will carry *Post* personalities on regular programs . . . Chicago Cubs' 77 home games for 7th season will be carried exclusively on WGN-TV, station paying reported \$100,000 for rights; Chesterfield & Hamm's Beer again expected to sponsor . . . New call letters of ABC's KECA-TV & KECA, Los Angeles, will be KABC-TV & KABC, after FCC approval, with Storer's KEYL-TV & KABC (AM), San Antonio, agreeing to become KGBS-TV & KGBS and present KGBS (AM), Harlingen, Tex., becoming KGVS . . . WAVE-TV & WAVE, Louisville, quit Free & Peters Jan. 1 to join NBC Spot Sales list; latter recently also added KSD-TV & KSD, St. Louis, but on Jan. 31 lose Westinghouse's WBZ-TV & WBZ, Boston, and WPTZ & KYW, Philadelphia, to Free & Peters . . . WTMJ-TV, Milwaukee, Rate Card No. 14, effective Jan. 1, raises Class A hour from \$960 to \$1050; \$180 min. rate remains same . . . KVTY, Sioux City, on Jan. 1 raises Class A hour from \$200 to \$260, min. from \$40 to \$52.

Sales of "Blab-Off," remote-control switch that enables viewers to turn off sound on objectionable TV commercials, went from 200 to 2000 a day since Nov. *Reader's Digest* devoted article to \$2.98 gadget, says Robert Grant, sales mgr. of Audio Controls Corp., 413 Race St., Cincinnati, manufacturer and distributor. Easily installed, gadget attached to sound wire on loudspeaker and extends by 20-ft. cord to remote control switch; picture remains undisturbed so viewer can see when commercial ends.

Station Accounts: Farm programs are currently carried on 60 TV stations, reports Dec. 5 *Tide*, listing them and quoting research firms as stating one out of 4 farm families already has a TV; that rate of TV set buying is now faster among farm than among other families; that sponsors like Allis-Chalmers, Ralston-Purina and Lederle Laboratories are already experimenting with farm TV . . . Charles Calkins, TV-radio director of Conklin Mann & Son, N. Y. agency, who recently toured farm TV stations, found chief handicap that their programs "ape aural radio" and concluded such shows might just as well air on radio at lower cost-per-thousand . . . Best farm shows, in Calkins' opinion: *Oklahoma Farmer*, 12:30-1 p.m. daily on WKY-TV, Oklahoma City; *Farmtime*, noon daily on WBNS-TV, Columbus; *Farm Furrows*, Wed. 5:15 p.m. on WSM-TV, Nashville; *RFD No. 4*, Sat. noon on WWJ-TV, Detroit; *Farm Reporter*, 12:30-12:45 p.m. daily on WOW-TV, Omaha; *Farm & Home Editor*, noon daily, on WBAP-TV, Ft. Worth . . . Heavy local spot buying in N. Y. by Ford and Buick indicate auto advertising via TV-radio "on strong up-beat," reports *Billboard*, with 1954 expected to be most competitive year for new car sales—Ford & Chevrolet "locked in a battle for the low-price car purchaser" and Nash, Kaiser, Hudson & Studebaker "in a struggle to recapture some of the customers they have lost to the majors" . . . Vaughan Motors, dealing in foreign cars, sponsoring *Wire Wheels*, first program devoted entirely to motor sports, Thu. 7:45-8 p.m. on WABD, N. Y. . . Heileman Brewing Co. (Old Style Lager), for 13 midwest markets, and Pure Oil Co., for 9 midwest & southern, have bought ABC film syndication div.'s *Racket Squad*, thru Leo Burnett, Chicago . . . Among other advertisers reported using or preparing to use TV: Armour & Co. (Suds detergent), thru John W. Shaw Adv., Chicago; Foremost Kosher Sausage Co., Philadelphia (meat products), thru Weightman Adv., Philadelphia; Sherrill Corp., Chicago (precision compasses), thru Robertson Potter Co., Chicago; Margo Wine Co., Philadelphia (Margo wines), thru J. M. Korn & Co., Philadelphia; Sta-Nu Corp., Chicago (dry cleaning system), thru Lester L. Jacobs, Chicago; Aluminum Goods Mfg. Co., Manitowoc, Wis. (Mirro cookie press), thru Cramer-Krasselt Co., Milwaukee; Toy Mfrs. of USA Inc. (American-made toys), thru Grey Adv., N. Y.; American Character Doll Co. (Rickey Jr. doll), thru Sterling Adv., N. Y.; Fanny Farmer Candy Shops Inc., Rochester, N. Y., thru Charles L. Rumrill & Co., Rochester; Caryn Gae Inc. (chlorophyll lipstick), thru Preiss & Brown, N. Y.; Comstock Canning Corp., Newark, N. Y. (canned fruits), thru Leo Burnett Co., Chicago; Grove Laboratories (Antamine cold remedy), thru Harry B. Cohen Adv., N. Y.; Block Drug Co. (Polident tooth powder), thru Cecil & Presbrey, N. Y.; Cristy Chemical Corp., Worcester, Mass. (Cristy Dry Gas anti-freeze for gas line), thru Humbert & Jones, N. Y.; Banner Candy Mfg. Co., thru H. L. Mihic & Co., N. Y.; Q & W Laboratories (Quettes face cloths), thru Gregory Ruffa Co., N. Y.; Dri-Zit Co., San Jose (Dri-Zit deodorizing products for garbage cans), thru Long Adv. Service, San Francisco; Jet-O-Mat Inc., Minneapolis (Duncan Hines automatic coffee maker), thru Addison Lewis Co., Minneapolis; Relaxacizor Sales Inc. (reducing aid), thru Wm. Warren, Jackson & Delaney, N. Y.

Motion Pictures for Television Inc. has formed MPTV (Canada) Ltd. with Paul Nathanson, Alf Perry and Alex Metcalf, of Sovereign Film Distributors, offering Canadian stations its services through offices in Toronto, Montreal & Winnipeg.

CBS-Columbia signs contract for TV receivers as standard built-in equipment for mobile home units of Pacemaker Trailer Co., Elkhart, Ind.

Network Accounts: Importance of advertising will be discussed by top ad executives in 2-min. films inserted on 3 NBC-TV sustaining programs each Sunday for 13 weeks starting Dec. 6, when leadoff speakers will be Foote, Cone & Belding's Fairfax M. Cone; J. Walter Thompson's James Webb Young, and Bristol-Myers' Lee Bristol. Conceived by Jacob A. Evans, NBC-TV adv. & promotion director, idea is to stress value and necessity of advertising in the American economy. Spots will be seen each week on *American Inventory* (2-2:30 p.m.) and *American Forum of the Air* (2:30-3 p.m.) and on alt. weeks on *Meet the Press* (6-6:30 p.m.) . . . Bucking top variety shows, ABC-TV launches unusual-format whodunit series, *The Mask*, starting Jan. 3, with central character as host narrator, Sun. 8-9 p.m., opposite NBC-TV's *Colgate Comedy Hour* and CBS-TV's *Toast of the Town*; no sponsor yet . . . Rybutol (vitamins) sponsors *Up for Adoption*, new human interest program on ABC-TV starting Jan. 16, Sat. 7-7:30 p.m., thru BBDO . . . Texaco buys *Cotton Bowl* game in Dallas New Year's Day on NBC-TV starting at 2:45 p.m., sandwiched between projected colorcast of *Tournament of Roses* (Woolworth's) and monochrome *Rose Bowl* game (Gillette) from Pasadena, thru Cunningham & Walsh . . . Anacin buys alt. wk. 10 min. of *Show of Shows-All Star Revue* on NBC-TV starting Dec. 5, Sat. 9-10:30 p.m., thru John F. Murray Adv. . . Gold Seal Co. (glass wax) sponsors *Jo Stafford Show* on CBS-TV starting Feb. 2, Tue. 7:45-8 p.m., thru Campbell-Mithun, Minneapolis . . . Sweets Co. of America (Tootsie Rolls) Dec. 13 shifts *Paul Whiteman TV Teen Club* on ABC-TV from Sat. 7-7:30 p.m. to Sun. 7:30-8 p.m.

Sylvania's annual awards, presented at New York's Hotel Pierre Dec. 1: comedy, *Make Room for Daddy* (ABC-TV); new series, *Person to Person* (CBS-TV); panel, *What's My Line?* (CBS-TV); public service, *American Forum of the Air* (NBC-TV); documentary melodrama, *Dragnet* (NBC-TV); children's series, *Ding Dong School* (NBC-TV); local education, *Shakespeare on TV* (KNXT, Los Angeles); creative technique, Ford Foundation's *Omnibus* (CBS-TV) & *Excursion* (NBC-TV); variety artist, Donald O'Connor; individual performance, Mary Martin, on Ford Motor Co.'s *The American Road*; actor, Rod Steiger, for *Marty*, on *Goodyear TV Playhouse*; writer, Irving Gaynor Neiman, for adaptation of John O'Hara's *Appointment in Samara*, on *Robert Montgomery Presents*. In addition, ABC, BBC & CBC were honored for coverage of Coronation. No grand prize was awarded by selection committee headed by Deems Taylor.

New York TV-radio stations reaped bonanza in heavy pre-Xmas advertising as result of strike which shut down city's 7 big daily newspapers — but they also took on greater responsibilities in keeping public informed via vastly increased schedules of newscasts. Some TV stations even read comics, newspaper editorial columnists, etc. While radio got greatest increase in advertising, most TV stations were sold out, or close to it—stores being biggest customers, but theaters and auto dealers also made heavy time purchases. Stations were hoping current test of TV's impact would sell dept. stores on continued heavy use of medium, even after newspapers are back in business.

Six grants-in-aid for educational TV programming were made this week by Ford Foundation's TV & Radio Center, Ann Arbor, Mich. Recipients: U of Nebraska, \$9000, for 39 programs explaining significance of Great Plains area in American history; U of Illinois, \$8500, for agricultural economics series; Stanford U, \$8000, for series on modern application of Constitution; New York U, \$6500 for series on archeology; St. Louis School Board, \$3500 for foreign language instruction. In addition, 8 colleges received grants for radio programming.

RCA SHIPPED 25-kw amplifier Nov. 30 to KID-TV, Idaho Falls, Ida. (Ch. 3), to be used in conjunction with GE 5-kw transmitter formerly used by KSL-TV, Salt Lake City, and station is aiming for early Dec. start. Its ownership interlocks with KSL-TV, and it's headed by C. N. Layne. RCA on Nov. 30 also shipped 10-kw transmitter to CBWT, Winnipeg, Man. (Ch. 4), being built by Canadian Broadcasting Corp.

There were no other shipment reports from the transmitter manufacturers this week, though at least one stated it has equipment ready to ship but has been asked by customers to hold it up while transmitter houses, towers, etc. were being built.

* * * *

In our continuing survey of upcoming new stations, these were the reports received this week:

KARK-TV, Little Rock, Ark. (Ch. 4), is remodeling recently purchased 1001 Spring St. building for combined TV-AM offices & studios, now plans start next March or April with RCA equipment, reports v.p.-gen. mgr. T. K. Barton. It will be first vhf competitor for KRTV (Ch. 17), which started last April. Rep not yet chosen.

WPBN-TV, Traverse City, Mich. (Ch. 7), granted last week to Paul Bunyan Radio Network (operating 5 AM locals), has ordered RCA studio equipment only, will choose transmitter, antenna and tower makes later, according to WTCM pres.-gen. mgr. Lee Biederman. Construction of transmitter house and adjacent 6,000-sq. ft. studio is expected to require approximately 2 months during winter; tower construction is scheduled for April 15 start; tests patterns for May 15. Hal Holman will be rep.

KETC, St. Louis (Ch. 9, educational), didn't make previously promised fall start because of delays in RCA equipment deliveries and move of Ideco tower from main campus to site between St. Louis U High School and Oakland Stadium, now has target "at least 2 or 3 months off," according to gen. mgr. Richard J. Goggin. Charles Guggenheim named operations & production director; John F. White, business mgr.; Jack Chenoweth, chief engineer.

WMAM-TV, Marinette, Wis. (Ch. 11), has part of its equipment on order from RCA, has begun construction, plans start 6-9 months from now, according to pres. William E. Walker. Call letters may be changed before debut. Rep not yet chosen.

KPAR-TV, Sweetwater, Tex. (Ch. 12), has ordered DuMont equipment for mid-Jan. delivery, but hasn't set target date yet, according to pres. W. D. Rogers. Same owners also operate KDUB-TV, Lubbock. Rep will be Avery-Knodel.

WGAN-TV, Portland, Me. (Ch. 13), already has 5-kw GE transmitter and temporary 2-bay antenna, gets Dec. 20 shipment of 20-kw amplifier, plans first tests Feb. 1, goes on with full power May 1, reports gen. mgr. C. E. Gatchell. Owner Gannett Co. Inc. publishes *Portland Press-Herald* and *Express* and other Maine newspapers. Avery Knodel will be rep.

KCEB, Tulsa (Ch. 23), first scheduled for Oct. start, then Nov., now plans to turn on juice shortly after Dec. 15 with 1-kw RCA transmitter atop Lookout Mt., reports gen. mgr. N. Ray Kelly, ex-NBC. Backed by oilman Elfred Beck, it will be first competitor to pre-freeze KOTV (Ch. 6). Hourly rate will be \$200. Bolling will be rep.

WCOC-TV, Meridian, Miss. (Ch. 30), bucking up against local Ch. 11 WTOK-TV which went on air Sept. 25 (Vol. 9:40), has had 100-watt GE transmitter since Aug., has occasionally tried it out, but won't go on regular tests until its new GE 12-kw is ready; it's now being installed, looks like Jan. 1 starter. Owner Withers Gavin, who has 3 AM stations and publishes weekly religious *Clarke County Tribune* in Quitman, Miss., has announced CBS affiliation, no rep.

WCMB-TV, Harrisburg, Pa. (Ch. 27), awaits FCC approval of increase in tower height to 404 ft. at new location adjacent to WTPA installation, now plans March 1 start with 5-kw DuMont transmitter, according to gen. mgr. Ed K. Smith, who heads radio WCMB, Lemoyne, Pa. Building next to present downtown studio-office is being remodeled for TV. Rep will be Donald Cooke.

WKNY-TV, Kingston, N. Y. (Ch. 66), has its 1-kw RCA transmitter, is working on 600-ft. Stainless tower located 3 mi. from Kingston and 10 mi. from Poughkeepsie, now has tentative mid-Jan. target, weather permitting, according to TV operations mgr. Robert L. Sabin. Base rate will be \$100. Rep will be Meeker.

* * * *

CBUT, Vancouver, B. C. (Ch. 2), plans to start on or about Dec. 16 as CBC's fourth outlet, transmitting from 2700-ft. level of Mt. Seymour with old RCA antenna of CFBT, Montreal, permitting 2½-kw ERP pending installation of 12-bay Canadian Marconi antenna allowing for 100-kw. Unique construction feat was laying of 16,000 ft. of power cable in 2-ft. trench along rugged mountain side. Two-story chalet type transmitter house has living quarters because weather and remoteness render transportation difficult. Communication with downtown studio-office building will be by radiophone. Peter McDonald has been named director; Marce L. Munro, program director; Ross L. Whiteside, technical director; R. L. Elson, news-reel editor. Hour rate will be \$175, and CBC will be rep.

CFCM-TV, Quebec City (Ch. 4), recently got city council's approval of transmitter site near suburban Ste. Foye, where construction is now underway, according to technical director Ernest Miller. Its 500-watt DuMont transmitter is on hand and programming is scheduled for next April. Weed will be U. S. rep.

□

Amplifiers permitting transmitter power boosts directly from 5 to 50-kw are being produced and installed "right now," Standard Electronics Corp. reminds us, taking issue with item in last week's Newsletter (Vol. 9:48). Writes Standard sales engineering mgr. Edward W. Stone: "A Standard Electronics amplifier (operating at about 40 kw) enabled WABT [Birmingham] to go to the maximum 316-kw ERP on Ch. 13 in Sept. This amplifier is driven directly by [a 5-kw] transmitter. The Empire State installation of WOR-TV, presently under test, uses a Standard Electronics 50-kw transmitter. Here the final amplifier operates from a 5-kw driver. In Jan., Crosley's WLWA [Atlanta] will install a Standard Electronics 50-kw transmitter." Last week's item described new GE 25-kw vhf tetrodes making possible 50-kw transmitter driven directly by 5-kw driver.

Transatlantic telephone cable, announced this week by AT&T for completion in 3 years, cannot be used or equipped for TV because it won't be able to accommodate sufficiently wide band. Nor will it be equipped with the proper repeaters for TV. However, it's expected to be used to supplement overseas radio program service, currently carried by shortwave. Jointly owned by AT&T, British Postoffice and Canadian Overseas Telecommunication Corp., cable project will cost \$35,000,000, involves laying 2300 miles of cable and numerous electron tube repeaters on ocean floor, will be capable of handling 36 simultaneous conversations. Undersea cable from Britain will connect with 350-mi. overland microwave system from Nova Scotia to U. S. border. Although this microwave route could conceivably some day be converted for TV, AT&T says this move is "not contemplated."

FCC extended deadline for compliance with new regulation limiting TV stations' upper sideband radiation to July 1, 1954, because of unavailability of filters needed to do the job in some transmitters (Notice 53-1567).

INVENTORY DROP BUOYS HOPE OF TRADE: Those clogged TV pipelines were shaken loose somewhat during November -- preliminary estimates placing total between 2,000,000 and 2,100,000 at end of month, as against about 2,350,000 end of Oct. (Vol. 9:45).

Both factory and distributor inventories showed sizable reductions from the 520,000 and 825,000 levels, respectively, at end of Oct. Full report on stocks of dealers isn't in yet -- but first returns from key retailers indicate they'll show healthy decline from the 1,000,000 estimate reported last month.

Cutbacks in production, modest business pickup, flurry of retail activity generated by Westinghouse price slash (Vol. 9:46), were credited by trade sources as main reasons for decline in inventory. Planned cutbacks and short Thanksgiving week combined to limit TV output to 103,692 week ended Nov. 27, way down from 146,727 in preceding week and 161,337 first week of month. It brought TV production for RETMA statistical month to about 570,000, and for year to date to about 6,770,000 (with 5 weeks to go) -- compared to 6,096,279 for all of 1952.

How much further inventories will decline in December is moot question. In opinion of one highly-placed source, stocks probably won't show much additional drop, sending color-conscious industry into 1954 with about 2,000,000 sets in all pipelines, or about the same as midyear 1953. That's not too high, he opined, considering fact there are 1500 more dealers today than year ago.

Other sources disagree, say Christmas month should bring down inventories, especially if production remains at reduced levels as expected. Time will tell who's right, but as a guide it should be noted that factory inventories increased from 78,200 to 143,800 in Dec. 1950, declined from 287,000 to 216,710 in Dec. 1951, increased from 105,170 to 119,345 last year; distributor inventories increased from 287,900 to 363,500 in Dec. 1950, from 405,469 to 439,340 in 1951, and declined from 468,341 to 404,315 last year. Retail stocks have always declined in December.

* * * *

Picture tube price trend is definitely downward. Without fanfare, nearly all tube makers have put into effect price reductions on 21 & 24-in. CR tubes during last 6 weeks. No announcement accompanied actions, but when pressed by newsmen for reasons, companies cited lower costs of glass bulbs, cuts in production cost of aluminized tubes and normal seasonal reductions in orders by set manufacturers.

"Set makers usually stock up on tubes in September and October, then live off their 'fat' in November and December," said one major tube maker. "I expect business will pick up again after the first of the year. It usually does."

Price cuts averaged about 7% on selected tubes, few if any manufacturers making across-the-board slashes. All companies agreed oversupply of these tubes was a factor. And as further indication of sluggish movement of large-screen sets, RCA Victor revealed this week it's discontinuing 27-in. output.

Nearly all tube makers are now operating at reduced pace. For example: RCA Victor has laid off 300 workers at Cincinnati plant, National Video Corp. has furloughed 300, Rauland and DuMont are producing at about 80% of capacity. Receiving tubes, still in relatively short supply, apparently aren't affected -- reflecting continuing good radio output and military procurement.

* * * *

Belief that slowness of TV trade is part of national economic letdown is strengthened by release this week of Federal Reserve Board report showing industrial output registered third consecutive monthly decline in Nov., with consumer durables leading downturn. Board estimated that Nov. output was 228% of prewar base average, compared to 231% in October and 234% in November 1952.

Labor Dept.'s Bureau of Employment Security, in another report, revealed a number of areas among 149 recently surveyed reporting small to moderate declines in

employment, and many others did not show the usual employment upswing characteristic of the Christmas season. Hours worked showed declines in still other regions.

* * * *

Like TV, radio production also dropped week of Nov. 27, totaling 219,156, down from 280,244 preceding week and 276,657 week ended Nov. 13. It brought month's production to about 1,060,000 and for year to date to about 12,415,000, compared to 10,934,872 for all of 1952.

Topics & Trends of TV Trade: Full new TV lines will be rarities—and even additions to lines are spoken of only in whispers, as manufacturers prepare for annual winter exhibitions at American Furniture Mart and Merchandise Mart in Chicago, Jan. 4-15. Set makers are generally maintaining competitive silence on their plans.

Advent of color, of course, has accelerated industry's drift to one line a year. As one manufacturer put it: "With everybody's mind on color now, introducing a lot of black-&-white models is like swimming upstream. You're wasting your time." Only Westinghouse, in wake of big price cut on six 21-in. models (Vol. 9:46), has revealed plans for full new line.

Admiral will introduce a few supplementary models at national distributors' convention at Chicago's Conrad Hilton Hotel, Dec. 28-30. Philco plans to introduce additions via closed-circuit telecast shortly after first of year; its Jan. 4-8 Atlantic City convention is said to be for white goods only. RCA conducts quarterly field sales meeting at Atlantic City's Haddon Hall Hotel, Dec. 7-11, will introduce only one new set—a 24-in. console—at the Marts.

American Furniture Mart will have these TV-radio exhibitors: Admiral, Arvin, Bendix Radio, DuMont, Hallcrafters, Jackson Electronics, Motorola, Philco, RCA Victor, Sparton, Westinghouse, Zenith. At Merchandise Mart, permanent exhibitors include Capehart-Farnsworth, CBS-Columbia, Crosley, GE, Magnavox.

* * * *

Applicable to TV, Federal Trade Commission this week approved new trade practice rule permitting use of word "free" in ads even though "receipt of article or service described is contingent on compliance with certain conditions," provided all conditions are "clearly and conspicuously disclosed at the outset" of the ad. Heretofore, FTC rules prohibited use of "free" if any conditions were attached. Rule forbids use of "free" to describe gift if increase in price of tie-in merchandise has been made to cover cost of gift. Rule is available on request of FTC.

Electronics industry prospects for 1954 look good to Sylvania chairman Don G. Mitchell, who told his salesmen at national conference in Rye, N. Y. that heavy expansion is contemplated next year. But he warned that 1954 will mark "the first year in entirely too many years that business will have to get back to selling" and that a salesman "will have to stop thinking about his product only—and concentrate instead on the customer's needs."

About 40,000 TVs will be sold in Puerto Rico first year after telecasting starts, according to Admiral's Joe Marty Jr., who planned this week end to hold big "sendoff" meeting with Admiral's distributor, Tartak Distributors Corp. New WAPA-TV (Ch. 4) is due to start in San Juan before end of month.

"Three-for-one" coin box is being offered its distributors by Raytheon in 1954 TV line. It permits 3 minutes of free viewing as come-on to hotel or motel guest to insert coin for 30 minutes.

RCA Victor tube dept., following recent reorganization (Vol. 9:44), will move headquarters of newly-created CR-power tube operations & marketing divs. from Harrison, N. J. to Lancaster, Pa.

NO DEARTH of color activity and talk this week. Examples from various fronts:

(1) GE announced "limited quantities" of color tubes will be offered first quarter 1954. Made in Syracuse, they'll be conventional 15-in. glass mask type, sell for "about 10 times" price of black-&-white tubes.

(2) RCA has scheduled 2 more color clinics in Camden for engineers from stations ordering color equipment. About 75 are expected at Dec. 7-8 and Dec. 14-15 sessions.

(3) Packard-Bell took nearly full-page ads in Los Angeles papers, much like recent ads of Magnavox (Vol. 9:44), designed to urge public to buy black-&-white instead of holding off for color. It stressed expected cost and size of color sets, compatibility of black-&-white, etc. Also in Los Angeles, Electric League sponsored dealer-servicemen meeting at which industry speakers expressed great hopes in future of color but stated that growth is bound to be gradual.

(4) DuMont network director Ted Bergmann, in Dec. 3 talk before Dayton Ad Club, dwelled particularly on fact that stations won't be able to telecast local commercials without substantial equipment investment and that advertisers won't shell out heavily for color until color set saturation is substantial—which will take time.

(5) RCA took occasion to deny reports, in *Time Magazine* and *Tide*, that it will guarantee current purchasers of black-&-white sets 80% of purchase price toward cost of color set bought next year. Though some RCA distributors are advertising such guarantees, RCA emphasized it has not adopted such policy nationally.

(6) Dec. 7 *Newsweek* included color roundup, nub of which was: "Color, for the average family, will be a long time coming" and "Black-&-white TV is here to stay for a while." Article shows considerable confusion over tube sizes. It tabulates size of color pictures to be offered by 18 manufacturers, showing range from 11½-in. on up. Fact is, of course, that 17 of the 18 will use exactly same size tube—15-in. envelope with 11½-in. picture. Crosley promises 17-in. on Lawrence tube. In same article, TV-radio editor Joan Walker comments on color quality, finds best "pure magic," poorest "tough on the eyes."

(7) Dec. 5 *Tide* polled manufacturers, found 150,000 color sets to be average estimate for 1954—with range between 50,000 for Seymour Mintz of Admiral to 200,000 for Frank Stanton of CBS.

—————□—————

Radio shipments to dealers in first 9 months—exclusive of auto radios—totaled 4,807,332, compared with 4,599,083 in corresponding period year ago, reports RETMA (state-by-state and county-by-county tables available from RETMA on request). For third quarter ended Sept. 30, shipments totaled 1,593,308 vs. 1,614,697 for the same 1952 quarter.

Special 13-page article on color in December *Electronics Magazine* is devoted to "what design engineers need to know" about NTSC standards, by Donald G. Fink, ex-editor of *Electronics*, now Philco director of research for TV-radio-appliances.

Bell & Howell acquires Three Dimension Co., 4555 Addison St., Chicago, manufacturer of tape recorders, slide projectors & viewers.

Trade Personals: Frank Folsom, RCA pres., to be guest of honor at dinner given by chairman David Sarnoff Dec. 14 in Waldorf-Astoria, N. Y., celebrating Folsom's 10th anniversary with company; about 350 men have been invited to black-tie affair . . . George Laux, ex-Federal Telephone & Radio, named mfg. v.p., National Co., Malden, Mass.; E. MacDonald Nyhen, ex-NPA Electronics Div., now in charge of National's industrial sales; R. A. Van Valkenburgh, ex-DPA electronics office, in charge of govt. sales . . . Robert C. Sprague, chairman of Sprague Electric, North Adams, Mass., retires as pres., Associated Industries of Massachusetts, after 2 years in post . . . C. E. Burnett, ex-kinescope equipment sales mgr., promoted to new post of mgr. of CR & power tube operations div., RCA Victor . . . Daniel J. Webster, ex-Westinghouse, appointed marketing mgr., Raytheon equipment div., Waltham, Mass. . . . Kenneth G. Gillespie, Jenkins Music Co., Kansas City, elected chairman of TV-radio committee, National Assn. of Music Merchants; Ted Leyden, Hockett-Cowan Music Co., Fresno, elected vice-chairman . . . Erik Isgrig promoted to new post of adv. v.p., Zenith Radio . . . F. D. Pinotti, chief engineer, Kimble Glass Co., elected v.p. . . . John H. Hocter resigns as sales v.p. of Jewel Radio, now in bankruptcy (Vol. 9:48) . . . James A. Egan, ex-Bendix appliances, appointed Chicago district sales mgr., Magnavox . . . Justin R. (Ted) Sypher, former secy., DPA Electronics Production Board, now field engineer, Micamold Radio Corp., Brooklyn, with offices in Wyatt Bldg., Washington.

* * * *

Distributor Notes: Philco appoints Boyd Distributing Co., ex-Motorola Denver outlet, replacing Walter Slagle Co. . . . Allied Appliances Inc., Denver, relinquishes Admiral franchise . . . Arvin appoints D'Elia Distributors Inc., Bridgeport, Conn. (Charles A. D'Elia, pres.), replacing Capital Light & Supply Co., Hartford, now CBS-Columbia; Harris Supply Co., Mobile (M. T. Harris, pres.), replacing Moore-Handley Co., Birmingham; Ogilvie Hardware Co., Shreveport (R. S. Ogilvie, pres.) . . . CBS-Columbia appoints Roberts & Knapp, 210 Boone Ave., Spokane, replacing Love Electric Co. . . . Bendix Radio names Lynn Dickerson Co., Houston . . . Simon Distributing Co., Washington (Zenith), opens branch at 405 No. Warwick Ave., Baltimore (Thomas Scanlan, mgr.) . . . Stern & Co., Hartford (Zenith), announces retirement of pres. Francis E. Stern, succeeded by J. Donald Cohon . . . Pacific Mercury Sales Corp., Los Angeles, promotes Stanley Cohen to national sales mgr.; Daniel Pollack named adv. director & field sales mgr., replacing Ross Mason, now Philco-Los Angeles.

RETMA service committee, implementing its plans for public relations campaign on color for servicemen (Vol. 9:47), will meet at New York's Hotel Roosevelt, Tue. Dec. 15, to consider color service pamphlet drafted by 2 regional subcommittees. It's expected pamphlet will be used by manufacturers as basis for lectures to servicemen early next year.

Phono record industry's best year, with sales of \$225,000,000, up 12% from year ago, is certainty for 1953, reports Dec. 1 *Wall Street Journal*, which lists 3 big reasons for boom: low prices, product improvements, aggressive promotions. At least 15 records each will pass 1,000,000-unit sales mark this year, story adds.

July-Sept. excise tax collections on TVs, radios & phonos were \$17,765,000, compared with \$22,729,000 in corresponding 1952 period. On refrigerators, air conditioners, etc., Govt. collected \$17,637,000 vs. \$22,201,000 in July-Sept. 1952.

Dun & Bradstreet reports bankruptcies in appliance and TV-radio categories lead all others in retail business this year; third is furniture & home furnishings category.

Electronics Reports: New "surface-barrier" transistor, announced Dec. 3 by Philco, was hailed by engineering v.p. Leslie J. Woods as "the most important advance in electronics since discovery of the point-contact transistor." Based on entirely new method of processing germanium, these features are claimed for it:

(1) Operating characteristics make possible reliable operation in frequency ranges up to 70 mc—"frequencies 10 to 100 times as high as obtainable with older alloy junction transistors."

(2) Precision which can be attained in manufacture of surface-barrier transistor gives promise of real mass production of reliable transistors.

Development was announced at IRE-Defense Dept.-Franklin Institute meeting in Philadelphia. New production method consists of etching germanium crystals with electric current passed through tiny streams of liquid indium salt. Thickness of germanium can be controlled to tolerance of 10 millionths of an inch. Because transistor can operate reliably on 20-58 mc military vhf communication band, it now makes possible "a portable military communications receiver powered solely by 2 flashlight cells," said Woods.

Philco research v.p. David Smith predicted new type transistor is "the beginning of a whole family of transistors based on this principle." Philco statement added: "The patents on these important transistor developments will add additional strength to Philco's major patent position in the electronic industry."

* * * *

Printed circuits and automatic production of radios get thorough *Wall Street Journal* treatment in Dec. 4 lead article, which reports that Raytheon "is putting finishing touches on an automatic radio assembly line geared to produce 1000 radios a day, with only 2 workers needed to run the line." To maintain that production rate by hand assembly would require 200 workers. Hallicrafters has turned out nearly 70,000 home radios with printed circuits. Motorola, which brought out printed circuit radio in 1952 (Vol. 8:31, 33), sold 75,000 last year, hopes to make total of 110,000 more by end of 1953, hasn't had single one returned as defective. Motorola plans to introduce printed circuit portables and auto radios next year.

Printed circuits occupy good part of December *Tele-Tech*. In addition to directory of printed-circuit manufacturers, there are articles on "Printed-Wiring Multiple Soldering Methods" by Methode Mfg. Corp's Alvin E. Stones, "Embossed Wiring" by Erie Resistor's O. I. Steigerwalt, "Economics of Printed Wiring" by Photocircuits Corp.'s Robert L. Swiggett & James F. Carberry, "Protective Coatings for Etched Circuits" by PCA Electronics' Morris Weinberg & Hughes Aircraft's L. J. Martin.

"Automatic transistor machinery" capable of producing 900-1200 sealed-in-glass transistors an hour are being advertised in technical publications by Kahle Engineering Co., North Bergen, N. J., manufacturer of electron tube production equipment.

RCA dedicated new modern plant for engineering and development of radar techniques with ceremonies Dec. 5. Plant buildings, with 145,000 sq. ft. of floor space, are located on 420-acre tract in Moorestown, N. J. Plant already employs 600.

Collins Radio Co., Cedar Rapids, establishes wholly-owned subsidiary, Collins Radio Co. of Canada Ltd., Ottawa, to provide technical assistance to Canadian manufacturers of military equipment.

Superior Tube Co., Norristown, Pa. (tube parts) buys controlling interest in Fine Tube Ltd., Surbiton, Surrey, one of England's largest producers of seamless nickel cathodes (Malcolm A. Rowe, managing director).

Financial & Trade Notes: Television-Electronics Fund Inc. reports assets of \$27,835,082 (\$15.10 on 2,009,920 shares) as of Oct. 31 compared with \$26,301,767 (\$14.56 on 1,806,158) last Jan. 31 and \$22,503,516 (\$13.57) Oct. 30, 1952. It also recommended to stockholders an increase in authorized capital stock from 5,000,000 to 10,000,000 shares, providing for 2-for-1 split. Annual meeting is Dec. 21 in Chicago.

Following is portfolio as of Oct. 30: Admiral 32,500 shares, Aerovox 17,500, Aircraft Radio 9000, American Bosch 15,000 common & 1300 pfd., AB-PT 12,500, American Phenolic 20,300, AT&T 2000 (plus 2000 rts.), Beckman Instruments 10,000, Bendix Aviation 10,000, Boeing 10,000, George W. Borg 7000, Burroughs 20,000, Carborundum 5100, Clark Controller 21,000, Clevite 26,500, CBS "A" 9000, Conrac 9000, Consolidated Engineering 19,000, Consolidated Vultee 22,500, Cornell-Dubilier 9000, Cutler-Hammer 12,000, Disney 8000, Douglas Aircraft 7400, DuMont "A" 8000, Eastman 9000, Eaton Mfg. 1500, Electronic Associates 5000, Emerson Radio 15,000, Erie Resistor 8300, Federal Enterprises 10,000, Garrett Corp. 3500, General Controls 15,000, GE 10,000, General Railway Signal 13,500, Giannini & Co. 5000, Globe-Union 1300, Haloid 1500, Hammond Organ 15,000, Hazeltine 23,500, Indiana Steel 12,600, IBM 3300, International Resistance 26,000, IT&T 18,600, Mallory 4000, Minneapolis-Honeywell 3000, Minnesota Mining 15,000, Motorola 26,700, Muter 4000, National Cash Register 15,000, Northrop Aircraft 20,000, Oak Mfg. 12,000, Otis Elevator 13,700, Owens-Illinois 2000, Philco 18,400, Photon 7800, RCA 46,500, Raytheon 15,000 common & 2000 pfd., Remington Rand 10,000, Robertshaw-Fulton 20,000, San Diego Corp. 2000, Servomechanisms 20,000, Speer Carbon 7000, Sperry 10,000, Sprague Electric 3900, Sylvania 32,100, Technicolor 13,300, Telecomputing Corp. 15,000, Television Associates 2400, Thompson Products 16,500, Tung-Sol 11,000, United-Carr Fastener 15,000, Vitro Mfg. 3030, Western Union "A" 9500, Westinghouse 24,000, Westinghouse Air Brake 21,000, Weston Electrical 32,000, Zenith 9800.

* * * *

Teleprompter Corp., in Nov. 1 progress report to stockholders, states weekly gross income has grown to average of \$5500 first half of 1953 from \$5200 second half of 1952, \$4500 first half 1952. Week ended Oct. 18 (\$7500) represents more than 50 TV shows and about 1000 unit hours of Teleprompter use. Operations first 9 months of year have been profitable, states chairman Irving B. Kahn, and despite expansion expenses and equipment delay year's net profit should compare with the \$50,000 earned in 1952, or about 50¢ a share on 100,000 shares outstanding.

Among officers' and directors' stock transactions reported by SEC for Oct.: Victor Emanuel sold 2250 Avco pfd. (Sept. & Oct.), holds none; Morton P. Rome bought 100 Emerson, holds 100; Harvey Tullo bought 500 Emerson, holds 2678; Royal Firman Jr. bought 100 Gabriel Co., holds 700; Earle G. Hines bought 100 General Precision Equipment, holds 600; Harold W. Brown sold 1900 Muntz TV, holds 4100; Louise A. Woodward sold 325 Muntz TV.

Dividends: Webster-Chicago, 10% stock div. payable Dec. 21 to stockholders of record Dec. 10; Zenith Radio, 50¢ and \$1 extra Dec. 28 to holders Dec. 11; Hoffman Radio, 25¢ Dec. 30 to holders Dec. 16; General Instrument, 25¢ Jan. 15 to holders Jan. 4; Muter Co., 3% stock div. Dec. 31 to holders Dec. 15; Reeves Ely Lab, 10¢ Dec. 31 to holders Dec. 17; RCA, 25¢ quarterly and 20¢ extra, Jan. 25 to holders Jan. 5.

Sparks-Withington sales to Oct. 31, first 4 months of fiscal year, were \$9,480,000 compared with \$9,580,000 year ago, but pres. John J. Smith explained at annual meeting last week that plant was shut down by strike during first 5 weeks of the 1953 period.

WHEN WILL HOLLYWOOD open its feature film vaults to TV? Probably not in near future, in opinion of 3 top distributors of TV film. Hardly a week goes by without a rumor that one major producer or another is getting ready to turn some of his backlog of film over to TV—but those closest to film industry have learned to ignore these rumors. Principal reason for movie companies' reluctance, in unanimous opinion of film people who should know, is summed up in one word — economics.

Old features can still bring in much more money on theatre re-run basis than on TV. For example, recent re-release of RKO's *King Kong* grossed \$2,000,000 in theatres, whereas Peerless TV Productions' package of 26 top features grossed only about \$800,000 on TV last year.

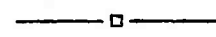
E. H. Ezzes, v.p. & sales mgr. of Motion Pictures for TV Inc., points out that another factor involved in big producers' reluctance is unwillingness to risk disfavor of exhibitors and stockholders. With some \$75,000,000 worth of current film inventories (now in distribution or ready for release), producers obviously will think twice before angering exhibitors into boycotting their product.

Ralph M. Cohn, head of Columbia Pictures' TV film subsidiary Screen Gems Inc., expresses similar viewpoint, and adds that chances for early release of majors' backlog "get smaller as talk about subscription TV gets larger." With pay-as-you-see TV looming on horizon, as many producers believe it is, it would be folly to release good features to free TV. However, Cohn points out that widespread adoption of new widescreen techniques by theatres and producers would tend to depress residual theatrical value of film backlogs. And imminence of color TV, too, is certainly making movie companies re-assess advisability of selling to TV while there's still market for black-&white films on TV (Vol. 9:46). Question of release to TV is known to be constantly under review by all major studios.

"No new evidence of any crack in the Hollywood dike," reported *Billboard* in recent interview with Arche Mayers, head of Unity TV Corp., one of biggest distributors of feature films to TV. Despite talk that color and TV tape recording will hasten release of Hollywood's old feature films to TV, Mayers also thinks film vaults will remain shut for some time because of (1) control of theatres by major studios, and (2) TV's inability to compete dollar-wise with theatres even for old features. Mayers says average good feature can barely return \$35,000 from TV showings, but can take in \$150,000-\$200,000 when re-released for theatre presentation. Meanwhile, Walt Disney Productions v.p.-gen. counsel Gunther Lessing is quoted in *Variety* as saying his company has no current plans to release any old films to TV, because (1) it doesn't pay enough, and (2) "there's no use competing against ourselves."

Films made especially for TV are getting more "respectable" every year, according to annual poll conducted by Hollywood consultant Gordon Levoy. His 1953 survey, released this week, indicates majority of agencies, stations and sponsors polled prefer filmed TV programming to live. Of agencies, 56% preferred film, as compared to 48% in 1952, 40% in 1951 and 35% in 1950. Of the stations queried, 51.5% preferred film this year, 40% last year, 47% in 1951 and 50% in 1950.

Sponsors, too, gave edge to film—55% preferring it in current survey, as against 45% last year, 10% in 1951. Even attitude of TV editors toward film was softening—40% preferred it this year, only 20% last year.



Wilcox-Gay, parent of Majestic & Garod, reports net profit of \$287,776 on sales of \$14,382,102 in 10 months ended Oct. 31 vs. \$327,440 on \$14,434,343 same 1952 period.

NBC's NEW PRESIDENT is Sylvester L. (Pat) Weaver, with Robert W. Sarnoff as executive v.p., both elected at board meeting Dec. 4, effective immediately. Selections weren't unexpected, may be followed by further shuffling of top staff—including probably separate executive heads in charge of TV and radio operations. Weaver continues to be vice chairman of NBC board, reports to Brig. Gen. David Sarnoff, RCA-NBC chairman, who stated he will continue to take an "active interest" in NBC. Gen. Sarnoff has been acting pres. since resignation of Frank White in July after serving only 6 months (Vol. 9:30).

Pat Weaver is 44, Bob Sarnoff 35—a team which Weaver, in closed-circuit broadcast to NBC affiliates, said aims to "make NBC the greatest social force and the greatest selling force in the nation." Weaver has been in charge of both TV and radio networks since summer of 1952, recently detailed to color. He has been responsible for many innovations, including the 7-9 a.m. *Today* with Dave Garroway, which he started 2 years ago in face of strong criticism both within and outside his company and which he saw grow into a participating show that not only is "changing the habits of America" but accounts for some \$5,000,000 in annual billings—the largest in TV.

Weaver is a native of Los Angeles, Phi Beta Kappa graduate of Dartmouth '30. He started in radio in 1932 as a writer for KHJ, Los Angeles, became N. Y. mgr. for Young & Rubicam in 1935, and in 1938 (at 30) adv. mgr. of big American Tobacco Co. He served in the Navy 2 years, commanding an escort vessel, rejoining American Tobacco after the war, returning to Y&R in 1947 as TV-radio v.p., joining NBC in 1949.

Young Sarnoff is eldest of 3 sons of Gen. Sarnoff, was graduated from Harvard in 1939, attended Columbia Law School for a year, was in the Navy 3 years, returned in 1945 to be asst. to Gardner Cowles Jr., publisher of *Look*. He joined NBC in 1948, was elected a v.p. in 1951, named head of film div. in 1952. He was prime mover in production of NBC-Navy documentary *Victory at Sea*, for which he received the Navy's distinguished service award. He's likely to be succeeded as head of film division by Carl L. Stanton, his right-hand man there.

Plane crash in which Michigan's ex-Gov. Kim Sigler and 3 companions were killed after hitting 550-ft. tower of upcoming WBCN-TV, Battle Creek (Ch. 58), was third such tragedy involving TV or radio tower in 4 months. CAA officials said ceiling was only 400 ft. at time of Michigan crash, allowing some 150 feet of tower to project into overcast. WBCN-TV tower was knocked down. It had Jan. 1 target date, hasn't yet estimated how long debut will be delayed. Two previous crashes this year were fatal for 30 persons: 2 were killed Aug. 8 when light plane struck guy wire of 1036-ft. tower of WHUM-TV, Reading, Pa. (Vol. 9:33); 28 died Sept. 16 when airliner hit two 346-ft. towers of radio WPTR, Albany. CAB this week released results of investigation of Aug. 8 crash, placing all blame on pilot. It said ceiling was only 200 ft., yet pilot attempted to fly by visual flight rules (without instruments). CAB staff analysis also blamed pilot for "failure to observe objects." CAB has completed public hearings on Albany crash, and has begun probe of Michigan disaster.

Besides "inventing" TV, these Soviet "firsts" as reported by AP from London monitor of Russian radio: "Soviet TV has outstripped American TV as regards clearness of reception. Color TV is being worked on. It is the aim of the designers to bring color TV out of the experimental stage in 1954-55." (Presumably that's time enough for Soviet agents to deliver the specifications on U. S. equipment.)

Three of the 5 applicants for Buffalo's Ch. 7 withdrew this week and formed new corporation, Great Lakes TV Inc., filing new application for the channel. New firm is equally owned by the 3 dropouts—*Buffalo Courier-Express* (WEBR), Copper City Bestg. Co. (WKTV, Utica & WKAL, Rome, N. Y.) and Cataract Theatre Corp. & WPIT, Pittsburgh (each of which had 50% of old Frontier TV Inc. application). Also filed this week was application for newly assigned Ch. 6 in Milwaukee (allocated to nearby Whitefish Bay) by WMIL, which also filed request to dismiss its CP for Milwaukee's Ch. 31 (see p. 4); application for Selma, Ala., Ch. 8, by group led by Wm. E. Bennis Jr., half owner of Vulcan Tower Co. and Wm. J. Brennan, mgr. of WBAM, Montgomery; application for Indianapolis, Ch. 13, by Crosley Bestg. Co., whose application for Ch. 8 there was dismissed this week at applicant's request. These 4 applications, together with 10 dismissals and week's 10 grants, left total applications pending at 386, including 86 uhf. [For further details about these applications, see *TV Addenda 17-V* herewith; for complete listings of all grants, new stations, applications, dismissals, hearings, etc., see *TV Factbook No. 17* with Addenda to date.]

Restoration of baseball TV-radio curbs, scrapped in 1951 under pressure from Justice Dept., was urged by minor leagues, meeting this week in Atlanta. Resolution by Sen. Johnson (D-Colo.), pres. of Western League, was passed unanimously, will be submitted next week to major league meeting. Principal points: (1) Commercial TV-radio broadcasts of big league games would be barred in minor league cities on dates when the minor league club is playing at home or away, unless minor league club gives its consent. (2) Sustaining TV-radio coverage would be permitted without restrictions. Major league meeting next week may consider proposal for NCAA-type "game of the week" TV series on Saturday afternoons, involving all 16 big league clubs, to be sold to sponsor for about \$2,000,000.

Chemical Bank & Trust Co., N. Y., reported to be planning to become active in TV picture financing, following announcement it's backing Telemount-Mutual Productions' series of 13 *Cowboy G-Men*. Bankers Trust Co. is bankrolling Mark VII Productions' *Dragnet*, and expansion of more big banks into TV films is regarded as certain.

Channel shifts & power increases: WXEL, Cleveland, Dec. 10 moves from Ch. 9 to 8, increases antenna height from 437 to 778 ft., changes from 6 to 12-bay antenna. KFOR-TV, Lincoln, Neb., has increased ERP from 11 to 59 kw. RCA Dec. 3 shipped 50-kw amplifier to WAAM, Baltimore.

Added to AT&T's TV network facilities this week were KFDA-TV, Amarillo, Tex. and WSIX-TV, Nashville, making total of 230 interconnected stations in 143 cities. Next on list to be interconnected are WWOR-TV, Worcester, Mass. and WTOV-TV, Norfolk.

KSTM-TV, St. Louis (Ch. 36) announces sale of 10% interest to *East St. Louis Journal*, one of Lindsay-Schaub newspaper group.

Bound and Indexed

We will index and bind, between embossed hard book covers, a limited quantity of all 1953 issues of the *Television Digest* Weekly Newsletters, plus the semi-annual *TV Factbooks* with all Addenda, plus all Supplements and Special Reports. This volume will provide a handy and handsome permanent reference for your own or your company library. Orders will be taken only until Jan. 5. Price: \$25 per volume.

MARTIN CODEL'S

AUTHORITATIVE NEWS SERVICE
FOR MANAGEMENT
OF THE
VISUAL BROADCASTING
AND ALLIED ELECTRONICS
ARTS AND INDUSTRY

Television Digest

with **ELECTRONICS** REPORTS

PUBLISHED WEEKLY BY RADIO NEWS BUREAU • WYATT BLDG. • WASHINGTON 5, D.C. • TELEPHONE STERLING 3-1755 • VOL. 9: No. 50

NARB LIBRARY DEC 14 1953

December 12, 1953

In this issue:

9 More Start Testing, Canada Adds One, page 1
The Blue Chip Business of Telecasting, page 2
Color Still 'Imminent'; CBS & NBC Plans, page 3
FCC Grants 6, Leery of Buffalo Deal, page 4

May Raise Ownership Limit to Grant UHF's, page 5
Antennas Blown Down; Upcoming Stations, page 7
Trade Marks Time, Gearing for Color, page 8
UHF-Equipped Sets Now 30% of Output, page 9

9 MORE START TESTING, CANADA ADDS ONE: Opening new TV areas mainly, 9 more stations went on air this week (5 of them vhf) along with another in Canada -- making total of 341 now in regular operation or on the air with test patterns, 223 vhf, 118 uhf. That makes 216 starters so far this year, 132 in the 134 days since Aug. 1 when we predicted one-a-day for rest of year -- still a good prediction. This week's:

KWTV, Oklahoma City (Ch. 9), first vhf competitor of Daily Oklahoman's pre-freeze WKY-TV (Ch. 4), was all ready to start testing Sat. Dec. 12 with RCA 10-kw transmitter telecasting from 6-bay antenna atop temporary 340-ft. Andrews tower pending construction of super-doooper 1572-ft. Ideco tower starting in Jan. Backed by John T. Griffin radio interests, oilmen Roy H. Turner (ex-Gov. of Okla.) and F. E. Harper, theatreman Henry S. Griffing, station is managed by ex-Oklahoman executive Edgar T. Bell, who owns all its Class B stock. Sales mgr. is Fred L. Vance, and chief engineer is Morris L. Thomas. It joins CBS-TV as basic outlet Dec. 20 when regular programming begins. Base rate is \$465. Rep is Avery-Knodel.

WWTW, Cadillac, Mich. (Ch. 13), opening up entirely new TV area more than 100 mi. from nearest other stations, put first test signals on air Dec. 11 and v.p.-gen. mgr. Lee T. Matthews wired: "Dealers reported generally excellent reception throughout predicted Grade A and Grade B coverage areas and usable picture from as far as 120 mi. away along the northeastern portion of the Michigan Lower Peninsula." Federal-equipped, station is owned by Sparks-Withington Co., Jackson, Mich., TV-radio manufacturer. It uses temporary 450-ft. tower pending 1200-ft. planned next spring. It becomes a primary affiliate of CBS, also will get ABC & DuMont programs. Regular programs start about Jan. 1. Base rate is \$200. Rep is Weed.

WSTV-TV, Steubenville, O. (Ch. 9), just 35 mi. due west of Pittsburgh and only 50 mi. south of Youngstown, began first test patterns Dec. 10, starts programs (CBS affiliation) Dec. 24. It's owned by group headed by exec. v.p. John J. Laux, which controls WFPG-TV, Atlantic City. It's RCA equipped with 12-section super-turnstile atop 800-ft. tower. Base rate is \$400. Rep is Avery-Knodel.

WNAM-TV, Neenah, Wis. (Ch. 42), on the shores of Lake Winnebago just 11 mi. north of Oshkosh, where uhf was opened up by WOSH-TV (Ch. 48) in June, began test patterns night of Dec. 10 and gen. mgr. Don C. Wirth wires: "Terrific response from viewers and dealers in Green Bay, Fond du Lac, Oshkosh and dealers in tri-city area of Neenah-Appleton and Menasha report solid signal in all locations." Station owner is Samuel N. Pickard, banker and paper mill owner. Station mgr. is Louis W. Pozgay, chief engineer Harry W. Hill. "We are having no trouble selling time here," states Wirth, "and we look to break-even point within 30 days after we are on the air." Equipment is RCA. Base rate is \$150. Rep is George W. Clarke Inc.

KFYR-TV, Bismarck, N.D. (Ch. 5), opening up brand new TV area in south central section of state, began test patterns Dec. 8 with RCA 10-kw transmitter and temporary 20-ft. single-bay antenna mounted atop 240-ft. State Capitol on edge of town, pending completion of new 12-bay superturnstile to go on 500-ft. Truscon tower

later. Gen. mgr. is F.E. Fitzsimmonds, with Alvin Anderson, sales mgr.; Cal Culver, program director; Ivar Nelson, chief engineer. Station will get NBC & CBS programs, starts with \$150 base rate. Blair is rep.

WAYS-TV, Charlotte, N.C. (Ch. 36), first competitor of pre-freeze vhf WBTW, began testing Dec. 7, expects to go commercial between Dec. 15-30, reports gen. mgr. James P. Poston, native of Durham and onetime Broadway actor. Roy Thomas is sales mgr., B.C. Stewart chief engineer. Same group (Geo. W. Dowdy, B.T. Whitmire, J.H. Doughton, Harold Thoms) also holds CP for WCOG-TV, Greensboro. RCA-equipped, new outlet will join ABC, has \$300 rate. Rep is Bolling.

WSIL-TV, Harrisburg, Ill. (Ch. 22), at extreme southern end of heavily uhf-populated state, began independent commercial operation Dec. 6. It's owned by partnership called Turner-Farrar Assn., with Oscar L. Turner as president, operating 17 theatres in 11 Illinois communities. Rate is \$150, no network or rep announced.

KOAM-TV, Pittsburg, Kan. (Ch. 7), located on Missouri border just 79 mi. west of Springfield, began operating Dec. 5, will get service from all 4 networks. Owned 20% by E.V. Baxter, it's 10% owned by Lester E. Cox, who recently sold interest in KCMO-TV & KCMO, Kansas City, and 10% by son Lester Lee Cox; former owns 49% of KWTO, Springfield, Mo. Joplin Globe Publishing Co. has option to buy 30%. Louis R. Martin is program mgr., Leo Stafford chief engineer. RCA-equipped, the station starts with \$200 base rate. Rep is Katz.

WAIM-TV, Anderson, S.C. (Ch. 40), located 28 mi. south of Greenville's new WGVL (Ch. 23) and 84 mi. northwest of Augusta's WJBF-TV (Ch. 6), has been testing intermittently since Dec. 1, begins programs Dec. 15. Gen. mgr. Glenn P. Warnock reports "response to coverage wonderful up to 50 miles," and adds, "41 days ago we were a mudhole." Owned by Wilton Hall's Anderson Independent, station uses Federal 1-kw transmitter, joins CBS, has \$200 base rate, is represented by Burn-Smith.

* * * *

CBUT, Vancouver, B.C. (Ch. 2), Canada's 6th station, began testing Dec. 7, starts 5-hours-a-day program operation Dec. 16 with official ceremonies attended by A.D. Dunton, Canadian Broadcasting Corp. chairman. It's CBC's 4th outlet, Marconi equipped with temporary 16-ft. wooden tower and RCA antenna (old temporary of Montreal's CBFT) atop 2-story chalet-type house at the 2700-ft. level of Mt. Seymour. Kenneth C. Caple has been assigned as CBC regional representative at Vancouver and Peter McDonald is CBUT director. Base rate is \$175.

Note: CBC has recommended 2 more CPs be granted in Canada -- to Ralph H. Parker, CFPA, Port Arthur, Ont., for Ch. 2, and to La Tribune Limitee, operator of CHLT, Sherbrooke, Que., for Ch. 7. Latter is headed by Senator J. Nicol. Stations presumably will simply add "TV" suffix to AM call letters. CBC recommendation is tantamount to grant since Canadian cabinet usually ratifies. With CBUT now on air, these make 17 CPs still outstanding (see list, p. 8, our Nov. 28 Special Report).

THE BLUE CHIP BUSINESS OF TELECASTING? It's been a rule-of-thumb, in contemplating the start of a TV station, that you have to figure on \$250,000 to \$1,000,000 to go into full-fledged operation -- the range depending on costliness of getting the CP, elaborateness of the preparations, cost of real estate, cost of transmitter, tower, studio equipment, etc. etc. Fact is, minimum figure for equipment alone is usually around \$200,000, not always including camera chain. And a TV station requires a bigger staff, costs more for programs (notably film rentals), burns out costlier tubes more rapidly than does a radio broadcasting station.

Hence the hesitancy of many enterprisers not in high income tax brackets to venture into telecasting. So far, we've heard of very few who got into the business on the cheap -- and of course there have been the examples of 2 who started but quit because they couldn't make a go of it (in Roanoke, Va. and Nampa, Ida.).

Our mail this week brings an astonishing report from a prospective telecaster, operator of 3 smalltown radio stations, who tells us he expects to increase the staff of his WJPB, Fairmont, W. Va. by only 6, is spending only \$117,565 for all the basic equipment for his new WJPB-TV (Ch. 35), has budgeted it for \$75,000 operating costs, expects gross revenues in excess of \$100,000 first year. At least:

"That is the picture as it looks from here just prior to going on the air Jan. 28, 1954," writes owner-mgr. J. Patrick Beacom. "We purchased a Continental 1-kw transmitter, RCA antenna, GPL image orthicon camera chain, GPL film equipment, General Radio Co. monitors and RCA audio equipment for a total cost of \$117,565. This is probably the lowest cost for a completely equipped station with camera chain, etc. By keeping costs down, we have every reason to believe we will be able to make WJPB-TV pay its way in the small Fairmont-Morgantown market."

Base rate will be \$200, network will be ABC but no interconnection promised before April and with some programs from DuMont & NBC. Rep will be Headley-Reed. Nearest stations are Wheeling's WTRF-TV (Ch. 7), 51 mi. away, and WTAP, Parkersburg (Ch. 15), 77 mi., so that for all practical purposes it opens up a new TV area.

Note: When he started KVOS-TV, Bellingham, Wash. (Ch. 12) last May, Rogan Jones boasted that with home-built transmitting equipment and no live camera he had added TV to his radio plant for only \$82,000, published \$90 Class A hour rate, still lowest of record. Next lowest rate seems to be the \$100 published by upcoming new WKNY-TV, Kingston, N.Y. (Ch. 66). If there are any lower, we haven't heard of them, though one respondent to our Factbook questionnaires, on the air since last spring, actually reported he publishes no rate card -- for whatever that connotes!

COLOR STILL 'IMMINENT'; CBS & NBC PLANS: Date of FCC color decision still can't be pin-pointed. The only thing sure is that "it's closer" through the mere passage of time -- and there's a fair possibility it won't come until after Christmas.

Commission has been sandwiching the color discussions in its huge agenda of business, some of which it obviously considers more urgent. Betimes, it has been subjected to considerable urging from both the "fast" and "slow" color schools.

Remember NARDA's frank letter to FCC about month ago? On behalf of heavily stocked retail dealers, it expressed hope decision would be delayed until as close to Christmas as possible so as not to disrupt normal trade (Vol. 9:45).

None other than Sen. Johnson (D-Colo.), who has long been needling FCC and the industry for speed on color, wrote NARDA from Denver Nov. 30 that he hopes the decision comes Dec. 31 or shortly thereafter.

Commission may well have eye out for trade, therefore, in belief that the healthier the industry the better able it will be to introduce color -- that a few weeks more or less can mean little as far as the long-term growth of color is concerned. It's a far cry from the hell-in-a-hack demand for color of recent memory.

* * * *

Game of "who's first" in color among stations, meanwhile, has become quite frenetic last week or two. Even more close-mouthed than NBC on color plans, CBS has been quietly colorcasting in New York only 5:30-6 p.m. Fridays, is now aiming for Mon.-Wed.-Fri. 5:30-6 series to start Jan. 15, including only New York and Baltimore at first, then on Feb. 1 extending to Chicago and Los Angeles.

Though AT&T promised to bring Jan. 1 Tournament of Roses to only 13 NBC-TV affiliates (Vol. 9:49), the irrepressible Walter Damm, WTMJ-TV, Milwaukee, finally wangled a regular color hookup. Not to be outdone by his northern colleague, the manager of another old-line NBC affiliate, George Burbach, KSD-TV, St. Louis, went into action and got guarantee he wouldn't be left out in the monochrome cold. Then Alvin Schrott, WJAC-TV, Johnstown, Pa., reported: "We will be the first TV station in the country to be fully converted for the transmission of network color" -- though he does say AT&T will be able to supply a "90%" signal instead of 100%.

But AT&T isn't guaranteeing signal to WJAC-TV, so station is in same position as many others with only microwave between them and color origination point. At the moment, only 15 stations (Vol. 9:49) are guaranteed by AT&T, though other NBC-TV affiliates are still in there pitching -- notably Stanley Hubbard's KSTP-TV, St. Paul, whose chances appear slim at this late date.

Another change affects Denver, where KOA-TV is due on air Dec. 24. It will replace KFEL-TV as NBC affiliate and take color Jan. 1. As example of color promotion among stations, KOA-TV has invited 1500 guests to see program, closed circuit, on 3 color sets in Cosmopolitan Hotel. [For color's impact on trade, see p. 8.]

FCC GRANTS 6, LEERY OF BUFFALO DEAL: Six CPs, 3 initial decisions, 3 CPs dropped -- FCC score this week might have included Ch. 2 grant in Buffalo too except that it smelled "strike" application there and set case for hearing. The week's grants:

Miami, Miami Biscayne TV Corp., Ch. 33; Baltimore, WSID (Essex, Md.), Ch. 18; Duluth, Minn., KDAL, Ch. 3; Asheville, N.C., WLOS, Ch. 13; Amarillo, Tex., KLYN, Ch. 7; Corpus Christi, Tex., H.L. Hunt, Ch. 43.

Initial decisions proposed grants to: Indianapolis, WISH, Ch. 8; Erie, Pa., WLEU, Ch. 66; Corpus Christi, Coastal Bend TV Co., Ch. 22.

The applicant which came close to grant was Niagara Frontier Amusement Corp., Buffalo. As result of merger agreement, competitors WGR, WHLD, Victory TV Corp. and Enterprise Transmission Inc. dismissed -- but Commission questioned whether Enterprise had filed in good faith and whether it received "additional consideration" for dropping out. As part of agreement, Niagara Frontier was to buy WGR for \$1,450,000. Reportedly, WBES-TV (Ch. 59) was to discontinue operations, sell part of equipment to new vhf grantee. Hearing was set for Jan. 8.

Miami grant resulted from FCC's dismissal of competitor for lack of prosecution. Duluth and Amarillo CPs were final decisions after opponents dropped out. Asheville grant stemmed from merger with WWNC and dismissal of application by Wm. W. Orr, who received \$5000. WWNC has option to buy 31.25%, gets \$5558 from WLOS for expenses, sells WLOS parcel of land for \$10,000.

Oilman H.L. Hunt received Corpus Christi CP after amending to newly assigned Ch. 43 from Ch. 22, then Ch. 22 was proposed to be granted to Coastal Bend. Indianapolis and Erie initial decisions followed dismissals by opponents.

* * * *

Among other actions, the FCC: (1) Officially cancelled CP of KIRV, Denver (Ch. 20) for failure to build. (2) Proposed assignment of Ch. 18 to Zanesville, O., at request of uhf grantee WHIZ-TV (Ch. 50); station had asserted that high channel was unsuited to terrain, and there's good chance FCC will waive rules to permit it to operate on old channel while applying for new. (3) Set Jan. 8 for start of hearing on Ch. 10 for 3 competing Norfolk area applicants.

Two more grantees dropped their CPs this week -- WJON-TV, St. Cloud, Minn. (Ch. 7) and WFMD-TV, Frederick, Md. (Ch. 62). Since freeze, 32 CPs have been cancelled, including 7 for vhf channels.

Telecasting Notes: "Is TV over-commercialized?" asked *Sponsor Magazine* in postcard survey of admen and station executives, with these results: 59.5% said yes, 12.3% said maybe, 28.2% said no. Critic John Crosby, calling *Sponsor* "the conscience of the industry" and deeply impressed by this reaction from the folks who earn their living by the commercialism of TV, draws these conclusions: "The principal offenders, though, are not networks but individual stations which are wallowing in income from these malpractices. When 6 out of 10 admen and station executives feel that TV is over-commercialized, something is clearly wrong. Eventually, there will be an outcry from the public of even greater dimension. Then some Congressman will start a crusade to determine just how much advertising is good for the public [which] ought to drive the more responsible members of the industry—of whom there are quite a lot—to clean their own houses before someone else does it for them" . . . MPAA-ABC half-hour film series glorifying Hollywood and presenting clips from new movies (Vol. 9:25) "appears dodo-dead," reports Dec. 9 *Variety*, principally because of lack of enthusiasm by movie producers and inability to arrange personal appearances by stars featured in the film clips now available . . . New NBC-TV studio 5-H in Radio City, designed for "the new horizons of tomorrow's TV" at cost of \$375,000, boasts ability to assemble and coordinate multiple originations from as many as 10 outside sources simultaneously as well as 2 new-type vidicon film camera chains and 2 iconoscope chains . . . *Variety* Dec. 9 surveys

"bylines and cushy sidelines" of newspaper folk on TV programs in roundup from N. Y., Hollywood, Chicago, Boston, Philadelphia, Pittsburgh, Detroit, Minneapolis correspondents detailing surprising number of editorial staffers earning extra money on all kinds of shows, sponsored and unsponsored . . . Historical TV series of 13 programs produced by U of Utah library and underwritten by \$3900 grant from American Library Assn. will be presented by KDYL-TV, Salt Lake City, beginning late in Jan. . . . Ed Murrow, with reporters Ed Scott & Bob Pierpoint, will again do a "Christmas in Korea" on CBS-TV *See It Now* Dec. 29, repeating assignment that won so much great acclaim last year . . . All 7 N. Y. stations slated to be telecasting from Empire State Bldg. antennas by Dec. 12, when WOR-TV begins transmission from new antenna there.

For "insulting" sponsor's product with a cute nose-thumbing on WOR-TV's *Broadway TV Theatre*, actor Ian Keith has been suspended by AFTRA for 3 months, union holding his action was "detrimental to the welfare of the acting profession" and "endangered the livelihood of fellow members of the cast." Charges were brought by producer Warren Wade and players Sylvia Sidney, James Blaine, Edward Peck, Christopher Plummer. Keith failed to appear at hearing, replied to charges in writing. Union board stated: "Such conduct cannot be countenanced and the union cannot condone Mr. Keith's conduct toward his fellow actors, his producer and his sponsor."

PRESENT LIMIT of 5 TV stations under common ownership (Vol. 9:48) is expected to be changed by FCC within 2 weeks to permit any single group to acquire 2 uhf stations for total of 7 holdings. Commission debate on subject has been vigorous; vote is likely to be 5-2—Comrs. Bartley and Henneck dissenting. Decision may come in form of proposed rule-making, though it may be a full-fledged final action.

Commission's thinking, in planning move, is that there's everything to gain, nothing to lose. Actually, there are very few groups with full complement of 5 stations now, but several are extremely influential and FCC reasons that the more direct their stake in uhf the better. Networks have long maintained that their real profits come from station ownership, rather than network operations, so Commission figures that networks may see long-term advantages in uhf ownership.

Five groups had asked Commission to up limit from 5—all of them in Jan.-Feb. 1952, before freeze was lifted: NBC, ABC, DuMont, Storer and group in northwest which includes Grant Wrathall. All asked for limit of 7, except DuMont which requested 8. Some said vhf holdings should be limited to 5; others asked that no distinction be made between vhf & uhf.

Commission doesn't delude itself that multiple owners will push uhf where economic cards are stacked against uhf, nor does it ignore possible psychological adverse reaction if multiple owners ignore uhf opportunities. However, it does hope that well-heeled groups can get uhf over the hump in cities where small fry would be unable to weather temporary red-ink period.

Commission is also aware of fact that networks control the most powerful factor for uhf success—programs—and over long haul could put uhf across in heavily saturated vhf cities if they choose to take affiliations away from vhf.

An additional factor impelling FCC to raise limit is that such organizations as NBC, CBS and DuMont also make TV sets, so may be inclined to put greater stress on uhf if they have a direct interest in uhf stations.

Network Accounts: CBS-TV's answer to Dave Garroway's successful 7-9 a.m. *Today* on NBC-TV probably will be forthcoming in Jan., with kine expected to be cut next week. Format is almost identical, will use same hours, same partic. sponsorship setup. Talent lined up so far includes Walt Kelly and Baird puppets, with possibility Edith Adams will be starred as female disc jockey. Unnamed as yet, it's under direction of special events director Paul Levitan . . . Tums buys two 15-min. segments, Gillette another. on *Season's Greetings*, special Xmas all-star variety show on NBC-TV Dec. 22, 8-9 p.m., former thru Dancer-Fitzgerald-Sample, latter thru Maxon . . . Nestle's to be alt.-week sponsor (with Ralston cereals) of *Space Patrol* on ABC-TV starting Jan. 16, Sat. 11-11:30 a.m., thru Cecil & Presbrey . . . See's Candy Shoppes Inc., Los Angeles, sponsors monochrome Tournament of Roses Parade New Year's Day on ABC-TV western regional network only, thru Geoffrey Wade Adv., L. A. . . U. S. Envelope Co. buys 7½ min. of alt. Wed. 3:15-3:30 p.m. segment of *Kate Smith Hour* on NBC-TV, starting March 2, Mon.-thru-Fri. 3-4 p.m., thru S. R. Leon Co. . . Seeman Bros. (White Rose tea) sponsors Thu. 2-2:15 p.m. segment of *Garry Moore Show* on CBS-TV starting Dec. 17, Mon.-Wed.-Fri. 1:30-2, Tue. & Thu. 1:30-2:30, thru Wm. Weintraub Co. . . Add bowl lineup: ABC-TV airs Sugar Bowl game from New Orleans New Year's Day, starting at 1:45 p.m.; no sponsor yet . . . Capital Airlines buys 39 partic. on NBC-TV's 7-9 a.m. *Today* starting Jan. 18 thru Lewis Edward Ryan Adv., Washington . . . With regional sponsors, Sat. basketball game of week—chiefly Army & Navy games—starts Dec. 12 at 2:30 p.m. on ABC-TV.

NBC's new president Pat Weaver has stirred some extraordinary loyalties among N. Y. trade newsmen, judging from their reports on his selection (Vol. 9:49). *Billboard's* Sam Chase sees Weaver's election, along with Robert W. Sarnoff as exec. v.p., as portending "drive to regain the initiative for the web in its battle for primacy with CBS, an initiative largely lost since the period of Niles Trammell's presidency." He sees Weaver as "a new, youthful Trammell" in capturing the respect and affection of affiliates, talent, clients, ad agencies and other broadcasters. *Billboard* predicts network TV program chief Tom McAvity will now become a v.p., with Wm. Fineshriber continuing as v.p. in charge of radio and a chief of TV operations to be chosen. *Variety's* George Rosen, who predicted the "Pat & Bob package command" week before it was announced, and who has publicized the "Weaver for prexy boom" ever since the Chicago affiliates' meeting in Nov., said that at Chicago Weaver "not only won a complete vote of confidence, but the majority of the affiliate body took a fancy to the Weaver-type leadership as an imaginative creator in his envisionment of future vistas." Selection was also a popular one with NBC executive staff generally; one v.p. observed: "It's time we had a production man running things. You'll notice that General Motors always has had a production man as president, and he chooses his operating executives on the basis of his own practical experience and know-how."

Many commercials are too long—but in other respects most NARTB TV code subscribers "are abiding by the standards which they have adopted." That was verdict of TV Code Review Board after special meeting Dec. 9-10 which reviewed reports on 2-month off-the-air monitoring project to check whether subscribers are living up to the Code (Vol. 9:37). Board voted to send full report on its findings directly to stations and networks monitored, to extend monitoring operation to include more stations and areas and to send all subscribers "monitoring logs" and urge "self-examination." Reporting on meeting, board chairman John E. Fetzner (WKZO-TV, Kalamazoo, Mich.) said: "We find that the majority of the subscribers [are] abiding by the standards . . . There is every evidence that a sincere effort is being made to program [in] conformance with the general provisions governing good taste in the Code. There is too much commercialism—our findings indicate—in the sense that advertising messages in too many instances are exceeding the maximum length contained in the code. [The] main task we face as TV broadcasters at the network and local level is to clean up bad commercials and restore length of copy to the sensible limits contained in the Code."

More rate increases as of Jan. 1: KNBH, Los Angeles, new Class AA rate of \$2000 per hour, \$450 for 20 sec., Class A \$1215 & \$350; WNBW, Washington, new Class AA of \$900 & \$200, Class A remaining \$725 but 1-min. dropped in favor of 20-sec. at \$175; KSD-TV, St. Louis, Class A hour from \$950 to \$1000, min. remains \$175; WSAZ-TV, Huntington, W. Va., Class A hour from \$500 to \$600, min. from \$100 to \$120; new WITV, Ft. Lauderdale, Fla., Class A hour from \$150 to \$250.

Ralph Hess, ex-Al Paul Lefton Co., Philadelphia, has purchased radio WFAI, Fayetteville, N. C. (250 watts on 1230 kc, CBS) for \$125,000 from Rollins Bestg. Co., recently purchasers of WNJR, Newark; he plans to run it, will reapply for TV Ch. 18.

NBC and sponsor Gillette each signed 3-year contract to continue exclusive TV-radio coverage of Rose Bowl football games from Pasadena New Year's Day. Contract with Pasadena Tournament of Roses Assn. runs through Jan. 1, 1957.

Personal Notes: John H. Bachem, DuMont Network national sales mgr., named network gen. mgr. to succeed Ted Bergmann, who becomes managing director Jan. 1 when Chris Witting leaves to head Westinghouse Radio Stations Inc. . . . Jack Heintz, mgr. of radio KSDO, San Diego, will become mgr. of KLAC-TV, Los Angeles, succeeding Mortimer W. Hall, who remains as mgr. of radio KLAC, when FCC approves transfer of ownership to Copley Press Inc. (Vol. 9:49); plan is to change call letters to KCOP . . . Kevin B. Sweeney upped to BAB exec. v.p., assuming duties of resigned pres. Wm. B. Ryan Jan. 1; John F. Hardesty resigns Dec. 31 as director of local promotion to become N. Y. sales mgr. of Westinghouse Stations, succeeding Eldon Campbell, being promoted to new post . . . Carl M. Stanton, promoted to chief of NBC-TV film div. succeeding new exec. v.p. Robert W. Sarnoff, has appointed Edgar G. (Ted) Sisson, ex-N. W. Ayer and one-time Pedlar & Ryan TV-radio v.p., as associate director of the div. . . . Frederic Wm. Wile Jr., NBC-TV production v.p., shifts to Hollywood to take over similar duties, with Earl Rettig, Hollywood program business mgr., assuming N. Y. duties . . . Les Dana, ex-WSPD-TV, Toledo, becomes gen. administrator for Storer's new CMTV, Havana, Cuba (Ch. 11) which began Nov. 11; Al Ruhfel takes his place as program director . . . Vicente Ramos named gen. mgr. of new Caribbean Networks Inc., 200 W. 57th St., N. Y., rep firm set up by Jose Ramon Quinones, pres. of WAPA & upcoming WAPA-TV. San Juan, Puerto Rico . . . Barry Keit named TV sales supervisor, Headley-Reed Co. . . . Steve Beard, ex-Dallas office of Blair TV, joins N. Y. staff, succeeded at Dallas by Frank Carter . . . Wm. E. Ellwell, ex-WTIX, New Orleans, named mgr. of Headley-Reed New Orleans office . . . Yale Roe, continuity director

of WABC-TV, N. Y., appointed film director . . . James Beach, ex-BBDO & Biow, named program mgr., ABC-TV, Hollywood, reporting to Donn Tatum, TV director of western div. . . . Norman H. Sloane named TV sales service mgr., ABC-TV western div. & KECA-TV (now KABC-TV), Los Angeles . . . Dupuy G. Warrick, counsel & board member, elected v.p. of Midland Bcstg. Co., licensee of KMBC-TV, Kansas City (Ch. 9); Arthur B. Church Jr., 4.37% owner and son of president, elected secy. & director; J. Noland Franz, controller, elected treas.; George J. Higgins, v.p. & managing director, elected to board . . . John E. Scott named sales mgr. of WKLO-TV & WKLO, Louisville . . . Wm. P. Geary, ex-El Paso chamber of commerce, named sales mgr. of upcoming WMGT, Adams, Mass. . . . John Fitzgerald, sportscaster, named promotion mgr. of WXEL, Cleveland . . . John Burr, ex-KGO-TV, San Francisco, named national adv. mgr. of Smullin stations KIEM-TV, Eureka, Cal., & KBES-TV, Medford, Ore. . . . Robert Martin appointed program director, KPHO-TV, Phoenix, replacing Arthur Sprinkle, resigned . . . Maurice Wynne, ex-WAFB-TV, Baton Rouge, named chief engineer of KTAG-TV, Lake Charles, La. . . . John Pindell, ex-KING-TV, Seattle, becomes commercial mgr. of KHQ-TV, Spokane . . . Sid Grayson, ex-KWFT-TV, Wichita Falls, named gen. mgr. of upcoming KMID-TV, Midland, Tex. (Ch. 2) . . . E. C. Cheviot, commercial mgr., WOAI-TV, San Antonio, elected pres. of San Antonio Ad Club . . . Linnea Nelson, ex-J. Walter Thompson, named TV analyst, Kudner Agency . . . Neil M. Morrison promoted to director of new audience research bureau, Canadian Broadcasting Corp. . . . Frank Amy named sales service mgr., WPIX, N. Y. . . . David Lasly, ex-DuMont Chicago div. sales mgr., joins CBS Radio spot sales, San Francisco.

After testing satellite transmitter at Clinton, Md. (Vol. 9:45), Jerrold Electronics Corp. delivered it to Mexico's Emilio Azcarraga, who plans to install many in small towns. During Clinton tests, Ch. 9 signals of WTOP-TV, Washington, were received then retransmitted on Ch. 3 with 5 watts ERP. Transmissions from antenna 255 ft. above sea level were received at several points 234 ft. above sea level. Following are signal strengths at various distances, with signal generally traveling through wet woods: 1.6 mi., 660 uv/m; 2.25 mi., 200 uv/m; 4.25 mi., 48 uv/m; 5.1 mi., 20 uv/m. Though tests showed signal dropping off rapidly, Jerrold engineers expect that coverage will be satisfactory under planned line-of-sight operations.

Reporting on community antenna system in Vancouver, B. C. (Vol. 9:47), pres. G. C. Chandler, of operator TruVu TV Ltd. and CJOR, says sales of sets in "shadow" area served by system are substantially higher than in parts of city where good "free" signals can be received. He says that ultimate plans call for receiving antenna on 1100-ft. mountain and institution of a pay-as-you-look service for movies, etc. when number of subscribers justifies it.

NARTB takes battle for more extensive TV football coverage (Vol. 9:48) to NCAA conference of coaches and athletic directors at Cincinnati's Netherland-Plaza Hotel Jan. 5, accepting invitation to present panel on its viewpoint. Panelists: George J. Higgins, KMBC-TV, Kansas City, chairman of NARTB sports committee; Thad H. Brown Jr., NARTB v.p. in charge of TV; Robert K. Richards, NARTB administrative v.p.; Richard Larkins, Ohio State U athletic director.

New low-loss coaxial transmission lines and fittings for uhf stations are described and illustrated, together with information on layout and installation, in 28-p. catalog now available from Broadcast Equipment Sales, RCA Victor, Camden 2, N. J.

Supreme Court upheld firing of 9 TV station technicians for passing out handbills disparaging station's programming during labor dispute. In case involving IBEW engineers fired in 1949 by Jefferson Standard Life Insurance Co.'s WBTV, Charlotte, N. C., court split 6-3 this week, Justice Burton asserting in majority opinion that technicians' attack on WBTV's programs "related itself to no labor practice of the company [and] made no reference to wages, hours and working conditions." Justices Frankfurter, Black & Douglas dissented. NLRB had upheld firings, was overruled by Appeals Court.

An ex-POW has sued WHAM-TV, Rochester, N. Y. for \$100,000, alleging libel in newscast which he says stated he had admitted Communist germ warfare charges. Former Air Force Capt. Wm. Preston, of nearby Batavia, N. Y., filed suit in county court and it's calendared for Feb. 1 term. WHAM-TV mgr. Wm. Fay says case has no merit since newscast was highly commendatory of Capt. Preston.

Chunk of Citizens Radio Service band (40 channels of the 100 in 460-470 mc) was requested by NAM's Committee on Mfrs. Radio Use in petition filed with FCC this week (Vol. 9:47). No FM spectrum was requested, though petition says: "The frequencies deleted from the Citizens Radio Service could very possibly be redeemed if the Commission were to undertake a re-examination into the amount of spectrum space assigned for the use of gov't. stations and the FM Broadcast Service." Petition, supported by 56 manufacturers, cites value of point-to-point radio in manufacturing processes, gives Detroit as prime example of area where need is greatest. Among petitioners are such giants as General Motors, Ford, Alcoa, the aircraft companies, etc. Included are 3 TV-radio manufacturers—GE, Motorola, Philco. Chairman of committee is Herbert E. Markley, Timken Roller Bearing Co.; counsel is Jeremiah Courtney; engineering consultants, Jansky & Bailey.

TWO TV ANTENNA towers blew down this week—both belonging to stations shooting for Xmas debuts—as high winds lashed Rocky Mountain area. Denver's KOA-TV (Ch. 4), whose 300-ft. structure atop Lookout Mt. was flattened Dec. 7 by 80-mph wind, promises it nevertheless “will definitely be on the air as scheduled Xmas Eve,” with tests before Dec. 20. Temporary tower is being built to accommodate 6-bay antenna, and “work will proceed around the clock to repair the damage to our building, with the expectation of installing our 25-kw amplifier to give us our full power of 100-kw as of our debut,” writes exec. v.p. Don Searle. KOA-TV will become basic NBC outlet.

Day after the Denver catastrophe, partially erected tower of KFBC-TV, Cheyenne, Wyo. (Ch. 5), 100 mi. away, bit the dust. It had been built up to height of 100 ft. of a planned 500 ft. on promontory 7000 ft. above sea level 10 mi. west of city. Mgr. Wm. C. Grove wired: “Transmitter building and 10,000-sq. ft. studio building completed and technical installations nearly completed for scheduled Xmas starting date. Tower will be rebuilt quickly as possible so as to reduce delay in starting date.” Station will carry CBS & ABC programs. Nobody was reported injured in either tower accident.

Neither GE nor RCA reported any new orders or shipments this week, but DuMont reported 5-kw and associated equipment ready to leave Dec. 15 for KFBB-TV, Great Falls, Mont. (Ch. 5) and order for 5-kw with studio equipment for WQED, Pittsburgh educational station (Ch. 13) due for Dec. 27 delivery.

* * * *

In our continuing survey of upcoming new stations, these were the reports received from principals this week:

WKAQ-TV, San Juan, Puerto Rico (Ch. 2) expects to begin interim operation with already-installed GE 5-kw transmitter Jan. 15 or immediately thereafter. Owned by *El Mundo* publisher Angel Ramos, its gen. mgr. is R. Delgado Marquez and commercial mgr. is David Polinger, formerly with No. Carolina stations. San Juan's WAPA-TV (Ch. 4), managed by Charles E. Bell, ex-WBTV, Charlotte, is also due on air sometime during first quarter 1954, probably about mid-Feb. WAPA-TV, with \$200 rate, will be represented by newly formed Caribbean Networks Inc., 200 W. 57th St., N. Y., established by WAPA owner Jose Ramon Quinones with Vicente Ramos as gen. mgr.

KOMU-TV, Columbia, Mo. (Ch. 8), U of Missouri's commercial grant, has its 5-kw GE transmitter, hopes to get going before Jan. 1, but bad weather is holding up installation of antenna atop 700-ft. tower, reports mgr. George J. Kapel. It will be primary NBC affiliate, but will feed from other 3 networks. Hour rate will be \$200. Rep will be H-R Television.

WIRY-TV, Bloomingdale, N. Y. (Ch. 5), last week's grant to Great Northern Television Inc., which interlocks with radio WIRY, Plattsburg, hasn't begun construction or ordered equipment, has “summer of 1954” as earliest target date, according to pres.-gen. mgr. Joel Scheier. Call letters may be changed to WGNT. Rep not yet chosen.

WINK-TV, Ft. Myers, Fla. (Ch. 11), oft delayed, now plans Feb. start with 2-kw RCA transmitter, according to gen. mgr. A. J. Bauer. Owner is United Garage & Service Corp., Yellow Cab operators of Cleveland (Daniel Sherby, pres.). It will be ABC affiliate. Hour rate will be \$150. Weed will be rep.

KBID, Fresno, Cal. (Ch. 53) now plans Jan. 16 start with 12-kw GE transmitter. It will be city's third uhf, will share KMJ-TV tower on Bear Mt. Hour rate will be \$225. Rep will be Meeker. It's first of 3 John Poole CPs to begin operation—KBIC-TV, Los Angeles (Ch. 22) being due in spring of 1954 and plans still indefinite for KBIK-TV, Sacramento (Ch. 46).

WQED, Pittsburgh, Pa. (Ch. 13, educational) has transmitter house ready for 5-kw DuMont transmitter due by Jan. 15, has begun work on studios, plans start before Feb. 1, according to newly appointed gen. mgr. William A. Wood, ex-CBS-TV Washington director of public affairs.

WINT, Waterloo, Ind. (Ch. 15) won't get started this Dec., as originally scheduled, now plans early March tests with 12-kw GE transmitter due in Jan., according to pres. R. Morris Pierce, who operates radio WDOK, Cleveland. Last week, request was filed to change to 800-ft. tower 7 mi. closer to Ft. Wayne. Rep not yet chosen.

WSID-TV, Baltimore (Ch. 18), granted this week to operator of suburban radio WSID, Essex, Md. (Richard Eaton), has tentative order for Federal equipment, will use present AM studio and Truscon AM tower, aims to get on air in summer of 1954, said company spokesman. It will be represented by United Bcstg. Co., N. Y., also owned by Mr. Eaton, who also operates radio WOOK, Washington; WINX, Rockville, Md.; WARK, Hagerstown, Md.; WANT, Richmond, Va.; WJMO, Cleveland, O. This is second Baltimore uhf grant, other having been in Dec. 1952 for Tom Tinsley's WITH-TV (Ch. 60).

WMAC-TV, Massillon, O. (Ch. 23), last reporting Dec. 7 debut with 1-kw GE transmitter (Vol. 9:42), still awaits FCC approval of changed site and lower power, now plans April 15 start, according to mgr. Jim Bushman. Ed Lamb station has set \$200 hour rate and signed DuMont affiliation. Rep will be Petry.

WDAN-TV, Danville, Ill. (Ch. 24) hopes to test RCA 1-kw transmitter before Jan. 1, reports gen. mgr. Robert J. Burow. It's owned by *Danville Commercial-News* of Frank Gannett chain, which also owns WHEC-TV, Rochester, and party of WECT-TV, Elmira, N. Y. Hour rate will be \$150. Everett-McKinney will be rep.

WNLC-TV, New London, Conn. (Ch. 26), oft delayed, again changes target from early 1954 to “sometime in 1954.” Mgr. Gerald J. Morey reports RCA equipment has been ordered, studios ready, transmitter site purchased. Class A hour will be \$150. Headley-Reed will be rep.

WTRI, Schenectady, N. Y. (Ch. 35), with 12-kw GE transmitter ready for shipment, has transmitter house on 1200-ft. Bald Mt. near Troy nearly ready, awaits shipment of 500-ft. Blaw-Knox tower, expects to meet Jan. target date, reports asst. gen. mgr. Paul L. Jacobson. Richard B. Wheeler is gen. mgr.; Albert Chismark, chief engineer. Owners are Fabian theatre interests and Col. Harry C. Wilder, founder and ex-owner of WSYR-TV, Syracuse, who operates WTRY, Troy. Rep not yet chosen.

WQXI-TV, Atlanta (Ch. 36) hasn't reported on equipment, construction plans or sales rep, but hopes to get going by June, 1954, according to owner Robert W. Roundsville who also holds CP for WLOU-TV, Louisville (Ch. 41) due in 1954 and 50% of WCIN-TV, Cincinnati (Ch. 54) scheduled for next Jan.

WFMZ-TV, Allentown, Pa. (Ch. 67), with 5-kw DuMont transmitter due March-April, 1954, and construction underway, plans tests late next spring, programming in early summer, according to pres. Raymond F. Kohn. Rep will be Avery-Knodel.

□

Channel shifts & power boosts: WNHC-TV, New Haven, has begun test pattern on Ch. 8 with RCA 10-kw transmitter while continuing operation on Ch. 6 in accordance with permission from FCC to operate simultaneously on both channels up to 30 days (Vol. 9:46). WCSH-TV, Portland, Me. (Ch. 6), which began test pattern Dec. 1 with 60-kw ERP, installs 25-kw amplifier this week end, plans 100-kw by start of programming Dec. 20. RCA this week shipped 25-kw amplifier to WBAP-TV, Ft. Worth (Ch. 5); GE shipped 20-kw to share-time WVET & WHEC-TV, Rochester, N. Y. (Ch. 10).

TRADE MARKS TIME, GEARING FOR COLOR: TV business continued to follow the general trade trends, getting nice pre-Xmas shot-in-arm and hoping expected downturn early part of next year will be no more than seasonal.

Excellent in some parts of the country, especially winter-bound areas, the movement of new TV sets into homes was spotty over the nation as whole, without any definite pattern. There were plenty of sets, output continued fairly high, people shopped "bargains" under the stimulus of inventory sales, best sellers were the low-priced units, larger and costlier models weren't moving too well.

While the holidays will put a nice dent into unit inventories, the glut of larger models led to the remark, "We're badly constipated and need a dose of salts."

Overshadowing all forward considerations was the color situation, everybody asking when FCC will give color the go-ahead. The trade generally seemed gratified that FCC did not muddy holiday waters with flashing headlines (see p. 3), holding off its decision -- for whatever reasons.

* * * *

Nearly all set and tube makers were preparing for color production and demonstrations, if not already at it. At same time, combined manufacturers, distributors and dealers were working on ways and means of keeping black-&-white markets reasonably stable until the supply of color receivers is sufficient to amount to something in a sales way. This week's developments:

(1) Foreshadowing closer liaison at all levels of the trade in putting over the industry's "color facts" campaign, RETMA is setting up panel on subject at NARDA convention in Chicago's Conrad Hilton Hotel, Jan. 12. Basically, the story is that there will be miniscule number of small-screen sets (certainly no more than 200,000) during 1954; that costs will be very high (\$800 to \$1000 minimum); that color programs will be few and far between for long while. Meanwhile, Better Business Bureau booklet on color for public (Vol. 9:47) awaits release after FCC decision.

(2) Prime color protagonist RCA, refusing to say how many sets and tubes it has turned out beyond the sampling to all its tube customers -- scuttlebutt has its Bloomington plant alone now assembling 10 receivers a day -- prepared to pop a big ad campaign to tell the public it can safely buy today's monochrome without fear of obsolescence from tomorrow's color sets. Other manufacturers were getting ready to follow same line, meanwhile gearing down their black-&-white output to what one said would be "very modest levels" next year.

(3) Admiral pushed for 100 color sets by Jan., will start color school for distributor servicemen Feb. 1, said it would offer service policy with color sets.

(4) Dr. Allen B. DuMont asked and answered 11 questions on color, in letter to distributors -- all pointing to thesis: "Buy black-&-white now, color later." He reiterated plans to deliver small number of color receivers for "demonstration purposes" next year, said 97½% of DuMont monochrome output in 1954 will be table models and open-face consoles, at \$200-\$400. (For DuMont's 4 new models, see p. 10.)

(5) Picture tube maker Thomas Electronics Inc., Passaic, N.J., took license from Chromatic TV Labs to make Lawrence color tube -- second to sign. Crosley was first (Vol. 9:45). Robert E. Burrows, gen. sales mgr., says Thomas is now sampling 22-in. Lawrence round tube, comments: "It has terrific possibilities. We have a great deal of faith in it. It lends itself to mass production more than any other tube." But he said Thomas will also continue to make RCA-type color tubes.

(6) First color tube delivery by National Union Radio Corp. went to an unnamed customer this week, and quantity production was promised "as soon as we can obtain bulbs and other materials from suppliers." Also announced were promotions of research chief A. Melvin Skellett to v.p. in charge of manufacturing & engineer-

ing, and Lawrence L. Hardin Jr. to director of research div., Orange, N.J., as moves "to meet the competitive challenge of color TV and other industry developments."

(7) Raytheon disclosed it too was making color tubes, said 4 sets would be on floor of its Los Angeles distributor James Kerwin Co. for Jan. 1 Tournament of Roses parade colorcast, to be carried locally on KNBH.

Most major set manufacturers were silent about plans, but a few smaller ones spoke out in various ways. Muntz TV demonstrated color set using Lawrence tube at Chicago, and pres. Earl Muntz told us he plans to sell, starting in Jan., 27-in. black-&-white set for \$500 which can be converted to color later simply by replacing monochrome tube with color tube; his current 27-in. sells for \$300.

Accenting the high cost of color, Scott Radio pres. John Meck announced he plans to start production of color set costing \$1485 retail, with gradual reduction to \$1285 in first 6 months. It utilizes standard 14-in. tri-color tube, giving a 12-in. picture, and will be used for display purposes only.

* * * *

TV production moved inexorably toward 7,000,000 mark, with slim possibility that total 1953 output will break 1950's record 7,463,800. Output week of Dec. 4 totaled 126,443, up from Thanksgiving week of 103,692, but down from 146,729 week ended Nov. 20. With 4 weeks to go, total output for year to date is about 6,900,000. RETMA's final figures for first 10 months show record 6,204,803 for that period, of which 1,222,507 were uhf-equipped. (For analysis of uhf production & markets, see below.) For Oct. alone, output was 680,433, of which 202,605 were uhf-equipped.

Radio production for week ended Dec. 4 totaled 241,549, up from 219,156 in preceding week and down from 280,244 week before. It brought total radio production to date to about 12,250,000. Revised 10-month radio output was 11,201,656.

UHF-EQUIPPED SETS NOW 30% OF OUTPUT: With some 11,000,000 families now within range of good uhf reception, industry's output of vhf-uhf sets continues to accelerate.

Just 15% of TV receivers produced first 7 months of this year had uhf tuners built-in at factory. For August, figure was 15.6%. Then in September, it jumped to slightly over 25% (Vol. 9:45). And in October, according to just-released RETMA figures, some 30% of TV sets produced had uhf tuners in them.

Industry production of vhf-uhf sets increased from September to October, despite a drop in total number of TV sets produced. Of 770,212 TV sets built in September, 193,212 had uhf. In October, 680,433 sets were made, of which 202,605 had uhf. For the first 10 months of 1953, uhf tuners were built into 1,122,507 of the 6,204,803 TVs produced -- or about 18%.

Adding uhf-equipped sets to an estimated 1,733,800 uhf "conversion units" (converters and sets of uhf strips) produced so far this year -- plus about 100,000 uhf sets and units made last year -- we estimate that very close to 3,000,000 uhf receivers and conversion units have been turned out to date. By year's end, figure should be at least 3,730,000.

How many of these uhf sets and converters are now in use, is a matter of educated guessing; we'd say something more than 2,000,000.

Potential market for uhf sets and converters grew from zero a little over a year ago to at least 11,000,000 families today. This is our estimate based on the number of households within the 93 primary market areas or counties of the 118 uhf stations now on air. Population figures are from 1950 Census as brought up to date by Sales Management's "Survey of Buying Power." We consider these estimates conservative, since many uhf stations reach out beyond their immediate trading areas.

Some 2,000,000 or more of these 11,000,000 families already own sets with uhf tuners, converters or uhf strips. About 80% still remain as prospects for sales of all-channel sets or uhf converters. Therefore, the sales potential for uhf sets and conversions is about 9,000,000 families, as of now. As uhf stations go on air in new communities, this potential continues to increase.

About 38,000,000 families are now within range of at least one TV station (vhf or uhf) -- some 85% of nation's 45,640,000 families. Saturation of all U.S. TV areas is about 67%. Some 12,000,000 families within range of TV have no sets at all.

Topics & Trends of TV Trade: Flat ban on "bait" ads—particularly those which proclaim "no down payment" merely as lure to increase store traffic—looms as at least one concrete result of series of fair practice rules meetings concluded by Federal Trade Commission Dec. 7.

Though industry representatives differed on other rules in the proposed code, remarkable chorus of agreement followed suggestion by NARDA's Mort Farr to ban such ads as deceptive trade practice. And FTC attorney Paul Butz, who has conducted drawn-out hearings dating back to 1951 (Vol. 7:25, 8:19, 9:41), told us the ban will surely be written into the code he'll submit for final FTC approval in month or so.

If commissioners approve, rules could be effective by mid-1954. Rules aren't legally binding, depend on voluntary compliance. Violators can be prosecuted only if FTC believes trade laws have been broken.

FTC plan is to make rules so general and all-inclusive that color and other subsequent electronic developments could fit into the framework with few, if any, amendments. RETMA's Glen McDaniel said he had considered asking further postponement to cover future developments but deemed it wiser to allow the rules to take effect, then amend them later if necessary.

One of biggest FTC headaches will be to determine how many times a demonstrator model can be played and still called "new". Kenneth Wilson, representing National Assn. of Better Business Bureaus, suggested FTC ban use of "new" to describe any demonstrator; NARDA's Fred Walker objected, saying mere fact sets were played a few times didn't make them used, added hundreds of dealers would be forced out of business if forced to sell demonstrators as low-priced used sets.

* * * *

Philco entered home laundry field this week, disclosing purchase of Dexter Co., Fairfield, Ia., manufacturers of washing machines & dryers (Tom B. Hunt, president) for undisclosed sum. Philco announcement said that "in exchange for plant facilities, patents and other assets of Dexter, Philco will tender 70,000 shares of its authorized but unissued common stock, or 1.05 shares of Philco stock for 3 shares of Dexter stock, of which there are 200,000 shares outstanding." Agreement is subject to approval of Dexter stockholders. Philco will operate Dexter as wholly-owned subsidiary under present management, with equipment marketed under Dexter brand. With 59-year experience in laundry equipment production, Dexter has plants in Fairfield, Ia. and Alliance, O. Last year, when it produced 125,471 washing machines, its profit was \$68,849 on sales of \$12,152,212.

Westinghouse's reduction of \$80-\$200 in prices of six 21-in. models in early Nov. (Vol. 9:46), along with larger promotion allowances to dealers on all other sets, resulted in threefold increase in sales over Oct., reports TV-radio div. sales mgr. R. L. Sandefur. Factory stocks have been reduced considerably, he added, though he said Westinghouse "never was overloaded."

Muntz TVs likely will be sold by independent dealers in newer TV markets after first of year, according to pres. Earl Muntz, who says his own retail distribution system hasn't proved adequate to meet market expansion. His statement followed disclosure that Muntz sets were being sold on "test basis" by Western Tire Auto Stores chain in Rockford, Ill. and by East TV in Peoria.

Federal Trade Commission this week approved consent order ending complaint charging National Electronic Distributors Assn. and 37 wholesaler-distributor members with conspiracy to create monopoly in sale of TV-radio-electronics parts (Vol. 9:16, 32). NEDA consented to issuance of order without admitting or denying any violation of anti-trust laws.

Mass-production of printed-circuit TV sets is promised within 3-4 months by Kaye-Halbert TV Corp., Culver City, Cal. First showing of set will be at Chicago's Conrad Hilton Hotel, Jan. 4. Kaye-Halbert officials describe new chassis thus: It's divided into 9 major sections, printed by silk screen etched method on copper lined phenolic plates. Standard components are used, with dip-soldering for connections. The sections snap into phenolic frame which is mounted vertically behind picture tube for easy accessibility from rear of cabinet. Company estimates 95% of all servicing can be done in the home, the serviceman snapping out the ailing section of the circuit for repair or replacement. While initial materials costs will be higher than for conventional wiring, officials say they expect substantial savings in labor costs from the start, with other benefits expected to be complete standardization and freedom from many of the ailments common to hand-wired sets. No price has been established. TV sets have used printed circuits in the past, but no production model set has had completely printed circuitry. RCA is manufacturing and selling to the trade a printed IF circuit for TV.

DuMont introduced four 21-in. additions to 1954 line at convention of regional and factory branch salesmen at Waldorf-Astoria this week, at same time raising list prices on 2 models in current line. New models: Benton, walnut-finish table \$260, mahogany \$270, blonde \$280; Preston, mahogany-finish table \$290, blonde \$300; Garfield, open-face walnut console \$330, mahogany \$340, blonde \$350; Newport, full-door mahogany console \$450, blonde \$470. Those raised were Summit, 17-in. table model, from \$210 to \$220 in mahogany & blonde, remaining at \$200 in walnut, and New Yorker, 24-in. open-face console, from \$500 to \$550 in mahogany and from \$530 to \$580 in maple & blonde. Sales mgr. Dan Halpin said increases were made to give dealer greater discounts.

New 12-channel turret tuner has been announced by Anchor Radio Corp., 2215 St. Louis Ave., Chicago, for production in mid-Jan. Anchor claims tuner is first with RF amplifier operating for both uhf & vhf channels, and that no adjustments are required when strips are installed. Tuner is expected to list for \$20-\$24, strips about \$3 each. Anchor is said to be negotiating with Muter Co. to manufacture the tuner, Anchor to handle jobber sales.

* * * *

Picture tube sales in first 10 months of year totaled 8,501,455 valued at \$203,127,855, compared to 4,954,031 worth \$108,866,565 in same 1952 period, reports RETMA. Rectangular 20-in. and larger represented 79% of sales. Oct. picture tube sales totaled 948,593 worth \$23,994,184, compared to 875,712 at \$20,524,677 in Sept. and 1,045,286 at \$23,340,340 in Oct. 1952.

Receiving tube sales in first 10 months totaled 382,080,588 valued at \$263,328,699, compared to 287,569,947 worth \$205,318,181 in same 1952 period. Of sales, 258,224,844 went for new sets, 97,333,270 replacement, 17,469,046 export, 9,053,398 Govt. For Oct., receiving tube sales totaled 34,928,108 worth \$25,393,879, compared to 38,929,539 at \$27,401,566 in Sept. and 41,880,318 at \$28,379,281 in Oct. 1952.

Bound and Indexed

We will index and bind, between embossed hard book covers, a limited quantity of all 1953 issues of the *Television Digest* Weekly Newsletters, plus the semi-annual *TV Factbooks* with all Addenda, plus all Supplements and Special Reports. This volume will provide a handy and handsome permanent reference for your own or your company library. Orders will be taken only until Jan. 5. Price: \$25 per volume.

Trade Personals: Wm. H. Martin, Bell Labs v.p., Jan. 1 becomes Deputy Asst. Defense Secy. for applications engineering . . . Harry W. McCullough resigns as Crosley TV-radio gen. sales mgr. after 5 years in top-level Crosley sales posts . . . John C. Marshall elected Arvin v.p. & TV-radio sales director; Herbert A. Holmes promoted to sales mgr. of special products div. . . . Ralph R. Stubbe named chief engineer, General Instrument Corp. . . . Douglas Day, recently adv. mgr. of DuMont, onetime Buchanan account executive, is now Chrysler-Plymouth dealer in his home town of Carmel, N. Y. . . . Arthur T. Baxter resigns as Hoffman Radio purchasing director to join S. L. Spraggins Co., Beverly Hills manufacturers' rep . . . H. Leslie Hoffman, pres. of Hoffman Radio, awarded engraved hour glass Dec. 1 by Los Angeles business magazine *Minute* in recognition of "technological leadership in TV and electronics" . . . George W. Fenimore, ex-Hughes Aircraft, named special asst. to Packard-Bell pres. H. A. Bell . . . Dean W. Phillips, southern California district sales mgr., Packard-Bell, named sales mgr. of its new Bellair room air conditioner div. . . . Kenneth Irwin, Los Angeles factory rep, named San Joaquin Valley district sales mgr., Kaye-Halbert, headquartering in Fresno . . . John C. Bibbs named mgr. of Westinghouse Ft. Worth sales office, replacing W. R. Dixon, now mgr. of Little Rock branch . . . Ray Turner succeeds R. Race as chief engineer, Motorola Canada . . . Charles P. Lloyd named Motorola regional mgr. out of Chattanooga, succeeding Verne May, resigned . . . Dr. Leslie Hill joins Pentron Corp., Chicago, as research director . . . Clayton Ryder promoted to Boston district mgr., GE replacement tube sales, replacing Paul P. Wickman, now at tube dept., Syracuse . . . Donald H. Rogers, ex-Western Electric, named chief engineer, Blonder-Tongue Labs, Westfield, N. J. . . . Robert Caswell resigns as central zone mgr., CBS-Columbia . . . Murray Platt, pres. of Platt Mfg. Corp., elected pres. of Link Radio Corp. in merger of the companies . . . Robert E. Ricketts, ex-DuMont, named chief engineer, Radio City Products, N. Y. . . . Wm. H. Kelley, recently resigned Motorola v.p. who becomes DuMont sales v.p. Jan. 1, was presented with certificate for a 1954 Cadillac by Motorola distributors as farewell gift at N. Y. party . . . Wm. C. Cothron, ex-DuMont & RCA, recently supervisory engineer for JOAX-TV, Tokyo, joins Graybar as TV equipment sales rep in Washington . . . Stanley Adams, mgr. of Bangor plant, promoted to gen. mgr. of Standard Coil Products Co. Chicago plants.

* . * . *

Distributor Notes: Philco appoints Electro-Pliance Inc., ex-Motorola Milwaukee outlet, replacing Radio Specialties Inc.; Philco Distributors Inc., Philadelphia, names David McGuckin, ex-sales promotion director, mgr. of air conditioning div. . . . Motorola appoints Allied Appliances, ex-Admiral Denver outlet (Wm. J. Lujan, pres.), replacing Boyd Distributing Co., now Philco; Motorola-Baltimore appoints Arthur E. Selnick TV-radio sales mgr. . . . Bendix Radio appoints Breece Distributing Co., Kansas City (W. E. Breece Sr., pres.) . . . Westinghouse appoints Home Equipment Co., Memphis (George B. Bates, pres.) . . . Trav-Ler Radio names Fresno TV Supply Co., Fresno, Cal. . . . Kinney & Faust, Fresno (Hoffman Radio) appoints Frank P. Fern TV-radio sales mgr., replacing V. E. Lehman, resigned . . . Radio Distributing Co., Detroit (Zenith) elects John W. Miltgen v.p.; he's gen. mgr. of Grand Rapids branch . . . Peninsular Distributing Co., Detroit (CBS-Columbia) names J. L. Leeson gen. mgr. . . . GE Supply Co. elects R. C. Hawley, ex-St. Paul district mgr., as national treas., headquartering in Bridgeport, Conn.; he replaces R. L. Johnson, now finance mgr. of GE lamp div., Cleveland.

Financial & Trade Notes: Packard-Bell reports net profit of \$1,139,642 (\$1.65 a share) after taxes of \$2,345,000 on record sales of \$32,152,750 in fiscal year ended Sept. 30, compared to \$968,051 (\$1.40) after \$2,103,720 taxes on \$22,724,273 sales during preceding fiscal year. Profit was second only to 1950's record \$1,308,510 (\$2.61). In annual statement, pres. H. A. Bell said company will begin deliveries of own "Bellair" room air conditioners in Feb. as "our first step in the direction of entering the air conditioning and refrigerating field, which appears from all statistical and economic studies to be the most promising growth field in hard goods for home use." Company makes own furniture in Los Angeles plant, and recently began manufacturing hollow core doors for the building industry in plant at Santa Ana as part of program of diversification. In last year, it has doubled manufacturing space, with 116,000-sq. ft. more for new mill & cabinet plant, 30,000-sq. ft. for research & development facilities.

Hoffman Radio reports net income of \$1,115,533 (\$1.92 a share on 574,726 common shares outstanding) after taxes of \$1,901,741 on sales of \$38,153,871 in first 9 months of 1953, compared to \$994,282 (\$1.73) after taxes of \$1,242,527 on sales of \$25,728,140 in same 1952 period. Earnings in third quarter ended Sept. 30 were \$418,213 (73¢) on sales of \$13,465,636.

Davega Stores reports net loss of \$108,093 on sales of \$11,830,531 in 6 months ended Sept. 30, compared to loss of \$601 on \$12,260,573 in corresponding 1952 period and profit of \$12,712 (22¢ a share) on \$13,074,000 same 1951 period.

Dividends: Admiral, 25¢ Dec. 31 to stockholders of record Dec. 17; Audio Devices Inc., 3¢ Jan. 4 to holders Dec. 21; Electronic Associates, 20¢ Dec. 31 to holders Dec. 21; Capitol Records, 15¢ quarterly Jan. 1 to holders Dec. 15 and 20¢ extra Dec. 24 to holders Dec. 15; IT&T, 25¢ Jan. 15 to holders Dec. 18; Technicolor, 10¢ year-end Dec. 30 to holders Dec. 18; Paramount Pictures, 50¢ Dec. 26 to holders Dec. 18.

"The little lady who wasn't there" isn't there any more. After providing 2 days of fascinating mystery and newspaper headlines, she vanished as suddenly as she appeared, just as WNBT's publicity dept. was about to cash in on her—proving that even ion burns don't like to be exploited. The ghostly face which appeared on the TV screen of Mr. & Mrs. Jerry Travers, Blue Point, L. I. Dec. 9 and wouldn't disappear even with set turned off and wall plug pulled out, was identified Dec. 11 as belonging to pretty singer Francey Lane, who doesn't look the least bit ghostly. But while studio press agents—and Miss Lane in the flesh—were heading for Blue Point to observe the phenomenon (and get Miss Lane's name in the papers), the "ghost" revolted and disappeared after a 51-hour stand. Engineers explained phenomenon was rare, apparently caused by electronic "explosion" in set, during Miss Lane's show 2 days earlier, which fixed her image on screen.

Retail showmanship: To demonstrate vhf-uhf reception, Carroll Miller Appliances, Modesto, Cal., set up 9 Raytheon TV sets in show window, each connected to different antenna and showing picture from different channel. On top of each set was display card showing channel number and city where picture originated. Pictures shown on window demonstrator sets were from: San Francisco's KRON-TV (Ch. 4), KPIX (Ch. 5) & KGO-TV (Ch. 7); Bakersfield's KERO-TV (Ch. 10); Chico's KHSL-TV (Ch. 12); Fresno's KJEO (Ch. 47) & KMJ-TV (Ch. 24); Stockton's KTVU (Ch. 36); Monterey's KMBY-TV (Ch. 8). Modesto itself has no TV station, but there are 3 applicants for Ch. 14 there.

Last week's sale of Cleveland's WGAR for approximately \$1,000,000 (announced purchase price of \$1,750,000 included about \$750,000 in quick assets) does not mean Detroit's WJR is also likely to go on the block, too—even though third radio station controlled by G. A. Richards estate, KMPC in Hollywood, was recently disposed of to Gene Autry and associates. WJR is publicly owned by WJR The Goodwill Station Inc., with Mrs. Francis S. Parker, recently remarried widow of the late Mr. Richards, as chief stockholder. WGAR pres. John F. Patt, who sells his 35% in WGAR along with Mrs. Parker's 52½% and other executives' 12½%, will devote his attention mainly to WJR but will continue as a consultant for WGAR. Peoples Broadcasting Co., purchaser, subsidiary of Farm Bureau Mutual Insurance Co., Columbus, is retaining gen. mgr. Carl George, reporting to its pres. Herbert E. Evans. Peoples also owns radio WTTM, Trenton, N. J., where it holds uhf CP; WMMN, Fairmont, W. Va.; WRFD, Worthington, O.; recently sold WOL, Washington.

As N. Y. newspaper strike ended this week, telecasters and broadcasters wondered whether dept. stores and theatres had been won over to TV-radio as ad medium. Most reports indicated theatre business about normal for this time of year, retail traffic off perhaps a little during strike when TV & radio were virtually only available major advertising media. As for TV-radio's stepped-up news coverage during strike, *N. Y. Times'* Jack Gould summed up: "If ever there were doubts over the complementary rather than competitive nature of the major news media, they were put at rest during the suspension of newspaper publication. TV & radio filled a real public need with their news schedules, but necessarily they fell far short of meeting the public's hunger for information. The lesson is that broadcasting and the press perform different services, but both are needed in modern life."

Connected to AT&T network circuits this week: KFOR-TV, Lincoln, Neb.; WWOR-TV, Worcester, Mass.; WTOV-TV, Norfolk, Va. Scheduled to be added this week-end: KOMO-TV, Seattle; WJHP-TV, Jacksonville, Fla. Meanwhile, CBC announced it had signed joint contract with Canadian National and Canadian Pacific Railways for construction of TV network routes connecting Toronto, Kitchener, Hamilton, London & Windsor, Ont., and Montreal & Quebec City, Que. Temporary link between Toronto's CBLT and London's CFPL-TV is slated to be operating by Xmas, with permanent facilities ready by time Hamilton and Kitchener stations go on air next year. Montreal-Quebec link is also scheduled for completion in 1954, to coincide with debut of CFQM-TV, Quebec.

Transfer of KAFY-TV, Bakersfield, Cal. (Ch. 29) with KAFY from control by Sheldon Anderson family was approved by FCC Dec. 11. Mr. Anderson, new operating KCOK-TV, Tulare, Cal. (Ch. 27), and family sell 51⅔% for \$85,000. New stockholders: *San Francisco Chronicle*, 49%; Charles Thieriot, gen. mgr. of *Chronicle's* KRON-TV, 16.67%; John Hearne, attorney, 25%; Mr. Anderson, 8.3%; Harold See, mgr. of KRON-TV, 1%.

W. D. (Dub) Rogers' KDUB-TV, Lubbock, Tex., which has just placed contract with Gates for 250-watt AM transmitter, is believed to be first TV station that started first, then applied for and got CP for radio adjunct.

Gross of \$1,250,000 by New York's WNBT (NBC-owned) in November is said by *Television Age* to be highest monthly figure ever recorded by any TV station.

American Assn. of Advertising Agencies, 420 Lexington Ave., N. Y., has reissued its Standards of Practice in new booklet, available to advertisers and media on request.

Newly allocated Ch. 6 in Milwaukee suburb, Whitefish Bay, Wis., this week got its second applicant in Hearst Corp., on whose petition channel was added. At same time, Hearst filed motion with Appeals Court to dismiss its appeal from FCC's action reserving Milwaukee's Ch. 10 for educational use. Hearst owns Baltimore's WBAL-TV & WBAL, Milwaukee's WISN and Pittsburgh's WCAE. Only other application filed this week was for Lexington, Ky., Ch. 18, by WLEX (J. D. Gay Jr., pres. & chief owner). Twelve applications were dismissed this week. On file with FCC at week's end were 368 applications, including 79 for uhf. [For further details about these applications, see *TV Addenda 17-W* herewith; for complete listings of all grants, new stations, applications, dismissals, hearings, etc., see *TV Factbook No. 17* with Addenda to date.]

Northeast Television Network, 3-station off-the-air hookup to begin program exchange in Massachusetts Mon., Dec. 14 (Vol. 9:38), will carry programs from New York's WPIX as well as from network "member" stations. WPIX already is beaming its sports programs to 2 Pennsylvania uhf stations. Northeast's guiding lights are Ansel Gridley of WWOR-TV, Worcester (Ch. 14), Charles DeRose of WHYN-TV, Springfield-Holyoke (Ch. 55), Frank Lyman of WTAO-TV, Cambridge-Boston (Ch. 56). Network is expected to be joined later by WATR-TV, Waterbury, Conn. (Ch. 53) and upcoming WMGT, Adams, Mass. (Ch. 74) and WNET, Providence, R. I. (Ch. 16).

Long-sought excess profits tax relief for telecasters has been granted in new ruling adopted by Internal Revenue Service. Washington attorney Lovell Parker, special tax counsel to NARTB, said effect and application of complex new rules will vary from case to case. He is preparing interpretation of new ruling for NARTB TV members. Text of amendment was published in Dec. 3 *Federal Register*, available for 15¢ a copy from Supt. of Documents, Govt. Printing Office, Washington.

FCC approved call letter changes of ABC's KECA (TV-AM-FM) to KABC (TV-AM-FM) this week, at same time changing George B. Storer's KABC, San Antonio, to KGBS, his TV there from KEYL to KGBS-TV, and switching KGBS-TV & KGBS, Harlingen, Tex., to KGBT-TV & KGBT.

FCC budget of about \$6,700,000 for next year, compared with \$7,400,000 for current year, will be recommended to Congress by President Eisenhower. FCC had pared its request to \$7,100,000, but Budget Bureau lopped off \$400,000 more.

Next TV Factbook—Pre-Print Orders

Our semi-annual *TV Factbook No. 18* will be off the presses shortly after Jan. 15, 1954—containing basic data on all U. S., Canadian and Mexican border stations & networks (including rates); complete tabulation of applications for new stations, detailing principals involved, facilities requested, etc. (and starting new series of weekly Addenda); list of all new-station grantees (with reported starting dates); directories of station representatives and major advertising agencies; directories of TV set & tube manufacturers, transmitter & studio equipment makers, film & live program suppliers, community antenna systems, theatres equipped for TV, FCC personnel, legal & engineering consultants, electronics laboratories; plus many other reference features. One copy goes to each *full-service* subscriber. Extra copies, if pre-print orders for 20 or more are placed by Jan. 3, cost \$1.50 each; single copies, \$3.

MARTIN CODEL'S
AUTHORITATIVE NEWS SERVICE
FOR MANAGEMENT
OF THE
VISUAL BROADCASTING
AND ALLIED ELECTRONICS
ARTS AND INDUSTRY

Television Digest

with **ELECTRONICS REPORTS**

PUBLISHED WEEKLY BY RADIO NEWS BUREAU • WYATT BLDG. • WASHINGTON 5, D.C. • TELEPHONE STERLING 3-1755 • VOL. 9: No. 51

MARTIN CODEL'S DEC 21 1953

December 19, 1953

In this
issue:

FCC Wishes Industry 'Godspeed' with Color, page 1
Buffalo UHF Station Quits, 4 CPs Issued, page 3
Commission's Survey of UHF Economics, page 4
7 More Starters, Mostly Small Towns, page 4

World's Tallest TV Tower—WMCT's 1088-ft., page 6
Transmitter Shipments & Upcoming Stations, page 8
There's Plenty of Life in TV Trade—for 1954, page 9
Color & 1954—What Trade Leaders Think, pp. 10-12

[With This Issue: Complete Text of FCC Color Decision, Including New Technical Standards Amended to Incorporate Color]

FCC WISHES INDUSTRY 'GODSPEED' WITH COLOR: FCC's color decision on Thursday, Dec. 17, approving compatible system endorsed by entire industry, has been so long anticipated and pre-digested that its historic significance may be obscured.

There can be little doubt the industry is beginning a new era, just as it did when it began TV itself in 1945-46. True, there will be a period of transition and dislocation -- the extent of which is industry's greatest concern -- but there's every indication that color TV will generate a brand new boom reminiscent of TV's inceptive years. Industry's major effort, at the moment, is to make the transition as smooth as possible. We have asked the leaders to forecast position and prospects of the industry during coming year; their responses are reported on pp. 10-12.

The wraps are really off. Though decision isn't "effective", in a strictly legal sense, until 30 days after publication in Federal Register -- meaning Jan. 23 or thereabouts -- FCC on Dec. 18 decided to permit commercial colorcasting starting immediately. Stations need merely notify Commission in advance by wire.

Sale, advertising and promotion of color sets can also begin immediately -- though this could have been done anyway, because FCC has no jurisdiction over the manufacture or sale of TV-radio receivers.

* * * *

Commission certainly didn't go overboard for system in its decision. Here's the impression FCC gave -- whether it meant precisely to do so or not:

It's a fine system, a miracle of ingenuity -- but it's kinda complicated. We once adopted the field-sequential system and got nowhere. Now, the whole industry tells us this compatible system will work -- and we believe it will. But if anything happens and this system doesn't get off the ground, we want the record to show that we gave clear warning of its shortcomings. We adopted it because it provides the sole possibility of bringing color into the home.

Here's what FCC actually said: "The accomplishment of a compatible color TV system within a 6-mc bandwidth is a tribute to the skill and ingenuity of the electronics industry. The proposed [specifications] produce a reasonably satisfactory picture with a good overall picture quality." But NTSC system currently requires some "extremely complicated and intricate equipment," said Commission. It went on:

"Although the color reproduction is not completely faithful, it is sufficiently accurate to be a pleasing reproduction. The loss in resolution, as compared with monochrome, is offset by the greater realism resulting from the addition of color information. The brightness level on present color equipment, while lower than on monochrome receivers, is nevertheless within the range of acceptability..."

Commission found black-&-white pictures received on monochrome sets from color transmissions to be poorer than straight black-&-white. And it said black-&-

white pictures on color sets are degraded. Furthermore, it found the system to be more susceptible to interference than black-&-white. On top of all that, it said, system definitely requires very expensive receivers and transmission equipment that will require more expert and more frequent attention than monochrome. Notwithstanding the drawbacks, FCC concluded that the following factors impelled approval:

- (1) There's "overwhelming" industry support for system.
- (2) "History has demonstrated that American industry is capable of devising practical and economical equipment on a mass production basis."
- (3) Standards "are broad enough to permit considerable latitude to competing companies in the future development of more economical and efficient equipment without obsoleting equipment in the hands of the public."
- (4) System is compatible, giving public choice of buying or not buying a color set and assuring public its present sets will receive all programs in black-&-white -- regardless whether they're transmitted in black-&-white or color.

* * * *

Decision was approved by all commissioners except Hennock after long Dec. 16-17 discussions. She declined to vote. Comrs. Webster, Sterling and Lee issued separate concurring statements.

Comr. Webster reiterated concern about disadvantages FCC found in system, but concluded that problems are temporary "equipment limitations" rather than permanent "system limitations."

Comr. Sterling expressed confidence standards will provide a "fine compatible system" and cited automobile as example of an initially expensive and complex product now in mass use. He said he's certain good, inexpensive color sets will be out in 2-3 years. "In the meantime," he added, "the public can buy black-&-white TV receivers now on the market, and which will continue for the next 3 or 4 years to represent the greatest percent of production of TV receivers, confident that when programs are broadcast in color they may view them in black-&-white." He laid great stress on need for proper suppression of interference.

Newest commissioner, Robert E. Lee, said: "I concur completely with the Commission's decision...The defects and imperfections [are] carefully pointed out and this is as it should be. [It is apparent] that color TV will not be available to most of us for some time to come but this was also true in the early days of black-&-white TV...The defects and shortcomings that may now exist will evaporate in the coming months as industry takes on mass production."

The ever-erratic Miss Hennock didn't disclose why she chose not to vote.

* * * *

FCC's decision was distinguished by its final and complete recognition of the basic importance of compatibility, and the air of finality with which it buried the field-sequential system. In press release accompanying decision, the Commission pointedly noted that it will take time to produce receivers and equip stations; that "meanwhile, existing TV sets, in addition to continuing to receive monochrome transmissions, will be able to receive color programs in black-&-white without change or other adjustment to the receivers."

Decision was also a milestone in restoration of good relations with industry. The whole calm, efficient deliberation was in striking contrast to Commission's outright hostility and distrust when it tried unsuccessfully to cram the incompatible system down throat of industry in 1950.

Whole affair was handled on paper, i.e., through written comments, and it avoided the delays and exhibitionism usually produced by oral hearings.

Major credit for staff work should go to Arthur Scheiner, chief of rules & standards div., and his very small group of assistants, under general supervision of Curtis Plummer, chief of broadcast bureau.

* * * *

Reaction from all segments of industry is yet to come. RCA was jubilant, of course, chairman David Sarnoff viewing decision as final vindication of his consistent and adamant stand on compatibility. CBS pres. Frank Stanton hailed decision as

an end to controversy and uncertainty, looked forward to bringing color to fruition. Both NBC and CBS raced to be first to colorcast bulletins and special programs, and both played the news up heavily in their Dec. 17 radio newscasts.

NBC will step up its program of giving all sponsors opportunity to colorcast at least once during "introductory year." Opera "Amahl and the Night Visitors" goes on Dec. 20, special all-star "Season's Greetings" Dec. 22, color film of "Dragnet" Dec. 24, mobile unit pickups of "Tournament of Roses" from Pasadena Jan. 1. CBS will introduce similar rotating system for its sponsors in addition to regular daytime color series (Vol. 9:50); it has leased RKO 81st St. Theatre, will convert it to color within about 4 months.

First 2 stations to ask permission to colorcast were WPTZ, Philadelphia (NBC) and WMAR-TV, Baltimore (CBS). Both are equipped to rebroadcast network color, originate slides, with Telechrome gear. FCC granted both, along with NBC's requests.

AT&T has added 3 more cities for NBC-TV's Jan. 1 colorcast from Pasadena -- Detroit (WWJ-TV), Cincinnati (WLWT), St. Paul (KSTP-TV). That makes total of 18 (Vol. 9:49-50). NBC had also asked for Columbus, Dayton & Wheeling, but AT&T said it couldn't make it. New Haven's WNHC-TV and Wilkes-Barre's WBRE-TV are reportedly planning to rebroadcast signals picked out of air from New York's WNBT.

BUFFALO UHF STATION QUILTS, 4 CPs ISSUED: WBES-TV, Buffalo (Ch. 59) turned off juice this week, becoming third station to throw in the sponge -- even as FCC was granting 4 more CPs and prodding 5 old grantees for failure to build. Commission also started ball rolling to issue proposed rule-making next week permitting owners of 5 stations to acquire 2 uhf (Vol. 9:50). It decided against making action a final decision.

Buffalo station follows WROV-TV, Roanoke (Ch. 27) and KFXD-TV, Nampa, Ida. (Ch. 11) in suspending operations permanently. KONA, Honolulu (Ch. 11) got into fiscal trouble and suspended, but was resuscitated by new owners (Vol. 9:11, 23).

WBES-TV told Commission: "We recently concluded that [a network affiliation] is not possible, and two things became apparent to us: firstly, that this operation could not succeed without a basic major network; and secondly, that the major networks were awaiting the outcome of the contests for vhf channels in Buffalo, so as to make an arrangement with the successful applicant."

In big merger deal last week, 4 Buffalo applicants dismissed and Niagara Frontier Amusement Corp. stood alone awaiting Ch. 2 grant. But FCC suspected that one applicant, Enterprise Transmission Inc., had not filed "in good faith," ordered Niagara to hearing. WBES-TV was to sell Niagara its equipment for reported \$500,000.

Station took to air only 3½ months ago, Sept. 5, was owned by banker Chas. Diebold, heating-refrigeration contractor Joseph Davis and attorney Vincent Gaughan. There were reports they plan to file for Ch. 7.

New CPs went to: Kirksville, Mo., KBIZ, Ch. 3; Ada, Okla., KADA, Ch. 10; Enid, Okla., Streets Electronics, Ch. 5; La Crosse, Wis., La Crosse TV Corp., Ch. 38.

Enid grant was merger, KCRC dropping application under option to buy 20% of grant held by Streets (appliances). La Crosse CP is one of many in which New York attorney George Becker holds interest; he must reduce holdings to 5 stations or CPs. Biggest stockholder of La Crosse CP is Wm. Zeckendorf, noted New York realtor.

* * * *

FCC called 5 more grantees on the carpet this week -- 4 of them uhf -- telling them their requests for more time to build can't be granted on basis of current evidence: WPAQ-TV, Mt. Airy, N.C. (Ch. 55); WMSL-TV, Decatur, Ala. (Ch. 23); WCRS-TV, Greenwood, S.C. (Ch. 21); WCOW-TV, St. Paul (Ch. 17); KNEH, Clovis, N.M. (Ch. 12).

Recent petition by KIT-TV, which gave up Yakima, Wash. Ch. 23 grant -- saying area wasn't suited for uhf and asking for assignment of Ch. 2 or 3 there (Vol. 9:48) -- drew objection this week from uhf station now operating in Yakima. KIMA-TV (Ch. 29) told FCC it spent \$350,000 on station, now is successfully serving 95% of trading area's population. If Commission should allocate vhf channel to Yakima, KIMA-TV asked permission to apply while still telecasting on Ch. 29. Meanwhile, FCC again rejected similar request by KSTM-TV, St. Louis (Ch. 36), for permission to file for Ch. 11 in East St. Louis, returned its Ch. 11 application.

COMMISSION'S SURVEY OF UHF ECONOMICS: First documented figures on the economics of post-freeze telecasting show uhf & vhf stations faring equally well -- within the framework of a rather limited study.

Highlights of FCC's recent survey of post-freeze stations (Vol. 9:31, 33-34) were revealed by Comr. John C. Doerfer in address to Maryland-D.C. broadcasters. He said 83 of the 101 post-freeze stations operating Aug. 1 returned Commission questionnaire, and their replies showed post-freeze uhf & vhf stations evenly matched from standpoint of profitability, average revenues and revenues from network shows.

More data on survey is expected from FCC next week, presumably including breakdowns of such factors as size of markets, number of stations in markets, etc.

Majority of vhf & uhf stations surveyed had reached or were well on way to profitable operation, Doerfer said. Responding stations were evenly divided -- 42 vhf, 41 uhf. Already operating at a profit were 8 vhf, 8 uhf.

Cautioning against drawing quick conclusions from survey, Doerfer pointed out that figures aren't necessarily typical. Lending credence to optimistic interpretation: (1) Average station surveyed was only 5 months old. (2) Survey period included traditionally poor summer months of June, July and August.

There are these caution signals, on other hand: (1) Stations covered were only about one-fourth of the total post-freeze CPs. (2) Only 2 respondents were in markets which have pre-freeze stations.

Real problem for both vhf & uhf post-freeze stations -- on which this report sheds little light -- is in old TV markets. Today, about one-fourth of uhf grantees are in such markets, and FCC can be expected to make further surveys to check particularly on economic health of new stations in such competitive situations.

Comparing current situation with vhf's early days, Doerfer pointed out that the 40 stations which operated for full year of 1948 lost \$8,500,000. Commission's records show that no TV station made profit in 1948, only 6 of 98 stations operating in 1949 were in the black, and in 1950 -- first year TV stations showed aggregate profit -- 53 of the 107 stations were still running in the red. Even now, Doerfer noted, some pre-freeze stations in highly competitive markets such as New York and Los Angeles are on a loss basis.

Obviously directing his remarks to the uhf operators who have been asking FCC to protect them from further vhf competition or let them switch to vhf channels, Doerfer declared: "We can't be concerned with individual inequities. The only time you can invoke the regulating function is where the whole industry is threatened and the public interest is involved."

To both vhf & uhf aspirants, Doerfer had words of advice. He said, in essence: It's common sense not to expect quick profitable operation in markets already heavily served by pre-freeze stations. Principal factors making for success in long run will be "programming and intelligent managerial operation."

7 MORE NEW STARTERS, MOSTLY SMALL TOWNS: Taking into account dropout of Buffalo's WBES-TV (p. 3), on-air total rose to exactly 347 this week (227 vhf, 120 uhf) as 7 more began testing. Four of the new starters were vhf and most are in relatively small communities but with populous service areas. Most significant about the new starters was fact that a state university grantee goes into full-fledged commercial operation, while a new uhf owned by theatre interests undertakes operation right "under the gun" of New York & Philadelphia stations. The newest starters:

KOMU-TV, Columbia, Mo. (Ch. 8), U of Missouri's commercial station, is all set for a few hours of preliminary testing on air of GE transmitter, Sun., Dec. 20, definitely begins program operation Dec. 21. Getting service from all 4 networks, it starts with 25 network shows and imposing array of other sponsorships. It opens new TV area in center of state, 123 mi. west of St. Louis, 131 east of Kansas City. University's TV director is Dr. Edward C. Lambert. George J. Kapel is station mgr.; Wm. A. Vaughn, program mgr.; Duane Weise, chief engineer. Base rate is \$200. Rep is H-R Television. Note: Not in the slightest abashed that it has elected to operate commercially (as does Iowa State's WOI-TV, too) rather than go along with the non-

commercial educational protagonists, KOMU-TV emblazons across its news releases, in capital letters: "The Commercial Television Station of the University of Missouri."

WRTV, Asbury Park, N.J. (Ch. 58) began test patterns Dec. 14, is continuing on daily 10 a.m.-5 p.m. schedule until commercial programming starts Jan. 9. Only 37 mi. from New York City, its area getting vhf service from all N.Y. and some Philadelphia stations, RCA transmitter and 465-ft. tower are located in Eatontown, N.J. drive-in theatre owned by licensee Walter Reade. Station's debut is being preceded by enormous promotion campaign, via theatres and local newspapers largely, accenting fact that WRTV will feature community service rather than try to compete with big-city and network stations. All commercials thus far sold are local, reports v.p.-gen. mgr. Harold C. Burke, onetime mgr. of WBAL-TV, Baltimore, whose staff includes Allen Preville, sales mgr.; Richard Behrman, production mgr.; Donald Volkman, technical director. Base rate is \$150. No national rep.

KATV, Pine Bluff, Ark. (Ch. 7) got on the air with test patterns night of Dec. 18, was to go commercial next day. With GE transmitter only 25 mi. from Little Rock, that community (now uhf-served) is being covered, and mgr. James A. Walker reports "wonderful signal" all the way to Houma, La., 125 mi. Area also gets some service from Memphis and Monroe, La. Ownership interlocks with John Griffin Tulsa interests, which recently started KWTU, Oklahoma City (Ch. 9). Pine Bluff outlet's sales mgr. is Bruce Compton, program mgr. Roy Pickett, chief engineer Louis Brown. Base rate is \$300. Rep is Avery-Knodel.

WDAN-TV, Danville, Ill. (Ch. 24) began first tests Dec. 13, is due on air with programs Dec. 27 -- second outlet owned by the Gannett newspaper interests, who publish Danville Commercial-News and operate WHEC-TV in home city Rochester, N.Y. It's RCA-equipped, has newspaper's Robert J. Burow as gen. mgr., Max Shaffer as station mgr., John Eckert, sales mgr. It's directly on AT&T's Chicago-Terre Haute-St. Louis circuit, joins ABC. Base rate is \$150. Rep is Everett-McKinney.

WEAU-TV, Eau Claire, Wis. (Ch. 13) began testing Dec. 17 with 10-kw RCA transmitter, first outlet in western Wisconsin, about 75 mi. from Twin Cities. It's owned by Morgan Murphy-Walter Bridges group, who recently started KGTU, Des Moines (Ch. 17). Harry S. Hyett is gen. mgr.; Dick Kepler, program mgr.; Mervin Greeley, chief engineer. Base rate is \$150. Rep is Hollingbery.

KID-TV, Idaho Falls, Ida. (Ch. 3), in southeastern corner of state, several hundred miles from Boise and about 150 mi. north of Salt Lake City, started testing Dec. 17, goes commercial Dec. 20 with kine service from all networks. Its ownership interlocks with KSL-TV, Salt Lake, whose old 5-kw transmitter it's using along with 25-kw RCA amplifier. C.N. Layne is gen. mgr.; Claude Cain, commercial mgr.; Carroll Secrist, chief engineer. Base rate is \$150. Rep is Gill-Perna.

WJHP-TV, Jacksonville, Fla. (Ch. 36), which was one of the 3 local radio stations which held pre-freeze vhf CPs but turned them in, began operating Dec. 13 with 12-kw GE transmitter, 5-bay antenna. It gets service from ABC, DuMont, NBC, since pre-freeze WMBR-TV (Ch. 4) is basic CBS. Owned by Perry newspaper interests (Jacksonville Journal), its gen. mgr. is T.S. Gilchrist Jr., sales mgr. Bill Fraker. Base rate is \$200. Rep is John H. Perry Associates (newspaper rep).

"Aware Inc.," taking up where *Red Channels* left off, is new group formed to "combat the Communist conspiracy in the entertainment world." Its president, attorney Godfrey P. Schmidt, says organization's functions will include dissemination of "facts on the organizations and individuals [in TV-radio, films, stage, etc.] employing Communists and fellow travelers and denying employment to non-Communists." Group, which has not yet set up permanent offices, will be financed by contributions and \$10 annual membership dues. Other officers: Ned Weaver, actor, 1st v.p.; Paul R. Milton, writer, 2nd v.p.; Richard Keith, actor, secy.; Jeanne Somerville, treas. Member of board is Vincent W. Hartnett, who assisted in preparation of *Red Channels*.

Use of "passive antenna systems" to deflect TV signals into valleys and behind obstructions is permissible without FCC licensing, provided they don't cause "harmful interference" to TV-radio stations, according to FCC Public Notice 53-1591 issued recently. FCC said it had received inquiries about use of such devices, apparently was referring to antenna arrays such as the rhombic developed by Dr. Richard C. Webb of Denver U to pick up signals on mountaintop, re-radiate them into valley without any amplification (Vol. 9:35). Commission emphasized that its ruling was tentative, that it was "not in any way passing judgment on the effectiveness of the systems," and it cautioned against use of any apparatus which would amplify signal.

Personal Notes: Thomas McAvity, NBC-TV national program director, placed in charge of TV network programs div., taking over new pres. Pat Weaver's former operational functions; he will soon be named v.p., and reporting to him will be new Hollywood program v.p. Frederic Wm. Wile Jr., talent v.p. Gus Margraf, et al. . . . Harmon O. Nelson resigns as program mgr. of KNBH, Los Angeles . . . Andrew W. Smith, ex-20th Century-Fox v.p. and veteran of 40 years in motion picture industry, named chief of motion picture service, U. S. Information Agency, replacing Herbert Edwards and reporting to USIA director Theodore C. Streibert . . . John Byram, ex-Paramount Pictures, appointed ABC-TV story editor, reporting to program v.p. Charles M. Underhill . . . Henry Howard named director of network program business affairs, CBS Radio, with Kenneth Craig holding same title in Hollywood . . . Edgar Rosenberg, ex-NBC, joins Box Office Television Inc. to handle negotiations with theatrical craft unions for theatre-TV presentation of Broadway plays . . . John A. Shay promoted to v.p. in charge of operations, WTVJ, Miami . . . Richard H. Mason elected pres. & gen. mgr. of WPTF Radio Co., subsidiary of Durham Life Insurance Co.; Graham B. Poyner, v.p. & asst. gen. mgr. It's applicant for Ch. 5 in Raleigh . . . Harold Singleton has resigned as chief engineer of KGW, Portland, Ore., to devote full time to his consulting practice; Earl Peterson succeeds him . . . George T. Shupert, ABC-TV film div. v.p., elected pres., N. Y. Radio & Television Executives Society, succeeding James M. Gaines, WOR-TV, who leaves Jan. 1 to head WOAI-TV & WOAI, San Antonio . . . Dr. Kenneth Christianson, on leave as chairman of TV-radio education dept., Stephens College, Columbia, Mo. and ex-U of So. Dakota faculty member, returns to Vermillion, S. D. to head S. D. Regional Education Board's project for educational TV . . . Ralph B. Austrian is now on leave from Periera & Luckman, Los Angeles architects, where he handled TV-radio accounts, to be v.p. of Paco Inc., 745 Fifth Ave., N. Y. formed to design, build and finance office buildings, factories, dept. stores, etc. . . . Harold (Hap) Anderson, mgr. of KOLN-TV & KOLN, resigns to join WDEF, Chattanooga, Tenn., in pursuit of its Ch. 12 application . . . George X. Smith has resigned as v.p.-gen. mgr. of KFOR-TV & KFOR, Lincoln . . . W. G. McLaren, ex-KLAC-TV, CBS & NBC, named program mgr. of upcoming KCEB, Tulsa (Ch. 23) . . . Adolph Schneider, ex-chief of NBC-TV news & special events, joins Hack Swain Productions, Sarasota, Fla., TV film producer, as v.p. . . . Hank Davis, ex-KFDX-TV, Wichita Falls, named program director of upcoming KSLA, Shreveport, La. (Ch. 12) . . . Richard E. Goebel has resigned from KOY-TV, Phoenix, to rejoin Advertising Counselors of Arizona, Phoenix . . . L. C. Smith, ex-WBAP-TV, Fort Worth, named chief engineer of KARK-TV, Little Rock (Ch. 4) due next March . . . Robert T. Richardson named film production supervisor, TV-radio dept., Leo Burnett Co., Chicago . . . Ralph Kanna, ex-WRGB, named program director, WKNB-TV, New Britain, Conn.

Richard C. (Dick) Patterson Jr., 67, who was NBC exec. v.p. 1932-36, later ambassador to Yugoslavia, Guatemala & Switzerland, will become New York City's official "greeter" as chairman of the Mayor's Reception Committee, succeeding famed Grover Whalen, when mayor-elect Robert F. Wagner Jr. assumes office.

Edward J. Noble, ex-chairman of ABC, now head of AB-PT finance committee and chairman of Life Savers Corp., has gifted \$2,000,000 more to the Edward J. Noble Foundation, established for charities and education in 1940.

Stephen Slesinger, 53, head of the N. Y. & Hollywood TV film production firm bearing his name, died in Los Angeles Dec. 17.

TALLEST TV TOWER in the land, at this writing, is that of WMCT, Memphis (Ch. 5), whose 83-ft. 6-bay antenna atop 1095-ft. Blaw-Knox tower gives it an overall height of 1088 ft. above ground, 1013 ft. above average terrain, 1325 ft. above sea level. It went into operation Dec. 11, mgr. Henry Slavick reporting outer fringe coverage to 135 mi. (including favorable response from Little Rock, Ark.) as RCA transmitter power was also increased to 100 kw ERP from 60 kw. Old 750-ft. Blaw-Knox tower was dismantled, sent to WEWS, Cleveland, WMCT swapping it for used 5-kw DuMont transmitter which it has installed with 360-ft. 3-bay antenna as an auxiliary standby.

New tower cost \$200,000. is located 11 mi. northeast of city, is also used by AM counterpart WMC (5 kw on 790 kc) and by FM station WMCF (300 kw ERP on 99.7 kc).

World's tallest tower is Air Force's 1212-ft. loran near Rome, N. Y. (Vol. 9:32) and of course there are 7 TV stations now operating from 1465-ft. Empire State Bldg. mast Next highest TV towers in use are those of WSB-TV, Atlanta (1059 ft. above ground); WBEN-TV, Buffalo (1057); WHUM-TV, Reading (1034); WTMJ-TV, Milwaukee (1032). Miami's WTVJ is now building 1000-ft. Lehigh tower having Otis building-type elevator. Oklahoma City's new KWTW plans to get started on 1572-ft. Ideco shortly after Jan. 1. Tallest ever proposed was for WFAA-TV, Dallas—1747 ft.—but Airspace Subcommittee turned it down (Vol. 9:32).

More new FCC attorneys reporting for duty in last 2 weeks: Rules & Standards Div.—Jerome S. Boros, ex-CAB; Richard E. Ely, ex-FTC; Lynne A. Kaufman, ex-private practice with Bert B. Rand & Hans Nathan, Washington. Aural Facilities Div.—Wm. J. Huff, ex-War Claims Commission; Ray R. Paul, ex-private practice, Troy, Ala.; Warren D. Quenstedt, ex-private practice with Blair & Blair, Washington. Hearing Div.—George M. Martin, ex-FTC; John M. Webster, ex-Govt. of Guam. Renewal & Transfer Div.—James H. Murphy, ex-private practice and OPS, Charleston, W. Va. Most of new attorneys will work in TV Div. from time to time.

Annual TV awards of *Look Magazine*: news & public affairs, *See It Now* (CBS-TV); variety, *Toast of the Town* (CBS-TV); panel, *What's My Line?* (CBS-TV); educational, *Omnibus* (CBS-TV); sports, Pabst Beer, boxing (CBS-TV); comedy, *Show of Shows* (NBC-TV); children's, *Ding Dong School* (NBC-TV); religious, *Life Is Worth Living* (DuMont); director, Jack Webb, *Dragnet* (NBC-TV); producer, Fred Coe, *Mr. Peepers, I Bonino*. TV Playhouse (NBC-TV); m.c., John Daly, *What's My Line?* (CBS-TV), *It's News to Me* (ABC-TV).

"Uhf information center" is being set up by Ultra High Frequency TV Assn. in De Sales Bldg., Washington. "to provide advertisers, agencies, network executives and others with the factual information they need to plan sound use of the selling power of [uhf] outlets." Association is sending questionnaires to all uhf stations, asking data covering equipment and facilities, TV set circulation and station coverage. Exec. secy. Melvin A. Goldberg said center's function will be to "service inquirers with specific information desired."

First CPs for 540 kc, new AM frequency, granted by FCC this week: Clarksville, Tenn., Clarksville, Bestig. Co., 250-w, daytime; San Diego, KFMB, shift from 550 kc and power increase from 1 kw to 5 kw; Richlands, Va., WRIC, shift from 1050 kc, using same 1-kw power, daytime. Twelve other applicants, mutually exclusive, were notified that hearings are required.

Station Accounts: How about "repeats" of TV film series—will they antagonize large number of viewers who have already seen same show? A. C. Nielsen Co. describes survey made for client who had run 21 episodes of film show, was considering re-run on 13 or 26-week basis: 77% of homes in all markets reached had seen at least one of the telecasts; but 64% of viewing homes saw average of only 2.2 broadcasts, 24% saw 7.7, 10% saw 12.5, only 2% saw 16 to 21. Since 88% of viewing homes were reached by average of only 3.7 of the programs, advertiser concluded he could safely re-run . . . General Tire & Rubber Co., for 38 markets, buys *The Greatest Drama*, 15-min. documentary, thru General Teleradio, which has made tieup with Fox Movietone News to produce 26-week series reviewing lives of famous news personalities and events based on newsreel footage; General Teleradio will make shows available to other sponsors in other markets . . . Ziv's *Favorite Story*, starring Adolph Menjou, is claimed as No. 1 syndicated non-network film show as it enters second year with renewals for 59 markets by Schaefer, Genessee, Drewrys, Blatz, Gunther, Olympic beers among the 116 markets carrying it . . . Philadelphia Gas Works, already sponsoring *Dione Lucas* cooking school Thu. 2:30-3 p.m. on WPTZ, Philadelphia, has taken another 52-week show starting Dec. 20, Sun. 7-7:30 p.m., featuring film dramas, thru John Falkner Arndt Adv. . . TV-film star Wendy Barrie has been "imported" to Dayton to handle Mon.-thru-Fri. 4-5 p.m. partic. show on WHIO-TV, to be piped also to WKRC-TV, Cincinnati, and WTVN, Columbus . . . Universal-International's v.p. David A. Lipton, announcing \$1,500,000 ad budget for major film releases during first 4 months of 1954, says TV-radio will be included . . . Allied Artists will use saturation TV-radio

spots in Jan. to promote local releases of Walter Wanger's *Riot in Cell Block 11* . . . Chevrolet preparing big campaign, supported by TV-radio, for new cars, thru Campbell-Ewald . . . Among other advertisers reported using or preparing to use TV: CVA Corp., San Francisco (Cresta Blanca wines), thru J. J. Weiner Co., San Francisco; Dell Publishing Co. Inc. (*Modern Romances*), thru Michael Roshking Co., N. Y.; Liggett & Myers (L & M filter cigarettes), thru Cunningham & Walsh, N. Y.; Maybelline Co., Chicago (toilet products), thru Gordon Best Co., Chicago; Personal Products Corp., Milltown, N. J. (Yes tissues), thru Compton Adv., N. Y.; Keebler Weyl Baking Co., thru McKee & Albright, Philadelphia; Alamont Labs. Inc., Montgomery, Ala. (Diximint disinfectant & Diximaid cleaner), thru Philip E. Lindsay Agency, Kansas City; Buckfield Packing Co., Buckfield, Me. (Bessey's cider, preserves, fruit juices), thru Daniel F. Sullivan Co., Boston; Holiday Delight Baking Co., Chicago (confection roll, cheese & coffee cakes), thru Marvin Gordon & Assoc., Chicago; Locks Labs Inc., Mt. Vernon, N. Y. (Robert Curley hair conditioning shampoos), thru Don Harrington Assoc., N. Y.; Rigident Products Co., Los Angeles (denture retainer), thru Harry G. Willis & Assoc., Glendale, Cal. . . . Among other advertisers reported using or preparing to use TV: Cigar Institute of America, thru Benton & Bowles, N. Y.; Durkee Famous Food Div., Glidden Co., thru Meldrum & Fewsmith, Cleveland; Van Munching & Co. Inc. (Heineken's Holland beer), thru Hirshon-Garfield, N. Y.; Monarch Wine Co. (Manischewitz kosher wine), thru Emil Mogul Co., N. Y. (formerly Donahue & Coe); Trico Products Corp. (auto accessories), thru Baldwin, Bowers & Strachan, Buffalo; Orkin Exterminating Co., Atlanta (termite & pest control), thru Bearden-Thompson-Frankel Adv., Atlanta.

Network Accounts: All NBC-TV sustaining programs will carry 1-min. filmed promotions plugging network's shows & stars, effective Dec. 20. It's idea of adv. & promotion director Jacob A. Evans, who says: "If a show isn't working for an advertiser, we'll put it to work for us." Promotion material consists of clips from other NBC-TV shows, appearances of stars, talks by NBC executives on value of TV advertising, etc. . . . Tums buys full-hour sponsorship of colorcast of *Season's Greetings*, special Xmas all-star variety show on NBC-TV Dec. 22, 8-9 p.m., thru Dancer-Fitzgerald-Sample; Gillette had signed for 15-min. segment (Vol. 9:50) but dropped out this week . . . Rybutol (vitamins) sponsors *Up for Adoption*, starring Arthur Godfrey's sister Kathy, on ABC-TV starting Jan. 16, Sat. 7-7:30 p.m., thru BBDO . . . Geritol (drugs) to be co-sponsor, with American Chicle Co., of *Rocky King, Detective*, on DuMont starting Jan. 3, Sun. 9-9:30 p.m., thru Edward Kletter Assoc. . . . S.O.S. Co. (scouring pads) buys alt. Mon. of *Hawkins Falls* on NBC-TV starting Jan. 4, 11-11:15 a.m.; one partic. a week for 52 weeks on *Today* starting Jan. 7, 7-9 a.m.; alt. Wed. 7½ min. of *Kate Smith Show* starting Jan. 13, 3-4 p.m., thru McCann-Erickson . . . General Motors paying \$100,000 in time & talent to put on annual Motorama show starring Arthur Godfrey on CBS-TV Jan. 20, 10-10:45 p.m., thru Kudner . . . GE eliminates all commercials on Bing Crosby's first TV show on CBS-TV Jan. 3, 9-9:30 p.m. . . . Esso sponsors annual East-West Shrine football game from San Francisco on DuMont Jan. 2 thru McCann-Erickson.

Televised Presidential news conferences moved step closer this week with release of tape recording of President's full conference Dec. 16 to TV-radio networks. Said White House press secy. James C. Hagerty: "I think this is the first step in opening the news conference up to other media." He added "from time to time we'll probably do the same thing" though no advance notice would be given. Army Signal Corps unit has been taping conferences for several years and has made excerpts available to media when direct quotation was authorized. Under plan this week, President could be quoted directly by newspapers only after 6 p.m., when networks began to put tape on air. Though no pictures were permitted at conference, several TV stations embellished tape recordings with still pictures.

1954 AM-FM Station Directory

All subscribers to the full TV-AM-FM services of *Television Digest* will, in mid-January, receive copies of our *1954 AM-FM Station Directory*, revised to Jan. 1, loose-leaf, printed on single sheets so that changes and corrections may be added on opposite blank pages as they're reported in our weekly AM-FM Addenda. New directory lists not only all North American AM-FM stations by states and cities (with company names, addresses, frequencies, powers, FM antenna heights, network affiliations) but also includes lists of AM & FM stations by frequencies, AM & FM applications by states & frequencies pending as of Jan. 1, AM & FM stations alphabetically by call letters. It's only handy volume of its kind, and carries no advertising. Extra copies, if pre-print orders for 10 or more are placed by Jan. 5, cost \$5.00 each; single copies \$7.50.

More rate increases: KGO-TV, San Francisco, from \$900 to \$1100 per Class A hour, \$90 to \$100 for 10 sec.; WDAF-TV, Kansas City, from \$785 to \$860 Class A hour, \$157 to \$172 per min.; WFAA-TV, Dallas, from \$650 to \$800 & \$130 to \$160; WEWS, Cleveland, from \$950 to \$1200 & \$200 to \$300; KDUB-TV, Lubbock, Tex., from \$200 to \$250 & \$20 to \$35.

SHIPMENTS OF UHF transmitters have all but halted in recent weeks, nor have many new orders been reported by the manufacturers. One reason given is that grantees are inclined to wait for promised higher powers before placing orders. Another is that winter has set in, and CP holders in the colder climes at least are not inclined to push construction until spring.

This week GE reported order for 1-kw unit from KSAN-TV, San Francisco (Ch. 32) for delivery before Jan. 15, but neither RCA nor DuMont reported any uhf orders or shipments. GE also stated that it shipped 5-kw vhf transmitters for CKCO-TV, Kitchener, Ont. (Ch. 13) and WTOC-TV, Savannah, Ga. (Ch. 11). GE also sent out 6-bay antenna to KRGV-TV, Weslaco, Tex. (Ch. 5), which got its 5-kw transmitter Oct. 24.

DuMont shipped 5-kw this week to WNEM-TV, Bay City, Mich. (Ch. 5) and KFBB-TV, Great Falls, Mont. (Ch. 5), and week of Dec. 22 is due to send one to WQED, Pittsburgh (Ch. 13). RCA reported only one shipment—25-kw transmitter to KARK-TV, Little Rock, Ark. (Ch. 4). due on air next March.

* * * *

In our continuing survey of upcoming new stations, these were the reports received this week:

WNEM-TV, Bay City, Mich. (Ch. 5), with DuMont 5-kw transmitter shipped Dec. 14, plans tests later this month, goes commercial in Jan., reports commercial mgr. Harley M. West Jr. Headley-Reed will be rep.

WHK-TV, Cleveland (Ch. 19), granted Dec. 2, hasn't ordered equipment or begun construction, may take until next summer to get going, reports exec. v.p. H. K. Carpenter. Grantee United Bcstg. Co., owned by Forest City Publishing Co. (*Cleveland Plain Dealer and News*), also owns 40% of highly successful uhf WKBN-TV & WKBN, Youngstown. Rep not yet chosen.

KBAY-TV, San Francisco (Ch. 20) and KPIC, Salem, Ore. (Ch. 24), both with 12-kw GE transmitters ordered for early delivery, now plan Feb. start, according to v.p. Joseph Brenner, onetime FCC attorney now practicing in Los Angeles. Lawrence A. Harvey, attorney & grantee of both stations and Ch. 34 applicant in Los Angeles, is son of Leo Harvey, pres. of Harvey Machine Co., Torrance, Cal. (aluminum & brass products). Rep not yet chosen for either station, but both will have \$250 base rate.

WLAP-TV, Lexington, Ky. (Ch. 27), granted Dec. 3, already has 500-ft. Stainless tower en route, has GE 12-kw transmitter and antenna scheduled for shipment in "immediate future," plans March 15 tests, programming around April 1, according to pres. Gilmore N. Nunn. Construction has begun of new transmitter-studio-office to house TV-AM-FM operations. Nunn family also owns WCMI, Ashland, Ky., and 30% of WBIR, Knoxville, Tenn., both TV applicants. Pearson will be rep.

KLIF-TV, Dallas (Ch. 29) plans to get going next Aug. 1, with 12-kw GE transmitter located between Dallas & Ft. Worth, reports v.p. Gordon McLendon. It's headed by theatremen Barton R. McLendon, pres. of old Liberty Bcstg. System.

WCIN-TV, Cincinnati (Ch. 54), 50% owned by broadcaster Robert W. Rounsaville and first of his 3 CPs scheduled to get going, won't make Jan. target—in fact, none of the 3 will start before "latter part of Feb. or after," he reports. Others are WQXI-TV, Atlanta (Ch. 36), last reporting June target, and WLOU-TV, Louisville (Ch. 41). WCIN-TV rep will be Forjoe.

WBCK-TV, Battle Creek, Mich. (Ch. 58), delayed by the plane crash into its tower resulting in death of ex-Gov. Kim Sigler (Vol. 9:49), now plans start next summer with DuMont equipment, according to pres. Robert H. Holmes. Headley-Reed will be rep.

Financial & Trade Notes: RCA's march toward "billion dollar" stature was recounted by chairman David Sarnoff to N. Y. Society of Security Analysts Dec. 14, and again before Waldorf-Astoria dinner he gave same evening for 350 friends and associates of RCA pres. Frank Folsom on occasion of latter's 10th anniversary with company. Gen. Sarnoff disclosed that RCA's gross earnings for 1953 will approximate \$830,000,000, compared with \$690,641,130 last year, and that net earnings will be about \$34,700,000 (\$2.25 a share) compared with \$32,425,299 (\$2.10) in 1952.

In the electronics fields, you "ain't seen nothing yet," Gen. Sarnoff in effect told both audiences, forecasting that everything now electrified will in one way or another be "electronified" in future and that great growth will come in things that do not even exist now. He estimated annual volume of whole electronics industry at \$8 billion now, of which TV-radio account for \$3 billion, TV alone representing some 80% of that amount.

The important growth in the future, he said, will be in color TV, transistors, magnetic tape recording, industrial TV, electronic household products (such as an all-electronic air conditioner), microwave radio relay communications, transportation controls, business machines, war materiel, atomic energy applications.

Industrial applications of TV, Gen. Sarnoff predicted, within a few years will be more important in RCA's business than entertainment TV today.

Of RCA's income, 70% of gross and net came from manufacturing, TV accounting for 55%; 20% of gross and 15% of net from broadcasting (TV & radio); 5% of gross and 5% of net from communications (international, maritime, etc.); 5% of gross and 10% of net from other operations. Backlog of govt. business, which was \$160,000,000, or 19% of this year's volume, is about \$500,000,00.

There has been a misconception, he said, about amounts RCA derives from patent royalties. From 1947-53, they averaged about \$3.5 million a year, and for 1953 they will be about \$2.5 million, he said. By end of 1954, he added, RCA will have spent more than \$30,000,000 on color TV alone without "making a dime on its investment up until then." But he foresees color TV becoming a commercial factor within 6 months, and the industry selling more color than black-&-white sets 7 years from now.

* * * *

Indiana Steel Products Co. reports net income of \$355,541 (\$2.50 a share) after Federal taxes of \$831,000 for 10 months ended Oct. 31, with \$243,276 increase in working capital since end of 1952. No comparison with same 1952 period is available, but for 9 months ended Sept. 30, 1952, net income was \$197,575 (\$1.39).

International Resistance Co., for 9 months ended Sept. 30, reports sales of \$8,989,819, net income of \$315,199 (23¢ a share). No direct comparison is available, but for all of 1952 sales were \$11,778,836, profit \$577,877 (44¢).

Raytheon has borrowed \$7,500,000 from group of insurance companies at 4¾%, to be amortized in not more than 12 years, proceeds to be used for working capital and to pay existing insurance loans of about \$3,300,000.

DuMont has established revolving credit of \$6,000,000 with 4 banks, headed by Bank of New York, borrowing on 4% notes expiring Dec. 1, 1954.

Dividends: Motorola, 37½¢ payable Jan. 5 to stockholders of record Dec. 30; Packard-Bell, 25¢ Jan. 25 to holders Jan. 11; Emerson Radio, 10¢ quarterly and extra 5¢ year-end Jan. 15 to holders Jan. 5; Trav-Ler, 10¢ Dec. 31 to holders Dec. 24 (first div. since March 1951); Clarostat, 15¢ Jan. 8 to holders Dec. 28.

THERE'S PLENTY OF LIFE IN TV TRADE—FOR 1954: "Pay no heed to the prophets of gloom. This industry's not going to hell in a hand basket." This rather colorful comment on the current and upcoming TV market by a manufacturing research expert for whose judgment we have the highest regard on basis of past observations. He's a man who has charted ups and downs of the TV industry from inception. He buttressed his conclusion with the following reasoning:

"Our inventories today are not in bad shape at all. They totaled between 2,000,000 and 2,100,000 in all pipelines on Dec. 4, and I'm willing to bet we leave the year with less than 2,000,000. I believe that's very good.

"Remember, we went into this year with about 1,200,000 sets in all pipelines and that was far too few. We had people standing in line to buy a TV set and that shouldn't happen in our industry or any other industry. Remember, too, that we have about 100,000 dealers handling TV now, as compared to about 85,000 a year ago."

He cited need to keep inventory in balance as reason for recent wave of TV production cutbacks -- "the manufacturers are just now catching up with their sins for making too many sets." He said nobody is overloaded now -- especially not the dealers, citing fact that 185,000 sets were sold by distributors to dealers in week ended Dec. 4 -- "and, brother, dealers aren't buying more than they're selling. So wouldn't you say that business was pretty good now?"

Turning to next year: "I fail to see why we shouldn't sell 6,000,000 to 6,500,000 sets at retail. In other words, just about what we're doing this year." He declined to make any forecast on production, saying "10 top set makers really make the decision on how many receivers will be produced in this industry -- but 150,000,000 consumers decide how many will be sold."

* * * *

Even while FCC was approving compatible color system this week, that school of trade which believes antidote to color's impact on black-&-white sales is larger sets at lower prices seemed to be asserting itself. There was scuttlebutt, unverifiable but probably with some substance, that several of the big manufacturers may shortly introduce 21-in. table models as low as \$200.

Move would follow logically in wake of recent tube price declines, growing popularity of 21-in. and reluctance of consumers to sink a lot of money into expensive black-&-white models with color in offering -- to say nothing of sluggish performance, saleswise, of 24 & 27-in. Attesting to popularity of 21-in., Motorola this week said it was short on that size models. Several other majors say the same thing, and there's no secret about fact that all have been producing progressively fewer 24 & 27-in. over last few months.

* * * *

TV production passed 7,000,000 mark week ended Dec. 11, totaling 131,893, up from 126,443 preceding week and 103,692 Thanksgiving week. It brought unofficial tally for year's production to date to about 7,030,000. With 3 weeks to go -- 2 of them short holiday weeks -- 1950's record 7,463,800 seems certain to stand. Radio production in week totaled 278,815, up from 241,549 week ended Dec. 4 and 219,156 week before. It brought year's radio production to date to about 12,525,000.

Retail TV sales in the first 10 months topped radio sales -- excluding auto radios -- for first time over such a period, according to RETMA report released this week. It tallied 4,922,128 TVs at retail, compared to 4,911,415 radios. They compared with 4,291,893 TVs, 4,877,059 radios, sold in corresponding 1952 period. For Oct. alone, TV sales were 621,768, down from 753,953 in Sept. Radio sales in Oct. totaled 385,299, way down from 650,898 in Sept.

COLOR & 1954—WHAT TRADE LEADERS THINK: Cautious restraint marked reaction of those most immediately and directly affected by FCC color decision -- the manufacturers and their distributors and dealers. Few were willing to go out on a limb with predictions and miscalculations that might rise to haunt them later. No one wanted to rock the trade boat, currently quite steady; not even the FCC, judging from the careful wording of its release -- a far cry from its former attitude.

Best example of studied restraint was the statement by RETMA's TV committee chairman Dr. W.R.G. Baker, who is also chairman of the NTSC. It noted with well-worded gratification that FCC "wisely has emphasized that the public's \$7 billion investment in black-&-white receivers has been fully protected," thanks to a single set of standards -- and compatibility. It added:

"The millions who now own black-&-white receivers, together with those who are interested in purchasing black-&-white receivers, now have official assurance that they will lose nothing by the Commission's action on color. Their sets will continue to receive all the transmissions now available. Even more important, when color transmissions are made by these stations, the quality of black-&-white reception of these sets will actually be improved.

"It should be understood that while the Commission has approved basic color standards today, it will take manufacturers of color transmitting equipment and home receivers considerable time to develop, field test and mass produce color equipment. It will be some time before more than a few hours weekly are devoted to color broadcasts. For a long time to come, most TV programs will continue in black-&-white.

"Color TV is one more stage in the orderly evolution of the TV industry. It will not destroy or impair the value of TV receivers now in use. Only a trickle of color TV receivers will be manufactured during 1954. It may be years before quantity production can be reached. Likewise, early color TV receivers will be expensive; most manufacturers estimate that small screen sets giving a 12½-in. picture will cost in the neighborhood of \$1000.

"Meanwhile, the entertainment and cultural advantages which TV offers now will continue to be available on large-screen, high quality black-&-white receivers at values never before offered."

There you have the basic industry thinking. The simple fact of a tube bottleneck that means 200,000 sets at the most in 1954, the removal of stupid political pressures, the obvious understanding now of compatibility by press and public alike -- all point to a rational, sensible and orderly approach to the most fabulous of the amazing series of "TV revolutions."

Considering the complexity of the color tube and its production, some of the best-informed opinion sees only 500,000 to 1,500,000 of them available in 1955. That might indicate repetition of the same cycle as black-&-white TV, originally also dependent largely on the CR tube.

TV's first year, 1947, saw only 178,571 sets produced; 1948, only 975,000; 1949, 3,000,000. Then came 1950 with its record of 7,000,000-plus. Production has continued at 5-7,000,000 since then, which some think will be range again next year.

We asked the leading manufacturers to comment on the outlook, particularly as related to the advent of color. Digests of their observations are on next page.

NOVEL TECHNIQUE for making sure color signal and equipment are "right" was suggested to FCC this week by Telechrome Inc., Amityville, N. Y., makers of color equipment. Pres. Ray Clurman proposed that networks and stations be permitted to transmit 10-12 lines at top of picture in color bars, bottom 10-12 lines in other components of color picture (I, R-Y, black-&-white)—simultaneously with regular color or black-&-white programs.

Purpose of such transmission, he said, is to give every one—from origination point, through interconnecting facilities and stations, to servicemen and the viewer—the same standard of comparison to check performance. He said that this would not only assure accurate transmission

of color but would eliminate much complex and expensive checking instruments by all "links" in the color chain.

Transmissions could be continuous, he said, without affecting programming or distracting viewer. Clurman noted that on 21-in. tube, 10-12 lines would take mere ½-in. or so at top and bottom in areas generally covered by mask. He says that serviceman can stretch those lines out of picture, if need be, after adjusting picture with aid of the special signals.

One criticism that may be raised, Clurman stated, is that new transmissions won't be "locked" to a crystal. But he says his tests indicate this isn't necessary. He believes that both NBC and CBS could readily adapt their present equipment for transmission of the signals.

OPINIONS VARY on the impact of color on the TV trade—but everyone is agreed the few sets available next year will be expensive and most think it will be several years before color becomes an important factor in public demand and dollar volume. We asked the leading manufacturers for year-end comments on the trade generally, which we were preparing to publish this week and next. When the FCC color decision broke, we decided simply to excerpt their observations on color, about which nearly all had something to say. Here's essence of what they said, plus some statements released this week:

Ross Siragusa, Admiral Corp.: "My guess is that the industry will turn out more nearly 200,000 than the outside 150,000 others have predicted. Admiral will make its share; in fact, we've gotten a good start already, and have made about 100 sets. I'm not one of those who is worried about the impact on black-&-white sales. If there has been any damage, it has already been done—yet our markets are still doing nicely." Admiral's exec. v.p. John Huarisa added Dec. 18 that Admiral plans to introduce its pilot sets (15-in. tube, 12-in. picture) to distributors at sales convention in Chicago's Conrad Hilton, Dec. 30. Price will be announced then, is expected to be "over \$1000," he stated. By second quarter 1954, Huarisa promises a "sample for every dealer in cities that will be on the color cable." He also predicted approximately 200,000 color sets in 1954 "barring shortages of picture tubes and color components" and said Admiral's production goal is more than 30,000 color sets next 12 months.

David H. Cogan, CBS-Columbia: "The industry will be able to make over 100,000 color receivers within one year [of FCC approval date]. The important problems facing the industry are engineering, testing and efficient production techniques. Once color receivers get out into the field, servicemen will need extensive equipment and considerable re-training to service them properly. There will be a temporary dropoff in black-&-white sales when color appears on the dealer's floor. However, once the novelty of color has worn off, monochrome sales will go back to their regular levels. In 1954 the industry will be able to sell some 5,000,000 receivers; 21-in. sets will account for 70% and 17-in. for 20%." CBS pres. Frank Stanton revealed, during a Dec. 17 colorcast, that CBS-Hytron will start "mass production" of color tubes next March, CBS-Columbia of color sets by mid-1954.

Leonard F. Cramer, Avco (Crosley): "It will be at least 5 years before color broadcasting makes sufficient progress in programming to stimulate receiver sales in the volumes of black-&-white." He predicted 5,500,000 black-&-white sales in 1954, with "a consumer move toward merchandise priced at the low end of the line."

Dr. Allen B. DuMont: "The FCC decision is ahead of the industry's ability to deliver commercially practical color TV equipment and programs in any appreciable quantities for several years . . . We believe that the public will demand large-screen color TV [and we] shall go into production and introduce a large-screen color TV receiver in 1954. However, the public should recognize that neither DuMont nor the rest of the industry will be able to deliver any substantial number of color receivers of any sizes at prices which the general public can afford for several years. Nor will there be enough color programs broadcast to justify a large receiver investment until they're available in quantity."

Benjamin Abrams, Emerson Radio: "It [the 1954 market] will not be a pink tea party. Instead, it will take all the sales and business ingenuity the industry can muster to come within 10% of 1953 sales. Beyond 1954, the prospects are much brighter." In telegram to distributors Dec. 18, Abrams said color decision "marks

a new era of prosperity for our industry never before equalled." He added: "The immediate effect of this announcement must result in increased sales of table model black-&-white receivers [at] \$150 & \$250 for 17-&-21-in. sets. By contrast, color receivers will sell for \$700-\$1000 . . . Color receivers will be available within a few weeks for demonstration purposes only. Mass production may not be reached for at least a year. Total production for industry may not exceed 50,000, which is equivalent to not more than one set per dealer for all of 1954, and the major part of this will be produced within the last months of the year."

Herbert Riegelman, GE TV-radio gen. mgr.: "In attempting to evaluate 1954 monochrome sales, it is necessary to gauge the effect of the introduction of color TV on saturated markets, at the same time realizing there will be opportunities in new markets where color will not have the same effect as in old markets." He estimated close to 5,500,000 black-&-white sets will be sold in 1954 and "minimum sales" of 100,000 color sets.

Hallicrafters spokesman: "The production of color sets hinges to a great extent, if not entirely, on the tube manufacturers' ability to supply us with color picture tubes. The consensus among manufacturers is that only a token quantity of color sets will be manufactured next year—in the neighborhood of 150,000, with which figure we concur. We do not believe that 1954 black-&-white receiver manufacturing will exceed 4,000,000 to 4,500,000, with the emphasis on 17-in. and 21-in. tubes."

H. L. Hoffman, Hoffman Radio: "It certainly is a challenge to the industry to harness the interest in color in a constructive way and sell more black-&-white. I think it can be done because certainly the display of color sets in the store will start people talking about TV and will create traffic at the dealer level."

Paul V. Galvin, Motorola: "The public's initial curiosity about color TV will be answered. But the purchase of a color receiver within the limits of the family budget will be years away." His son, exec. v.p. Robert W. Galvin, added: "Color will principally influence the mix of sets. Lower list price merchandise will represent a considerably higher percentage of the TV volume. Sales of black-&-white should approximate 3,000,000; of color receivers, over 100,000."

Philco Corp.: Official company attitude was that the color decision must be studied before any formal comment would be made, but a spokesman told *Wall Street Journal*: "It will take us 9 months to tool up and then we'll only be producing a trickle for several months." Exec. v.p. James H. Carmine told *Retailing Daily* a few days earlier that "8 to 9 months will be required for broadcasting changeovers even after the FCC finally approves color standards" and added his opinion that the effect of color talk on current sales has been greatly exaggerated.

Frank Folsom, RCA: "Color TV sets will begin to come off the production lines in small quantities in approximately 6 months from today [and] it will probably be at least an additional year until mass production is reached. First color sets manufactured by RCA will have a 14-in. picture size and will be priced between \$800 & \$1000. Considering the relative values of the dollar, this compares favorably with the price of the first 12-in. sets introduced in 1939. When mass production of receivers and tri-color tubes gets under way, the prices will come down as they did with black-&-white receivers [but] it will take several years to reach this goal."

H. G. Baker, RCA Victor home instruments v.p.: "There is little doubt that 1954 will be a black-&-white year . . . It has been estimated the industry during 1954

will be able to produce only about 50,000 to 75,000 color sets, and initial sets will be costly, probably between \$800 to \$1000. Beyond 1954, production will increase and color broadcasting will expand, of course, but it can be expected that it will take considerable time before color TV develops into mass market proportions . . . Today's black-&-white receivers, particularly in the large-screen sizes, represent greater value for less money."

C. F. Adams Jr., Raytheon: "While early color sets may be expensive and not altogether attractive, and may continue at least for a brief period to affect black-&-white sales, the company believes that in the long run color will add a substantial increment to the TV industry."

Sylvania spokesman: "[Color] certainly will depress black-&-white sales early in the year, but I believe that as people realize the size picture they will get and the cost of initial color sets there will be a revival of interest in black-&-white so that the overall sales for the year will reach 5,000,000. Certainly there is no question about the fact that people who are willing to pay something in excess of \$500 for sets will be substantially out of the market during the entire year and such sets as will be sold will be almost entirely in the medium and low-price category."

Robert Tait, Stromberg-Carlson: "I believe that the FCC approval of compatible color, the start of color broadcasting in a few markets, and the introduction of high priced small screen color receivers, with limited distribution late in the year, will do much to eliminate the present confusion and revitalize the black-&-white TV business. The first 6 or 8 months of 1954 will probably prove a hectic period for our industry as color TV makes its bow to the public. However, my 'guesstimate' for industry unit production in 1954 is 5,000,000 black-&-white receivers, and approximately 100,000 color sets."

Trade Personals: James T. Buckley, chairman of Philco board, appointed to President's Committee on Employment of the Physically Handicapped; he's also national chairman of Goodwill Industries of America Inc. . . . Charles G. Sherwood, ex-purchasing director, named v.p. of Federal Telephone & Radio Co. . . . Richard A. Graver, sales v.p., and David P. Higgins, v.p. in charge of govt. work, elected directors of Hallicrafters Co. . . . R. B. Sayre, 32 years with Graybar, elected v.p. . . . E. R. Glauber, ex-Admiral-N. Y., director of Emerson distributing companies since Oct. 5, adds duties of national sales mgr. for Emerson's new air-conditioning to be introduced in Jan. . . . Robert E. Peterson resigns Dec. 31 as exec. v.p. of Standard Coil Products Inc. due to ill health, continues as a principal stockholder and member of board . . . Harold P. Gilpin, gen. mgr. of Sylvania electronic sales div., retires Dec. 31 after 21 years with company . . . S. Roy Chilton, ex-pres. of Key Co., Seattle TV-radio distributor, named gen. merchandising mgr., Pacific Mercury . . . Phil Stone resigns as Philco Milwaukee district mgr. . . . John F. Mehr resigns as gen. sales mgr. of Simon Distributing Co., Washington (Zenith Radio) to become Zenith regional sales mgr., headquartering in Washington . . . Dick Klein, v.p. & gen. mgr. of Raytheon distributing div., appointed director of marketing, TV-radio div., and named asst. v.p. of parent company supervising all Raytheon TV national sales, advertising & servicing activities . . . Herman Kaye, ex-Kaye-Halbert secy., forms Caltech Electronics Corp., 8930 Lindblade St., Culver City, Cal. (high-fidelity equipment).

Glenn M. Nutter, 54, pres. of G. M. Nutter Inc., Cleveland DuMont distributor, died Dec. 15 in Lakewood Hospital.

Topics & Trends of TV Trade: What does 1954 hold in store for the TV-radio-appliance dealer? Without breaking down estimate by products, Richard E. Snyder, economic marketing specialist, director of Snyder Business Research Reports and economic consultant to NARDA, this week released forecast in report, *Estimated 1954 Sales Potentials for Appliance-Radio-TV Dealers in 170 Metropolitan Areas*, available for \$10 from his office, 11 So. La Salle St., Chicago. Though it's based on data from 170 markets, report projects findings for retailers everywhere. Major predictions:

(1) Sales will total \$3.806 billion, or 6.5% below 1953's estimated \$4.069 billion. This will represent 2.28% of the total national retail sales estimate of \$167 billion for all items in the economy.

(2) The 170 metropolitan markets will account for 64.1% of all TV-radio-appliance sales, compared with 62.1% this year. Continued growth of suburban communities may boost total to 70-75% by 1960.

(3) Middle Atlantic states will lead all regions in sales, with 25.37% of total; east north central area second, 20.25%; Pacific coast, 11.53%.

* * * *

Two new 21-in. picture tube types—about 3-in. shorter than corresponding types because of 90-degree deflection angles—were disclosed this week by GE, which announced they'll enable set manufacturers to design narrower cabinets in future. Labeled 21ACP4 and 21ACP4-A (aluminized), tubes are 4th & 5th GE types to incorporate 90-degree deflection feature, according to marketing mgr. Grady L. Roark, who said production of both will begin shortly.

Xmas bonus of up to 5% of individual earnings for year is again being paid by Andrea Radio Corp. to all employes.

Exuding optimism about TV's future growth, Sylvania chairman Don. G. Mitchell writes in Dec. *The Exchange*, official magazine of N. Y. Stock Exchange: "By 1961, we think there will be nearly twice as many sets in use—about 48,000,000. Even though 8 years from now there probably will be about 22,000,000 more TV sets in use than there are today, we are not at all sure that sales will be reaching a saturation point for a number of reasons. The entire concept of home TV installations may be entirely different by that time, and you may well find, for example, entire TV systems in the home, with several screens throughout the house, not only for entertainment but communications." Other reasons cited for TV's development: color, uhf, improved programming, better merchandising techniques.

More layoffs and cutbacks: (1) GE furloughs 4000 employes from Dec. 23 to Jan. 4 at tube and TV-radio receiver depts. in Syracuse because of holidays and cutbacks in orders. (2) Raytheon announced that since fall 400 have been laid off at Chicago TV-radio div., 650 at Newton, Mass. receiving tube plant. (3) CBS-Hytron puts 4-day work week into effect for 1400 receiving tube employes at Danvers & Salem, Mass.

Jacob Friedus, ex-Starrett Television Corp., was convicted by a jury of Federal district court of the District of Columbia last week of filing a false financial statement with the RFC in proceedings for purchase of Aireon Mfg. Corp., Kansas City, which the govt. agency had taken over for non-payment of a \$1,500,000 loan. Larry Knohl, co-defendant, was acquitted.

National Assn. of Electrical Distributors' annual committee meeting schedule: TV-radio, at NAED headquarters, 290 Madison Ave., N. Y., Feb. 2; major appliances, Jan. 12, and electric housewares, Jan. 15, both days at Chicago's Conrad Hilton Hotel.

Distributor Notes: Hoffman Radio establishes factory branch at 450 Ninth St., San Francisco (John N. Barker, mgr.), replacing McCormack & Co.; Hoffman also appoints Broyles-Milner Co., Knoxville (A. C. Broyles Jr. and Orvis Milner, owners) . . . Harper-Meggee Inc., Seattle, discontinues RCA Victor line . . . Motorola appoints Kenrow-Gorgia Inc., Atlanta . . . Stromberg-Carlson names Garfield Distributors, Enid, Okla. (Walter A. Norman, owner) . . . Pacific Mercury establishes factory branches in Portland, Ore. (Kenneth Chilton, mgr.), Seattle (Dean Hillbum, mgr.) and Spokane (Wm. Ferguson, mgr.) . . . Simon Distributing Co., Washington (Zenith Radio) appoints Saul Greber, ex-pres. of Greber Bros. (Motorola), as gen. sales mgr., succeeding John F. Mehr, now Zenith Washington regional sales mgr. . . GE Appliances Co., Louisville, names John H. O'Toole gen. sales mgr.

TV set sales by Canadian factories totaled 258,445 in first 10 months, at average price of \$411, compared to production of 302,725, reports Canadian RTMA. Projected production estimate is that 168,951 more sets will be turned out next 3 months. For Oct. alone, sales were 59,069, production 49,399, inventory 50,634 at month's end. Quebec led in sales with 24,170; Toronto second, 13,637; Hamilton-Niagara, 6249; Ottawa & eastern Ontario, 6015; other Ontario, 3592; Windsor, 3029; British Columbia, 1958; Prairies, 281; Maritime Provinces, 138.

Old-timer Frank A. D. Andrea, head of Andrea Radio Corp., once owned "Fada" trademark based on his initials—but it wasn't until Dec. 14 Waldorf-Astoria banquet in honor of RCA pres. Frank Folsom that he met the rival TV-radio set manufacturer who now owns and uses it—Jack Marks, pres. of Fada Radio & Electric Co. They happened to be assigned to same table, were "formally" introduced by fellow old-timer Jack Binns, Hazeltine, and industry youngster Joe Elliott, RCA, also at same table.

Better Business Bureaus Assn. released handy 10-p. consumer information booklet, *The Facts About Color TV*, available free from local BBB offices or from national headquarters, Chrysler Bldg., New York 17. About 800,000 copies were printed in first run. Based on survey of manufacturers, it answers many basic questions about color, stresses "it will not obsolete the black-&-white receiving set you now own or contemplate purchasing."

Uhf on installment plan: Public Loan Corp., St. Louis, takes half-page newspaper ads to boost sales of uhf converters and antennas on time payment plan—"gives you 1 stations for as little as \$12 a month." Financing, including installation cost, is handled through local TV dealers. Stations cited are uhf KSTM-TV (Ch. 36), WTVI (Ch. 54), KACY (Ch. 14), in addition to vhf KSD-TV (Ch. 5).

Construction of new RCA administration and laboratory headquarters for Victor home instrument dept. and RCA Service Co. has been started on 58-acre tract in suburban Cherry Hill section of Camden, N.J. Five ultra-modern buildings with 325,000-sq. ft. of floor space will be completed in fall of 1954, housing 1400 workers.

Dun & Bradstreet, on basis of first 9 months, reports 104 out of every 10,000 TV-appliance retailers will have failed this year, compared with 70 out of 10,000 in 1952 (not counting voluntarily liquidations or changes of ownership involving no losses to creditors).

Trav-Ler Radio to take 200 guests via special train to French Lick Springs, Ind., Jan. 4-7, for 4-day preview of new 1954 line of TVs, radios, phonographs, with side trip to its plant at nearby Orleans, Ind.

Workshop Associates Div., The Gabriel Co., Norwood, Mass. (transmitting & receiving antennas) changes name Jan. 1 to Gabriel Electronics Div.

Electronics Reports: Military electronics procurement shows no sign of slackening, though further cutbacks and economies are expected in other phases of defense buying. Those in position to know say dollar volume of electronics procurement in budget recommendations to President Eisenhower for coming fiscal year won't be less than this year's, possibly will be greater. Electronic research and development, too, is expected to stay at current high level.

As for actual military electronics production, it has finally hit its stride, is either at all-time high or very close to it. It's expected to level off soon and reach a plateau—but the decline, if any, will be very slight.

This outlook applies generally to all phases of defense electronics—including guided missiles, atomic, etc.—although procurement of certain isolated expendable items, such as handie-talkies, is obviously being curtailed as result of Korea truce.

Hitherto secret data on Army's deadly "Nike" ground-to-air target-tracking missile were released this week, along with the information that first Nike operational unit will be installed soon at Ft. Meade, Md. to guard approaches to Washington and Baltimore. Missile is about 20 ft. long and 1 ft. in diameter, carries 2 sets of fins for guidance and steering. It's launched vertically, can "out-manuever bombers, fighters or transport planes" and functions regardless of weather conditions and visibility. Research for missile was begun by Bell Labs in 1945; missile itself was designed and is now mass produced by Douglas Aircraft Co. Western Electric makes most of Nike's control equipment.

Brush Electronics Co. president W. Russell Burwell announces these top management promotions, effective Jan. 1: Douglas C. Lynch, from sales v.p. to exec. v.p.; C. J. Mayers, from treasurer-controller to v.p.-treas.; B. H. VanHouten, director of employe relations, employe relations v.p.; A. J. W. Novak, from asst. sales mgr. to gen. sales mgr.; W. C. Hall, from budget director to controller. Brush is subsidiary of Clevite Corp.

Emerson Research Laboratories will be established Jan. 1 at 701 Lamont St., Washington, by Emerson Radio for research and development in electronics. Dr. Harold Goldberg and Dr. Donald Burcham, both of whom formerly directed ordnance electronics div. (guided missiles) of National Bureau of Standards, will be director and asst. director, respectively.

Manual on electronic circuits for commercial and military personnel, latest volume in RCA Electronic Training Series, contains more than 100 pages of text, diagrams and analyses of 77 basic circuits. It's available for \$1.60 from RCA Service Co.'s govt. service div., Camden, N. J.

Philco's surface-barrier transistor (Vol. 9:49) is described in 5-part article in Dec. *Proceedings of the IRE*.

Vice Adm. Walter S. Anderson, director of Automatic Electric Co., elected pres., N. Y. chapter, Armed Forces Communications Assn., succeeding Donald F. McClure, asst. v.p., N. Y. Telephone Co. Emmett R. Shute, Western Union v.p., was named a v.p., all other officers reelected.

Bound and Indexed

We will index and bind, between embossed hard book covers, a limited quantity of all 1953 issues of the *Television Digest* Weekly Newsletters, plus the semi-annual *TV Factbooks* with all Addenda, plus all Supplements and Special Reports. This volume will provide a handy and handsome permanent reference for your own or your company library. Orders will be taken only until Jan. 5. Price \$25 per volume

Telecasting Notes: Importance of TV film industry to Hollywood emphasized this week in announcements that 2 big movie studios have changed hands and will be used exclusively to make films for TV. Eagle Lion Studios, 6 stages, was bought from Chesapeake Industries for \$1,100,000 by newly formed First National Studios Inc., whose pres. is TV producer Bernard Prockter, owner of several network TV shows, including *The Big Story* and *Treasure Men in Action*. Edward Conne, Los Angeles TV film & radio producer is exec. v.p. and Los Angeles financier and realtor Fred Levy Jr. is treas. & board chairman. Also on board are oilman Edwin W. Pauley, ex-Democratic national chairman; Los Angeles Rams pres. Daniel F. Reeves; Western Auto Supply pres. Bertram Gamble; Metal Moss Corp. (Chicago) pres. Edward Maltz; oilman F. R. Long. Company will produce own films and rent studio space to some outside TV film producers . . . Other big transaction this week was lease of Charles Chaplin Studios, 2 stages, on long-term basis to Kling Studios by realtors Webb & Knapp. Kling pres. Robert Eirinberg said acquisition makes his firm "the country's largest motion picture facility, with the exception of the major Hollywood studios." Kling has other studios in Chicago and Hollywood . . . Distributors of TV film see 1954 volume, thanks to more stations, jumping 50% over the nearly \$50,000,000 they grossed this year, says Dec. 19 *Billboard*. Syndication of 30 & 15-min. series alone brought in about \$30,000,000; features and westerns, about \$15,000,000; musical libraries & shorts, about \$4,000,000 . . . "In the feature film field," says *Billboard*. "some 150 titles were brought into TV distribution for the first time. This was a mere trickle in an industry consisting of about 2000 features and about 500 westerns" . . . No great promise for more feature film is seen for 1954, though magazine sees "possibility that Samuel Goldwyn will set up his own TV distribution subsidiary, and at the same time may go into production of TV film series"; and reports current bidding for small group of Eagle Lion pictures, current distribution by Vitapix Corp. of 2 feature films, release soon by Tele-Pictures Inc. of 20 new films, mostly Lippert . . . Gross-Krasne Inc., up-&-coming TV film producer-distributor, expands into production of filmed commercials, Vernon E. Clark heading commercial dept. in Hollywood, Hampton W. Howard in N. Y. . . . Eddie Cantor reported from Hollywood to be planning half-hour film show, a la Groucho Marx, won't renew live on *Colgate Comedy Hour* . . . Thanks to TV, American Museum of Natural History has been converted from a N. Y. city institution to a national educational medium. notes Museum pres. Alexander White in annual report which estimates some 5,000,000 viewers "toured" museum through CBS-TV's weekly *Adventure* series . . . Senate Judiciary Committee hearing into political dynamite-laden Smaldone jury tampering case Dec. 12 was carried live in its entirety from Denver Appeals Court 10 a.m.-8:30 p.m. by KBTW . . . N. Y. News' WPIX, independent, re-reported by *Variety* to have grossed record \$374,000 in Nov., up 43% from same 1952 month.

Total sets-in-use jumped to 26,364,000 as of Nov. 1, increasing 674,000 during Oct., reports NBC Research. Nearly half the Oct. installations, which were equalled only 4 times in TV history, were in areas opened up since lifting of freeze. The 674,000 compare with 626,000 in Oct. 1952. New set installations first 10 months of 1953 were 5,130,000, compared with 3,974,000 same 1952 period. NBC Research no longer releases area-by-area monthly figures, but prepared county-by-county "census" as of last May 1 (published in *TV Factbook No. 17* of July 15, 1953). Area figures updated to latter 1953 are now being gathered for CBS-TV by Nielsen, will be released at end of Jan.

Six applications for new TV stations were filed with FCC this week. WOPA-TV Inc., operating WOPA, Oak Park, Ill., and headed by TV film producer Egmont Sonderling, filed first application for Chicago's Ch. 44 and WOOK, headed by Richard Eaton, for Washington's newly-assigned Ch. 50. Eaton last week received CP for Baltimore's Ch. 18. Other applications were for Miami, Ch. 7 (5th application for that channel), by Sunbeam Television Corp., local group headed by shoe manufacturer Sidney D. Ansin; for Charlotte, N. C., Ch. 9, by Carolinas' Television Corp. (G. Richard Shafto, WIS-TV, Columbia, S. C., pres.), where application by Bestg. Co. of the South was dismissed this week; for Palm Springs, Cal., Ch. 14, by investor Florence P. Raley; for Carthage, N. Y., Ch. 7, by Brockway Co., grantee of WWNY-TV, Watertown, N. Y. (Ch. 48), and publisher of *Watertown Daily Times*. Latter promises to relinquish uhf CP if granted Carthage; FCC has thus far refused to accept applications on such condition. Seven applications were dismissed this week. On file with FCC at week's end were 363 applications, including 79 for uhf. [For further details about these applications, see *TV Addenda 17-X* herewith; for complete listings of all grants, new stations, applications, dismissals, hearings, etc., see *TV Factbook No. 17* with Addenda to date.]

Westinghouse Radio Stations Inc. has changed corporate name to Westinghouse Broadcasting Co. Inc., will be headed as of Jan. 1 by Chris J. Witting, ex-DuMont Network director, succeeding E. V. Huggins, who will devote fulltime to his duties as v.p. in charge of corporate affairs for parent Westinghouse Electric Corp. Broadcasting subsidiary, which operates 2 TV and 5 AM stations, will move headquarters from Washington to New York sometime next year.

Commercial TV for Britain was approved by House of Commons Dec. 16 on strict party-line vote, 302-280. Govt.'s proposal for limited advertising on new TV chain competitive with BBC was previously approved by House of Lords (Vol. 9:46,48).

Iowa State College's WOI-TV, though colleges are exempt from taxation, must pay income taxes on profits from its commercial income, according to Federal ruling, which impelled Iowa's Attorney General to ask those of other states to join in test suit in U. S. Tax Court.

AT&T interconnections this week: KOMO-TV, Seattle; WJHP-TV, Jacksonville, Fla. Next to begin network service probably will be: KSLA, Shreveport, La.; WDAN-TV, Danville, Ill.; KWTW, Oklahoma City.

Next TV Factbook—Pre-Print Orders

Our semi-annual *TV Factbook No. 18* will be off the presses shortly after Jan. 15, 1954—containing basic data on all U. S., Canadian and Mexican border stations & networks (including rates); complete tabulation of applications for new stations, detailing principals involved, facilities requested, etc. (and starting new series of weekly Addenda); list of all new-station grantees (with reported starting dates); directories of station representatives and major advertising agencies; directories of TV set & tube manufacturers, transmitter & studio equipment makers, film & live program suppliers, community antenna systems, theatres equipped for TV, FCC personnel, legal & engineering consultants, electronics laboratories; plus many other reference features. One copy goes to each full-service subscriber. Extra copies, if pre-print orders for 20 or more are placed by Jan. 3, cost \$1.50 each; single copies, \$3.

Full Text of FCC's

FINAL COLOR TELEVISION DECISION

Adopted Dec. 17, 1953 and Released as FCC Public Notice No. 53-1663, Mimeo 98948

With Appendix Describing Operation of New System and

Full Text of FCC Technical Standards Amended to Incorporate Color

In the Matter of
Amendment of the Commission's
Rules Governing Color
Television Transmissions } Docket No. 10637

REPORT AND ORDER

By the Commission: Commissioners Webster, Sterling and Lee concurring with separate statements; Commissioner Hennock present but not voting.

I — PRELIMINARY STATEMENT

1. On August 7, 1953, the Commission issued a Notice (FCC 53-1015) instituting rule-making proceedings looking toward the adoption of new signal specifications for color television transmissions to replace the present rules and standards. Petitions requesting such action had been filed by the Radio Corporation of America (RCA) and the National Broadcasting Company, Inc. (NBC), jointly; the National Television System Committee (NTSC);¹ the Philco Corporation; Sylvania Electric Products, Inc.; the General Electric Company; and Motorola, Inc. All of the above petitioners urged the adoption of color television signal specifications advanced by the NTSC.

2. In accordance with the Commission's Notice formal comments supporting the adoption of the proposed new signal specifications for color television transmissions were filed by Columbia Broadcasting System, Inc. (CBS); Hazeltine Corporation; Admiral Corporation; Westinghouse Radio Stations, Inc.; and Harry R. Lubcke. In addition, the Commission accepted as comments in the proceeding the petitions referred to above; and NTSC filed additional material in support of the adoption of new rules.

3. Oppositions to the adoption of the signal specifications as proposed were filed by Paramount Television Productions, Inc.; Chromatic Television Laboratories, Inc.; American Television, Inc.; and Marshall Soghoian and S. L. Cooke, Jr.,² Richmond, Va.

4. We believe that a brief review of prior Commission proceedings and activity relating to color television will be helpful.

5. The Commission has concerned itself with the development of a commercially practicable color television system in formal proceedings since 1940.³ In addition, the Commission and the industry have conducted studies, investigations, and experimentation in the field of color television. Finally, on October 10, 1950, the Commission

¹ The NTSC is an association of engineers and scientists interested in the development of television and its members include representatives of many of the companies engaged in the manufacture of television equipment.

² Marshall Soghoian and S. L. Cooke, Jr., and Otto Luther, New Preston, Connecticut, proposed alternative color television systems. In a Memorandum Opinion and Order (FCC 53-1325), adopted October 7, 1953, the Commission dismissed these comments insofar as they proposed new color systems on the grounds that the proposed color systems did not meet the specified requirements for receiving consideration by the Commission in these proceedings. (The requirements referred to are set forth below in par. 8.)

³ 1940 (Docket No. 5806), 1944-45 (Docket No. 6651), 1946-47 (Docket No. 7896), 1949-50 (Docket No. 8736 *et al.*).

adopted Rules and Engineering Standards for color television based upon the "field sequential" system of color television, one of the systems proposed in the hearing in Docket 8736. The Commission found that of the systems then before it only this system produced an acceptable color picture and that neither of the other two systems in that hearing satisfied the Commission's minimum requirements.

6. The field sequential system which the Commission standardized was, however, an incompatible system in the sense that existing receivers could not receive color transmissions in monochrome without adaptation. The Commission recognized the practical difficulties involved in commercializing an incompatible color system and indicated that had a satisfactory compatible system been ready at that time it would certainly have been desirable to adopt it.

7. A number of circumstances, not necessary to detail here, combined to prevent the commercial development of color television on the field sequential standards. The limited amount of commercial color broadcasting on these standards was short-lived, and color television broadcast equipment for the field sequential system has never been produced in quantity and is not now being produced, nor are color transmissions in accordance with the field sequential standards being broadcast or contemplated.

8. When the Commission adopted rules for color television in 1950, it recognized the need for further research and experimentation in this field. In a Public Notice (FCC 51-592) of June 11, 1951, the Commission pointed out that "In a field as relatively new as radio in general and television, in particular, there is always room for genuine programs of experimentation." In that Notice, the Commission stated, however, that in the interests of orderly procedure and stability, the following steps would be required of the proponents of new color systems:

(a) An appropriate petition must be filed requesting rule making proceedings with respect to color television standards.

(b) Representative receiver apparatus must be delivered to the Commission's laboratory at Laurel, Maryland.

(c) A signal must be put on the air in Washington, D. C. for the purpose of demonstrating the system.⁴

(d) The above tests must show to the Commission's satisfaction that the proposed system has a reasonable prospect of satisfying all of the criteria for a color tele-

⁴ Waiver of this requirement was requested. In the Notice of Proposed Rule Making (FCC 53-1015) issued in these proceedings the Commission determined that it was not necessary that a signal be put on the air in Washington prior to the institution of rule making. The Commission stated, however, that it would determine at a later date whether during the course of the proceeding a signal on the air in Washington will be required. It is now our view in light of all the circumstances, and particularly the demonstration held in these proceedings and the broadcast of several color programs in Washington and elsewhere that no useful purpose would be served by requiring petitioners to put a signal on the air in Washington for evaluation in these proceedings.

This Supplement is published for its subscribers by
Television Digest; extra copies \$2 each.

vision system set forth in the reports. These criteria are as follows:

(1) It must be capable of operating within a 6-megacycle channel allocation structure.

(2) It must be capable of producing a color picture which has a high quality of color fidelity, has adequate apparent definition, has good picture texture, and is not marred by such defects as misregistration, line crawl, jitter or unduly prominent dot or other structure.

(3) The color picture must be sufficiently bright so as to permit an adequate contrast range and so as to be capable of being viewed under normal home conditions without objectionable flicker.

(4) It must be capable of operating through receiver apparatus that is simple to operate in the home, does not have critical registration or color controls, and is cheap enough in price to be available to the great mass of the American purchasing public.

(5) It must be capable of operating through apparatus at the station that is technically within the competence of the type of trained personnel hired by a station owner who does not have an extensive research or engineering staff at his disposal and the costs of purchase, operation, and maintenance of such equipment must not be so high as unduly to restrict the class of persons who can afford to operate a television station.

(6) It must not be unduly susceptible to interference as compared with the present monochrome system.

(7) It must be capable of transmitting color programs over inter-city relay facilities presently in existence or which may be developed in the foreseeable future.

9. In the early part of 1950 the NTSC, among other undertakings, commenced studies looking toward the development of a commercially practicable system of color television. The signal specifications now proposed for adoption are the product of a program of study and experimentation lasting for a period of more than two years. The NTSC during this period considered and evaluated several sets of signal specifications which employed various alternative techniques and values. On January 13, 1953, the NTSC adopted the specifications now proposed in this proceeding for field testing purposes. Numerous tests and demonstrations have been conducted to determine whether the signal specifications under consideration satisfy the Commission's criteria for a color television system.⁵ Subsequent to the adoption of the proposed signal specifications for field testing, shake-down tests were first held to determine whether the specifications merited formal testing. Thereafter, formal tests were held and the data obtained in such tests have been submitted to the Commission in this proceeding.

10. The Commission was kept advised of the progress of the NTSC in this field by means of various reports submitted to the Commission and by attendance at tests and demonstrations. Following a conference with the parties to this proceeding the Commission ordered a demonstration of the color television signal specifications proposed in this proceeding to be held in New York City under the auspices of the NTSC. Programs were transmitted over Stations WNBT (National Broadcasting Company, Inc.), WCBS-TV (Columbia Broadcasting System, Inc.) and KE2XDR (Allan B. DuMont Laboratories, Inc.). The program material consisted of representative indoor and outdoor scenes and color slides and covered a wide range of hue and chroma including strongly contrasting color patterns.

⁵ In order to conduct the field testing of the NTSC signal specifications for color television, Panel 16 was established. The responsibility for insuring "by actual observations during field tests that the proposed standards would result in a signal which will satisfactorily operate color receivers and provide the public with service which, in color, is comparable in performance to that established by the monochrome standards" was delegated to this Panel. At the conclusion of its field test program, Panel 16 was composed of 109 engineers. The group averaged from 15 to 20 years' experience and included among its members 18 Fellows and 30 Senior Members of the IRE. The Panel was in existence for more than 2 years and a total of 126 engineers were in some way officially connected with it; and many other persons actively participated in its work as receiver operators, unofficial observers, or in some other capacity. In addition, RCA-NBC held several tests to obtain (1) an engineering evaluation of the proposed specifications by trained technical personnel; and (2) reaction of public opinion with respect to the color picture (conducted by Opinion Research Corporation).

11. Proponents of the new signal specifications for color television, which are urged in place of the present rules governing color transmission, contend that the new signal specifications meet or are capable of meeting all of the Commission's criteria for a satisfactory color system, and that these specifications, in addition, are compatible with the Commission's present rules and standards for monochrome transmission. Thus, RCA-NBC states that all of the criteria are met by the proposed color specifications. Substantially the same position is advanced by Sylvania, Motorola, Admiral, Westinghouse Radio Stations, and by Harry R. Lubcke. NTSC states that the new color specifications meet Commission's criteria (1), (2), (3), (6) and (7); that transmitters and receivers of a number of manufacturers have been successfully demonstrated; but no comment is directed to the possibilities of producing low-cost receiving and transmitting equipment [criteria (4) and (5)]. Philco alleges that the new signal specifications meet the Commission's technical criteria but that inexpensive receivers are not now available and the Commission should waive criterion (4). Philco concludes that adoption of these signal specifications will give a strong impetus to the scientists and engineers "to develop a satisfactory color receiving tube, capable of economical mass production, and hence color receivers that will be within the price range of the great mass of the American people." CBS maintains that the new signal specifications do not meet criteria (4) and (5), but that basic changes in circumstances warrant "less rigid application" of the criteria now than in 1950 and 1951, and that adoption of the new specifications will provide a tremendous challenge to the industry to meet the criteria sometime in the future. The views advanced by General Electric were generally similar to those of CBS.

12. Oppositions to the new color specifications have been advanced by Paramount Television Productions, Inc.; Chromatic Television Laboratories, Inc.; American Television, Inc. and Marshall Soghoian and S. L. Cooke Jr. These oppositions, in common, contend that little basis now exists for a reasonable assurance that receivers under the proposed color specifications will be "cheap enough in price to be available to the great mass of the American purchasing public" and that the Commission should not adopt the proposed color specifications until such assurance is possible.

II — EVALUATION OF PROPOSED SIGNAL SPECIFICATIONS

13. The Commission has before it for consideration proposed new signal specifications for color television to replace its present rules and standards governing color television. The standardization of signal specifications for the utilization of radio frequencies is always a grave undertaking with important consequences to the public and the electronics industry. Such standardization for color television is particularly important in view of the emergence of the television service as a powerful medium of mass communications. The ultimate question presented is whether the proposed signal specifications provide a reasonable basis for the development of a color television system in the public interest. In order to aid in the resolution of that question we have in our earlier considerations of the problem formulated certain criteria to serve as guide lines in the evaluation of proposed signal specifications.⁶ In the discussion that follows the proposed signal specifications are evaluated in the light of the Commission's criteria based upon the evidence in the record and the observations of the Commission at the demonstrations and at the Commission's laboratory.⁷

14. Operation Within a 6-Megacycle Channel Structure. The Commission's first criterion for evaluating signal specifications for the transmission of color television is that it must be capable of operating within a 6 megacycle

⁶ Criteria are set forth above, paragraph 8.

⁷ A description of color television transmissions in accordance with the proposed signal specifications is attached hereto in Appendix A.

channel allocation structure.⁸ The signal specifications now under consideration meet this objective. Within the same bandwidth that had been allocated to monochrome alone, the proposed system has succeeded in adding color information, while maintaining compatibility with present monochrome standards. This has been achieved by "interlacing" the color information with the luminance signal when portrayed on a picture tube in either color or monochrome;⁹ and by taking advantage of the relative insensitivity of the eye to changes in hue and saturation in small areas.

15. To "interlace" the color information, a color subcarrier within the 6 megacycle channel is used. The location of this subcarrier is critical in that it must be selected so as to minimize color information visible on monochrome receivers in order to maintain to the greatest extent possible the quality of the monochrome picture. In addition, the location of the subcarrier must be well removed from the picture carrier and sufficiently removed from the sound carrier to avoid interference. The objectives with respect to the location of the subcarrier, although not fully attained, have been met to a satisfactory degree.

16. The second technique relied upon in the NTSC system relates to the demonstrated fact that the eye is much less sensitive to changes in hue and saturation in small areas than it is to changes in brightness. The corollary is that as the size of the viewed object is reduced, the eye becomes progressively color blind so that ability to distinguish hue deteriorates. It follows that the color components of a picture can be transmitted over a narrow band of frequencies since resolution of fine detail is a function of bandwidth. In the NTSC system faithful colors are transmitted over a 0.6 mc bandwidth while the monochrome or luminance signal is transmitted over a 4.2 mc bandwidth. In between is a twilight zone where adulterated colors are transmitted. Thus, faithful colors appear in the coarse areas of the picture, adulterated colors in the medium fine detail and only monochrome in the finest detail of the picture. The saving of frequencies resulting from the use of this technique is obtained at a cost in terms of the adverse impact on picture quality, but as indicated below, the overall result meets minimum standards of acceptability.

17. Quality of the Color Television Picture. The Commission's second and third criteria relate to the quality of the color television picture in terms of specific characteristics. In the light of the data of record concerning the tests and demonstrations conducted by proponents, and the observations of the Commission at the demonstration in these proceedings and at the Commission's laboratory we are of the view that the color television pictures transmitted are satisfactory and that the signal specifications merit standardization on this score. We have reached this

⁸ The amount of picture detail which can be conveyed and the resulting quality of the television picture, is delimited by the bandwidth allocated for the transmission of the video signal. Each time the scanning beam traverses from a light element of the picture to a dark element and returns, a complete cycle of video electrical energy is generated. For technical reasons the 6 mc channel assigned to a television station can only accommodate approximately a 4 mc video bandwidth. If the sole objective to be served were a high quality picture, it would certainly be desirable to increase the video bandwidth to permit transmission of greater picture detail. However, spectrum space is severely limited and the bandwidth of television stations must be determined with a view to the desired number of television stations and the needs of other services.

⁹ Color is perceived as a conscious sensation in terms of three major attributes: *brightness*, *hue* and *saturation*. Brightness is a measure of the light intensity radiated or reflected from objects, i.e., their physical "luminance", and is the only attribute exhibited by both colored and non-colored objects. Hue is the most characteristic attribute of color and determines whether the color is red or green or yellow, etc. Finally, saturation distinguishes strong colors from pale colors of the same hue, as red and pink. Saturation may be considered as related to physical "purity" or freedom from dilution with white. It is common knowledge that sunlight is a mixture composed of all the various colors of the rainbow such as red, orange, yellow, green, blue, indigo and violet. It has been found that it is not necessary to mix all the colors of the spectrum to form white light. Three colors properly selected and mixed in proper proportions will form white and most other colors. However, it is not possible to produce colors which are outside the spectrum area included by the primaries. For example, if the three primaries are red, green and blue, it is not possible to produce saturated violet since it is outside the spectrum area included between red and blue. Likewise, if a diluted red or orange were selected as one of the primaries, it would not be possible to obtain a saturated red.

conclusion despite some apparent deficiencies of the color pictures as viewed on presently available receivers. None of the deficiencies present is sufficiently grave, however, to interfere seriously with the over-all enjoyment which may be derived from viewing the color pictures. Although the color reproduction is not completely faithful, it is sufficiently accurate to be a pleasing reproduction. The loss in resolution, as compared to monochrome, is offset by the greater realism resulting from the addition of color information. The brightness level on present color equipment, while lower than on monochrome receivers, is nevertheless within the range of acceptability for home viewing.

18. Receiver Apparatus. The Commission's fourth criterion relates to receiver apparatus and is a two-fold objective. First, the receiver apparatus must be simple to operate in the home and must not have critical registration or color controls, and second, it must be cheap enough in price to be available to the great mass of the American purchasing public.

19. Our evaluation of the receiver apparatus with relation to the first of the foregoing objectives is based on our examination of the receivers furnished by 13 manufacturers for use in the demonstration held in these proceedings and the receivers offered by three manufacturers to the Commission's laboratory and on our consideration of the data submitted in the proceedings. The inherent complexity of the proposed signal specifications is, in large part, reflected in the receiver. The color tube, and the attendant circuitry, is of complicated and intricate design and will impose a substantially greater burden in the servicing and maintenance of the color receiver as compared with monochrome receivers. The viewer controls on the front panel of the receiver apparatus are relatively simple to operate in light of the complexity of the equipment, and color controls do not appear to be critical. The reception of color television transmissions on color receivers demonstrated and examined does require a finer adjustment of the tuner control than is necessary on a monochrome receiver, for by moving this control too far in either direction, a considerable change can be effected in the color balance of the picture. This necessity for finer tuning, however, does not add significantly to the complexity of operation; and such adjustment would appear to be well within the competence of the normal home viewer. In addition to the controls required for monochrome reception, all of the receivers have an additional "chroma" control which requires adjustment by the viewer. The chroma control, which is not critical, determines the saturation of the colors. At one extreme position, the colors are fully saturated, while at the other extreme position, the colors are washed out. Some of the receivers also have a hue control installed on the front panel of the receiver for adjustment by the viewer. The hue control permits the hue of the picture to be adjusted to the personal taste of the viewer.

20. The data in the record with respect to the estimated price of the receiver is meager. The cost of the tri-color kinescope and the complexity of the attendant convergence circuitry, deflection yoke, and high voltage supply in the receiver, comprise major elements in the price of the color television receiver. RCA-NBC has furnished estimates of receivers based on the use of a 16-inch envelope tri-color tube which has a measured viewing surface of 8½ inches by 11 inches, the equivalent of a 12½ inch monochrome tube.¹⁰ The estimated cost of the 16-inch envelope tube to receiver manufacturers is between \$175 and \$200. The estimated introductory price of the first color receiver will be between \$800 and \$1000. We do not believe that the data in the record are sufficient to support the conclusion that the presently available receiver apparatus is "cheap enough in price to be available to the great mass of the American people" as contemplated in our criteria. However, several manufacturers have expressed their conviction that when color

¹⁰ No estimates have been furnished on the price of receivers with larger tubes.

television reaches the mass production stage, substantial reduction in the price of color receivers will follow, as was the case of the monochrome receiver.

21. **Broadcast Station Apparatus.** The Commission's fifth criterion pertains to apparatus at the broadcast station and, like the criterion relating to receiver apparatus, also is expressed as a two-fold objective. First, the station apparatus must be technically within the competence of the type of trained personnel hired by a station owner who does not have an extensive research or engineering staff at his disposal, and, second, the costs of purchase, operation, and maintenance of such equipment must not be so high as unduly to restrict the class of persons who can afford to operate a television station.

22. Upon the basis of our examination of the data in the record and of our observations, we are of the view that the color signal specifications proposed by petitioners are capable of operating through station apparatus technically within the competence of the type of trained personnel hired by a station owner lacking an extensive research or engineering staff. Clearly, the operation and maintenance of color equipment at the station is more complicated than that employed with monochrome; and in the initial stages, additional training of technical personnel will be required. Nevertheless, it appears that extensive testing of the proposed signal specifications has been satisfactorily carried on by personnel recruited from monochrome operations, and that training of personnel for color operation can be accomplished without undue difficulty. At a demonstration held in this proceeding, color programs were originated by NBC, DuMont, and CBS. These organizations do, of course, have available to them research and engineering staffs that would not be available to the great majority of other broadcasters. And, for that reason, these organizations may not be considered typical or representative of broadcasters generally for this purpose. At the same time, however, the successful participation of NBC, DuMont, and CBS in the demonstration is somewhat persuasive that color transmissions in accordance with the proposed signal specifications can be accomplished by other broadcasters after adequate training of their technical staffs.

23. With respect to the cost of purchase of color broadcasting equipment, approximate estimated cost figures and production plans have been submitted by RCA-NBC. Such data has been furnished for the following types of television broadcast transmissions: (1) network color programs; (2) color slide programs; (3) color film programs; and (4) local live programs in color. The estimated total price for the required equipment for these transmissions is \$187,850. The contemplated equipment for the various types of transmissions, which it is explained will be produced on a custom basis at first, together with the approximate prices for each type of transmission are set out below:

(1) **Network operation only.** The equipment needed to supplement the monochrome facilities of an existing station to enable network programs to be transmitted in color, consist of the following: Color stabilizing amplifiers, tri-color monitor, phase equalizers, miscellaneous parts, extra side-band filter, and test equipment. The approximate total cost for this equipment would be \$24,500.

(2) **Color Slides.** The additional equipment required to permit stations to transmit color slides would be the following: Color slide camera, color frequency standard, burst flag generator, colorplexer, modification kit for sync generator, and miscellaneous parts and test equipment. The approximate total cost for this equipment would be \$43,250.

(3) **Color Film.** The additional equipment required by a station already equipped for Stage 2 to broadcast color motion pictures would be the following: 16 mm film chain and miscellaneous equipment. The approximate total cost for such additional equipment would be \$50,600.

(4) **Live Pick-up.** The additional equipment required by a station already equipped for either Stage 2 or 3 in order to broadcast simple live programs with one camera would be the following: Three-tube color camera and associated control and miscellaneous equipment. The ap-

proximate total cost of such equipment would be \$69,500. This figure, it should be understood, is based on the utilization of one camera, which is minimum equipment. Generally, two or more cameras are required for the origination of live broadcasts. In addition, price quotations have not been furnished for remote pick-up equipment.

24. The data in the record is meager relating to the cost of the above equipment, and the costs figures submitted, it should be emphasized, represent only estimates on the bases of present conditions. This data indicates that the costs entailed in originating live color programs with present equipment will substantially increase the station's costs above that necessary for monochrome transmissions. However, it is our view that once commercial production designs are finalized and the production level for such equipment is increased, substantial reductions in the costs of such equipment will be feasible. We believe, also, upon our consideration of the evidence in the record, that the future holds promise for the development of cheaper apparatus.

25. Operation and maintenance of color television equipment at the transmitter and the studio concededly will be more complicated than that necessary at a comparable monochrome station. It appears that additional equipment and personnel will be required for the operation and maintenance of the transmitter since it will be necessary to maintain a more careful alignment of the transmitter than is generally required for monochrome transmissions. In addition, where live programs in color are originated by the station, additional personnel will be required to be assigned to each color television camera as video control technicians, and one or more additional persons might be required at the studio for other purposes.

26. **Interference Characteristics.** The Commission's sixth criterion is that the color system must not be unduly susceptible to interference as compared with the present monochrome system. It is apparent from the tests that have been conducted that susceptibility to interference is related to the signal specifications, but, in addition, it is influenced by equipment design particularly in regard to adjacent channel interference. The significance of the test data submitted to the Commission was limited by the fact that only one type of receiver with a limited range of signal conditions was included, and a question is raised as to the applicability of the data to over-all performance of all types of receivers which may be produced.

27. With respect to the important factor of co-channel station interference, there is no substantial difference between color and monochrome reception. Similarly, with respect to lower adjacent channel interference, impulse and random noise, no significant differences appear to exist between color and monochrome reception. With respect to the interference resulting from multipath it appears that receivers of better design suffer only a negligible increase in interference as compared with monochrome reception.

28. In certain respects, however, the more intensive use of the television channel due to the addition of the chrominance information renders the system more vulnerable to interference and increases the possibility of causing interference to other services. Particularly, color receivers are more vulnerable to interference which falls in the region of the subcarrier. Such interference to the color receiver could originate from the additional sideband energy radiated by a color television transmitter on the upper adjacent channel; or, it could be caused by some other continuous wave source of radio energy. In the first case, the transmitter manufacturer must expend every effort to confine the radiations within the limits of the authorized channel. In the second case, the receiver manufacturers must utilize the methods known to the art for reducing this interference susceptibility, even though such methods may involve additional manufacturing costs.

29. A further interference problem is presented by the radiation from the 3.579545 mc subcarrier oscillator in color receivers. The frequency of this oscillator and several of its harmonics fall in the amateur bands. Here too, receiver manufacturers must make full use of shielding,

traps and any other known methods to minimize the radiation. The ultimate answer to whether the additional interference susceptibility of color receivers will be a serious impediment to the establishment of a successful color television system will be furnished in the performance record of receiver manufacturers and the manufacturers of transmitters and other electronic equipment.

30. **Transmissions over Inter-City Relay Facilities.** The Commission's seventh criterion is that the signal specifications must be capable of transmitting color television programs over inter-city relay facilities presently in existence or which may be developed in the near future.

31. It is our view, based on the data in the record and the observations of the Commission at the demonstration in these proceedings and at the Commission's laboratory that satisfactory color television pictures can be transmitted over existing inter-city relay facilities. Moreover, it appears that improved systems of inter-city relay facilities now under development will provide for the transmission of a more satisfactory color television picture in accordance with the signal specifications under consideration.

32. Long distance television transmissions are generally provided by use of the microwave relay system and the coaxial cable system. Existing microwave circuits have a bandwidth of somewhat more than 4 mc and require no special equipment to transmit color pictures using the proposed signal specifications. The bandwidth of the coaxial cable currently in use, however, is limited nominally to 2.7 mc. Since all the color information in the proposed signal specifications is transmitted on the 3.58 mc sub-carrier, special provision must be made for confining the color signal within the 2.7 mc bandwidth. This is accomplished by the use of cable conversion equipment which heterodynes the color information down to a frequency band within the cable pass band for transmission at the sending end of the circuit and restores it to the original frequency band at the receiving end. The resulting signal is limited to a bandwidth of 2 mc for the luminance channel and .3 mc for the color signal.

33. Color television pictures transmitted in accordance with the proposed signal specifications over the microwave system currently in use results in negligible observable degradation and provides a highly acceptable color inter-city transmission service. Transmissions over the coaxial cable system currently in use results in appreciable degradation. Although the degradation is appreciable it is our view that the over-all quality of the pictures presently meets minimum standards for acceptability. Moreover, although it appears likely that the coaxial cable currently will continue to be used for a number of years to provide network service in some areas, it appears that commercial and audience pressure may result in replacing this equipment with improved cable carrier and improved microwave equipment. The Bell Telephone Laboratories, Inc., which participated in the activity of the NTSC, stated that it has under development improved systems of inter-city television transmission to provide for the satisfactory transmission of a color signal in accordance with the proposed signal specifications.

34. **Compatibility.** The term compatibility in its usual sense refers to the satisfactory reception of black and white pictures from signals broadcast in color on monochrome receivers without alteration. There is, however, another aspect of compatibility, sometimes referred to as "reverse compatibility," which relates to the satisfactory reception of monochrome signals on color receivers without alteration.

35. The first aspect of compatibility is a factor of critical importance in view of the fact that there are at the present time more than 27 million sets in the hands of the public. No change is required in existing monochrome receivers for the reception of a black and white picture from color transmissions on the proposed signal specifications. It appears, however, that the black and white pictures suffer some degradation. At distances from the receiver where the line structure is evident there is also a dot structure visible. Beyond this critical distance there appears to be no significant deterioration in the picture.

It appears that the degree of degradation is not substantial, and we do not believe it will interfere seriously with the public's viewing of color programming in black & white.

36. With regard to the second aspect of compatibility (i.e. reverse compatibility) no test data has been submitted. A number of parties commented favorably on the ability of present color receivers in this respect, but the statements were of a general nature unsupported by data. Our own observation indicates that the monochrome picture suffers a noticeable loss of definition when received on a color set.

37. **Convertibility.** The term convertibility has been used to describe the changes necessary to enable existing receivers to receive color transmissions in color. No practical converter has been demonstrated nor does it appear that proponents of the proposed signal specifications have any current plans for the production of converters.

III — CONCLUSIONS

38. **Field Sequential System.** In our consideration of specifications for the broadcast of color television in the 1949-50 proceedings in Docket 8736 *et al.*, we concluded that of the three systems under consideration only the field sequential system met minimum standards of acceptability. These signal specifications were, however, incompatible in the sense that receivers outstanding in the hands of the public could not receive color transmissions in monochrome without adaptation. The limited amount of commercial color broadcasting on these standards was short-lived, and color television broadcast equipment for the field sequential system has never been produced in quantity and is not now being produced, nor are color transmissions in accordance with the field sequential standards being broadcast or contemplated. Three years have passed since that decision, and there are now more than 27 million television receivers in the hands of the public, all of which are incompatible with our present color television standards. That circumstance serves to nullify those rules and standards completely. We have concluded, therefore, that our present rules for the transmission of color television should be deleted.

39. **Proposed Signal Specifications.** The proponents of the color television signal specifications proposed in this proceeding have been of the view that a color television system in order to prove successful must be compatible. With this premise in mind, petitioners have cooperated in an industry-wide, intensive program of study, research and experimentation, lasting over a period of more than two years, in an effort to evolve and formulate satisfactory compatible color television signal specifications. To this end, petitioners have expended millions of dollars and have employed thousands of man-hours of the most highly skilled engineers and scientists in the electronics and related fields.

40. The accomplishment of a compatible color television system within a 6 mc bandwidth is a tribute to the skill and ingenuity of the electronics industry. The proposed color television signal specifications produce a reasonably satisfactory picture with a good overall picture quality. The quality of the picture is not appreciably marred by such defects as misregistration, line crawl, jitter or unduly prominent dot structure. The picture is sufficiently bright to permit a satisfactory contrast range under favorable ambient light conditions and is capable of being viewed in the home without objectionable flicker. Color pictures can be transmitted satisfactorily over existing inter-city relay facilities and improvements in inter-city relay facilities may be reasonably anticipated.

41. It has long been recognized that compromises are necessary when an attempt is made to compress within a 6 mc channel as much information as is required in a color television system. The achievement of a compatible system within a 6 mc channel has been accomplished only by the utilization of extremely complicated and intricate equipment. It relies on a system of circuitry involving the most advanced techniques in optics, mechanics and electronics. The complexity and intricacy of the equipment and circuitry is reflected in the following:

First, the cost of apparatus is high. The estimated retail price of the receiver is in the luxury range of \$800 to \$1,000. The heart of the receiver problem lies in the color tube and its associated circuitry. The current estimated cost to a receiver manufacturer of a color tube with a viewing surface which approximates that of a 12-inch monochrome tube, is between \$175 to \$200. This figure alone exceeds the entire cost of several popular models of monochrome receivers. Similarly, the costs to television broadcasters for transmitting equipment, and particularly for the origination of color programs, are substantially higher than the cost of monochrome transmissions.

Second, the maintenance and operation of a compatible color receiving and transmitting apparatus in a 6 mc bandwidth will inherently result in greater costs than monochrome alone. Because the proposed signal specifications rely on complicated techniques and because the "system load" is, in large part, shared by the receiver, it is reasonable to anticipate that receiver failures and service adjustments will be more frequent. Similar difficulties may also be anticipated at the studio and transmitter.

Third, the additional susceptibility of the color receiver to interference and the possibility of causing interference to other services from the radiation of the subcarrier in the receiver, must be given close attention by the receiver manufacturer. Also, the transmitter manufacturer, in order to reduce interference, must take steps to eliminate, so far as possible, all unnecessary radiation. In this connection, it is noted that the industry has recently established committees, which have begun work toward these ends.

42. In the comments filed in this proceeding a number of parties urging adoption of the proposed signal specifications have requested that we waive or relax certain of our criteria. It is our view, in light of the changed circumstances, that a rigorous or inflexible application of our criteria would not be warranted and that, accordingly, these requests should be granted. It was our view that any new system would have to sustain the burden of establishing that any improvement which would result from its adoption must be substantial enough to justify the resulting dislocation to receivers then in the hands of the public. There are no color receivers in the hands of the public designed to receive transmissions in accordance with those standards. And no question is presented with respect to dislocation or harm because of investment in apparatus. We believe, therefore, that the change in circumstances warrants a shift in emphasis and that we are justified in relying on the representations of petitioners that certain of the inadequacies as presently exist are a function of "equipment limitations" and are not necessarily inherent "system limitations."

43. We are persuaded to this view on the basis of the following factors:

First, included among the NTSC and the other parties

to this proceeding are the major electronics manufacturing organizations. Among these parties there is overwhelming support for the proposed specifications. There is virtual unanimity that these specifications are fundamentally capable of producing satisfactory color television pictures. There is also substantial agreement that the proposed specifications have a potential for growth.

Second, although the major effort has, up to this point, been directed to the development of the system, approval of the proposed signal specifications will furnish an incentive and stimulus to manufacturing and research organizations to devote their efforts to the equipment problems. The success of color hinges on mass receiver circulation, and every effort must be made to bring the price down to the level of the mass purchaser. Every effort must also be made to design equipment to minimize the additional interference susceptibility of operations under the proposed specifications. History has demonstrated that American industry is capable of devising practical and economical equipment on a mass production basis. We have the assurance of the industry that the enormous engineering and production ingenuity at their command will be focused on these remaining problems.

Third, the proposed signal specifications are broad enough to permit considerable latitude to competing companies in the future development of more economical and efficient equipment without obsoleting equipment in the hands of the public. Thirteen manufacturers demonstrated receivers in the proceeding employing several types of picture tubes. Thus, the proposed color specifications afford an opportunity and challenge to the industry to implement these specifications with the necessary equipment innovations.

Fourth, the signal specifications proposed are compatible, and a compatible system will afford the consumer a greater degree of freedom than would an incompatible system in choosing whether or not to purchase a color receiver at a given price, since the public will, in any event, continue to receive the program material in monochrome.

44. Upon a careful consideration of the complete record in this proceeding, we are of the view that the signal specifications proposed by petitioners provide a reasonable basis for the development of a color television service in the public interest. We have therefore concluded that the present rules and standards for the broadcast of color television based on the field sequential signal specifications should be deleted and that the signal specifications in this proceeding should be adopted in lieu thereof at this time.

15. Authority for the adoption of the amendments is contained in Section 303(b), (e) and (g) of the Communications Act of 1934, as amended.

46. In view of the foregoing, IT IS ORDERED, That, effective 30 days after publication in the Federal Register, Subpart E of Part 3 of the Commission's Rules Governing Television Broadcast Stations, is amended as set out in Appendix B attached hereto.

CONCURRING STATEMENT OF COMMISSIONER E. M. WEBSTER

The adoption of standards for color television is an important milestone on the road to expansion of our broadcast industry. As a member of the Commission and one of the guardians of the public interest I have strong feelings that the adoption of such standards cannot be taken lightly.

Consideration of the color standards proposed by the National Television System Committee indicates to me that those standards, and any system based thereon, involve certain problems among which are included such matters as:

1. Estimated high cost of color receivers and station equipment.
2. Complexity of receivers.
3. Degradation of color transmissions as received on monochrome sets.
4. Degradation of monochrome transmissions as received on color sets.
5. Susceptibility of color receivers to interference.

It would serve no useful purpose for me to elaborate upon such problems here as the Commission's Report and Order adequately discusses these and other problems. However, I believe that the public should be forewarned that in view of the subjective nature of the evaluation of any color television demonstration it is not likely that

unanimity will prevail with respect to the adequacy of present color pictures and that some viewers may find the results somewhat less satisfactory than expected.

The adoption of these standards creates certain receiver problems which must be recognized. Accordingly, the receiver manufacturers are obligated to the public to incorporate in color receivers refinements beyond those in present monochrome receivers necessary to adequately suppress aggravated receiver radiation and to overcome the greater susceptibility to interference, particularly in the region of the color sub-carrier.

While the current system designed around the NTSC standards may fall short of the established criteria in some respects, as for example the estimated cost of color receivers, I believe that compatibility is sufficiently important to warrant a reasonable flexibility in the application of the criteria. Furthermore, in my opinion those features which may be believed to be inadequacies in the current state of development are equipment problems, not inherent limitations imposed by the standards, and future improvement can be expected.

Accordingly, I concur with the Commission in its decision adopting the color television standards proposed by the National Television System Committee.

ADDITIONAL CONCURRING VIEWS OF COMMISSIONER GEORGE E. STERLING

I have participated in this proceeding and the final results with confidence that a foundation is being laid that will provide the people of this nation a fine compatible color television system, capable of improvement without obsolescence of black and white receivers and color receivers built to receive the programs broadcast in accordance with the signal specifications embraced in the standards.

History is replete with the initial high cost and complexity of products designed for public consumption, resulting from the birth of a new industry, for example: the automobile. This, too, has been the experience in the radio and television industry. With respect to the complexities and cost of equipment, considering the competition in the manufacturing industry coupled with the public enthusiasm and acceptance of the television broadcasting service, I am certain that both larger screen and cheaper color receivers with controls having the ease of adjustments of current monochrome receivers will be made available to the public within the next two or three

years, the time necessary to establish a color television broadcasting service of any consequence. In the meantime, the public can buy black and white television receivers now on the market and which will continue for the next three or four years to represent the greatest percent of production of TV receivers, confident that when programs are broadcast in color they may view them in black and white. In the meantime, the manufacturing industry will move ahead affirmatively to build color receivers within the price range of the great mass of the American people.

The Commission has, in this decision, pointed out with considerable emphasis the necessity of properly shielding and filtering receivers so that color programs will not be degraded by interference from radio frequency sources as well as preventing interference to the important amateur radio service, considering the public service it renders in several respects. It is my hope that industry will continue to give this subject high priority as they proceed to build equipment for public consumption.

COMMISSIONER ROBERT E. LEE CONCURRING

I concur completely with the Commission's decision in this case. The defects and imperfections of this new medium are carefully pointed out and this is as it should be. The factual situation has been given to the public. It is patently apparent that color television will not be available to most of us for some time to come but this was also true in the early days of black and white television.

For my own part, I would like to say that I consider this decision a milestone in the fast moving electronics industry. The American standard of living rises again. I would like to pay my own tribute to the Industry and the able and ingenious men comprising it who have made

this new miracle possible.

The defects and shortcomings that may now exist will evaporate in the coming months as Industry takes on mass production. The first automobile had many defects. An aeroplane going on the assembly line immediately takes on some aspects of being outmoded as experience teaches us new improvements and better methods of production. We would never learn the new short-cuts if we kept the basic idea on the drawing board.

Our economy will get a tremendous boost from this development.

I am delighted at long last to have had a small part in putting the show on the road.

Appendix A

Description of Color Television Transmissions Under New Rules

Description of Color Television Transmissions in Accordance with Proposed Signal Specifications

I—INTRODUCTION

1. Following is a description of color television transmissions in accordance with the proposed signal specifications under consideration. In attempting to simplify the description so that it might be intelligible to the lay reader it has been necessary from time to time to use non-technical terms. This may have resulted in some technical inaccuracies. However, engineers will find full data and descriptions in the record.

II—GENERAL

2. There is much similarity in the composition of television pictures and magazine or newspaper pictures. Printed pictures are composed of small dots and in the case of black and white pictures these dots are black and of varying size to give the impression of various shades of gray. The presence of the dot structure is not apparent to the eye under normal conditions because the distance between the viewer and the picture is such that the eye can no longer distinguish the individual dots and sees the combined effect as a single image. The sharpness of the picture is determined by the number of dots which compose the picture. The monochrome television picture, however, is composed of lines with varying degrees of grayness throughout their length to correspond to the brightness of the original object at that point. The sharpness of such an image is determined to a large extent by the rapidity with which variations in brightness can occur

along the line either from black to white, or from white to black. For a given system there is a maximum rapidity with which the line can change from black to white and back again to black, which change would result in a white dot. The width of this dot determines the number of such dots which could be reproduced in a particular line and thus the number of such dots per line is a measure of the sharpness of images which can be reproduced. The television picture differs from the printed picture in that the number of equivalent dots in television is independent of the size of the television screen whereas the printed picture normally uses a fixed number of dots per inch of picture dimension. In order to create the illusion of motion it is necessary to transmit a series of still pictures in rapid succession. This principle for creating the illusion of motion is the same for both motion pictures and television, and depends upon the well known phenomenon of persistence of vision.

3. In television the tools employed for reproducing a picture are the camera, transmitter, and receiver. The function of the camera in a television system is to transform light energy into electrical energy. In principle, the television camera is not unlike a photographic camera. However, in place of film, in back of the television camera, there is substituted an electrical plate which is sensitive to light. This plate is composed of thousands of separate light-sensitive cells. When the light comes through the lens of the camera, it forms an image of the scene on the plate. The individual cells of the plate store up energy in proportion to the light which falls upon them. Thus, the cells in the bright parts of the image are filled with

considerable energy while the darker parts are filled with less energy. In order to release this stored energy to the transmitter, an electron beam is caused to scan the image from left to right and top to bottom. The beam can be thought of as an electron gun which successively punctures the individual cells thus releasing the stored energy to the transmitter. The transmitter provides a vehicle for transporting the camera signals to the receiver. This is done by generating a radio frequency signal in a part of the spectrum which has previously been determined to have the desired properties with regard to propagation, available bandwidth, etc. The camera signals including the image signals and certain other electrical pulses needed to maintain synchronism between transmitter and receiver are then superimposed on this radio frequency carrier. At the receiver a scanning beam similar to that at the camera is directed against the face of a viewing screen. The receiver scanning beam travels from left to right across each of the lines of the picture in exact synchronism with the beam at the camera. Therefore, the amount of electrical energy released at the camera at any instant will affect the beam at the receiver at that identical point in the picture. Thus, the picture is recomposed.

III — THE COMMISSION'S STANDARDS

4. When the monochrome television standards were adopted, the Commission allocated 6 mc (6 million cycles per second) for each television channel, nearly all of which is utilized for transmitting the video portion of the composite video-sound signals. The Commission's rules for monochrome require that thirty complete pictures each comprising 525 lines be transmitted each second. In a 4 mc video bandwidth 4 million pairs of elemental light and dark areas can be transmitted each second, or 8 million separate distinguishable elements. The number of elements is a limiting factor in determining the sharpness or resolution of the television picture and these may be arranged vertically or horizontally in an infinite variety of combinations. If it is decided, and the Commission's rules so provide, that it is necessary to scan 30 pictures each second in order to maintain continuity of motion and prevent flicker, 266,666 elements (i.e. 8 million divided by 30) are available for each "still" picture. Since the Commission's standards provide for 525 lines of vertical resolution, the horizontal resolution is fixed at 505 elements (i.e., 266,666 divided by 525). It should be noted that since the picture is 4 units wide for each 3 units of height the horizontal elements are thus about 40% wider than the vertical elements. In practice, the values of the number of lines and elements are reduced due to the time required for sending the synchronizing signals, limitation of equipment, and other factors.

IV — OPERATION UNDER PROPOSED SIGNAL SPECIFICATIONS

A. The Camera

Since most colors can be duplicated by the mixture of proper amounts of three properly selected primary colors, it follows that a color television system can be based on the transmission and reception of images in the three primary colors.

5. The first step in the transmission and reception of images in the three primary colors is accomplished in the television camera. The camera generates three different signals from the information in the picture. These may be the signals corresponding to the red, green and blue components in the picture but other combinations of three such independent sets of information could be used.

6. One method that has been used is the equivalent of three monochrome cameras. These cameras are operated from a single set of controls so that the view televised by each camera is identical. In front of each camera lens there is placed a red, a blue and a green filter, respectively. Thus, while the view in front of each camera is identical, the scene reaching the light sensitive plate of each camera contains only the components passed by the

red, blue or green filters. Hence, this camera produces an image in each of the primary colors, and changes the optical images into their equivalent electrical energy.

B. The Transmitting System

7. The three components obtained from the camera are electrically processed in such a manner as to obtain a brightness signal and two color-minus-brightness signals, namely red-minus-brightness and blue-minus-brightness. The brightness signal is channeled into one circuit with the other two signals being dealt with in a separate circuit.

(1) The Brightness Component

8. The brightness circuit of the color transmitter is similar to the conventional monochrome transmitter. Both have the same function of transmitting the relative brightness of the picture in monochrome. Thus, the two systems may be considered compatible, since a receiver performing satisfactorily on the monochrome system will also receive the brightness or monochrome signals transmitted in the color system. Since the eye is most sensitive to green, less sensitive to red, and least sensitive to blue, the brightness is obtained by mixing signals in that order of proportion. The specific values of the mixture are 59% green, 30% red, and 11% blue.¹ Such a mixture will produce a picture on monochrome receivers, in shades of gray. In the color system, this mixture accomplishes the primary objective of transmitting with correct intensity the brightness signal which is one of the two components of the color picture image.

(2) The Chroma Component

9. The color-minus-brightness signals are derived by subtracting the electrical value of the brightness signal from the electrical value of the color signals. The result is called the "color-minus-brightness" signal or "color difference" signal.² Thus, the chroma circuits of the transmitter must process two signals, red minus brightness ($E_R' - E_Y'$), and blue minus brightness ($E_B' - E_Y'$). Only two signals are necessary since the similar relation for the green signal ($E_G' - E_Y'$) can be recovered at the receiver from a mathematical relationship between the other two.³ The two signals transmitted are the red minus brightness and blue minus brightness. This still presents somewhat of a problem since the two signals must be transmitted in the same circuits without interaction. The method used is to modulate⁴ the two signals on a selected

¹ Mathematically, this is written:

$$E_Y' = .59 E_G' + .30 E_R' + .11 E_B'$$

Where

E_Y' = brightness signal

E_G' = electrical signal corresponding to the green components of the picture

E_R' = electrical signal corresponding to the red components of the picture

E_B' = electrical signal corresponding to the blue components of the picture

² The brightness signal is not separated from the chroma signal until after the color image has been transformed by the camera from an optical quantity to its electrical equivalent. The reason for this is that the electrical quantity "color-minus-brightness" has no physical equivalent since the eye responds only to chroma accompanied by brightness. Chroma minus brightness would be invisible. The subtractions and additions necessary to compose the brightness and chroma signals are accomplished in a matrix unit which is a computing machine for units of electricity. Mathematically, the color minus brightness signal of the blue signal is written:

$$E_B' - E_Y'$$

$$\begin{aligned} E_Y' &= .59 E_G' + .30 E_R' + .11 E_B' \\ .59 E_G' &= E_Y' - .30 E_R' - .11 E_B' \\ E_G' &= 1.7 E_Y' - .51 E_R' - .19 E_B' \\ E_G' - E_Y' &= .7 E_Y' - .51 E_R' - .19 E_B' \\ &= .51 E_Y' - .51 E_R' + .19 E_Y' - .19 E_B' \\ &= -.51 (E_R' - E_Y') - .19 (E_B' - E_Y') \end{aligned}$$

⁴ The term modulation is used a number of times in the text of the decision. For those unfamiliar with this fundamental process the following may be helpful. A radio transmitter generates a "carrier frequency" on the frequency assigned to the station. (This carrier might be considered as a replacement for the wire in a telephone system.) The intelligence to be transmitted, whether it is sound, picture or facsimile, is imposed upon this carrier by the process of modulation. For radio and television the intelligence or modulation, always a lower frequency than the carrier, is imposed upon the higher frequency for more efficient transportation to the receiver. When the desired intelligence modulates a carrier wave there results a composite signal which has the propagation characteristics of the carrier wave but also

subcarrier in a manner designed to prevent interaction.⁶ The frequency of the subcarrier is carefully selected to reduce the visibility of interaction between the chroma information and the brightness signal on the received picture.⁶

10. The relative location of the subcarrier within the channel is also an important consideration. If the subcarrier is placed too near the picture carrier there may be interference between the two. On the other hand, if the subcarrier is placed too near the edge of the channel it will restrict the width of the side-bands and limit the information which can be carried. The NTSC has compromised on a subcarrier frequency which is 3.579545 megacycles above the video carrier. Since this frequency is approximately .6 mc from the edge of the pass band (see Fig. 3, App. B), if the blue and red chroma signals were transmitted they would be limited to .6 mc. Resolution being a function of bandwidth, this would limit the resolution of color to very coarse detail. This limitation to a .6 mc bandwidth applies only when two sets of information such as the two color difference signals must be modulated on a single subcarrier. The reason for this is that in the quadrature method of modulating the subcarrier, both upper and lower side-bands of each color difference signal must be equal. It is, however, possible to send one set of information by using a single sideband. Thus, it would be possible to send two sets of information up to .6 mc and continue to a higher modulating frequency with a single set of information, e.g., a single color difference signal, using only one sideband. This is the method used in the NTSC system with the result that coarse color detail in the scene being televised which produces signals of frequency less than .6 mc is reproduced in approximately the original color. (The third color difference signal is recreated at the receiver.) Semi-fine color detail in the scene being televised which produces signals of frequencies greater than .6 mc and less than 1.5 mc is reproduced in hues which are contaminated. (With only one color difference signal being transmitted the primaries cannot properly combine at the receiver.) Very fine color detail in the scene being televised which produces signals of frequency greater than 1.5 mc is reproduced in monochrome. The NTSC has made a variation in the method of sending the red minus brightness and blue minus brightness signals. Instead of sending the blue minus brightness and the red minus brightness over the subcarrier, each of these signals is mixed with the other so that the blue minus brightness contains some red and the red minus brightness contains

⁶ A sine wave subcarrier can carry two sets of information by splitting the sine wave into two components in quadrature and amplitude modulating each component with one set of information.

⁶ The line frequency is chosen as 1/286 times the frequency difference between the sound and picture carriers (4.5 mc/sec) or 15,734.26 cycles/second. Since there are 525 lines per frame, the frame frequency becomes 29.97 cycles per second and the field frequency 59.94 cycles per second. The subcarrier frequency is chosen as an odd multiple of one half the line frequency which in this case was chosen as 455/2 of the line frequency or 3.579545 mc/sec. It will be noted that the line, field and frame frequencies are very close to the nominal values used for monochrome, namely, 15,750, 60 and 30 cycles/sec.; thus existing monochrome sets will be able to respond to such scanning rates. The above combination will result in the beat note between the quiescent sound carrier and the color subcarrier being an odd multiple of one half the line frequency. It has been determined that such a relationship results in a minimum visibility, on the received picture, of such interaction as well as a minimum visibility of the subcarrier itself due to a similar relationship of its frequency to that of the line scanning rate.

contains the original intelligence in one form or another. At the receiver the demodulation process results in recovery of the original intelligence and elimination of the carrier wave which has served its purpose. This is accomplished in a demodulator (detector) and there are a number of ways of performing the demodulation. One way is to generate in the receiver another frequency which is exactly equivalent to the transmitter carrier frequency. When these two identical carriers (frequencies) are placed in the same receiver circuit (demodulator) they have the effect of cancelling each other leaving the original intelligence. This is the system used in the recovery of the color signals described above. (The system of modulation described above is known as *amplitude modulation* because the modulation varies the amplitude of the carrier.) Other systems based on the same broad principles are called *frequency modulation* and *phase modulation*. In the latter cases, the modulation varies the frequency or phase characteristics of the carrier rather than the amplitude; however, the objective of the modulation is the same.

some blue.⁷ Corresponding changes are also made in the receiver circuits so that as long as both color mixture signals are received, i.e., in the modulation range 0-.6 mc, the circuits could unscramble the mixture and deliver the red minus brightness, blue minus brightness, and green minus brightness to the viewing tube. Thus, there results no change in the coarse detail of the picture. However, when only one color mixture signal is transmitted, i.e., a .6 mc to 1.5 mc modulation, the receiver circuits unable to function as above produce a contaminated color varying from orange to cyan depending upon the actual color being televised. This contaminated color produces less noticeable distortion in the semi-fine detail of the picture than when a single pure color is transmitted. The luminosity of the picture is approximately uniform throughout its range from orange to cyan, thus further reducing the apparency of its color distortion. This distortion in fine detail is sometimes called *edge distortion*, the reason being that fine detail only occurs at the edge of an object where it contrasts with the background, or, with other objects or with part of the same object. Thus, while the eye is relatively insensitive to the color in these edges, nevertheless, if the color is intense or sharply different from the adjoining area, some distortion will be apparent. The NTSC system overcomes this difficulty by using a blended color which does not call attention to the transition.

(3) Synchronization

11. The NTSC color system requires no change in the black and white synchronizing standards except that additional synchronizing information, referred to as the "color burst," is added. In order to demodulate the color subcarrier the receiver must generate a subcarrier of its own of exactly the same phase and frequency. It is, in fact, so important that the received subcarrier be identical with the transmitted subcarrier that it is necessary to send along a sample of the transmitted subcarrier which can be used as a reference by the receiver. It is rather a problem of just where to put this reference "burst" so that it won't be in the way of the luminance signal, the chrominance signals or the other synchronizing pulses. The place selected was the so-called "back porch" (blanking interval) following the horizontal synchronizing pulse. This is the short period during which the picture is blanked out to prevent visible retrace while the scanning beam is returning across the picture to its starting point. Only a few cycles (9 cycles of 3.579545 megacycles) of the reference burst (derived from the color subcarrier) are transmitted.

(4) The Combined Signal

12. Prior to transmission over the air the various signals mentioned above are combined into a composite signal. This signal includes the synchronizing signals, the brightness signal, and the chroma information on the subcarrier.⁸

C. The Receiver

13. The following description of receivers now known is included to indicate how the signal can be used to produce a color picture.

14. The composite color signal arriving at the receiver antenna consists of a brightness component and a chroma component.

⁷ The amplitude of these two orthogonal components of the chrominance signals can be expressed in terms of color difference signals as follows:

$$E_Q' = .41 (E_B' - E_Y') + .48 (E_R' - E_Y')$$

$$E_I' = -.27 (E_B' - E_Y') + .74 (E_R' - E_Y')$$

Where

$$E_Q' = \text{narrow-band component of the color signal}$$

$$E_I' = \text{wide-band component of the color signal}$$

⁸ The complete color signal has the following composition:

$$E_M' = E_Y' + E_Q' \sin (\omega t + 33^\circ) + E_I' \cos (\omega t + 33^\circ)$$

$$E_{SI}' - E_{SI}' + 0.493 (E_B' - E_Y') \sin \omega t + 0.877 (E_R' - E_Y') \cos \omega t$$

where the angular frequency ω is 2 pi times the frequency of the chrominance subcarrier.

The second equation above is only valid for color difference frequencies below 500 kilocycles since the E_Q' signal is removed for frequencies above that range.

(1) Brightness Component

15. If the signal is received on a monochrome television set the brightness component will pass through the receiver circuits and appear on the viewing tube as a monochrome picture. The interference from the chroma component of the incoming signal will be reduced on the monochrome receiver because of the interlacing principle previously described.⁹ If the composite color signal is received on a color set the brightness component will be processed by the receiver brightness circuits and appear at the viewing tube ready to be combined with the chroma component.

(2) Chroma Component

16. When the composite color signal is received on a color receiver the chroma component must be separated by means of special filters before it can be processed.¹⁰ The output of these filters is fed to the chroma demodulator

⁹ The color subcarrier frequency selection for minimum visibility of the color information on the luminance channel is sometimes called frequency interlacing.

¹⁰ The chroma signal is removed from the composite signal at about the third video amplifier and then fed through a 1.8 mc to 4.3 mc bandpass filter. This filters out the video carrier frequency and low frequency components leaving the color subcarrier and sidebands along with the high frequency components of the lumi-

which recovers the original color difference signals.¹¹ The two color difference signals thus derived are fed into a matrixing unit from which is recovered the third color difference signal (green minus brightness). In the case of the three-gun type of color tube, the three color minus brightness signals are routed to the three respective electron beams of the color tube where they are combined with the brightness signal. The result—color minus brightness plus brightness equals color, i.e., the original primary color is restored and projected on the viewing tube.

¹¹ The local oscillator supplies two signals having exactly the same frequency as the subcarrier. These two signals are placed in quadrature with each other in the same phase relationship as the two quadrature components of the subcarrier. Each quadrature component demodulates the respective color signal with which it is in phase.

nance signal. The modulations of the two color difference signals on the subcarrier remain independent only when the modulated waves each consist of like upper and lower sidebands. When the sidebands are not equal, the modulation E_Q' and E_I' cross talk on each other and the color is contaminated. Since the receiver response falls off for the higher video frequencies, compensation is necessary to make the upper sideband equal the lower sideband in the region 0 to 0.6 mc from the subcarrier. This compensation consists usually of peaking coils with a peak of about 6 db in the 4.0 mc region and is inserted in the circuit to the demodulator grids.

Appendix B—Full Text of

FCC Technical Standards Amended to Incorporate Color

I. Section 3.681 is amended to read as follows:

§ 3.681 Definitions—(a) *Amplitude modulation (AM)*. A system of modulation in which the envelope of the transmitted wave contains a component similar to the wave form of the signal to be transmitted.

(b) *Antenna height above average terrain*. The average of the antenna heights above the terrain from two to ten miles from the antenna for the eight directions spaced evenly for each 45 degrees of azimuth starting with True North. (In general, a different antenna height will be determined in each direction from the antenna. The average of these various heights is considered the antenna height above the average terrain. In some cases less than 8 directions may be used. See § 3.684(d)).

(c) *Antenna power gain*. The square of the ratio of the root-mean-square free space field intensity produced at one mile in the horizontal plane, in millivolts per meter for one kilowatt antenna input power to 137.6 mv/m. This ratio should be expressed in decibels (db). (If specified for a particular direction, antenna power gain is based on the field strength in that direction only.)

(d) *Aspect ratio*. The ratio of picture width to picture height as transmitted.

(e) *Aural transmitter*. The radio equipment for the transmission of the aural signal only.

(f) *Aural center frequency*. (1) The average frequency of the emitted wave when modulated by a sinusoidal signal; (2) the frequency of the emitted wave without modulation.

(g) *Blanking level*. The level of the signal during the blanking interval, except the interval during the scanning synchronizing pulse and the chrominance subcarrier synchronizing burst.

(h) *Chrominance*. The colorimetric difference between any color and a reference color of equal luminance, the reference color having a specific chromaticity.

(i) *Chrominance subcarrier*. The carrier which is modulated by the chrominance information.

(j) *Color transmission*. The transmission of color television signals which can be reproduced with different values of hue, saturation, and luminance.

(k) *Effective radiated power*. The product of the antenna input power and the antenna power gain. This product should be expressed in kilowatts and in decibels above one kilowatt (dbk). (If specified for a particular direction, effective radiated power is based on the antenna power gain in that direction only. The licensed effective radiated power is based on the average antenna power gain for each horizontal plane direction.)

(l) *Field*. Scanning through the picture area once in the chosen scanning pattern. In the line interlaced scan-

ning pattern of two to one, the scanning of the alternate lines of the picture area once.

(m) *Frame*. Scanning all of the picture area once. In the line interlaced scanning pattern of two to one, a frame consists of two fields.

(n) *Free space field intensity*. The field intensity that would exist at a point in the absence of waves reflected from the earth or other reflecting objects.

(o) *Frequency modulation (FM)*. A system of modulation where the instantaneous radio frequency varies in proportion to the instantaneous amplitude of the modulating signal (amplitude of modulating signal to be measured after pre-emphasis, if used) and the instantaneous radio frequency is independent of the frequency of the modulating signal.

(p) *Frequency swing*. The instantaneous departure of the frequency of the emitted wave from the center frequency resulting from modulation.

(q) *Interlaced scanning*. A scanning process in which successively scanned lines are spaced an integral number of line widths, and in which the adjacent lines are scanned during successive cycles of the field frequency.

(r) *Luminance*. Luminous flux emitted, reflected, or transmitted per unit solid angle per unit projected area of the source.

(s) *Monochrome transmission*. The transmission of television signals which can be reproduced in gradations of a single color only.

(t) *Negative transmission*. Where a decrease in initial light intensity causes an increase in the transmitted power.

(u) *Peak power*. The power over a radio frequency cycle corresponding in amplitude to synchronizing peaks.

(v) *Percentage modulation*. As applied to frequency modulation, the ratio of the actual frequency swing to the frequency swing defined as 100 percent modulation, expressed in percentage. For the aural transmitter of television broadcast stations, a frequency swing of ± 25 kilocycles is defined as 100 percent modulation.

(w) *Polarization*. The direction of the electric field as radiated from the transmitting antenna.

(x) *Reference black level*. The level corresponding to the specified maximum excursion of the luminance signal in the black direction.

(y) *Reference white level of the luminance signal*. The level corresponding to the specified maximum excursion of the luminance signal in the white direction.

(z) *Scanning*. The process of analyzing successively, according to a predetermined method, the light values of picture elements constituting the total picture area.

(aa) *Scanning line*. A single continuous narrow strip of the picture area containing highlights, shadows, and half-tones, determined by the process of scanning.

(bb) *Standard television signal.* A signal which conforms to the television transmission standards.

(cc) *Synchronization.* The maintenance of one operation in step with another.

(dd) *Television broadcast band.* The frequencies in the band extending from 54 to 890 megacycles which are assignable to television broadcast stations. These frequencies are 54 to 72 megacycles (channels 2 through 4), 76 to 83 megacycles (channels 5 and 6), 174 to 216 megacycles (channels 7 through 13), and 470 to 890 megacycles (channels 14 through 83).

(ee) *Television broadcast station.* A station in the television broadcast band transmitting simultaneous visual and aural signals intended to be received by the general public.

(ff) *Television channel.* A band of frequencies 6 megacycles wide in the television broadcast band and designated either by number or by the extreme lower and upper frequencies.

(gg) *Television transmission standards.* The standards which determine the characteristics of a television signal as radiated by a television broadcast station.

(hh) *Television transmitter.* The radio transmitter or transmitters for the transmission of both visual and aural signals.

(ii) *Vestigial sideband transmission.* A system of transmission wherein one of the generated sidebands is partially attenuated at the transmitter and radiated only in part.

(jj) *Visual carrier frequency.* The frequency of the carrier which is modulated by the picture information.

(kk) *Visual transmitter.* The radio equipment for the transmission of the visual signal only.

(ll) *Visual transmitter power.* The peak power output when transmitting a standard television signal.

II. Section 3.682 is amended as follows:

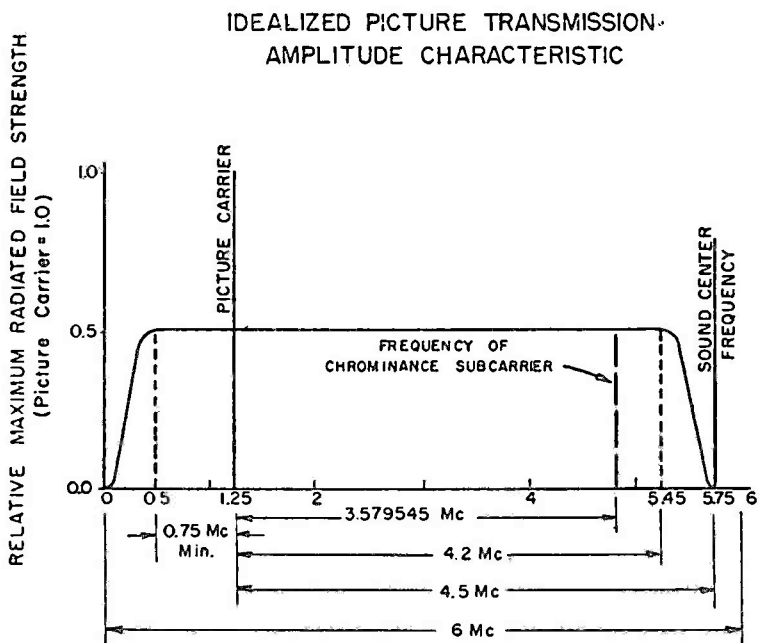
Delete subparagraph (a) and substitute the following:

§ 3.682. *Transmission standards and changes (a) Transmission standards.* (1) The width of the television broadcast channel shall be six megacycles per second.

(2) The visual carrier frequency shall be nominally 1.25 mc above the lower boundary of the channel.

(3) The aural center frequency shall be 4.5 mc higher than the visual carrier frequency.

(4) The visual transmission amplitude characteristic shall be in accordance with the chart designated as Appendix III, Figure 3.



Note: Not drawn to scale

FIGURE 3

(5) The chrominance subcarrier frequency shall be 3.579545 mc \pm 10 cycles per second with a maximum rate of change not to exceed one-tenth cycle per second per second.

(6) For monochrome and color transmissions the number of scanning lines per frame shall be 525, interlaced two to one in successive fields. The horizontal scanning frequency shall be 2/455 times the chrominance subcarrier frequency; this corresponds nominally to 15,750 cycles per second (with an actual value of 15,734,264 \pm .044 cycles per second). The vertical scanning frequency is 2/525

times the horizontal scanning frequency; this corresponds nominally to 60 cycles per second (the actual value is 59.94 cycles per second). For monochrome transmissions only, the nominal values of line and field frequencies may be used.

(7) The aspect ratio of the transmitted television picture shall be 4 units horizontally to 3 units vertically.

(8) During active scanning intervals the scene shall be scanned from left to right horizontally and from top to bottom vertically, at uniform velocities.

(9) A carrier shall be modulated within a single television channel for both picture and synchronizing signals. For monochrome transmission, the two signals comprise different modulation ranges in amplitude, in accordance with the charts designated as Appendix III, Figures 3 and 4(b). For color transmission, the two signals comprise different modulation ranges in amplitude except where the chrominance penetrates the synchronizing region and the burst penetrates the picture region, in accordance with the charts designated as Appendix III, Figures 3 and 4(a).

(10) A decrease in initial light intensity shall cause an increase in radiated power (negative transmission).

(11) The reference black level shall be represented by a definite carrier level, independent of light and shade in the picture.

(12) The blanking level shall be transmitted at 75 \pm 2.5 per cent of the peak carrier level.

(13) The reference white level of the luminance signal shall be 12.5 \pm 2.5 per cent of the peak carrier level.

(14) The signals radiated shall have horizontal polarization.

(15) An effective radiated power of the aural transmitter not less than 50 percent nor more than 70 percent of the peak radiated power of the visual transmitter shall be employed.

(16) The peak-to-peak variation of transmitter output within one frame of video signal due to all causes, including hum, noise, and low-frequency response, measured at both scanning synchronizing peak and blanking level, shall not exceed 5 percent of the average scanning synchronizing peak signal amplitude.²⁰

(17) The reference black level shall be separated from the blanking level by the setup interval, which shall be 7.5 \pm 2.5 percent of the video range from blanking level to the reference white level.

(18) For monochrome transmission, the transmitter output shall vary in substantially inverse logarithmic relation to the brightness of the subject. No tolerances are set at this time.²⁰

(19) The color picture signal shall correspond to a luminance component transmitted as amplitude modulation of the picture carrier and a simultaneous pair of chrominance components transmitted as the amplitude modulation sidebands of a pair of suppressed subcarriers in quadrature.

(20) Equation of complete color signal.

(i) The color picture signal has the following composition:

$$E_M = E_Y' + \left\{ E_Q' \sin(\omega t + 33^\circ) + E_I' \cos(\omega t + 33^\circ) \right\}$$

where

$$E_Q' = 0.41 (E_B' - E_Y') + 0.48 (E_R' - E_Y')$$

$$E_I' = -0.27 (E_B' - E_Y') + 0.74 (E_R' - E_Y')$$

$$E_Y' = 0.30 E_R' + 0.59 E_G' + 0.11 E_B'$$

For color-difference frequencies below 500 kc (see (iii) below), the signal can be represented by:

$$E_M = E_Y' + \left\{ \frac{1}{1.14} \left[\frac{1}{1.78} (E_B' - E_Y') \sin \omega t + (E_R' - E_Y') \cos \omega t \right] \right\}$$

(ii) The symbols in (i) have the following significance:

E_M is the total video voltage, corresponding to the scanning of a particular picture element, applied to the modulator of the picture transmitter.

E_Y' is the gamma-corrected voltage of the monochrome

²⁰ These items are subject to change but are considered the best practice under the present state of the art. They will not be enforced pending a further determination thereof.

(black-and-white) portion of the color picture signal, corresponding to the given picture element.²¹

E_Q' and E_I' are the amplitudes of two orthogonal components of the chrominance signal corresponding respectively to narrow-band and wide-band axes.

E_R' , E_G' , and E_B' are the gamma-corrected voltages corresponding to red, green, and blue signals during the scanning of the given picture element.

ω is the angular frequency and is 2π times the frequency of the chrominance subcarrier.

The portion of each expression between brackets in (i) represents the chrominance subcarrier signal which carries the chrominance information.

The phase reference in the E_M equation in (i) is the phase of the burst $+180^\circ$, as shown in Figure 4(c). The burst corresponds to amplitude modulation of a continuous sine wave.

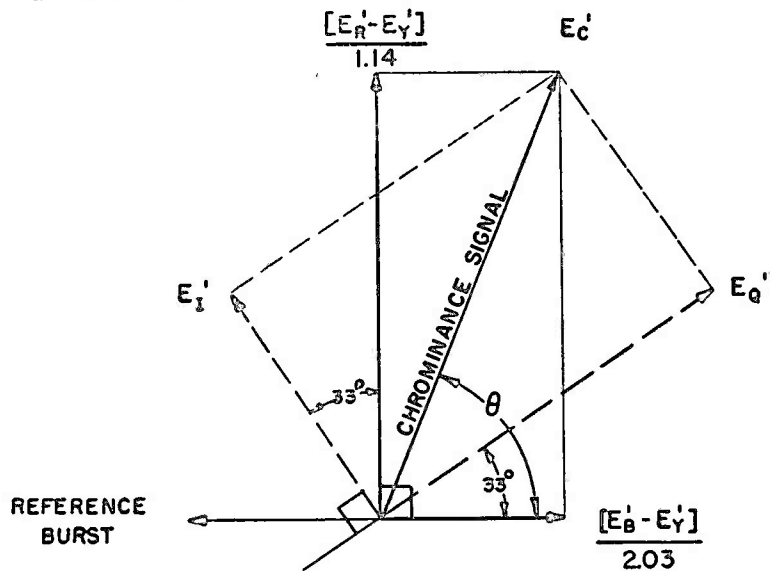


FIGURE 4(c)

(iii) The equivalent bandwidth assigned prior to modulation to the color difference signals E_Q' and E_I' are as follows:

- Q-channel bandwidth
 at 400 kc less than 2 db down
 at 500 kc less than 6 db down
 at 600 kc at least 6 db down

- I-channel bandwidth
 at 1.3 mc less than 2 db down
 at 3.6 mc at least 20 db down

(iv) The gamma corrected voltages E_R' , E_G' , and E_B' are suitable for a color picture tube having primary colors with the following chromaticities in the CIE system of specification:

	x	y
Red (R)	0.67	0.33
Green (G)	0.21	0.71
Blue (B)	0.14	0.08

and having a transfer gradient (gamma exponent) of 2.2²² associated with each primary color. The voltages E_R' , E_G' , and E_B' may be respectively of the form E_{R1}/γ , E_{G1}/γ , and E_{B1}/γ although other forms may be used with advances in the state of the art.

(v) The radiated chrominance subcarrier shall vanish on the reference white of the scene.^{22a}

(vi) E_Y' , E_Q' , E_I' and the components of these signals shall match each other in time to 0.05 microseconds.

(vii) The angles of the subcarrier measured with respect to the burst phase, when reproducing saturated primaries and their complements at 75 per cent of full amplitude, shall be within $\pm 10^\circ$ and their amplitudes shall be within ± 20 percent of the values specified above. The ratios of the measured amplitudes of the subcarrier to the

²¹ Forming of the high frequency portion of the monochrome signal in a different manner is permissible and may in fact be desirable in order to improve the sharpness on saturated colors.

²² At the present state of the art it is considered inadvisable to set a tolerance on the value of gamma and correspondingly this portion of the specification will not be enforced.

^{22a} The numerical values of the signal specification assume that this condition will be reproduced as CIE Illuminant C ($x = 0.310$, $y = 0.316$).

luminance signal for the same saturated primaries and their complements shall fall between the limits of 0.8 and 1.2 of the values specified for their ratios. Closer tolerances may prove to be practicable and desirable with advance in the art.

III. Section 3.687 is amended as follows:

A. Delete subparagraph (a) and substitute the following:

§ 3.687. Transmitters and associated equipment—(a) *Visual transmitter.* (1) For monochrome transmission only, the over-all attenuation characteristics of the transmitter, measured in the antenna transmission line after the vestigial sideband filter (if used), shall not be greater than the following amounts below the ideal demodulated curve. (See Appendix III, Figure 7.)

- 2 db at 0.5 mc
- 2 db at 1.25 mc
- 3 db at 2.0 mc
- 6 db at 3.0 mc
- 12 db at 3.5 mc

The curve shall be substantially smooth between these specified points, exclusive of the region from 0.75 to 1.25 mc.²⁷

(2) For color transmission, the standard given by § 3.687(a)(1) applies except as modified by the following: A sine wave of 3.58 mc introduced at those terminals of the transmitter which are normally fed the composite color picture signal shall produce a radiated signal having an amplitude (as measured with a diode on the R.F. transmission line supplying power to the antenna), which is down 6 ± 2 db with respect to a signal produced by a sine wave of 200 kc. In addition, the amplitude of the signal shall not vary by more than ± 2 db between the modulating frequencies of 2.1 and 4.18 mc.

(3) The field strength or voltage of the lower sideband, as radiated or dissipated and measured as described in subparagraph (4) of this paragraph, shall not be greater than -20 db for a modulating frequency of 1.25 mc or greater and in addition, for color, shall not be greater than -42 db for a modulating frequency of 3.579545 mc (the color subcarrier frequency). For both monochrome and color, the field strength or voltage of the upper sideband as radiated or dissipated and measured as described in subparagraph (4) of this paragraph shall not be greater

ASSUMED IDEAL DETECTOR OUTPUT

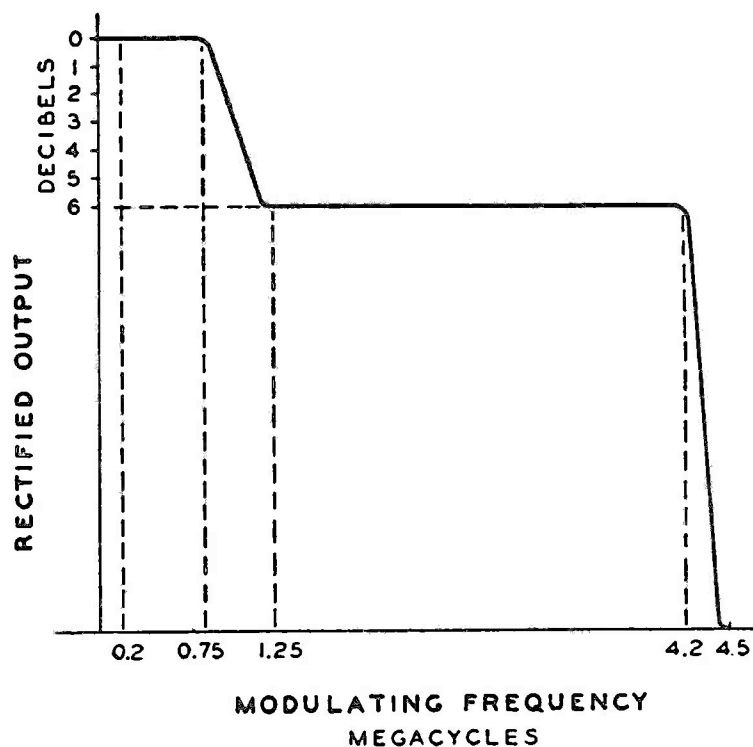


FIGURE 7

²⁷ Output measurement shall be made with the transmitter operating into a dummy load of pure resistance and the demodulated voltage measured across this load. The ideal demodulated curve is that shown in Appendix III, Figure 7.

than -20 db for a modulating frequency of 4.75 mc or greater. ²⁵ ^{25a}

(4) The attenuation characteristics of a visual transmitter shall be measured by application of a modulating signal to the transmitter input terminals in place of the normal composite television video signal. The signal applied shall be a composite signal composed of a synchronizing signal ²⁶ to establish peak output voltage plus a variable frequency sine wave voltage occupying the interval between synchronizing pulses. The axis of the sine wave in the composite signal observed in the output monitor shall be maintained at an amplitude 0.5 of the voltage at synchronizing peaks. The amplitude of the sine wave input shall be held at a constant value. This constant value should be such that at no modulating frequency does the maximum excursion of the sine wave, observed in the composite output signal monitor, exceed the value of 0.75 of peak output voltage. The amplitude of the 200 kilocycle sideband shall be measured and designated zero db as a basis for comparison. The modulation signal frequency shall then be varied over the desired range and the field strength or signal voltage of the corresponding sidebands measured. As an alternate method of measuring, in those cases in which the automatic d-c insertion can be replaced by manual control, the above characteristic may be taken by the use of a video sweep generator and without the use of pedestal synchronizing pulses. The d-c level shall be set for mid-characteristic operation.

(5) A sine wave, introduced at those terminals of the transmitter which are normally fed the composite color picture signal, shall produce a radiated signal having an envelope delay, relative to the average envelope delay between 0.05 and 0.20 mc, of zero microseconds up to a frequency of 3.0 mc and then linearly decreasing to 4.18 mc so as to be equal to -0.17 microseconds at 3.58 mc. The tolerance on the envelope delay shall be ± 0.05 microseconds at 3.58 mc. The tolerance shall increase linearly to ± 0.1 microseconds, down to 2.1 mc, and remain at

²⁵ Field strength measurements are desired. It is anticipated that these may not yield data which are consistent enough to prove compliance with the attenuation standards prescribed above. In that case, measurements with a dummy load of pure resistance, together with data on the antenna characteristics, shall be taken in place of over-all field measurements.

^{25a} Television stations shall have until July 1, 1954 for compliance with the requirements of this subparagraph with respect to attenuation of the upper sidebands.

²⁶ The "synchronizing signal" referred to in this section means either a standard synchronizing wave form or any pulse that will properly set the peak.

± 0.1 microseconds down to 0.2 mc. ^{27a} The tolerance shall also increase linearly to ± 0.1 microseconds at 4.18 mc.

(6) The radio frequency signal, as radiated, shall have an envelope as would be produced by a modulating signal in conformity with Appendix III, Figure 4(a) or (b), as modified by vestigial sideband operation specified by Appendix III, Figure 3.

(7) The time interval between the leading edges of successive horizontal pulses shall vary less than one half of one per cent of the average interval, however, for color transmissions, § 3.682(a)(5) and § 3.682(a)(6) shall be controlling.

(8) The rate of change of the frequency of recurrence of the leading edges of the horizontal synchronizing signals shall be not greater than 0.15 per cent per second, the frequency to be determined by an averaging process carried out over a period of not less than 20, nor more than 100 lines, such lines not to include any portion of the blanking interval. However, for color transmissions, § 3.682(a)(5) and § 3.682(a)(6) shall be controlling.

(9) Sufficient monitoring equipment shall be employed to determine whether the visual signal complies with the requirements of this subpart.

(10) For color transmission the transfer characteristic (that is the relationship between the transmitter RF output and video signal input) shall be substantially linear between the reference black and reference white levels.

B. Delete subparagraph (c)(1) of § 3.687 and substitute the following:

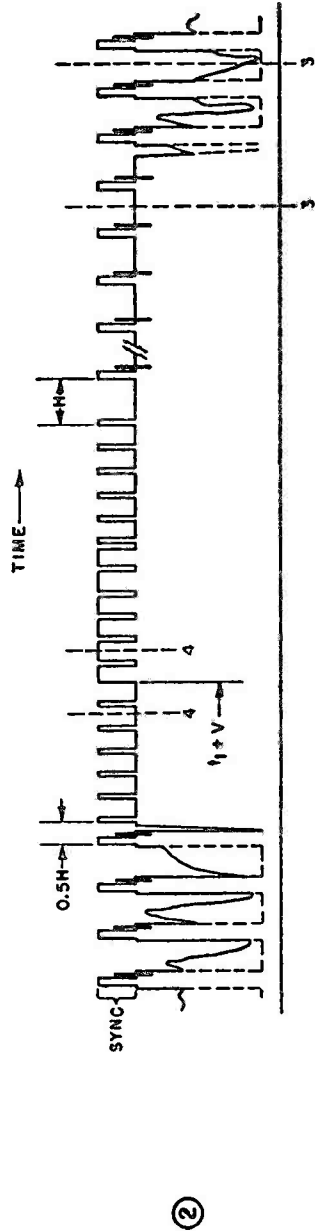
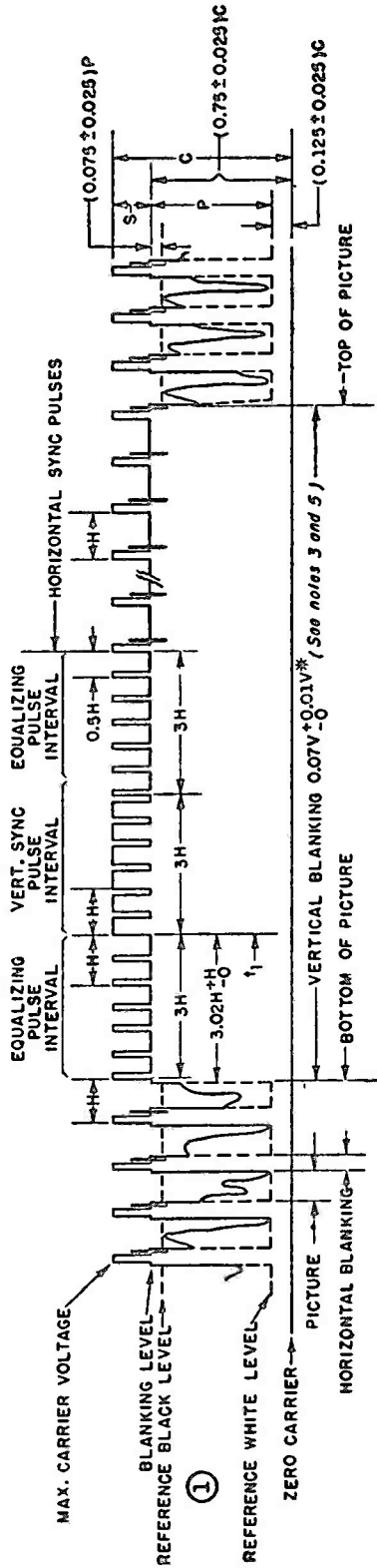
(c) *Requirements applicable to both visual and aural transmitters.*

(1) Automatic means shall be provided in the visual transmitter to maintain the carrier frequency within one kilocycle of the authorized frequency; automatic means shall be provided in the aural transmitter to maintain the carrier frequency within four kilocycles of the assigned aural carrier frequency or, alternatively, 4.5 megacycles above the actual visual carrier frequency within five kilocycles. For color transmission the aural carrier shall be maintained 4.5 megacycles above the visual carrier within ± 1 kilocycle. When required by § 3.606, the visual and aural carrier frequencies are to be offset in frequency by 10 kilocycles (plus or minus, as indicated) from the normal carrier frequencies.

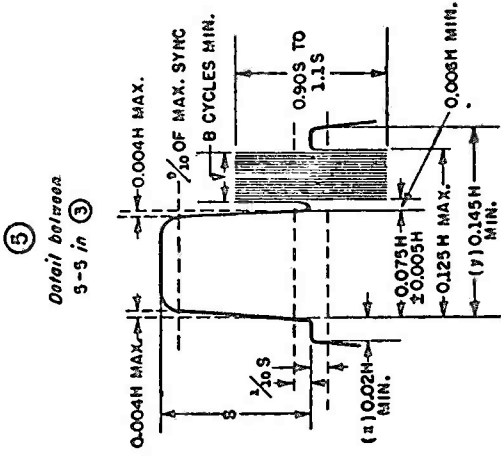
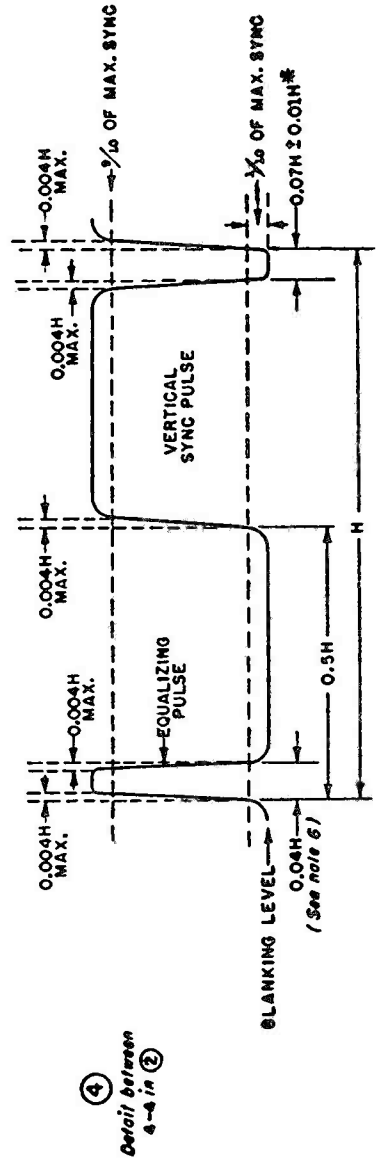
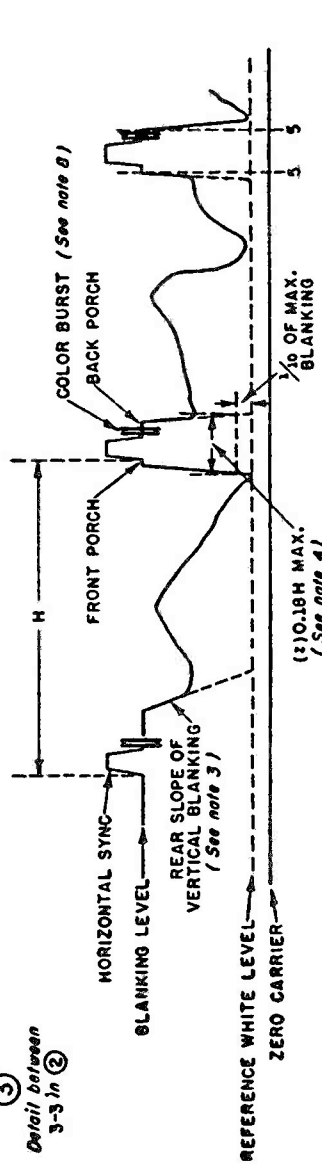
IV. Appendix III to subpart E is amended as follows: Delete Figures 3, 4, and 7 and add the attached Figures 3, 4(a), 4(b), 4(c), and 7.

^{27a} Tolerances for the interval of 0.0 to 0.2 mc are not specified at the present time.

TELEVISION SYNCHRONIZING WAVEFORM FOR COLOR TRANSMISSION



Horizontal dimensions not to scale in 1, 2 and 3

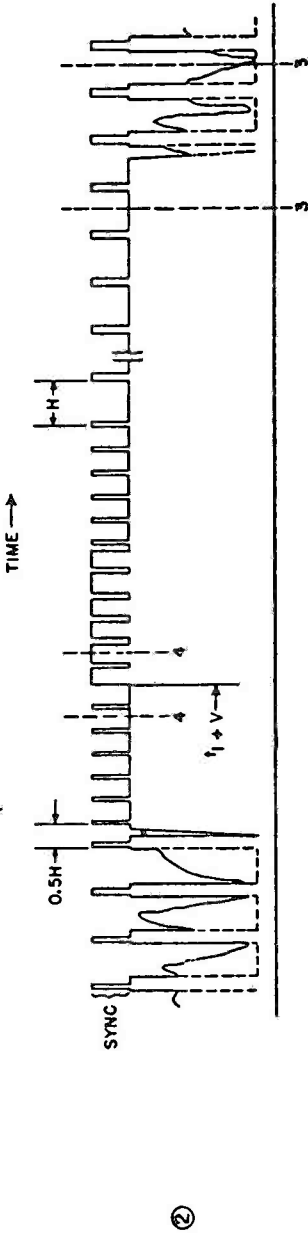
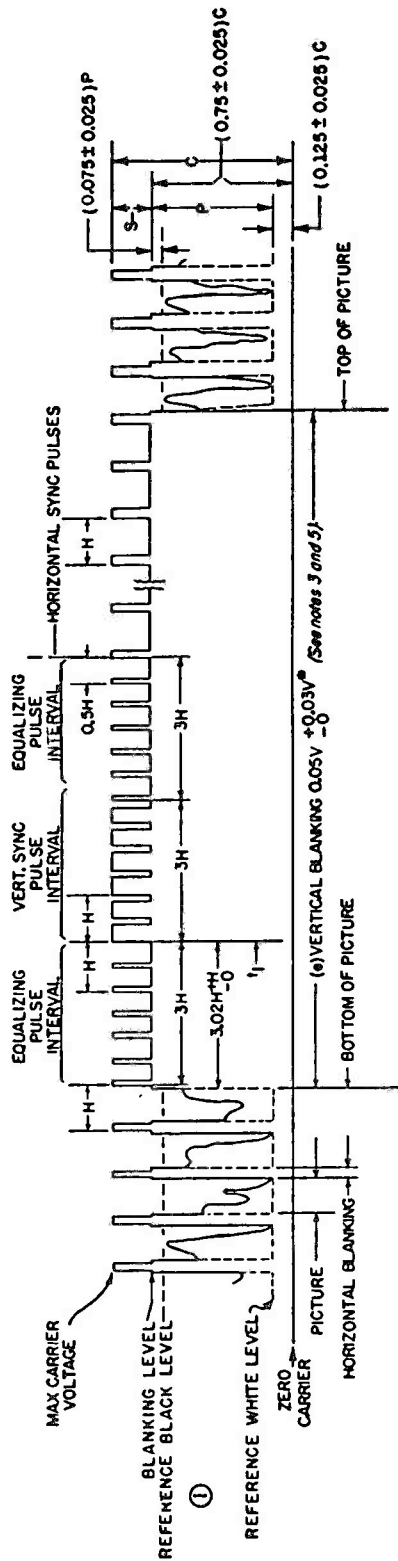


NOTES

- 1 H = Time from start of one line to start of next line.
- 2 V = Time from start of one field to start of next field.
- 3 Leading and trailing edges of vertical blanking should be complete in less than 0.1H.
- 4 Leading and trailing slopes of horizontal blanking must be steep enough to preserve minimum and maximum values of (x+y) and (x) under all conditions of picture content.
- 5 Dimensions marked with asterisk indicate that tolerances given are permitted only for long time variations and not for successive cycles.
- 6 Equalizing pulse area shall be between 0.45 and 0.5 of area of a horizontal sync pulse.
- 7 Color burst follows each horizontal pulse, but is omitted following the equalizing pulses and during the broad vertical pulses.
- 8 Color bursts to be omitted during monochrome transmission.
- 9 The burst frequency shall be 3.579545 mc. The tolerance on the frequency shall be ±10 cycles with a maximum rate of change of frequency not to exceed 1/10 cycle per second per second.
- 10 The horizontal scanning frequency shall be 2/3 times the burst frequency.
- 11 The dimensions specified for the burst determine the times of starting and stopping the burst, but not its phase. The color burst consists of amplitude modulation of a continuous sine wave.
- 12 Dimension "P" represents the peak excursion of the luminance signal from blanking level, but does not include the chrominance signal.
- 13 Dimension "S" is the sync amplitude above blanking level.
- 14 Dimension "C" is the peak carrier amplitude.
- 15 Refer to text for further explanations and tolerances.

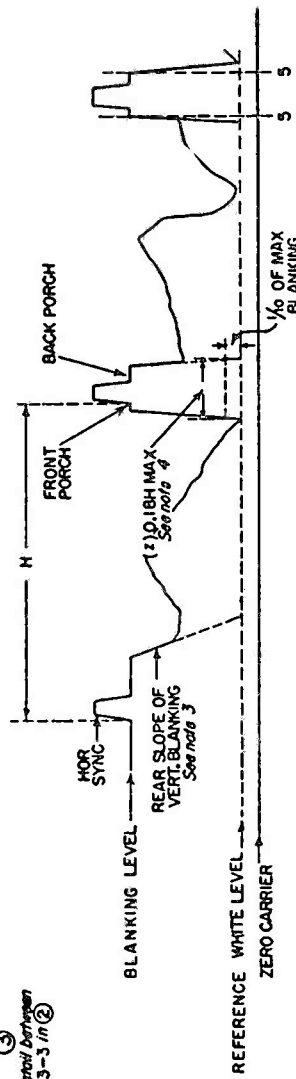
FIGURE 4(a)

TELEVISION SYNCHRONIZING WAVEFORM FOR MONOCHROME TRANSMISSION ONLY

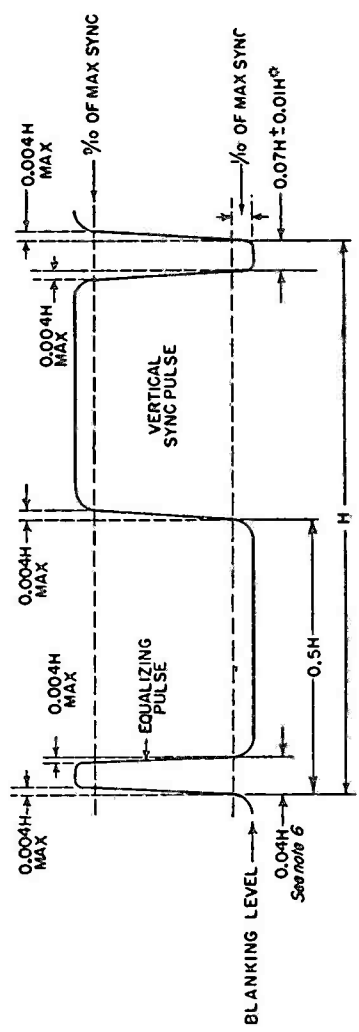


Horizontal dimensions not to scale in 1, 2 and 3

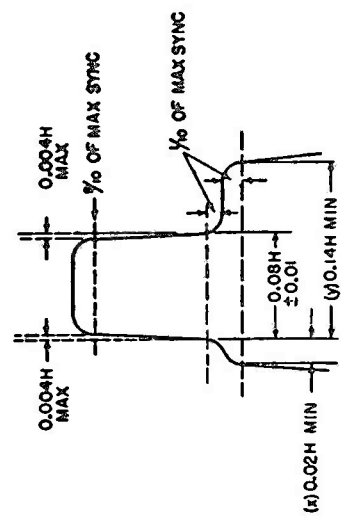
(3) Detail between 3-3 in (2)



(4) Detail between 4-4 in (2)



(5) Detail between 5-5 in (3)



NOTES

- 1 H = Time from start of one line to start of next line.
- 2 V = Time from start of one field to start of next field.
- 3 Leading and trailing edges of vertical blanking should be complete in less than 0.1H.
- 4 Leading and trailing slopes of horizontal blanking must be steep enough to preserve minimum and maximum values of (xy) and (z) under all conditions of picture content.
- 5 Dimensions marked with asterisk indicate that tolerances given are permitted only for long time variations and not for successive cycles.
- 6 Equalizing pulse area shall be between 0.45 and 0.5 of area of a horizontal sync pulse.
- 7 Refer to text for further explanations and tolerances.

FIGURE 4 (b)

MARTIN CODEL'S
AUTHORITATIVE NEWS SERVICE
FOR MANAGEMENT
OF THE
VISUAL BROADCASTING
AND ALLIED ELECTRONICS
ARTS AND INDUSTRY

Television Digest

with **ELECTRONICS** REPORTS

PUBLISHED WEEKLY BY RADIO NEWS BUREAU • WYATT BLDG. 1 • WASHINGTON 5, D.C. • TELEPHONE STERLING 3-1755 • VOL. 9: No. 52

December 26, 1953

**In this
issue:**

Multiple Owners 'Definitely' Seek UHF, page 1
Color Unleashed, Active on All Fronts, page 1
FCC Grants 5, Defends 'Intermixture', page 3
353 Now on Air, Fewer Starters in 1954, page 4
Telecasting Fast Forging Ahead of Radio, page 5

Armed Services' Own TV Stations, page 7
Higher Power UHF & Upcoming New Stations, page 8
First Low-End Price Cuts Presage More, page 9
Intra-Industry Arguments Over Color, page 11
What Expiration of EPT Means to Electronics, page 13

MULTIPLE OWNERS 'DEFINITELY' SEEK UHF: Proposal to lift limit on station ownership from 5 to 7 -- no more than 5 of them in vhf -- was issued by FCC this week, and there are certain to be "customers" for additional stations if rule is made final.

All using the word "definitely", ABC, CBS and NBC told us they'll go after 2 uhfs each as soon as possible; Dr. Allen B. DuMont said no decision has been made. George Storer indicated interest in attractive markets. The station brokers report buyers have eyes on specific stations now. None would divulge which cities they're interested in or whether they plan to buy or to file applications, or both.

Why the Commission chose to propose a rule (FCC Notice 53-1720) rather than adopt it finally wasn't stated, but fact that Sen. Edwin Johnson filed opposition to the idea -- although quite some time ago -- may have prompted caution.

Reason for proposing change, FCC said, is "to encourage the rapid and effective development of the uhf band." Last week (Vol. 9:51), we discussed Commission's reasons in detail; generally, FCC saw potential for far more good than harm.

Comments are due Feb. 1, replies 10 days later. Comr. Bartley concurred in proposing the rule "for the purpose of eliciting current comments and arguments" but said previous arguments haven't convinced him of wisdom of changing the rules. Comr. Hennock dissented, wants first to "explore all facets of the uhf problem."

COLOR UNLEASHED, ACTIVE ON ALL FRONTS: FCC's color decision last week gave full rein to developments in the 3 major phases of the new medium -- programming, transmission and receiver production-distribution. (For latest on manufacturing, distribution and patent competition, see pp. 9-12.)

On transmission end, biggest buildup is still towards NBC-TV's coast-to-coast colorcast of Tournament of Roses Parade Jan. 1. (Rose Bowl game itself will be in monochrome.) AT&T still guarantees "full" color to only 18: Los Angeles, KNBH; San Francisco, KRON-TV; Salt Lake City, KDYL-TV; Denver, KOA-TV; Omaha, WOW-TV; St. Paul, KSTP-TV; St. Louis, KSD-TV; Milwaukee, WTMJ-TV; Chicago, WNBQ; Detroit, WWJ-TV; Toledo, WSPD-TV; Cincinnati, WLWT; Cleveland, WNBK; New York, WNBTV; Philadelphia, WPTZ; Wilmington, WDEL-TV; Baltimore, WBAL-TV; Washington, WNBW.

* * * *

But these aren't only stations to be equipped for network rebroadcasts by Jan. 1, because RCA is committed to equipping stations according to priority of purchase. Therefore, following additional stations are due to be equipped by Jan. 1 -- most of which, however, won't get Tournament parade in color:

NBC -- Ft. Worth, WBAP-TV; Oklahoma City, WKY-TV; Jackson, WJTV; Grand Rapids, WOOD-TV; Johnstown, WJAC-TV; Wilkes-Barre, WBRE-TV; New Haven, WNHC-TV.

CBS -- Los Angeles, KNXT; Salt Lake City, KSL-TV; Omaha, KMTV; Minneapolis, WCCO-TV; Chicago, WBBM-TV; Cleveland, WEWS; Buffalo, WBEN-TV; Baltimore, WMAR-TV; Norfolk, WTAR-TV; New York, WCBS-TV. Only ABC affiliate is WXEL, Cleveland.

At least 4 of these plan to get the Jan. 1 show without benefit of AT&T: WNHC-TV, New Haven, and WBRE-TV, Wilkes-Barre, plan to take it off-air from WNBT; WJAC-TV, Johnstown, will get it via "unguaranteed" AT&T microwave from Pittsburgh; WOOD-TV, Grand Rapids, will use its private microwave.

RCA has been operating on "emergency" round-the-clock schedule to equip the stations. Equipment was rushed from Camden plant to airport, then air-expressed to stations where RCA Service Co. technicians worked day and night to install it. Five installation crews timed their work and itineraries according to shipments. This week end, Sat. & Sun., RCA planned to keep going, delivering with its own trucks.

On another equipment front, DuMont has shipped its new "Colcervision" flying-spot color slide scanners to CBS and to equipment makers Motorola (receivers) and Eitel-McCullough (picture tubes). Scanner provides good picture for transmission of program material and for testing equipment.

Authoritative report on color film transmission is being readied for release in January by NTSC Panel 11-A, headed by consultant Dr. Alfred N. Goldsmith.

* * * *

Here are examples of what stations are doing with their brand new signals:

(1) Omaha. WOW-TV reported successful color transmission Dec. 20 after 3 nights' work by RCA and station technicians. Opera "Amahl and the Night Visitors" was shown to VIPs and their wives. For Jan. 1, some 300 guests are invited, including civic and business leaders, sponsors, ad agencies, press.

(2) Philadelphia. Westinghouse's WPTZ claimed to be first with local color commercial, with Dec. 18 color slides of "Falso" commercial for Fels & Co. Program included film clips from Disney's Technicolor "Living Desert", projected via Philco's 35mm continuous scanner (Vol. 9:18) and microwaved from Philco labs.

(3) Denver. KOA-TV plans gala Jan. 1 affair for 1500 guests (Vol. 9:50). Program will go directly to Cosmopolitan Hotel rather than to station.

* * * *

How about the end product? Is all the fuss and fury about color worth it? Consider these comments on "Amahl" by a couple of TV-radio columnists who normally don't enthuse without considerable stimulation:

Jack Gould, New York Times: "The beauty and loveliness of full color TV was bestowed last night on Gian-Carlo Menotti's modern Christmas classic...The effect was striking in the home, like a succession of Yuletide cards come to life...The addition of color [was] much the same as adding another dimension. [It was] a moving picture of theatrical grandeur."

Harry MacArthur, Washington Star: "Any hesitancy you may have about small-screen-large-price color TV vanishes when you are face-to-face with it. Color makes a difference you can't believe without seeing. It is something other than the difference between black-&-white and color movies, too.

"There is nothing artificial about the color that glows with life on the face of the picture tube. This is just complete TV, delivering to you all the picture you would see if you were standing beside the camera, and it is exciting stuff. The lapse back into monochrome [afterwards] was almost a shock, for once your eye is attuned to color the normal gray picture is a singularly lifeless one...The trade isn't going to have trouble selling sets once it gets a few demonstration models."

Gould is particularly color-savvy, being the only newsman with a color set (Emerson) in his home. His rhapsody over "Amahl" had been preceded by column built around theme "the show's the thing, whether in color or black-&-white." After viewing Donald O'Connor's "uninspired" job on Nov. 22 Comedy Hour (Vol. 9:48), he wrote:

"Enthusiasts for color TV are going to have to readjust their sights [because] the novelty of color can wear off quickly [and] the acid test of the tinted medium will be the same as in black-&-white -- how good is the show. Color by itself will not save any show. If the quality of the color program is either second rate or not to individual taste, the set owner indicates no reluctance to turn the color off and look for something better in black-&-white."

Gould also noted CBS's improvement this week: "In song, dance and comedy, the CBS colors, for perhaps the first time, had real stability and depth. Their texture still may not be up to NBC's tints, but in vividness they now may be ahead." The importance of the CBS development is that it is employing a much simplified camera...With the color TV race now in full swing, it begins to look as if many advance prognostications may have to be revised."

We watched "Amahl" and we shared the columnists' feelings completely. We also watched NBC's special "Season's Greetings" Dec. 22, found colors good but the Tums commercials extremely distracting and in bad taste. Sidelight: KSD-TV, St. Louis, invited Tums' president and press to show but color never came through, AT&T not being quite fully prepared.

Color film of "Dragnet" was to be transmitted in usual time, Thu. Dec. 24 -- but this Letter went to press before we could report on it. From now on, you can expect at least one color show weekly from NBC, same from CBS, non-simultaneously, so that sponsors especially can observe results. Both intend to give each of their advertisers at least one crack at color during 1954.

Color set tuning is still not child's play. It took great care to keep the colors properly balanced. Another observation: FCC's statement in its decision -- that compatible pictures of color transmissions on monochrome sets are poorer than on regular black-&-white -- certainly wasn't true of "Amahl". One engineer at FCC told us he couldn't believe it was being transmitted in color. And "Season's Greetings" also came through very well as we compared it on color and monochrome screens.

FCC GRANTS 5, DEFENDS 'INTERMIXTURE': Policy of intermixing vhf-uhf channels was strongly defended this week by FCC, as it issued 5 CPs and an initial decision, and published third bi-monthly hearing priority list.

This week's CPs: Thomasville, Ga., E.D. Rivers Sr., Ch. 6; San Diego, Cal., Elliott L. Cushman, Ch. 21; Joplin, Mo., KSWM, Ch. 12; Seattle, U of Washington, Ch. 9 (educational); Newport, Ky., WNOP, Ch. 74 (Cincinnati), final decision.

Initial decision favored Ch. 2 grant to WJBO, Baton Rouge, La. -- on condition stockholders divest themselves of holdings in local WLCS -- after competing Southern TV Co. dismissed.

Thomasville grantee E.D. Rivers Sr., ex-Gov. of Georgia, is principal owner of upcoming WMIE-TV, Miami (Ch. 27) and WOBS-TV, Jacksonville (Ch. 30). San Diego grantee owns San Diego Shopping News and Southwest Color Press.

* * * *

New hearing priority list is less than half the size of last one issued in October, signals virtual end of big post-freeze waiting line. (For full list, see TV Addenda 17-Y herewith.) In next 2 months, almost entire backlog of applications will at least have started through Commission's processing line.

Tabulation has only 30 cities, down from 63 in October (Vol. 9:33), indicating FCC has been processing contested applications at rate of about 16 a month.

The 22 cities left in Group A (those with no operating stations) are mostly small ones, starting with Lexington, Ky. (pop. 55,534) and ending with Hatfield, Ind. (410). The 8 cities in Group B (those with stations now on air): Las Vegas, with one station; Buffalo, San Antonio & Omaha, with 2 stations each; San Francisco, Minneapolis, Boston & Pittsburgh, with 3 stations each.

* * * *

Faced with new attacks on policy of mixing vhf & uhf channel allocations, FCC took occasion this week to stress that it still considers "an assignment plan based on intermixture of vhf & uhf channels both necessary and desirable." Denying petition of KSTM-TV (Ch. 36) to remove 2 vhf channels from St. Louis and add 4 more uhf, Commission urged "a long-range view" and asserted:

"The Commission stated its view in the Sixth Report -- and we are still of this view -- that uhf stations will eventually compete on a favorable basis with vhf stations. If our nationwide assignment plan is to prove effective, uhf stations must constitute an integral part of a single, nationwide TV service. [We] do not

believe that the Commission's principles of TV assignment should be departed from merely because of some temporary adverse effect on private interests." Chairman Hyde was absent; Comr. Webster didn't participate in order.

Commission decided against changing mileage separation rules, dismissed the petition of WSAL, Logansport, Ind. to permit channel assignments to cities coming within 5 mi. of minimum separation from authorized transmitter sites in other cities -- provided site of new station complies with the minimum.

Though it had proposed to approve the change (Vol. 9:38), FCC now sees no "necessity at this time" to alter TV assignment principles, but says it will explore possible changes "at some later date in the light of additional data and experience." Comr. Bartley dissented. As result of decision, FCC dismissed petition by WTIP, Charleston & WMON, Montgomery, W.Va. asking addition of Ch. 2 to Montgomery.

* * * *

In other actions, the FCC this week:

(1) Called 4 more grantees on carpet -- including subscription-TV petitioner WDHN, New Brunswick, N.J. (Ch. 47) -- telling them they can't be given more time to build, on basis of evidence. Besides WDHN, they were WMRP-TV, Lewistown, Pa. (Ch. 38); WMRI-TV, Marion, Ind. (Ch. 29); KMON-TV, Great Falls, Mont. (Ch. 3).

(2) Gave 2 other grantees 6 more months to build -- WCBI-TV, Columbus, Miss. (Ch. 28); WITH-TV, Baltimore (Ch. 60) -- and at same time began proceedings to let WITH-TV switch to Ch. 72 to permit station to use highest site in area without violating FCC spacing requirements.

(3) Granted petition by North Shore Bcstg. Co. (Harold R. Murphy) to reinstate its application for Milwaukee's Ch. 31 -- formerly granted to WMIL-TV. North Shore dismissed application last August, paving way for WMIL-TV grant, but latter dropped CP 3 weeks ago to apply for newly assigned Ch. 6 (Vol. 9:49).

Two more CPs were returned this week: KEPO-TV, El Paso (Ch. 13), telling Commission that city, already served by 2 stations, can't support 3; KTVF, Eugene-Springfield, Ore. citing usual economic reasons -- "lack of interest" by networks, vhf competition, sluggishness of set sales, etc.

353 NOW ON AIR, FEWER STARTERS IN 1954: Pace of new-station starts will doubtless slow down next few months, even though a half dozen or so more are due before end of this year and several dozen say they'll get going in January or February. Reasons for slowdown: (1) Winter weather hampering construction in many parts of country; (2) Diminishing competitive urge as one-station markets disappear; (3) Stalling on part of many, particularly uhf grantees proposing to wait-&-see how higher powers and maybe subscription TV come along.

If 1954 brings as many as 200 more stations, it will be surprising -- this despite 239 CPs still outstanding and FCC's continually generous grants.

Up to time we went to press Thu. p.m., 6 more stations were testing -- and one is due in Canada. All but one were vhf. Denver gets its 4th vhf, obviating the likelihood anybody will go ahead with uhf there. Montreal gets second outlet. Other towns getting stations were medium-sized, mostly new markets. Total now is 353 on air, of which 232 are vhf, 121 uhf. Latest starters up to Dec. 24:

KOA-TV, Denver (Ch. 4) started testing Dec. 22, began programming Xmas Eve, despite storm that recently wrecked its partially constructed tower atop Lookout Mt. (Vol. 9:52). Though temporary tower is being used with 25-kw RCA transmitter, gen. mgr. Don Searle reports it starts with full 100-kw ERP. Station will get huge promotional boost as outlet for NBC-TV color starting Jan. 1. John Henry is sales mgr.; Judson Wood, program operations mgr.; Robert H. Owen, chief engineer. Station's owners are actor Bob Hope and large group of local citizens, who combined last year to purchase 50-kw KOA from NBC. Base rate is \$500. Rep is Petry.

KSLA, Shreveport (Ch. 12), first TV station in that rich community in north-west corner of Louisiana, began testing Dec. 22 -- and associate mgr. Deane R. Flett wires, "Excellent reception reported in the immediate area. One set dealer in Marshall, Tex., 45 mi. distant, reported a 260 mv/m signal." Station is licensed to

Interim Television Corp. which, as name infers, is combination of rival local groups (including KRMD & KCIJ) who built and shared costs pending FCC hearing decision that will decide which one should get CP (Vol. 9:38). Pres. is Don George, theatremen; chief engineer is Morris C. Barton Jr. Equipment is RCA. Base rate is \$250, and station will be interconnected with all 4 networks. Rep is Raymer.

WNCT, Greenville, N.C. (Ch. 9), first TV in coastal plain community 71 mi. east of Raleigh, began test patterns Dec. 22 from 10-kw RCA transmitter with 12-bay antenna and 800-ft. Skyline tower. "Excellent coverage," says report from gen. mgr. A. Hartwell Campbell, who also manages radio WGCT, has tower construction business and heads big group of local investors underwriting project. It affiliates with ABC, CBS & DuMont. John G. Clark is sales mgr.; Margaret J. Laughinghouse, business mgr.; Hank Tribley, chief engineer. Base rate is \$200. Rep is Pearson.

WLBT, Jackson, Miss. (Ch. 3) began testing Dec. 20 with 25-kw RCA transmitter and 488-ft. Truscon tower. It goes commercial Dec. 28 as NBC affiliate. Second station in city (other being Jackson Clarion Ledger and News' Ch. 27 WJTV), it's licensed to old-line broadcaster Lamar Life Bcstg. Co. (WJDX) and owned in co-equal parts by Wiley P. Harris, pres.; Fred L. Beard, secy.-treas. & gen. mgr.; Maurice Thompson, v.p. & program mgr.; Peter Koch Lutken, v.p., pres., Lamar Life Insurance Co.; Wm. Calvin Wells III, v.p., attorney for Lamar Life. Frank Gentry is sales mgr.; Robt. Smathers, chief engineer. Base rate is \$200. Rep is Hollingbery.

KTVU, Stockton, Cal. (Ch. 36), about 60 mi. east of San Francisco and 45 mi. down valley from uhf-only Sacramento, began programming Dec. 18 after only a few days of test patterns. GE transmitter is throwing such good signal, reports gen. mgr. Knox LaRue, that viewer reports have come from 160 mi. north and south. LaRue is ex-San Francisco mgr. for Hollingbery, is 20% stockholder, with Fontana (Cal.) Herald-News owning 75% and L.E. Chennault, of KYNO, Fresno, 5%. Mgr. of operations is D.M. Greene, ex-KSTN, Stockton. Base rate is \$250. Rep is Hollingbery.

KMID-TV, Midland, Tex. (Ch. 2), about 125 mi. away from nearest other station (in Abilene, Tex.), began programs Dec. 20, will get service from ABC, DuMont & NBC. RCA-equipped, it's owned by group (headed by R.H. Drewry) owning KSWO-TV, Lawton, Okla. Sid Grayson, ex-KWFT, is gen. mgr. Base rate is \$200. Rep is Taylor.

* * * *

CBMT, Montreal (Ch. 6), 5th outlet of Canadian Broadcasting Corp. to get on air, was all set to begin testing RCA transmitter on Mt. Royal this weekend, regular programming to start Dec. 28. It will be the English-language outlet, as original CBC outlet CBFT (Ch. 2) goes over entirely to French. Francis Coleman is CBMT program mgr., Fernand Guerard his opposite number at CBFT, both reporting to Alphonse Ouimet, CBC director of TV for Montreal. CBMT will carry U.S. as well as CBC network shows. Two more CBC stations are projected -- CBWT, Winnipeg (Ch. 4), due in April; CBHT, Halifax (Ch. 3), in Oct. Others operate in Toronto, Ottawa, Vancouver.

TELECASTING FAST FORGING AHEAD OF RADIO: There's a chance that telecasting revenues this year will very nearly equal, may even surpass, those of radio broadcasting. For it looks like a \$450-475,000,000 year for TV's 4 networks and 350-odd stations.

Radio broadcasting's 4 nation-wide networks and 2500-odd AM stations (to say nothing of some 550 FM), enjoying flourishing business lately too, should come near to its record 1952 volume of \$473,100,000, as reported by FCC auditors. But there are some who think its sales curve has flattened out to a "plateau", even though NARTB's Dick Doherty thinks it may show as much as a 3% increase -- to \$490,000,000.

Figures are for time sales plus what FCC statisticians call revenues from "incidental broadcast activities." They do not include incalculable talent and production costs handled and paid for by sponsors & agencies direct. So it's reasonable to say combined TV-radio broadcasting businesses this year will exceed \$1 billion.

For TV at least, that's only the beginning -- for new stations are being added every day, old stations are increasing rates, and the business currently is fairly bursting its britches -- like the adolescent offspring of radio that it is.

Only definite TV revenue figures as yet available are FCC's for previous years, showing networks-stations combined took in \$324,000,000 in 1952, \$235,700,000

in 1951, \$105,900,000 in 1950, \$34,300,000 in 1949, \$8,700,000 in 1948. Figures were on the loss side for inceptive 1947 & 1946.

Comparable radio broadcasting figures: \$473,100,000 in 1952, \$450,400,000 in 1951, \$444,500,000 in 1950, \$413,800,000 in 1949, \$407,000,000 in 1948. [Both TV & radio figures, broken down as between networks & stations and showing earnings before taxes, are tabulated more completely on p. 351 of our TV Factbook No. 17.]

We know how the networks are faring, thanks to the Publishers Information Bureau's monthly reports, which for the 10 months through October show total of very nearly \$180,000,000 for time sales by the 4 TV networks -- CBS-TV & NBC-TV accounting for about \$77,000,000 each, ABC-TV \$16,000,000, DuMont \$8,500,000. But even if they are projected to an assured \$225,000,000 or more for the whole year, these figures are more apparent than real. They're based on one-time gross rates, which probably means that only about 60% of this sum actually goes into network coffers.

They're generally accepted as index to trends, however, and on the basis of the enormous upsurge they represent, the upsurge in national spot and local business on nearly all TV stations, higher rate cards -- and of course the more than doubled number of stations this year -- it's a good guesstimate that 1953 gross revenues could readily achieve \$475,000,000, or even higher.

Note: For 1952, Printers' Ink estimated \$580,100,000 spent by advertisers for time, talent and all other costs. Good guess is that this figure will go up to perhaps \$700,000,000 this year. Consider the report this week by the authority on TV film production & syndication, Billboard Magazine. It says that business grossed about \$50,000,000 this year from all types of film alone (see Telecasting Notes).

Personal Notes: Frank White, ex-NBC pres., named chairman of McCann-Erickson Corp. (International); George Giese promoted from v.p. to pres. of subsidiary operating company's 17 overseas offices . . . John K. Herbert, NBC v.p. in charge of TV network sales, resigns as of Jan. 1, will be succeeded by George H. Frey, v.p. & director of sales; Herbert also quits NBC board, has not yet announced plans . . . Sam Fuller, NBC-TV director of network programming and producer of *Colgate Comedy Hour*, promoted to director of TV network programs, succeeding Tom McAvity, now in charge of TV network programs div.; reporting to him are Mike Dann & Roy Passman, mgr. & administrative mgr., respectively, of network programming, as well as all producers . . . Kenneth Craig, ex-exec. asst. to H. Leslie Atlans, v.p. of CBS central div., named director of business affairs, CBS Radio, Hollywood, replacing Jack Meyers, now CBS-TV script coordinator . . . Guy Herbert promoted to v.p., Stuart MacKay to gen. mgr., All-Canada Radio Facilities Ltd., national sales reprs . . . Frank A. Carter, from KWFT-TV & KWFT, Wichita Falls, to Dallas office of Blair-TV, replacing Steve Beard, shifted to N. Y. office . . . Alex Roseman, recently gen. mgr. of WCAN-TV & WCAN, Milwaukee, ex-sales v.p. of WCAU-TV & WCAU, Philadelphia, becomes N. Y. business mgr. of new WTVI, St. Louis (Belleville, Ill.), working with national rep firm, Weed . . . Winston Kirby, ex-O. L. Taylor Co., joins Weed & Co. . . . Irvin Paul Sulds, ex-theatre TV consultant to ABC-Paramount, joins Theatre Network Television Inc. (Nathan L. Halpern, pres.) as specialist in sales and production of its Tele-Sessions, closed-circuit system . . . Charles W. Stone, ex-WNAO-TV, Raleigh, succeeds Martin Silver as excc. v.p. & gen. mgr. of WTVU, Scranton, Pa. . . . Howard S. Frazier, Washington TV-radio management consultant, named gen. mgr. of proposed St. Louis Ch. 11 station by applicant 220 Television Inc., due to start hearings Dec. 31 in competition with KMOX, St. Louis Amusement Co. & St. Louis Telecast Inc.; he proposes to acquire about 10% interest in licensee and continue Washington business under lease arrangement . . . Robert B. Hoag, ex-CBS TV spot sales, replaces W. O. Edholm who resigns as gen. sales mgr. of

KFMB-TV, San Diego . . . Lee Ruwitch reelected exec. v.p., John Allen elected v.p., in addition to election of Jack Shay as operations v.p., WTVJ, Miami . . . Robert B. Hoag, ex-CBS-TV spot sales, on Jan. 4 becomes commercial mgr. of KFMB-TV, San Diego . . . Dixon Harp has resigned as gen. mgr. of WETV, Macon, reports Alfred Lowe, exec. v.p.; Carl Williams, new sales mgr., replacing Barney Kobres . . . A. Roy Briscoe named asst. production mgr. of new WSTV-TV, Steubenville, O. (Ch. 9) . . . Robert E. Lee (no kin to FCC Comr. Lee), ex-WAAM, Baltimore, named program mgr., WSVA-TV, Harrisonburg, Va. (Ch. 3) . . . James Paterson, ex-J. Walter Thompson, recently a B-29 pilot in Korea, has joined KNXT, Hollywood, as TV producer . . . Ralph Bachman joins D. P. Brother & Co., Detroit, as TV-radio timebuying asst. to Carl Georgi Jr., media director . . . Don Blahut, ex-Raymond Spector Co., named TV-radio director, Edward Kletter Assoc., N. Y. . . . Charles King, ex-WKAL, Rome, N. Y., named Mutual station relations contact . . . Alfred R. Stern, from film div., named asst. to Robert W. Sarnoff, NBC exec. v.p. . . . Maurice Unger, mgr. of Ziv west coast operations, promoted to v.p. . . . James L. Wolcott named exec. v.p., James S. Burkett sales mgr., Pathe Laboratories, whose Pathecolor was used on Dec. 24 colorcast of *Dragnet*; both are ex-Color Corp. of America . . . Humphrey Ireland, ex-TV director, Ruthrauff & Ryan, joins Brisacher, Wheeler & Staff, San Francisco.

Ernest B. Loveman, 58, Philco v.p. who was gen. mgr. of its TV station WPTZ until its sale to Westinghouse last year (Vol. 9:8, 22), collapsed of a heart attack in the company's main plant in Philadelphia Dec. 22 and died shortly thereafter. He was Philco adv. mgr. from 1928-42, became head of its TV activities fulltime in 1945. He was unmarried.

John Blair re-elected pres. of Station Representatives Assn.; v.p., Robert Meeker; secy., Adam J. Young Jr. (re-elected); treas., Joseph J. Weed. Directors: Lewis H. Avery, Avery-Knodel; Russell Woodward, Free & Peters; Joseph Timlin, Branham.

ARMED SERVICES' own TV stations—for entertainment and education of troops at isolated bases both in America and overseas—was foreshadowed Dec. 23 as Strategic Air Command began 6-month trial operation of low-power TV station at lonely Limestone Air Force Base near Caribou, Me. Success of this operation will determine whether Air Force will go ahead with plans for overseas TV installations, patterned after Armed Forces Radio Service, to “increase incentive” and help make duty at out-of-the-way bases “more attractive to potential enlistees.”

Limestone station—on Ch. 8, assigned by FCC to Presque Isle, 17 mi. away—is RCA-built, covers about 3 mi. with its 8-10 watt output. It has vidicon camera and film chain, will rely principally on kines of network shows for its 50-60 hours-a-week schedule. It cost \$30,000, funds coming from PX sales and movie receipts. Airmen will buy their own TV sets.

Though FCC has no authority over assignment of govt. stations, Air Force has agreed with FCC to cease operations if any regular TV station begins operating in area, and to begin no similar operations in any area already served by TV. It's only installation of kind so far, though for some time Navy has had booster station near Inyokern, Cal. to relay signals from Los Angeles stations to personnel at China Lake Naval Ordnance Station. Army has discussed building satellite at White Sands, N. M. to rebroadcast programs from El Paso.

Senator Robert S. Kerr (D-Okla.) and fellow oilman Dean A. McGee were authorized by FCC this week to sell their radio KRMG, Tulsa (50-kw D, 25-kw N, on 740 kc, ABC) to company headed by Frank E. Wimberly, member of Federal Power Commission and publisher of *Altus* (Okla.) *Times-Democrat*. They get \$305,000 for radio station, and are thus left free to hold interests in Ch. 2 application of Central Plains Enterprises Inc., Tulsa, in which oilman W. G. Skelly's KVOO holds 52.5%; Sen. Kerr, 13.49%; Mrs. Grayce B. Kerr, his wife, 15.31%; T. M. Kerr, son, 7.09%; Mr. McGee, 7.66%; T. A. Love, 2.09%; C. B. Akers, 1.87%. Ch. 2 competitor Fred Jones (Oil Capital Television Co.), who owns KFMJ, Tulsa, had protested sale of radio KRMG, alleging it would overlap Mr. Wimberly's 250-watt KWHW, Altus, but FCC held against him. It's expected Tulsa's Ch. 2 will be set for hearing shortly, third applicant being Fryer Television Co., backed by Texas oilmen. Sen. Kerr and McGee propose to donate 2% interest in Tulsa TV station, if it's granted, to Oklahoma A&M College, and Mr. Skelly promises 2% to Tulsa U. Sen. Kerr also controls WEEK-TV & WEEK, Peoria, Ill.

Formerly co-owned, Havana's CMA-TV (Ch. 2) and CMUR-TV (Ch. 4, with Ch. 3 satellites in Santa Clara & Pinar del Rio) are now separately owned. Amadeo Bartetta, publisher of *El Mundo* and Cuban distributor for Cadillac, Oldsmobile & Chevrolet, now heads Tele-Mundo, S.A., licensee of CMA-TV, with Pedro Alvarez Rios as gen. mgr. and Ventura Montes as technical director. CMUR-TV and satellites are now operated by Radio Television Nacional, S.A., with Angel Cambo as pres.; Juan Montaner, v.p.; Carlos Rom, Gustavo Fernandez, Angel Barranco & Ramiro Gomez Kemp, exec. v.p.'s. Cuba's other stations are CMQ-TV (Ch. 6), CMBF-TV (Ch. 7) and George Storer's CMTV (Ch. 11)—also all in Havana. First 2 are owned by Goar Mestre group, and CMQ has 5 satellite outlets: CMJL-TV, Camaguey (Ch. 6); CMKJ-TV, Holguin (Ch. 4); CMGC-TV, Matanzas (Ch. 9); CMHQ-TV, Santa Clara (Ch. 5); CMKN-TV, Santiago (Ch. 2).

RCA Victor and NBC ad accounts leave J. Walter Thompson after June 30, 1954; new agency not yet named, though Grey Adv. continues to handle NBC film div. account, Al Paul Lefton some of RCA space.

Network Accounts: Flushed by success of Dave Garroway's 7-9 a.m. *Today*, NBC-TV now is preparing nighttime version in new program tentatively titled *Tonight*, with Steve Allen as m.c., and using similar format. Idea would be to expand *Steve Allen Show*, now on WNBT 11:20-midnight, to a network show from 11:20-12:50 a.m. It's pet project of new NBC pres. Pat Weaver, guiding light of *Today* . . . Reader's Digest buys partic. on *Panorama Pacific*, CBS-TV west coast regional 7-9 a.m. show, starting Jan. 6 thru Schwab & Beatty; Ford Dealers of So. California, Jan. 6 thru J. Walter Thompson; Accent (food flavorer) Jan. 4 thru BBDO . . . Mystic Adhesive Products Co. (tape) buys Fri. 1:45-2 p.m. portion of *Garry Moore Show* on CBS-TV starting Jan. 15, thru George Hartman Co., Chicago; Kellogg Co. moves to Thu. 2:15-2:30 . . . Congoleum-Nairn Co. (linoleum) buys alt.-week sponsorship (with Revlon cosmetics) of *Mr. and Mrs. North* on NBC-TV starting in Jan., Tue. 10:30-11 p.m., thru McCann-Erickson . . . With regional sponsors, DuMont starts weekly pro-basketball games each Sat. 3-4:15 p.m. in 56 cities . . . Variety replacement for *I Bonino* on NBC-TV will be *Spike Jones Show*, starting Jan. 2, Sat. 8-8:30 p.m.; no sponsor yet . . . Quaker Oats sponsors *Contest Carnival* on CBS-TV starting Jan. 3, Sun. 12:30-1 p.m. thru Sherman & Marquette.

Seeking to settle long-standing ASCAP dispute, All-Industry Local TV Music Committee is polling all TV stations on new offer to ASCAP: (1) Blanket license agreement for 4 years beginning Jan. 1, involving commercial fee of 2.05% of receipts from sponsors after certain deductions, and monthly sustaining fee equal to station's highest quarter-hour rate. (2) Per-program agreement covering same period and retroactive to Jan., 1949, involving 9% of net receipts from sponsors on certain programs using ASCAP music, 4% for theatrical type films in which ASCAP music is used incidentally, 3.5% of applicable rate card for sustaining programs.

General Teleradio Inc., the General Tire & Rubber Co. subsidiary operating WOR-TV, WNAC-TV & KHJ-TV, as well as Yankee & Don Lee networks and various radio stations, has purchased Phillips H. Lord Inc., whose TV-radio properties include *Gangbusters*, *We the People*, *Mr. District Attorney* and script rights to Kathleen Norris novels. Phillips Lord becomes consultant to General Teleradio for 5 years.

“Birthplace of the talking pictures,” old Warner Bros. studio on Sunset Blvd., Hollywood, was sold this week to Paramount Pictures for “more than \$1,000,000” to become future home of its KTLA, Los Angeles. Paramount has agreed to make part of the studio available to Motion Picture Relief Fund for establishment of a motion picture museum.

First 3 feature films of series of 26 to be made especially for TV have been completed by Princess Pictures Inc. for cooperatively-owned Vitapix Corp., whose latest stockholder is Paramount's KTLA, Los Angeles. Series, which will not be shown theatrically prior to TV release, will be premiered next month on 30 stations; all 26 films will be delivered first 9 months of 1954.

First receiving tube type intended primarily for use in color TV sets goes into production at GE's Owensboro, Ky. plant in first quarter 1954. Type 6BJ7 is miniature triple diode for use as DC restorer for the 3 signal channels of color sets. Information is available from GE tube dept., Schenectady, N. Y.

Another TV operator seeks AM: John S. Booth & T. K. Cassell, who last June started WTVE, Elmira, N. Y. (Ch. 24), have applied for 500-w D on 800 kc there.

HIGHER-POWERED UHF transmitter now under development by RCA probably won't be available until next May. Long-awaited tetrode-powered plant, using A-2500 power tube (Vol. 9:36, 44), will be rated at least 12½ kw, possibly 15. Prototype model is slated to be shown before May. Meanwhile, Standard Electronics now has prototype 1-kw uhf transmitter, plans to show higher powered model this summer.

No new transmitter shipments were reported by any company this week, but 2 more existing stations have increased their power outputs. WALA-TV, Mobile, Ala. (Ch. 10) went from 22 to 112-kw ERP; WOC-TV, Davenport, Ia. (Ch. 5) from 22.9 to 100 kw. GE's WRGB plans to switch Jan. 4 from Ch. 4 to 6, up output from 16.3 to 93 kw.

* * * *

In our continuing survey of upcoming new stations, these were the reports received this week:

KBIZ-TV, Kirksville, Mo. (Ch. 3) hasn't ordered equipment or begun construction yet, but hopes to get going in 5-6 months, reports owner-gen. mgr. James J. Conroy who also controls WBIZ, Eau Claire & WLCX, La Crosse, Wis. CP was granted last week after KBIZ Inc. switched application from Ch. 15 in Ottumwa, Ia. Rep not yet chosen.

KQED, Berkeley-San Francisco (Ch. 9, educational) expects to get converted KPIX transmitter before Jan. 1, still awaits other equipment, now hopes to get going by March or April, reports gen. mgr. James Day. It's planning initial \$150,000 fund drive and concurrent campaign for 6800 \$10-a-year dues-paying members—a membership goal equal to 2% of potential audience, which it's estimated would place station on self-sustaining basis.

WMUR-TV, Manchester, N. H. (Ch. 9) didn't make promised Xmas debut, now hopes for Jan. 15 tests, with RCA equipment due shortly. It's going to adapt former FM tower for TV. Rep will be Weed.

WSEE, Erie, Pa. (Ch. 35) has ordered 12-kw GE transmitter for Jan. delivery, begins construction any day now, plans March tests, goes commercial in April, reports v.p.-gen. mgr. Charles E. Denny. Rep not yet chosen.

WCET, Cincinnati (Ch. 48, educational), granted Dec. 2 to Greater Cincinnati Television Educational Foundation, has ordered RCA equipment, hopes to begin construction Jan. 15, plans debut after April 1, 1954, according to gen. mgr. Uberto I. Neely.

* * * *

CKCK-TV, Regina, Sask. (Ch. 2), equipment not specified, plans July 1 tests, Sept. 1 programming, according to mgr. H. A. Crittenden. Weed will be U. S. rep; All-Canada Television in Dominion.

CFPA-TV, Port Arthur, Ont. (Ch. 2), recommended by CBC Dec. 7—tantamount to a grant—hasn't ordered equipment as yet, plans to buy unused City Fire Hall located at highest point in city for studio-transmitter house, hopes to begin next Sept. 3, reports owner Ralph H. Parker. Rep not yet chosen.

CHCH-TV, Hamilton, Ont. (Ch. 11) reports delay in equipment deliveries, now plans April start with RCA transmitter, according to gen. mgr. Kenneth D. Soble, who heads group of 3 local radio stations which combined to get grant. Temporary rate card quotes \$300 hourly base rate. Reps will be Adam Young for U. S. and All-Canada Television.

— ■ —

New Rider books: *UHF TV Antennas & Converters*, by Allan Lytel (128 pp., \$1.80); *Audio Reproduction*, by David Fidelman (240 pp., \$3.50); *How to Troubleshoot a TV Receiver*, by J. Richard Johnson (128 pp., \$1.80); and Vol. 12 of *Rider TV Manual* series.

Seeking "realistic" depreciation base for taxes on uhf station equipment, Uhf TV Assn. counsel Wm. A. Roberts has requested meeting with Internal Revenue officials. In letter to John H. Fahrenbach, Revenue Service public utilities engineering chief, Roberts wrote: "The extremely expensive transmitter equipment [for] uhf stations is obsolete almost when installed, and with no certainty as to the time when 'maximum' powers in the order of 50 kw or above will be available . . . Uhf broadcasters, having invested heavily, are confronted with great insecurity commercially, instability in their revenue and the certainty of obsolescence in their initial installations . . . The uncertainties of the impact of color TV in accelerating obsolescence of transmitting equipment require flexibility of depreciation rates."

Annual "Mike" awards by *McCall's Magazine*: outstanding woman in TV & radio, Helen Tullis, blind announcer of WMAR-TV, Baltimore, for rehabilitation series, *As You Can See*; service to women, Beulah Donohue, WTMJ-TV, Milwaukee, for *Your Family's Health* series, and Marian Gifford, WHAS-TV, Louisville, for maternity series, *Good Living*; service to youth, Judith Waller, NBC-TV, Chicago, for development of *Ding Dong School*, and Jean Sullivan, KMTV, Omaha, for programs on mentally handicapped children on *Woman's View*; community service, Bea Johnson, KMBC(AM), Kansas City, for traffic safety reminders on *Happy Home*, and Dolly Banks, WHAT(AM), Philadelphia, for better understanding of Negro problems.

Background of every FCC employe, as of July 1, 1953, is included in 180-page supplement to annual report to Congress submitted by Commission this week under requirements of McFarland Act. Henceforth, annual report will cover only employes added or dropped during year. Report includes information on date and place of birth, salary, education, employment history, other "pertinent biographical data and experience." It's first such submission by FCC, and Commission is believed to be only govt. agency required to make such report.

You'll never guess who said this: "I think TV is terrific. The more we have the more we like it." That was National Football League commissioner Bert Bell, commenting on NFL-DuMont deal, which, he said "created thousands of new fans" and helped to make 1953 an all-time record year for pro football. Bell and members of his league went to court last year to defend League's right to restrict members' football telecasts in recent anti-trust case (Vol. 7:41, 9:46), in which formal court order is still pending.

Legal action to tear down old WOR-TV tower on the Palisades in N. Bergen, N. J., overlooking New York City, was threatened this week by town's public safety commissioner Patrick Sullivan. WOR-TV moved transmitter to Empire State Bldg. Dec. 12, retained 760-ft. tower in Jersey for standby. Sullivan said tower, in heavily populated area, is possible aircraft hazard, added he would give WOR-TV opportunity to remove it before taking steps to have it razed as a menace.

Rep. Robert L. Condon (D-Cal.) was denied court order Dec. 21 in demanding time from KGO-TV, San Francisco, to reply to testimony before House Un-American Activities Committee alleging he had attended a closed Communist party meeting in 1948. Though he claimed a verbal agreement with station for time for public answer to charge, court ruled no "oral contract" existed and denied court order for proposed telecast.

"Determination of VHF Superturnstile Antenna Gains" is new 70-p. book by RCA's M. R. Johns, available from Broadcast Equipment Section, RCA, Camden.

FIRST LOW-END PRICE CUTS PRESAGE MORE: Even lower prices of low-end black-&-white sets all through trade are certain in wake of announcements of cheaper sets by RCA and Philco. RCA introduced one 21-in. table model at \$200 and reduced two 17-in. tables to their original \$180. Philco disclosed all-new line of 17 models, all 21-in., with low-end plastic table at \$200, discontinuing production of 17-in. tables.

Prodded by advent of color, reduced tube costs and, in varying degrees, inventory positions, prices of other manufacturers may go even lower -- with strong possibility widespread price cuts will be offered at Chicago marts next month.

RCA's 6 new sets: 'Master 21', ebony 21-in. table model \$200; Modernette, 21-in. open-face limed oak console \$250; Barnes, 21-in. open-face maroon console \$260; Farrell, 21-in. open-face blonde or natural walnut \$300; Barrett, 24-in. open-face mahogany \$395, blonde \$415; Sewell, 24-in. full-door mahogany \$460, blonde \$480. Craig and Brent, 17-in. table models in ebony and maroon, respectively, were reduced to their original price of \$180 after having been raised to \$190 two months ago.

Philco's price slashes are due to be announced on NBC-TV Philco Playhouse Sun., Dec. 27. At this writing, it's known only that there will be new line of 17 models, all 21-in., the low-end plastic table priced at \$200, wood console at \$280. No more 17-in. tables will be made. Last low-end 21-in. table was \$250, console \$300; last low-end 17-in. table was \$180. Though Philco says its Atlantic City convention Jan. 4-8 will be devoted only to white goods, custom is to display TV-radio lines there, too -- and distributor orders aren't likely to be refused.

Admiral distributors meet in Chicago Dec. 30 -- and spokesman said company may introduce some cheaper sets at that time, though he insisted prices won't be finally determined until just before meeting. Admiral already has a 17-in. table selling at \$160 and a 21-in. table at \$200.

Motorola, like Admiral, isn't saying anything officially about prices -- yet -- but probably will have some news by time of Chicago marts. And the news should be less about new models than about prices. At distributors meeting Dec. 18 in Chicago, Motorola introduced only one model -- a 21-in. metal cabinet table at \$230, to replace same-price set with plastic cabinet.

As the Big 4 go, so usually goes rest of the industry, who also will be represented in big way at the marts or will hold distributor meetings in January.

* * * *

Rash of activity broke out following FCC color decision. Metropolitan newspapers for most part played story of color to the hilt -- stressing compatibility and also giving proper prominence to color's immediate limitations for consumer.

Set makers geared to rush such sets as were available to distributors in cities equipped by AT&T (see p. 1) in time to let dealers watch colorcast of Tournament of Roses, Jan. 1. RCA dispatched 2 color sets each to distributors on loan basis in 21 cities, sent out 50 servicemen to install them. Admiral, Raytheon & Hallicrafters were among those who also announced shipments to distributors. Doubtless there were others -- just as more will be added in coming weeks.

Distributors and dealers will get another look at color sets at the marts and at company conventions. Virtually every manufacturer who has produced a pilot color set will demonstrate it within month.

Some manufacturers moved quickly into the servicing front, too. RCA set up series of 4-day color servicing clinics for its set-making licensees, distributors & service technicians. Clinics for licensees start in N.Y. Jan. 11, Chicago Jan. 25, Los Angeles Feb. 8 -- each consisting of 28 hours of instruction by RCA Service Co. on color theory, color signals, basic circuitry, components and adjustment.

RCA Service Co. also announced 3 other servicing actions: (1) Published new

textbook, "Practical Color Television for the Service Industry", showing the various techniques for installation and maintenance, available for \$2 through RCA parts and tube distributors or from company headquarters in Camden. (2) Offered, through RCA Institutes, 350 West 4th St., N.Y., a home study course for technicians. (3) Developed and installed in factory service branches new type of test equipment, called color signal simulator, to be used for proper phasing and alignment of color sets. It was also disclosed that RCA service contract for color will cost minimum of \$180, as compared to \$60 for black-&-white sets.

Westinghouse also started 2-week course this week for its key engineers on problems of color service at TV-radio div. headquarters in Metuchen, N.J. Admiral starts its school for distributor servicemen in Chicago Feb. 1.

Few distributors had established any allocation plan for color sets, for simple reason no factory was in position to make any commitments on deliveries. And besides, with 100,000 or more dealers handling TV, and with outside guesstimate of only 200,000 color sets to be produced next year, what chance does a dealer have? One major Washington distributor, still awaiting first color set, told us: "I know one priority system I'm going to use -- my best-paying accounts get first crack."

* * * *

As for consumer reactions, it was still too early to draw any conclusions. There were widespread reports of considerable curiosity among late Xmas shoppers in first few days after FCC decision. But their interest was dampened when dealers told them the facts of color life -- only a comparative trickle of sets next year, at \$800-\$1000, only 12-in. screens as yet, few color programs at outset. These facts are expected to minimize any immediate impact on planned black-&-white purchases.

Epitomizing approach of trade to prospective set purchasers was significant paragraph in Philco's full-page ad in Dec. 23 & 24 New York Times and in Dec. 24 Philadelphia Bulletin and Wall Street Journal. Headed "Facts the American People Should Know About Color Television," ad said, among other things:

"You should understand that much work still remains to be done, and color receivers will not be available in quantity for a long time. Now that the standards have been approved, manufacturers can proceed with the problem of developing color TV receivers with viewing screens large enough in size to interest the buying public and at prices they can afford to pay. At present, the industry has developed only small screen color tubes with approximately 11½-in. viewing screens giving only 89-sq. in. of picture, which will cost from \$800 to \$1000 each. Contrast this with today's 21-in. black-&-white set with an approximate 250-sq. in. picture which sells for as little as \$200."

Retailers were generally appreciative of the timing of FCC decision and all seemed agreed Xmas trade was hurt little, if at all. Said Mort Farr, ex-president of National Appliance & Radio-TV Dealers Assn. who had requested FCC to delay decision until as close to Xmas as possible (Vol. 9:45): "I'm pleased the FCC gave us any consideration and think they handled the situation very fairly."

While trade busied itself, the few stations that are getting color from network fanned interest by inviting local civic leaders, merchants and press to private showings of color programs (see p. 2).

* * * *

No production statistics this week. Because of short work week, RETMA staff wasn't able to compile all area reports before shutting down for weekend Dec. 24.

Shipments of TVs to dealers totaled 5,305,072 in first 10 months of 1953, when production was 6,204,803, according to RETMA's state-by-state and county-by-county tables released this week and available on request. They represented 20% gain over first 10 months of 1952, when shipments were 4,451,759, as against production of 3,394,707. New York led with 500,054, Pennsylvania was second with 458,942, California third with 424,515. For Oct. alone, shipments were 690,711, compared to 816,529 in Sept. and 913,779 in Oct. 1952.

Federal Trade Commission issued initial decision this week against Sylvania for selling radio tubes to Philco in 1949 at 7-9¢ less than to its own distributors (Vol. 6:2, 8:46). Decision, which must be approved by full FTC, orders Sylvania to stop "discriminatory pricing practices." Charges against Philco of "knowingly inducing and receiving" discriminatory prices from Sylvania were dismissed by FTC examiner Webster Ballinger.

Majestic Radio has acquired 50,000-sq. ft. plant at 41 Water St., N. Y. for final TV assemblies.

INTRA-INDUSTRY arguments over who did what for color, to say nothing of hints of more patent suits, are already being heard—and the signs right now don't augur any such happy "cooperative relationship" as existed among the rival manufacturers in their virtually solid front against FCC's original adoption of the field sequential system. This week, for example, Philco stated in full page ads in *New York Times*, *Wall Street Journal* and *Philadelphia Bulletin*, which were captioned "Facts the American People Should Know About Color Television":

"The standards were developed by the leading scientists of the electronics industry. They are *not* the work of *any one company* [italics Philco's]. In the words of the FCC: 'The accomplishment of a compatible color TV system that can operate within a 6-megacycle bandwidth is a tribute to the skill and ingenuity of the electronics industry.'"

Ad then lists 42 companies as "some of the organizations whose combined knowledge and strength are responsible for the system that won final FCC approval." Among them are all NTSC participants—comprising top companies in TV-radio manufacturing and such organizations as American Radio Relay League, Bell Laboratories, Chromatic Television, Color Television Inc., Gates, General Aniline, Hazeltine, Mallory, Remington-Rand, Technicolor.

Text then goes on to tell how "Hundreds of scientists in the electronic industry combined their efforts, developed one set of standards after another, all of which were subjected to rigorous field tests until the major problems were overcome and the final result achieved . . . the color system which the *industry committee* recommended to the Commission with confidence in July, 1953. *This is the system the FCC has now adopted and made official.* Every electronic laboratory, every TV manufacturer, large or small, who participated in this gigantic undertaking can rightfully share in the credit for the final result. It is a thrilling story of the strength of American industry in the solution of a highly complex peace-time problem."

* * * *

There's no secret in the trade that the ad was intended to counteract RCA's claim, also heavily publicized in full-page ads immediately after FCC's decision last week, that it had led the fight for compatible color and that "RCA has made the basic inventions." As if in anticipation of disputation of its leadership in this respect, RCA's chairman David Sarnoff told N. Y. Society of Security Analysts Dec. 14 that RCA's net income from patent royalties has averaged less than \$3,500,000 a year from 1947-53 and will be less than \$2,500,000 in 1954 (Vol. 9:51). He asserted RCA, its Princeton Labs employing more than 1000 plus 2200 other scientists and engineers in RCA Victor plants, has invested more than \$50,000,000 in black-&-white TV research and development "before it made a dime of profit," and added: "Before the end of next year we will have spent more than \$30,000,000 in research and

development of color TV, and we cannot possibly hope to make a dime on color TV in the first year of its life."

With respect to lawsuit brought by GE and Westinghouse against RCA sublicensing rights under their patents, which they say expire Dec. 31, 1954, Gen. Sarnoff said AT&T doesn't take same position and matter is now before Delaware district court. "However," he added, "without arguing the pending case, I can tell you certain facts concerning it.

"First, no matter what the outcome of the case may be, no question has been raised as to the fact that both GE and Westinghouse are required to continue to pay the RCA, after Dec. 31, 1954, royalties on all radio, TV and other electronic patents in our field which they use and which were developed by GE, Westinghouse, the telephone company or RCA before Dec. 31, 1954.

"Second, it is the opinion of our experts that the most important inventions for the future of our business and for the business of those whom we license are not the GE and Westinghouse inventions. Among the areas for licensing which we regard as most important are color TV and transistors. In color TV, I'm sure you all know that RCA has made the basic inventions. In transistors, the basic inventions have been made by RCA and the telephone company."

He denied RCA takes competitive advantage of its patent position. "If RCA were not in the business of licensing its competitors on the inventions which it makes," he said, "we would be the only one able to market our own important developments and to retain for the RCA all the benefits from such exclusivity. As matters stand now, we share our inventions with our competitors at a very moderate royalty rate of less than 2% of the manufacturers' selling price of the apparatus which uses our inventions. And our very liberal license agreements contain no restrictions at all as to price, quantity, territory or anything else.

"It is this liberality in our licensing policy which has contributed to making the TV industry the highly competitive industry it is today. If RCA were to give up its licensing business and stop licensing the rest of the industry, it would be RCA's competitors who would suffer most in relative standing and not the RCA."

* * * *

Note: RCA claims it's pushing for final judgment in Zenith suit in Wilmington court questioning its patents and rights to collect royalties, expects adjudication before end of next year. Meanwhile, Zenith has not paid royalties and its financial statements show no reserve fund set up for possible back payments if case goes against it. Meanwhile, too, certain staff efforts within FCC to resume probe of RCA patent structure, which came to light during early stages of color fight, have again met cold reception among commissioners—though it's understood data is still being transmitted to Dept. of Justice from staff level.

WHAT IS TELEVISION? The word covers more territory than you may think. It's been registered at least 10 times at the U. S. Patent Office to apply to as many different products. It was first registered as trademark in 1928, by Television Corp. of America, St. Louis, applying to a product described as "a certain novelty known as Television." In 1933 it was registered as trademark for theatrical makeup; in 1939, metal cans; 1942, sweaters; 1945, a publication; 1948, a permanent wave machine; 1950, electric clocks and fresh tomatoes; 1952, bird seed. These trademarks all still stand—the only one dropped was use of the word to apply to fabrics, registered in 1929. And there's a "Television Gun," too—it's a target practice gun, which got its trademark registered in 1937.

There's been no scramble yet to register trademarks and slogans for color TV sets and tubes—presumably because a tradename must be used in interstate commerce before it may be registered. Only new color trademark we could find submitted for registry was "CBS Colortron," which was filed Aug. 31, 1953 to describe color TV picture tube. Registered or pending registration, however, are these names, leftovers from an earlier "color TV era": "Telecolor," registered by CBS in 1944; "Colorola," described as "TV receiving apparatus" by registrant Joseph W. Jones of New York in 1951; "Colorvue," for "multi-color filter screen which is placed over the face of a black-&-white TV tube to give illusion of color TV," and "Colorvision eye glasses for viewing TV" (1950).

Topics & Trends of TV Trade: Here's one manufacturer who says he's "a little more optimistic than my brethren in the trade on the outlook for 1954" and comes up with some unusual reasons why he thinks it should be "a fairly successful year". Robert S. Bell, exec. v.p. of Packard-Bell, Los Angeles, guesstimates 1954 retail sales will be 5-5,000,000, gives as reasons for his optimism: (1) "Pent-up desire in purchasing power" by consumers, which will bear fruit next spring. (2) Ability of set makers to adjust their production to consumer demand more quickly than in past. He says:

"There has been a deferment of purchasing by a rather good-sized segment of the public, apparently, from all statistics we have, and that means there will be some pent-up desire in purchasing power for TV sets this spring when business is psychologically lower. It is the eternal history of the purchasing public that while they can defer their purchases for a short time, the money soon burns a hole in their pockets and they are back in the market places. Normally, the maximum period they can stay away is about 6 months.

"Industry statistics have become more and more complete and reliable during the past several years and most of the manufacturers are now willing to rely upon them. As a result, production has been trimmed very quickly compared to past history when there were times of slower sales. While overall industry inventory is large, it is not an impossible burden in most cases so long as the pressure from the manufacturing end is reduced by the manufacturers trimming their production plans."

He says prices should be about the same as 1953, but concedes that cost of CR tubes might go down a bit more, and concludes: "Most of our other components and labor certainly are not going down, and even the strongest of our competitors can't sell at a loss forever."

* * * *

Says **H. L. Hoffman, Hoffman Radio:** "I believe 1954 will not be nearly as bad a year as some seem to feel at this time. In my opinion, the industry should produce about 5,200,000 sets in 1954 and sell at retail approximately 6,000,000 . . . 1954 will be a year of challenge [demanding] more down-to-earth marketing, more value selling compared to mere price selling, fewer gimmicks, more education on the value of the show on TV, the facts on color and high fidelity. The outlook for our national economy for 1954 is good, with high employment, high consumer income and high spending by business, the people and govt. We have never had a bad year in the radio and TV business in an election year."

GE's Dr. W. R. G. Baker foresees strong demand for black-&-white equipment maintained as 200 new TV stations go on air in 1954, bringing total to 550. He also forecasts limited commercial color telecasting opening new markets for broadcast equipment and receivers; industry-to-distributor sales of 5,200,000 black-&-white, 100,000 color sets; production of about 7,600,000 home and portable radios; further improvement in black-&-white picture tubes, intensified research in color tubes, continued growth in total tube sales; high level of military electronics output.

Motorola v.p. Edward R. Taylor thinks only 1,000,000 TV sets will be produced first 1954 quarter, about half output of same 1952 quarter, and figures that only about 20% will list over \$300. He calculates year-end inventories at 2,100,000, as against 1,200,000 year ago, but high Xmas trade and good going rate of sales does not make the higher figure dangerous. He agrees with exec. v.p. Robert Galvin that year's output will be about 5,000,000 TV sets (our proofreaders erred last week in quoting young Galvin as saying 3,000,000). He also sees 1954 sales of 6,775,000 radios, exclusive of auto radios.

Trade Personals: Don G. Mitchell, Sylvania chairman, appointed by ex-President Hoover to "task force" of Commission on Organization of Executive Branch, dealing with govt. personnel . . . David J. Hopkins, Emerson Radio sales director and son of late Presidential adviser Harry Hopkins, Jan. 4 joins CBS-Columbia as sales director, reporting to v.p. Harry Schecter and assuming duties of sales mgr. R. D. Payne, resigned; Leo Hahn promoted to national radio sales mgr., Emerson . . . A. Melvin Skellett, ex-research v.p., named to new post of v.p. for manufacturing & engineering, National Union Radio Corp.; Lawrence L. Hardin promoted to director of research div. . . . Harvey Williams, ex-v.p. of H. J. Heinz Co., named Avco v.p. in charge of overseas operations, handling relations with Crosley and Bendix licensees and distributors abroad . . . Paul T. Wickman, ex-Boston district sales mgr. for replacement tubes, named by GE to new post of merchandising mgr. for dealer products, in charge of distributor-dealer liaison on electronic tubes, high-fidelity systems, test equipment & germanium products . . . Albert C. Allen resigns as DuMont central regional mgr. to head Allen Distributing Inc., Providence (appliances) . . . Otis W. Murray named west coast operations v.p., James S. Burket west coast sales mgr., Pathe Laboratories . . . Dr. George E. Duvall, ex-GE & MIT, and Dr. Charlotte Zihlman Lemay, ex-Texas Instrument Co. (transistors), join Stanford Research Institute physics engineering staff . . . Edward Edison, ex-KLAC-TV & NBC Hollywood, named RCA Victor broadcast field sales rep, Los Angeles . . . Louis DeLaFleur leaves FCC frequency allocation & treaty div. after 13 years with Commission to become mgr. of RETMA international dept., Washington . . . D. W. Gunn promoted to gen. sales mgr., Sylvania electronic products, succeeding Harold P. Gilpin, retired.

—■—

Distributor Notes: McCormack & Co., San Francisco, which relinquished Hoffman line last week, moves headquarters to Western Merchandise Mart, plans to take on new line shortly . . . Emerson Radio of Pennsylvania, Philadelphia, appoints Charles F. Boice as gen. sales mgr.; he's succeeded as Tele King Philadelphia branch mgr. by Joseph Supplee . . . Gough Industries Inc., Los Angeles (Sylvania) opens new offices at 560 So. Mission Road, L. A. . . . Pilot Radio appoints Adolph L. Gross Assoc. Inc., 23 Park Place, N. Y. . . . Bendix Radio appoints Lynn Dickerson Co., ex-Raytheon Houston outlet . . . Samson Distributors, Washington (Motorola) appoints C. D. Kendall gen. sales mgr. . . . Simon Distributing Co., Washington (Zenith) appoints M. A. Becker exec. v.p.

James D. Shouse, Avco v.p. in charge of appliance-electronics operations, sees period of change ahead like that which automobile industry went through. Trend in distribution and marketing is toward full-line companies, he says. Year should see beginning of consolidations, mergers and outright sales as more companies strive to expand into full lines—with strong brand names maintained and others dying out.

Service survey by GE among 40,000 service dealers reveals these details: Average bill for TV service is \$8.75-\$11.50, with parts and labor charges about evenly divided; two-thirds of service work is done in set owner's home; average of 35-40 calls is handled per week per technician. Every group of service dealers predicted business volume in 1953 would exceed last year.

Regal Electronics Corp., 605 W. 130th St., N. Y., has filed petition under Chapter XI of the bankruptcy Act in Federal court, proposing settlement at 75%—10% on confirmation and balance of 7½% every 90 days. Maker of TV and radio sets, it also has several govt. cost-plus contracts, lists assets of \$1,185,500, liabilities of \$864,000.

Financial & Trade Notes: What does expiration of excess profits tax (EPT) at end of this year mean to the electronics industry? We asked an expert, consultant Edgar N. Greenebaum Jr., the youthful LaSalle Streeter who helped set up Television-Electronics Fund Inc., for a summary—and this is what he says:

"There is no hard and fast answer as it depends entirely on which particular company or companies referred to. For example, 2 representative manufacturers, GE and Sprague Electric, one a giant and the other medium-sized, paid taxes last year at close to the maximum rate. GE's tax bill was 63.5% of earnings, Sprague's 69.6%, which is virtually the 70% tax ceiling.

"Specifically, EPT is a 30% tax added to the 52% regular corporate income taxes. Showing graphically how burdensome it is to many companies, Sprague last year earned \$4.18 per share for its 1383 stockholders; without EPT, the earnings would have been \$6.60 per share. So it's clear that companies like GE and Sprague will benefit greatly from the expiration of EPT Dec. 31.

"On the other hand, quite a few companies have satisfactory EPT exemptions, due in part to the work done by RETMA in obtaining a fair shake for corporations which would have been severely penalized by the inequities of EPT legislation as originally drawn—particularly the set makers, most of whom enjoyed their most profitable year in pre-EPT 1950.

"Hence Motorola paid an effective tax rate of 55% in 1952, only slightly more than regular income tax rate; with increases in sales and earnings this year, Motorola will of course have a greater EPT liability.

"Even though RCA paid more than \$35,000,000 in Federal income taxes last year, none was for EPT. Admiral also had a large enough exemption so that it paid no EPT last year, nor will it have to for 1953. Philco will be subject to EPT, though it will be well under \$1 per share; its exemption is slightly below \$3.50 per share, and total 1953 earnings are currently estimated at less than \$4 after all taxes (not including the non-recurring capital gain of \$1.51 per share from the sale of its TV station WPTZ to Westinghouse).

"Zenith is expected to show net earnings of about \$13 per share this year on sales close to \$170,000,000; its earnings would be quite a bit higher were it not for EPT since estimated overall tax rate for 1953 is 58% in contrast to 55.7% paid last year. Emerson will pay a relatively small

EPT figure, if any, for its fiscal year ended Oct. 31, 1953; the preceding year no EPT was required from Emerson.

"Westinghouse is subject to a rather steep liability as its EPT credit base is estimated at \$3.50 per share while earnings should run about \$1 per share additional after taxes. Sylvania paid the maximum tax of 70% last year, so that its \$3.05 per share earnings would have been increased roughly 25% had there been no EPT; this year Sylvania will again pay the maximum rate. And last of the Big 10 set makers, Avco (Crosley), had no EPT liability last year and won't have any again this year.

"Considering one electronics firm not in TV, Beckman Instruments Inc. earned more than \$2,000,000 before taxes, but after paying 66% tax was left with relatively little to show for the fiscal year ended June 30, 1953. It even had to borrow \$2,500,000 during that year.

"More than \$2 billion EPT will be paid by all industries this year. Without this burden in 1954, things may be quite different. For example, even major sales and earnings declines in many cases will not result in any decrease in net profits after taxes for many companies. Quite a few electronic concerns are paying the maximum 70% this year. Their pre-tax earnings can drop as much as 37.5% next year and they will still earn as much as in 1953.

"This analysis, in some cases, may be an over-simplification—for renegotiation may rear its ugly head. However, for those supplying little or no materiel to the Govt., the expiration of EPT can truly be a bonanza."

DuMont directors did not vote usual 25¢ annual dividend this week, Dr. Allen B. DuMont stating FCC approval of color standards (Vol. 9:51) makes it "imperative that DuMont have additional working capital for production of color tubes, receivers and transmitting equipment." He said sales for first 11 months of 1953 were 25% ahead of same 1952 period, profits for full year would exceed the \$1,425,000 (55¢) on sales of \$76,367,000 reported in 1952. Last DuMont report showed sales for first 40 weeks of this year were \$65,896,000, profit before taxes \$1,910,000 (Vol. 9:43).

Television-Electronics Fund Inc. has declared 2-for-1 stock dividend payable Jan. 20 to holders of record Jan. 8. This increases authorized stock from 5,000,000 to 10,000,000 shares. As of Dec. 22, there were 2,112,716 shares outstanding.

Electronics Reports: Nearly \$5 billion worth of equipment and components was turned out by electronics industry in 1953—a record exceeding 1952 by nearly \$1 billion. So says year-end summary by RETMA board chairman Robert C. Sprague, Sprague Electric Co.

Uncle Sam was by far biggest customer, spending between \$2.7-\$3 billion on military electronics-communications. Sprague puts factory value of 1953's TVs at more than \$1.25 billion, radios at \$250,000,000. TV-radio replacement parts business enjoyed record of nearly \$500,000,000. While neither military nor civilian electronics production set record this year, Sprague said the 2 together constituted an all-time high, easily exceeding peak years of World War II. For next year, he forecast:

"As for defense production, the industry has good reason to expect that electronics procurement will not be reduced substantially . . . regardless of an over-all cut in military funds. In the first place, a large backlog of military orders will keep deliveries high. Secondly, the proportion of military expenditures for electronic products in all probability will increase as the Defense Dept. curtails its spending. The reason is that electronics is becoming increasingly essential to the operation and control of almost all modern military weapons as well as to communications, navigation and detection."

Control of Johnson Electronics Inc., Orlando, Fla. (coils & components) has been acquired by 4 executives of Gramer Transformer Corp., Chicago—James M. Blackridge, pres.; Burt Anderson, gen. sales mgr.; Ralph L. Weber, secy.; Fred R. Cooper, chief engineer. Gramer Transformer will serve as national sales agency for Johnson products, and Blackridge becomes chairman of Johnson Electronics; Anderson, sales v.p.; Cooper, engineering v.p.; Weber, secy. E. S. Johnson continues as president.

Chesapeake Industries Inc., investment firm, has acquired Allen D. Cardwell Corp., manufacturer of military radar, closed-circuit industrial TV equipment and other electronic products, with plants in Plainville & Stamford, Conn. Among other Chesapeake holdings are Pathe Laboratories Inc. (film processors) and Television Center Inc.

GE had good and bad news this week for employes in receiver & CR tube depts. at Electronics Park, Syracuse. It cancelled plans to lay off 4000 workers over holidays (Vol. 9:51)—but announced 700-800 would be furloughed indefinitely beginning Jan. 8 because of production cut-backs in first quarter 1954.

Electronic Parts Show next year will be held at Chicago's Conrad Hilton, May 17-20; booth applications should be sent to gen. mgr. Kenneth Prince, c/o Conrad Hilton.

Telecasting Notes: "I only wish we had color TV right here now, so you could see this in all its real beauty." This type of comment, ad-libbed by announcers more and more on TV these days, is "ill-advised," says Schwerin Research Corp., which adds: "Promoting a feeling among viewers that they are being 'left out' is one of the quickest ways to build audience resentment against your program or product." Schwerin *Bulletin* cites actual case in which 5 new food commercials were tested; one with "if-you-could-see-it-in-color" approach got 48% fewer viewers to remember brand name and some sales point than did average other commercial in group . . . Color TV will step up use of spot commercials, forecasts rep Joseph J. Weed; he visualizes color spots sandwiched in between monochrome shows and ultimately distributed over stations' time schedules just as color ads are intermixed with black-&-white in magazines . . . One of nicest self-introductions we've ever heard of, as stated on the air Dec. 20 on occasion of commercial debut of KWTW, Oklahoma City, new CBS outlet (Vol. 9:51)—gen. mgr. Edgar T. Bell speaking: "We are planning to conduct ourselves as honored guests whenever your dial is turned to Channel 9 and you invite us into your home. We plan to make our station one of real public service to the people of Oklahoma" . . . Advertest Research reports TV viewers understand why networks go in for alternate sponsorships (e.g., Philco & Goodyear *Playhouse*) and generally approve; survey showed 3 out of 4 knew they're due to high cost of TV time and production. Highest sponsor recall for an alternately-sponsored program: *Lucky Strike Hit Parade*, 86%; Buick's *Milton Berle*, 79% . . . Catholic Digest for Jan. starts monthly "rating" service of program favorites of its readers, ranks top ones in this order: *Bishop Sheen*, *I Love Lucy*, *Toast of the Town*, *Dragnet*, *Arthur Godfrey & His Friends*, *What's My Line?*, *Our Miss Brooks*, *Mama*, *Jackie Gleason Show*, *Studio One*, *You Bet Your Life*, *Liberace* . . . Unsure what his rates ought to be, v.p. Bill Hoover of Eastern Okla. Television Co. Inc., grantee of Ch. 10 in Ada, Okla., this week wrote nation's 100 top ad agencies to see if they had any suggestions, informing them he intends to adopt average of their suggestions as national rate; he enclosed complete market data on area, TV set circulation estimates and coverage map . . . More rate increases: WBBM-TV, Chicago, Class A hour from \$1550 to \$2000, min. from \$475 to \$500; WSAZ-TV, Huntington, W. Va., \$500 to \$600 & \$100 to \$120; KCBF-TV, Lubbock, \$200 to \$250 & \$20 to \$30 . . . KFAZ, Monroe, La. (Ch. 43), which started last Aug. with \$150 rate, has reduced it to \$100, cutting min. also from \$22.50 to \$14.50.

President and Mrs. Eisenhower got color set last week as gift from RCA chairman David Sarnoff—and promptly put it to use, watching colorcast of *Amahl and the Night Visitors* Dec. 20. It was placed in White House oval study, where two 21-in. black-&-white receivers are recessed in wall. Other RCA color sets in Washington are in Shoreham Hotel suite of Gen. Sarnoff; office and home of NBC v.p. Frank Russell; home of Carleton Smith, WNBW v.p. & gen. mgr.; viewing room of Sheraton Park Hotel studios of WNBW—plus transmitter monitor there.

FCC's color decision is legally effective Jan. 22, or 30 days after publication in *Federal Register* Dec. 23. Of course, for all practical purposes, decision is now effective, since Commission ruled that stations can go ahead commercially immediately, only requirement being that they notify FCC. Commission has interpreted its ruling to mean that notification by network suffices for its affiliates.

Kansas City's Sheriff Owsley, buying 12 TV sets for county jail, is quoted in AP dispatch as stating, "Keeps 'em from thinking about who they're going to rob when they get out."

Fight over Comr. Robert E. Lee's confirmation as FCC member appears to be shaping up as Congress prepares for second session beginning Jan. 6. Lee holds recess appointment, without pay, subject to approval by Senate. He has been sharply attacked by several writers, bitter foes of Sen. McCarthy, because of his friendship with McCarthy and his alleged activities on behalf of the Senator's supporters. Among critics of Lee are *St. Louis Post-Dispatch*, columnists Marquis Childs and Doris Fleeson. Latest to blast Lee is free-lance writer Arthur R. Main, with lead article in Dec. 19 *Nation* titled "McCarthy's \$300,000 Windfall," referring to free TV-radio time McCarthy obtained to answer ex-Pres. Truman during Harry Dexter White controversy.

Two applications for new TV stations were filed with FCC this week. With 7 dismissals, pending applications were reduced to 351 (74 uhf). Week's applications were for Shorewood, Wis., Ch. 31 (allocated to Milwaukee), by Harold R. Murphy, former applicant for same channel, whose application was reinstated by order of FCC; for Fayetteville, N. C., Ch. 18, by adman Ralph E. Hess, whose purchase of radio WFAI from Rollins Bcstg. Co. pends FCC approval. [For further details about these applications, see *TV Addenda 17-Y* herewith; for complete listings of all grants, new stations, applications, dismissals, hearings, see *TV Factbook No. 17* & Addenda to date.]

Copley Press Inc.'s purchase of KLAC-TV, Los Angeles (Ch. 13) from Mrs. Dorothy Schiff Sonnenborn (Vol. 9:49) was approved by FCC Dec. 23, and station will soon become known as KCOP and will have Jack Heintz, from San Diego's radio KSDO, as new mgr., succeeding Mrs. Sonnenborn's son Mortimer W. Hall. Big publishing firm, whose newspaper chain includes 7 Los Angeles County dailies, paid \$1,375,000 for TV outlet, did not acquire sister AM station KLAC, which Hall will continue to manage.

Interconnected by AT&T to nationwide TV network facilities this week: WDAN-TV, Danville, Ill.; KWTW, Oklahoma City. These make total of 239 stations in 147 U. S. cities on network routes. Next on interconnection schedule are WOSH-TV, Oshkosh, Wis.; WSTV-TV, Steubenville, O.; KCEB, Tulsa; KCMC-TV, Texarkana, Tex.; WLBT, Jackson, Miss.; KOA-TV, Denver. AT&T this week filed application with FCC to construct new Orlando-West Palm Beach microwave relay, which would make possible 2 additional TV network channels.

TV-radio will add nearly \$1,000,000 to receipts of New Year's Day football bowl games, about half as much as spectators will pay at gate. Associated Press gives this roundup of TV-radio contributions to major bowl receipts: Rose Bowl, TV-radio \$610,000, gate \$340,000; Orange Bowl, TV-radio \$70,000, gate \$386,000; Cotton Bowl, \$120,000 (including programs & concessions) and \$300,000; Sugar Bowl, \$100,000 (estimate) & \$365,000; East-West All-Star (Jan. 2), \$65,000 & \$280,000.

Sale of Crosley's radio WINS, New York, to J. Elroy McCaw and Jack Keating for \$450,000 was approved by FCC this week. It's understood theatreman Charles Skouras will acquire 50% interest, and McCaw agrees to divest himself of interests in KPOA, Honolulu; KILO, Hilo; KORC, Mineral Wells, Tex.

World's tallest TV tower now in use is WHIO-TV's in Dayton, O., measuring 1104 ft. from base to top of antenna. If it's possible to overlook a 1104-ft. tower, that's exactly what we inadvertently did in story last week on high towers (Vol. 9:51). WHIO-TV tower has been in use since late last month.

Color tape recording of Jan. 1 Tournament of Roses parade is reportedly being planned by Bing Crosby Laboratories.

Index to Television Digest, 1953: Volume 9

References are grouped into three major categories: General (pages 1-5), Manufacturers & Merchandisers (pages 5-6), Supplements (page 1). Index attempts to cover only items considered to be of more than passing interest. Reference numbers following each item designate issue and page of Newsletter in which item appeared.

General

ADVERTISING

TV not hurting other media, 'N. Y. Times' reports, 2:7
top agencies in 1952, 2:7, 9:8
162 most important markets, 3:2
'Sponsor' estimates 1955 network show costs, 3:7
TV hits newspapers, movies, radio, 5:1
McCann-Erickson estimates media volume, 5:1
crime programs ineffective, says Weiss & Geller, 5:6
Publishers Information Bureau figures on network billings, 5:7, 10:6, 14:8, 17:6, 22:12, 26:16, 31:14, 35:16, 40:14, 44:12, 48:12
FCC Grand Rapids-Muskegon decision, 6:7
TV leads in newspaper lineage, 7:10
PIB lists top media in 1952, 8:8
FTC checks commercials, 9:6
study of TV's effects, in 'Journalism Quarterly,' 9:11
TV cost-per-1000 drops, 10:7
TV termed "underpriced," 11:8
agencies doing less program production, 14:9
agencies complain of costs, 15:5
PIB analysis of 4 media in 1952, 18:7
AAA officers, 18:9, 38:8
attention paid to commercials, 18:9
Westinghouse calculates TV effectiveness, 25:3
AMA assails "medical" commercials, 28:6
'Printers' Ink' survey, 28:7
trends, according to 'Sponsor,' 33:3
druggists say TV biggest sales aid, 35:6
top 20 TV advertisers, 37:12
color at ANA convention, 39:2
ANA officers, 39:7
total advertising in 1953, 41:8
networks dislike spot placements, 44:6
ANA survey of 1954 budgets, 45:15
'Blab-Off' commercial eliminator, 49:7
'Sponsor' survey of "overcommercialization," 50:4
Schwerin warns against stressing color, 52:14

ALLOCATIONS (see also UHF)

FCC adamant on "one-year rule," 5:5
channel shifts, 6:2, 48:5
WSAZ-TV asks lift of 1000-ft. limit, 12:12
FCC rescinds Ch. 4 from Fayetteville, W. Va., 22:6
KXLY-TV requests higher power ceiling, 25:5, 32:12
court upholds FCC allocations authority, 32:6
Radio Propagation Advisory Committee, 33:11
Cullum study of high antennas, 36:5
separation changes proposed, 38:16, 52:4
how new stations affect coverage, 40:3
revised U.S.-Canadian agreement, 45:15

AM (Standard) Broadcasting (see also specific networks and Advertising)

number of stations, 1:5, 27:1
Nielsen set count, 4:4
operator rules amended, 5:5, 10:8, 14:10
ABC stations on single-rate basis, 5:6
first Guam station, 9:9
WJR financial reports, 10:13, 17:14, 29:6, 43:13
John Crosby comments on network future, 15:7
FCC AM-FM financial report, 18:14
networks' set estimate, 26:11
joint ownership with TV stations, 27:1
attorneys criticize AM ownership of TV, 28:6
FCC analysis of AM-FM-TV ownership, 28:6
Emerson promoting Conelrad in sets, 32:9
Sarnoff evaluates future, 38:6

Sales

WMGM, New York, 2:6
KJR, Seattle, 3:11
WELL, New Haven, 11:6
KTHH, Houston, 12:10
KABC, San Antonio, 25:1, 26:16, 34:12
KSOX, Harlingen, 25:1
WMMN, Fairmont, 26:16
WINS, New York, 32:6, 52:14
WJJD, Chicago, 32:6
KGW, Portland, 36:12, 43:14
WWNC, Asheville, 46:12
WGAR, Cleveland, 50:12
KRMG, Tulsa, 52:7

AMERICAN BROADCASTING CO. (ABC)

1952 billings, 1:12
Sen. Tobey questions merger, 2:1, 3:11
merger with UPT finally approved, 7:5
new financial setup, 7:12
executive changes, 8:10, 23:6
\$2,000,000 earmarked for technical facilities, 8:14
time sales, 11:8
financial reports, 13:15, 16:15, 29:11, 43:13, 45:14
forms ABC Syndication div., 29:6
camera stolen in Los Angeles, 45:15

ANTENNAS, TRANSMITTING — see Equipment, Telecasting

ANTI-TRUST

GE licenses renewed, 1:11
'Kansas City Star' indicted, 2:6
Govt. drops color-FM probe, 4:8
suit against National Football League, 5:8, 6:10, 7:9, 9:9, 10:9, 11:14
FTC charges NEDA with conspiracy, 16:13, 18:12, 26:15, 32:10, 50:10
KWVL, Waterloo, sues KXEL, 28:6
GE light bulb decision, 40:11
GE judgment on electrical equipment, 41:10
variable condenser judgment, 41:10

APPLICATIONS & CPs FOR NEW TV STATIONS (see also UHF)

FCC proposes more accurate rules, 2:12
list of uncontested channels, 4:1
station-application total limited to 5, 5:2
Denver Ch. 7 initial decision, 6:2, 12:3
hearing rules amended, 6:4

Macon joint-AM grant, 7:4
shared-time, 7:3, 8:3, 11:2, 38:3, 39:4
appeal in Muskegon-Grand Rapids case, 9:9
"trustee corporation," 9:14, 35:10, 38:2
"strike" applications, 10:4, 25:3, 28:4, 50:4
"protest" decisions, 13:5, 14:5, 15:2, 27:12
first final decision, 21:3
speedup procedures, 21:5
advertising and cutoff rule, 27:2, 33:12
attorneys criticize AM entry into TV, 28:6
processing priorities revised, 29:1, 34:3, 43:2
Hearst litigates Milwaukee Ch. 10, 29:12
Interim TV Corp., 35:10, 38:2
Bartley dissents on "deals" for CPs, 36:2
Westinghouse asks exception to priority, 36:4
"shoestring" CP, 38:9
insurance company ownership questioned, 42:6
decisions not discriminating against media, 47:3
multiple ownership decisions, 48:1, 50:5, 52:1

ASCAP—See Music Agencies

BOOSTERS & SATELLITES

proposed for Elkins, W. Va., 9:7, 24:8
British, 9:12, 18:6
Howard-Yale, Palm Springs, Cal., 13:16
Rep. Sutton urges commercialization, 17:9
WSM, Lawrenceburg, Tenn., 18:5
Sylvania, Emporium, 20:12
Hawaiian requests denied by FCC, 22:6
Rep. Bush favors satellites, 34:8
rhombics for long distance, 35:12, 51:5
Sylvania petitions for satellite approval, 38:4
WSM-TV petition, 45:8
Jerrold tests, 45:8, 50:6

Supplements and Special Reports Published During 1953

References are to issues of *Television Digest* with articles pertaining to documents

Directories

Semi-Annual TV Factbooks of Jan. 15 and July 15; with weekly Addenda reporting current FCC grants, applications, new stations on air, etc.
Annual AM-FM Directory of Jan. 1; with weekly Addenda reporting current FCC decisions, applications, etc. Listings of all AM-FM stations by states and frequencies, all applications by states and frequencies, call letter lists, etc. (Includes other North American stations.)

Numbered Supplements

No. 75-A: Revised NTSC Color Field Test Specifications. Technical details of signal to be tested preparatory to submission to FCC. (Vol. 9:7).

Special Supplements and Reports

Bell System TV Network Facilities. Existing and planned coaxial and microwave circuits, as of Jan. 1, 1953, submitted by AT&T during theatre-TV hearings. (Vol. 9:4).

Television Sets-in-Use & Other Data. Substitute tables for TV Factbook No. 16, bringing figures up to date. (Vol. 9:7).

New Stations in Operation and CPs. Directories of all stations operating, plus all grantees, revised periodically. (Vol. 9:11, 24, 37, 48).

First 312 Markets of the United States. Tabulation of sets-in-use, households, percentage of "saturation," etc., prepared by J. Walter Thompson and 'Television Digest.'

Address by David Sarnoff at NARTB Convention. Full text of address analyzing status of TV-radio and prospects for future, Los Angeles, April 29, 1953. (Vol. 9:18).

Small Market TV Stations—Practices & Prospects. Salient portions of transcript of panel discussion during NARTB convention, Los Angeles, April 30, 1953. (Vol. 9:19).

Status and Evolution of Color Television. Address by Dr. W. R. G. Baker, chairman of NTSC, before convention of National Assn. of Electrical Distributors, Chicago, May 25, 1953. (Vol. 9:22).

New Priorities for Processing TV Applications—Full text of FCC report and order changing procedures, with illustrative table of cities. (Vol. 9:29).

Final NTSC Color Transmission Standards. Complete text of signal specifications submitted to FCC after field tests of specifications previously proposed (Supplement No. 75-A). (Vol. 9:30).

What's on the Mind of the Business Man. Reprint of article by W. M. Kiplinger, in Oct. 18 'New York Times' Sunday Magazine. (Vol. 9:43).

Solving the Problems of TV-Radio Interference. Address by FCC Comr. George E. Sterling, before Radio Fall Meeting of RETMA, RTMA of Canada and IRE, Toronto, Ont., Oct. 26, 1953.

How Dept. Stores Use TV. Reprint of article by Robert H. Cole, asst. professor of marketing, U of Illinois, from November, 1953, issue of 'Stores,' official publication of National Retail Dry Goods Assn.

Final Color Television Decision. Full text of FCC report and order approving compatible system endorsed by industry, including appendix describing operation of system and full text of amended FCC technical standards. (Vol. 9:51).

Bound Copies Available

Complete sets of the 1953 *Television Digest* Newsletters, along with the two 1953 TV Factbooks, Addenda and all Supplements can be permanently bound between embossed hard covers and be made available on order at \$25 per volume.

CENSUS, TV RECEIVER

J. Walter Thompson estimates saturation, 3:2, 14:1
 NBC Research, 5:12, 10:14, 14:14, 18:14 29:6, 35:16, 41:12, 51:14
 CBS county-by-county, 21:10
 NBC county-by-county, 28:12
 Nielsen, 44:12, 46:12

COLOR

CBS says compatible color not ready, 1:9
 Westinghouse 42-tube set, 1:9
 new field test specifications, 4:9, 7:14
 Lawrence tri-color tube, 4:9
 Senate-House demand investigations, 11:4
 House hearing, 12:1, 13:1, 14:3
 Telechrome signal generators, 13:11
 RCA demonstrations, 16:1, 21:1
 tri-color camera tube, 16:1
 CBS & Lawrence demonstrations, 16:2
 Sen. Johnson praises compatible system, 16:4
 tape recordings held feasible, 17:14
 Bell Labs test color perception, 18:10
 DuMont not satisfied, proposes 3-D, 19:1
 Siragusa says tube not ready, 19:1
 FCC attitude relaxes, 20:12
 Sterling wants home tryout of set, 21:1
 Dr. Baker's status report, 22:1
 holds NBC affiliates, 22:3
 NBC affiliates sign color clauses, 22:5, 23:16, 25:14
 Philco estimates prices and timing, 24:9
 RCA-NBC petition FCC for new system, 26:1
 RCA demonstrates to Senators, 26:2
 color set costs estimated by RCA, 26:3
 station equipment, 26:10, 27:6, 28:11, 31:5
 NBC network tests, 29:8
 NTSC petitions FCC, 30:1
 FCC proposes adoption of NTSC standards, 32:1
 RETMA asks tax relief on color sets, 32:8
 Sightmaster conversion plan, 33:10
 Sanabria opposes NTSC standards, 34:8
 RCA-NBC promotion, 34:12
 Emerson predicts set prices, 35:13
 Griffin proposes line-sequential system, 35:15
 Wickes Engineering & Construction, 36:4
 AT&T plans, 36:4, 52:1
 Wixon opposes NTSC standards, 36:8
 comments filed with FCC, 37:1
 Dr. Baker estimates growth, 37:9
 no hurried decision, says Comr. Webster, 38:10
 at Chicago ANA convention, 39:1
 prospects for tubes, 39:10, 46:7
 new CBS tube, camera, 41:1, 48:9
 NTSC demonstration for FCC, 42:1
 dealers fear impact on trade, 43:10
 RCA seminar for engineers, 44:4
 Magnavox ads, 44:11
 DuMont sees slow expansion, 44:11
 RCA-NBC coast-to-coast show, 45:1
 Lawrence tube licensees, 45:12, 50:8
 critics' comment on "Carmen," 45:16
 WKY-TV ad anticipating color, 45:16
 Hoffman analysis, 46:9
 Motorola publicity, 46:11
 networks equipped for color, 47:1, 49:3, 50:3, 52:1
 projection receivers, 48:4
 Tarzian surveys employes as set prospects, 48:11
 CBS programming plans, 50:3
 Hazeltine techniques for Lawrence tube, 50:9
 FCC final approval, 51:1
 Telechrome suggests test pattern to FCC, 51:10
 manufacturers' predictions for 1954, 51:11
 GE receiving tube tailored for color, 52:7
 dispute over contributions and patents, 52:11
 Schwerin warns against too much emphasis in commercials, 52:14
 President gets RCA set, 52:14

COLUMBIA BROADCASTING SYSTEM (CBS)

Sen. Bush resigns from board, 1:7
 Stanton heads Ford social study group, 5:5
 \$25,000,000 credit with Prudential & Metropolitan, 11:10
 educational series, 12:8
 financial reports, 12:11, 19:9, 32:11, 45:14
 Stanton says CBS income from network and manufacturing about equal, 13:14
 officers' salaries, 13:14
 "raids" on NBC affiliates, 20:1, 21:1, 42:3
 Hollywood TV City, 20:7
 maniac stabs cameraman, 27:12
 "Fortune" article on CBS vs. NBC, 29:6
 predicts network growth, costs, 39:1
 Stanton resigns from fraternity, 46:12
 Stanton on future rates, 47:12

COMMUNITY ANTENNA SYSTEMS

WSM-TV booster tests, 3:3, 15:6
 genesis of San Bernardino system, 3:10
 growth of systems, volume of business, 4:3, 23:4, 23:3
 new projects, 5:8, 8:10, 21:9 28:7, 31:8, 38:11, 40:5, 43:12, 50:6
 microwave-fed systems, 7:10, 31:8, 45:8, 47:5
 Pottsville system largest, 9:7
 Malarkey urges clean practices, 10:8
 annual meeting, 19:5, 23:4, 24:8
 fight in Asheville, N. C., 19:10, 20:12
 local originations, 23:4, 23:7
 excise taxes, 23:4
 FCC analysis, 23:5
 "Editor & Publisher" article, 25:13
 FCC questions Belknap microwave idea, 26:11
 AT&T asks FCC for microwave, 31:8, 45:8, 47:5
 analysis of costs, revenues, 40:4
 NLRB ruling on jurisdiction, 40:5
 Jerrold 5-channel equipment, 42:10

"world's largest" planned for Vancouver, B. C., 47:5

CONGRESS

Agronsky heads TV-radio galleries, 3:7
 Tobey says he's friend of TV, 3:11
 Interstate Commerce committees, 3:12
 McCarthy opposes Madison applicant, 3:12, 4:12
 proposals to televise sessions, 4:5
 Senate-House recording facility, 4:5
 House quizzes FCC, 8:9, 11:6
 Tohey's CBS-Radio program, 10:7
 bill to compensate W. L. Gleason, 11:9
 permanent station licenses proposed, 13:16
 educational TV hearing, 14:9, 16:8, 17:7
 McFarland becomes lobbyist, 17:13
 McCarthy bill on program transcripts, 24:6
 bill to study international TV, 29:12, 30:5
 Sen. Tobey dies, 30:12
 Streibert heads U. S. information Agency, 31:6
 Bricker heads Senate Commerce Committee, 31:14
 Wolverson bill on telecommunications policy, 32:11

EDUCATIONAL TV

New York commission hearings, 1:7, 2:6, 4:5
 Baltimore experiments during janitor strike, 2:6
 WOI-TV psychology course, 3:6
 WTLV, New Brunswick, closed-circuit tests, 5:6
 Connecticut CPs await funds, 6:5
 Comr. Henock says costs not high, 8:8
 New York commission rejects 10-station plan, 9:2, 10:13
 New Jersey commission favors project, 11:13
 theatre-TV programs for students, 11:13
 CBS-TV series, 12:8
 extension of June 2 deadline urged, 13:9
 Senate hearing, 14:9, 16:3, 17:7
 KUHT, Houston, starts, 19:2, 22:6, 24:6
 Milwaukee Ch. 10 fight, 20:4, 21:9
 President endorses \$400,000 for D. C., 20:4
 Ford Foundation expenditures, 23:9, 49:8
 JCET thanks NARTB, 23:15
 NARDA seeks \$200,000 for educational TV, 27:9
 Sen. Tobey defends educational channels, 28:12
 discussed at governors' conference, 32:6
 New Orleans reservation retained, 35:15
 WOI-TV remains commercial, 37:5
 NCCET sees 27 stations in 1954, 40:8
 Yale closed-circuit system, 43:11, 46:5

EQUIPMENT, TELECASTING

Antennas
 tower lighting & marking, 2:12, 9:14, 11:14
 WOR-TV moving to Empire State Bldg., 8:14
 FCC specifies ERP for tilted beam, 11:14
 highest stations, 28:3, 32:4, 33:4, 36:12, 47:5, 51:6, 52:14
 GE vhf helical, 38:9
 plane accidents, 33:12, 38:16, 49:14
 two toppled by high winds, 50:7
 legal action aimed at removing WOR-TV tower, 52:8

Cameras

"cons" at NARTB convention, 18:3
 Multi-Con image iconoscope, 22:8
 Dage demonstration tour, 29:12
 Marconi unit with 80-in. focal length, 29:12
 RCA film vidicon, 40:6, 42:12
 Dage film vidicon, 46:5, 48:6

Transmitters (see also UHF)

GE renting klystrons, 3:5
 vhf amplifier shipments, 6:1
 GE 5-kw & 250-watt uhf tubes, 12:11
 Gates production, 13:10
 GE "one-man" station, 17:9, 18:4
 spurious emission regulation, 24:8
 GPL-Continental tieup, 28:4, 37:5
 Willy Motors enters field, 30:7, 39:14
 GE 25-kw vhf tetrode, 48:6

Miscellaneous

daytime lighting, 1:11
 KVOS-TV home-built, 5:4
 WHAS-TV hits 316-kw, 6:1, 7:14, 13:7
 tri-dimensional, 9:12, 12:12, 18:10, 48:6
 tests from Mt. Washington, 11:14
 DuMont kine-recorder, 13:16
 DuMont film scanner, 14:10
 Raytheon microwave gear, 15:8
 studio Zoomar, 15:8, 33:11
 Teleprompter, 15:12, 49:13
 meaning of power, 17:9
 British film technique, 17:14
 scanners at NARTB convention, 18:3
 styroflex cable, 26:10
 new RCA mobile unit, 31:8
 Bureau of Standards frequency measurement, 35:15
 "obstacle-gain" vhf transmission, 37:8
 RCA "Monitran," 38:11
 RCA portable microwave, 43:14
 Eye-Cue Sales prompter, 48:8
 more remote pickup channels assigned, 49:6

FEDERAL COMMUNICATIONS COMMISSION (FCC)

budget, 2:12, 14:9, 17:5, 21:3, 30:3, 50:12
 speculation over new members, 4:4
 Communications Bar Assn. officers, 6:12
 changes hearing hours, 7:14
 appeal in Muskegon-Grand Rapids case, 9:9
 Doerfer appointed, 12:1, 13:16, 14:5, 16:5
 FCC attitude evaluated, 14:5
 ideas on network regulation, 14:9
 Hyde named chairman, 17:4
 Cottone resigns, 19:5
 mock hearing conference, 25:14, 26:7

Examiner Irion writes pageant, 26:7
 Comr. Walker retires, 27:12
 3-year TV licenses, 30:4, 33:12, 34:7
 studying network-uhf relations, 31:1, 33:1, 34:6
 new examiners, 33:12, 48:12
 Baker appointed general counsel, 34:12
 Doerfer favors local regulation, 38:10, 43:14
 Lee gets recess appointment, 41:1, 52:14
 license fees, 45:16
 revenue-expense reports, 46:5
 mfrs. want mobile frequencies, 47:12, 50:6
 Barr heads TV-AM-FM divs., 48:5
 new attorneys and engineers, 49:6, 51:6
 employes' backgrounds given to Congress, 52:8

FILM, TV—See Movies & TV Film**FINANCIAL ACTIVITY, GENERAL**

Manufacturing
 "Tele-Tech" estimates electronics volume, 1:11
 Television-Electronics Fund, 3:11, 9:13, 23:14, 49:13, 52:13
 experts forecast general business, 12:9
 doubled appliance sales seen in 10 years, 13:14
 earnings & dividends of 37 electronics mfrs., 16:14
 "Wall St. Journal" compares TV mfrs. with others, 16:14, 20:10, 45:14
 Radio & Television Inc. considers diversification, 20:9
 TV-radio ahead of other industries, "New York Times" survey, 23:14
 FTC-SEC report on wholesale-retail profits, 23:14
 National Credit Office report on industry, 23:14
 BLS reports wage trends, 23:14
 "New York Times" survey of manufacturers, 25:13, 29:13
 Elgin seeks electronics affiliation, 32:11
 Dun & Bradstreet study of failures, 33:10
 "Big 4" summary, sales-profits, 33:11
 top producers estimated, 39:12
 Sprague estimates \$5 billion 1953 output, 52:13

Telecasting (see also Advertising)

WMBR financial report, 1:6, 3:7
 Bankers Trust plans station loans, 1:7
 KONA public stock offer, 2:12
 Crosley financial report, 4:12
 FCC dollars-per-set breakdown, 4:12
 "Broadcasting" estimates 1952 time sales, 5:7
 FCC Grand Rapids-Muskegon decision, 6:7
 KFMB-TV & KFMB operations, 9:14
 FCC report on 1952, 12:12
 WOI-TV audit, 12:12
 assets of WPTZ listed with FCC, 12:12
 FCC network-station statistics, 13:4, 31:4, 41:12
 NARTB small market symposium, 19:1, 20:5
 stations discontinued, 26:4, 34:2
 "pedigree" of TV station ownership, 27:1
 analysis of Meredith Pub. Co., 28:6
 rate trends, per Factbook No. 17, 29:12
 WOOD-TV & WOOD profit, 31:6
 Edward Lamb buys C. L. Bryant Co., 33:11
 CBS predicts network growth, 30:1
 1953 billings estimated, 33:3, 52:5
 "Dub" Rogers on small markets, 42:7
 earnings of WHEN, Syracuse, 42:12
 NARTB estimates revenue per set, 42:12
 Doherty warns of poor planning, 43:1
 Storer stock offer, 47:12
 WJPB-TV operations, 50:2

FINANCIAL REPORTS—see individual manufacturers and networks**FOREIGN TV**

international transmission, 3:10
 Brazil sees TV as colonization aid, 5:8
 Commerce Dept. roundup, 8:13
 Italy, 9:12, 18:12, 20:12
 Russia, 10:14, 46:6, 49:14
 State Dept. views, 20:11
 Belgium, 20:11, 45:7
 digest of Factbook No. 17 directory, 29:6
 Japan, 30:4, 35:15, 37:11
 Venezuela, 37:8
 Philippines, 39:7
 Portugal, 45:7
 DuMont's Marx on set makers, 47:10

Britain

tube sizes, 8:12, 40:12
 commercial TV, 10:7, 42:11, 46:12, 48:12, 51:14
 TV endangering Welsh language, 11:14
 sales tax reduced, 18:12
 12-channel tuner, 20:11
 Jack Gould's evaluation, 27:7
 BBC financial report, 37:12
 tax evaders, 40:13

Canada

U. S. network programs, 1:6
 new-station schedule, 7:14, 9:9, 24:5, 47:3
 drops fees on TV-radio sets, 8:13, 17:7
 private applications, 10:12, 14:14, 19:10, 23:16, 38:16, 40:13
 broadcasters criticize Govt., 11:9
 CARTB officers, 11:9
 sponsorships, 35:7
 CBC financial report, 38:8

Cuba

CMQ microwave, 4:10
 2% luxury tax, 8:12
 new stations, 8:14, 13:16, 20:5
 set smuggling, 24:7
 CMA-TV & CMUR-TV ownership, 52:7

Mexico

San Diego originations for XETV, 4:12, 10:7, 48:7
 TV "notifications," 17:9
 XEQ-TV in Cortez Pass, 24:8

FM (Frequency Modulation) BROADCASTING
number of stations, 1:5
special services, 5:8
multiplex, 12:7, 15:13
transit FM era over, 11:14, 21:10
pioneers dropping, 23:16
Comr. Webster warns of spectrum demands,
38:10, 44:12

HOME LIFE, TV's IMPACT ON (see also
Surveys)
TV vs. telephone in average home, 3:12
Cardinal Spellman calls TV aid to religion, 9:8
programs gauged by water pressure, 9:9
more TVs than bathtubs, 9:11, 29:12
TV admen charged with "cultural corruption,"
11:8
Oregon bans TV on auto dashboard, 13:9
watch-size TV-telephone visualized, 15:15
widow wills \$12,000 to wrestling announcer,
16:16
malocclusion in children, 18:14
cameras withdrawn when suicide threatened,
19:10
librarians say TV doesn't harm children, 24:14
bus operator complains of TV inroads, 25:7
judge enjoins TV hater, 25:14
"televisio" added to Latin, 27:12
librarian finds TV stimulates reading, 28:12
osteopaths see harm in TV, 32:12
more tubes than light bulbs, 36:12
watching wrestling termed good for old folks,
36:12
firemen favor TV over cards and checkers, 39:14
influence on furniture, 40:12
nightclub audiences shrink, 40:14
possum hunting suffers, 42:12
judge uses 'Dragnet' recording, 47:12
son imitates father's mattress-cutting commer-
cial, 48:4
image persists on receiver, 50:10
sheriff buys sets for jail, 52:14

INDUSTRIAL TV

at Beauty Show, 8:14
closed-circuit setup in U. S. clinical center, 11:14
simple cameras shown at IRE convention, 13:11
used in New York Savings Bank, 13:11
RCA "TV-Eye," 20:11
color, 40:12
physician series on KDYL-TV, 45:15
new Lage camera, 47:5

INSTITUTE OF RADIO ENGINEERS (IRE)

officers, 2:11, 46:10
convention, 5:11, 13:10
awards, 47:11

LABOR—see Unions

MERCHANDISING

uhf at Chicago marts, 2:2
Western Auto volume 25% TV-radio-appliances,
2:11
NARDA officers, 3:9
fair practices campaign in Springfield, Mo., 4:10
Freimann says no markets "saturated," 5:10
contests for trips, 6:10
price controls off, 8:11
NRDGA report on TV in dept. stores, 8:12
Dynamic-New York bankruptcy, 8:12
Philadelphia sales, 8:12
Halpin sees more 2-set homes, 9:11
possibility of credit restrictions squelched, 12:10
President doesn't object to standby controls,
12:10, 14:12
impact of color on trade, 13:12, 17:10, 33:8,
43:10, 45:12
estimated cost of color sets, 13:12
Bonfig reports buyers' market, 22:9
Mart "Hall of Fame," 14:12
value of appliance sales surpasses autos, 15:11
Howard Frazier on saturation, 15:13
FTC charges NEDA with conspiracy, 16:13,
18:12, 26:15, 32:10
Siragusa prods trade to sell harder, 19:7
trade-in percentages, 19:9
Sylvania merchandising concept, 23:12
Sanabria newspaper ad, 23:12
farm market, 24:12
NARDA convention, 27:8
NARDA considers auto franchise pattern, 28:10
NAMM convention, 29:9
FRB survey, 30:8
Irving Sarnoff compares TV and refrigerators,
31:12
Muntz and BBB tangle in Dallas, 32:9
TV-radio dealer starts and failures, 35:13
Washington market analyzed in 'Star,' 36:10
FTC trade practices rules, 37:10, 41:10
NEDA convention, 38:14
Admiral favors premiums, 39:12
market created by new stations, 40:10
Magnavox color ads, 44:11
N. J. law against trans-shipping, 48:11
preparation for marts, 49:11
FTC ruling on use of "free," 49:11
TV-radio-appliances lead in dealer mortality,
49:12
FTC-industry meetings, 50:10
Modesto dealer shows reception from 9 stations,
50:11
NARDA predicts 1954 sales, 51:12
price cuts, 52:9

MILITARY PROCUREMENT—see Mobilization

MILITARY USE OF TV BY

tactical use, 31:12
stations for morale & entertainment, 52:7

MOBILIZATION & WAR

NPA staff changes, 1:11, 3:10, 5:11
tax-aided expansion, 1:11
Sprague nominated as Air Force undersecretary,
3:8, 6:9, 7:13
Civil Defense seeks \$5 radio, 3:10, 8:13
small business, 6:9, 10:12, 11:13
price controls off, 8:11, 15:11
Sarnoff committee report on manpower, 8:13
station construction, 8:14
top contractors, 10:12, 27:11
reorganization of defense agencies, 14:12
speculation over Korean peace, 15:9
Cotton says U. S. not yet ready with electronics,
17:13
guided missiles, 18:10
Commerce Dept. electronics div. urged, 23:13
business services agency, 24:13
post-attack program for production, 26:15
President abolishes telecommunications job, 26:15
NPA abolished, 26:15, 27:11
effects of Korean truce, 31:13
Quarles named Asst. Defense Secy., 31:13
Porter heads communications in ODM, 34:6,
40:12
BDSA formed, 40:13
details of "Nike" disclosed, 51:13

MONOPOLY—see Anti-Trust

MOVIES & TV FILM

Republic sells features to stations, 1:7, 2:7
MPAA's Joyce O'Hara dies, 2:7
TV barred from Zukor dinner, 3:6
'Variety' says majors' grosses stabilized, 3:12
Coyne calls TV "villain," movies "poverty in-
dustry," 4:11
three-dimensional film, 6:6, 7:9
TV permitted at Academy Award presentations,
6:7, 10:8
Loews sues KTTV on film use, 6:12
RKO control reverts to Hughes, 7:10
features based on TV programs, 9:8
Warner Bros. split, 9:13
'TV Swinging to Film—And Vice Versa,' 10:1
TV effect on newsreels, 10:8
New York film industry half of Hollywood's,
10:8
Ed Sullivan-movie tieup, 11:10
MPAA plans TV show, 12:12
SMPTE convention, 14:10
Republic's Yates favors TV, 15:6
3-D color film process, 15:13
Skouras plans oldies release, 16:7
tax relief asked, TV cited, 17:14
American Assn. of Film Producers formed, 18:6
UPT salaries, 18:10
Vitapix formed by stations, 19:5, 52:7
Rembusch attacks FCC on "oldies," 20:12
RKO considers acquiring TV interests, 20:12
ABC-MPAA deal with major producers, 25:7
Johnston sees rosy future, 26:11
new TV film makers, 37:8
SMPTE officers, 41:8
TV becoming principal Hollywood industry, 42:7
TV film makers folding, 45:10
Times' Pryor weighs TV impact, 46:1
prospects for opening vaults to TV, 49:13
Eagle Lion studios for TV film exclusively, 51:14
'Billboard' estimates \$50,000,000 worth of TV
film in 1953, 51:14
Financial Reports
National Theatres, 7:13
Loew's, 18:13
Paramount, 27:11
Universal, 27:11
Official Films, 42:11
Theatre TV
Closed-Circuit TV Co., 2:7
Wolfson urges more enthusiasm, 18:10
Cappel, MacDonald & Co., 23:8
business users, 25:7
Box Office TV Inc., 28:4, 34:11, 43:14, 48:8
Marciano-La Starza fight, 32:12, 34:11, 39:14
Lee Hat color session, 40:6
exhibitors resolve to apply to FCC, 45:8
football series, 46:5
FCC Hearing
Western Union proposal, 3:4, 6:6
FCC ultimatum, 3 questions, 5:8, 7:8
can supply 10 mc. AT&T says, 6:6
movie groups offer "compromise," 9:9
hookup costs, 25:13
FCC rules theatre TV common carrier, 26:6

MUSIC AGENCIES

NARTE negotiating committee, 20:12, 52:7
ASCAP \$150,000,000 suit, 46:5

MUTUAL BROADCASTING SYSTEM (MBS)

General Tire financial reports, 8:10, 43:13
executive realignment, 12:8
carrying TV sound tracks, 25:7
new option-time plan, 36:5

NATIONAL ASSOCIATION OF RADIO & TELE- VISION BROADCASTERS (NARTB)

code board studies, 3:6, 37:12, 46:12, 50:5
TV labor advisory committee, 6:4
names 4 vice presidents, 6:6
seeks sets-in-use setup, 6:12, 7:14, 25:14, 40:14,
41:12
engineering conference agenda, 9:12
Doherty predicts TV income, 16:16
Los Angeles convention, 18:1
board, 18:6
A. Frosc Walker engineering director, 23:6 26:7
report on educational programs, 36:8

lists "5 major accomplishments," 38:16
Doherty warns of poor TV planning, 43:1

NATIONAL BROADCASTING CO. (NBC)

Frank White president, 1:12
Weaver assigned to planning, 3:11
CBS "raids," 21:1, 22:3, 42:3
2-year affiliation with KPTV, 21:2
Beville on color and vhf vs. uhf, 25:8
integration policy dropped, 29:6
White resigns, 30:5, 37:5
WNBT rates, 32:7
'Fortune' on NBC presidents, 36:12
"electronic spot buying," 39:9
affiliates meeting, 47:7
Weaver pres., Sarnoff exec. v.p., 49:14, 50:5

NATIONAL PRODUCTION AUTHORITY — see Mobilization

NETWORKS, Coaxial-Microwave Facilities

circuit map, 4:1
Canada connected, 4:6
Cuban microwave, 4:10
New York-Philadelphia L-3 in use, 9:7
transatlantic telephone cable, 49:9

NEW STATIONS ON AIR

WKAB-TV, Mobile, Ala., 1:1
WBRE-TV, Wilkes-Barre, Pa., 1:1
KTSM-TV, El Paso, Tex., 1:1
KOPO-TV, Tucson, Ariz., 3:1
WALA-TV, Mobile, Ala., 3:1
WKBN-TV, Youngstown, O., 3:1
KXLY-TV, Spokane, Wash., 4:2
WJTV, Jackson, Miss., 4:2
WABL-TV, Bangor, Me., 4:2
WEEK-TV, Peoria, Ill., 5:3
WLVA-TV, Lynchburg, Va., 6:3
WFMJ-TV, Youngstown, O., 7:5
WHUM-TV, Reading, Pa., 7:5
KOLN-TV, Lincoln, Neb., 7:5
WKNB-TV, New Britain, Conn., 7:5
WROV-TV, Roanoke, Va., 8:2
KTNT-TV, Tacoma, Wash., 9:1
WFBG-TV, Altoona, Pa., 9:1
KWFT-TV, Wichita Falls, Tex., 9:1
WWLP, Springfield, Mass., 10:2
WHYN-TV, Holyoke, Mass., 10:2
WBAY-TV, Green Bay, Wis., 11:3
KVTV, Sioux City, Ia., 11:3
KGNC-TV, Amarillo, Tex., 11:3
KGUL-TV, Galveston, Tex., 11:3
KSWO-TV, Lawton, Okla., 11:4
KTTS-TV, Springfield, Mo., 12:2
KDZA-TV, Pueblo, Colo., 12:2
KFDX-TV, Wichita Falls, Tex., 13:6
WICC-TV, Bridgeport, Conn., 14:2
KFDA-TV, Amarillo, Tex., 14:2
WLOK-TV, Lima, O., 14:2
WHP-TV, Harrisburg, Pa., 14:2
WPAG-TV, Ann Arbor, Mich., 14:2
WKST-TV, New Castle, Pa., 15:1
KCJB-TV, Minot, N. D., 15:1
KRTV, Little Rock, Ark., 15:2
WKNX-TV, Saginaw, Mich., 15:2
WFTL-TV, Ft. Lauderdale, Fla., 15:2
WEEU-TV, Reading, Pa., 15:2
WTVO, Rockford, Ill., 15:2
WAFB-TV, Baton Rouge, La., 16:6
KTYL-TV, Mesa, Ariz., 17:3
WCOV-TV, Montgomery, Ala., 17:3
WLEV-TV, Bethlehem, Pa., 17:3
WCOS-TV, Columbia, S. C., 17:4
WLBC-TV, Muncie, Ind., 18:4
KUHT, Houston, Tex., 19:2
WFAM-TV, Lafayette, Ind., 19:3
KCBF-TV, Lubbock, Tex., 19:3
KELO-TV, Sioux Falls, S. D., 20:3
KVEC-TV, San Luis Obispo, Cal., 20:3
WHIZ-TV, Zanesville, O., 20:3
WSUN-TV, St. Petersburg, Fla., 21:3
WBKZ-TV, Battle Creek, Mich., 21:3
KVOS-TV, Bellingham, Wash., 21:3
KFOR-TV, Lincoln, Neb., 22:3
KMJ-TV, Fresno, Cal., 22:3
WDAY-TV, Fargo, N. D., 22:3
WFTV, Duluth, Minn., 23:1
WTVE, Elmira, N. Y., 23:1
KCTV, Kansas City, Mo., 23:1
WGBI-TV, Scranton, Pa., 24:3
WAKR-TV, Akron, O., 24:3
WCSC-TV, Charleston, S. C., 25:2
KSWV-TV, Roswell, N. M., 25:2
WTPA, Harrisburg, Pa., 25:2
KTXL-TV, San Angelo, Tex., 26:4
KTVH, Hutchinson, Kan., 26:4
KFXD-TV, Nampa, Ida., 26:4
KCSJ-TV, Pueblo, Colo., 26:4
WROM-TV, Rome, Ga., 26:4
WGLV, Easton, Pa., 27:2
WKOW-TV, Madison, Wis., 27:2
KIMA-TV, Yakima, Wash., 27:2
WOSH-TV, Oshkosh, Wis., 27:2
WISE-TV, Asheville, N. C., 28:3
WNAO-TV, Raleigh, N. C., 28:3
WMTV, Madison, Wis., 28:3
KLAS-TV, Las Vegas, Nev., 28:3
KIDO-TV, Boise, Ida., 28:3
WGVL, Greenville, S. C., 29:1
WKJF-TV, Pittsburgh, Pa., 29:1
KROC-TV, Rochester, Minn., 29:1
KSFA-TV, Ft. Smith, Ark., 29:1
KEYT, Santa Barbara, Cal., 30:4
WETV, Macon, Ga., 31:3
KMMT, Austin, Minn., 31:3
KBES-TV, Medford, Ore., 31:3
KMBC-TV & WHB-TV, Kansas City, Mo., 32:2

KMO-TV, Tacoma, Wash., 32:2
KUSC-TV, Los Angeles, Cal., 32:2
WTVP, Decatur, Ill., 32:3
WTVI, Belleville, Ill., 33:1
WILS-TV, Lansing, Mich., 33:2
KXLF-TV, Butte, Mont., 33:2
KFAZ, Monroe, La., 33:2
WVEC-TV, Hampton-Norfolk, Va., 34:1
KEDD, Wichita, Kans., 34:1
KCMC-TV, Texarkana, Tex., 34:1
KSBW-TV & KMBY-TV, Salinas-Monterey, Cal., 34:1
WBUF-TV, Buffalo, N. Y., 34:1
WTVU, Scranton, Pa., 34:1
KAFY-TV, Bakersfield, Cal., 34:2
WTVH-TV, Peoria, Ill., 34:2
WTCN-TV & WMIN-TV, Minneapolis, Minn., 35:2
WPMT, Portland, Me., 35:2
WDAK-TV, Columbus, Ga., 35:2
KHQA-TV, Hannibal, Mo., 35:2
WGEM-TV, Quincy, Ill., 35:3
WICA-TV, Ashtabula, O., 35:3
KETX, Tyler, Tex., 35:3
KRBC-TV, Abilene, Tex., 35:3
KOPR-TV, Butte, Mont., 35:3
KHSL-TV, Chico, Cal., 35:3
WCAN-TV, Milwaukee, Wis., 36:1
WBES-TV, Buffalo, N. Y., 36:2
WATR-TV, Waterbury, Conn., 36:2
WCHA-TV, Chambersburg, Pa., 36:2
WNOK-TV, Columbia, S. C., 36:2
WTAO-TV, Cambridge, Mass., 36:2
WIRK-TV, W. Palm Beach, Fla., 36:2
WMAZ-TV, Macon, Ga., 36:2
WENS, Pittsburgh, Pa., 36:2
WEHT, Henderson, Ky., 37:3
KFSD-TV, San Diego, Cal., 37:3
KCMO-TV, Kansas City, Mo., 37:3
WILK-TV, Wilkes-Barre, Pa., 37:4
WKLO-TV, Louisville, Ky., 37:4
WTOB-TV, Winston-Salem, N. C., 38:1
WREX-TV, Rockford, Ill., 38:2
WICS, Springfield, Ill., 38:2
WKNA-TV, Charleston, W. Va., 38:2
KGBS-TV, Harlingen, Tex., 38:2
KFEQ-TV, St. Joseph, Mo., 38:2
KVOA-TV, Tucson, Ariz., 39:3
WOKY-TV, Milwaukee, Wis., 39:3
WMT-TV, Cedar Rapids, Ia., 39:3
WROL-TV, Knoxville, Tenn., 39:4
KGGM-TV, Albuquerque, N. M., 39:4
WJBF-TV, Augusta, Ga., 39:4
KRDO-TV, Colorado Springs, Colo., 39:4
KJEO, Fresno, Cal., 39:4
KCCC-TV, Sacramento, Cal., 40:1
KYTV, Springfield, Mo., 40:1
WECT, Elmira, N. Y., 40:1
WSJS-TV, Winston-Salem, N. C., 40:1
KOIN-TV, Portland, Ore., 40:1
KOAT-TV, Albuquerque, N. M., 40:2
WHBQ-TV, Memphis, Tenn., 40:2
KZTV, Reno, Nev., 40:2
KNOE-TV, Monroe, La., 40:2
KERO-TV, Bakersfield, Cal., 40:2
WTOK-TV, Meridian, Miss., 40:2
KIEM-TV, Eureka, Cal., 41:5
WSVA-TV, Harrisonburg, Va., 41:5
KIVA, Yuma, Ariz., 41:5
WACH, Newport News, Va., 41:5
WTAP, Parkersburg, W. Va., 41:6
WIFE, Dayton, O., 41:6
WTSK, Knoxville, Tenn., 41:6
KOOL-TV & KOY-TV, Phoenix, Ariz., 42:4
WPFA-TV, Pensacola, Fla., 42:4
KCRI-TV, Cedar Rapids, Ia., 42:4
WARD-TV, Johnstown, Pa., 42:5
WROW-TV, Albany, N. Y., 42:5
KNUZ-TV, Houston, Tex., 42:5
WLBK-TV, Lebanon, Pa., 42:5
WIS-TV, Columbia, S. C., 43:2
WTRF-TV, Wheeling, W. Va., 43:3
WJMR-TV, New Orleans, La., 43:3
WTOV-TV, Norfolk, Va., 43:3
KSTM-TV, St. Louis, Mo., 43:3
KANG-TV, Waco, Tex., 43:3
KFIA, Anchorage, Alaska, 43:3
KOOK-TV, Billings, Mont., 43:4
WHEC-TV & WVET-TV, Rochester, N. Y., 44:2
KLZ-TV, Denver, Colo., 44:2
WTAC-TV, Flint, Mich., 44:3
KTVQ, Oklahoma City, Okla., 44:3
WJHL-TV, Johnson City, Tenn., 44:3
KCEN-TV, Temple, Tex., 44:3
KLPR-TV, Oklahoma City, Okla., 45:4
KACY, Festus, Mo., 45:4
KQTV, Ft. Dodge, Ia., 45:4
KTAG-TV, Lake Charles, La., 45:4
WIBW-TV, Topeka, Kan., 46:2
WCIA, Champaign, Ill., 46:2
WRBL-TV, Columbus, Ga., 46:2
WFIE, Evansville, Ind., 46:2
WNOW-TV, York, Pa., 46:2
KTVE, Longview, Tex., 46:2
KOMO-TV, Seattle, Wash., 47:2
WWOR-TV, Worcester, Mass., 47:2
KCOK-TV, Tulare, Cal., 47:3
KGTV, Des Moines, Ia., 47:3
KWWL-TV, Waterloo, Ia., 47:3
WKJG-TV, Ft. Wayne, Ind., 47:3
KBOI, Meridian, Ia., 47:3
WSIX-TV, Nashville, Tenn., 48:3
WITV, Ft. Lauderdale, Fla., 48:3
WLAM-TV, Lewiston, Me., 48:3
KTVA, Anchorage, Alaska, 48:3
WCSH-TV, Portland, Me., 49:5

WJDM, Panama City, Fla., 49:5
WBLN, Bloomington, Ill., 49:5
WRAY-TV, Princeton, Ind., 49:5
KWTW, Oklahoma City, Okla., 50:1
WWTW, Cadillac, Mich., 50:1
WSTV-TV, Steubenville, O., 50:1
WNAM-TV, Neenah, Wis., 50:1
KFYR-TV, Bismarck, N. D., 50:1
WAYS-TV, Charlotte, N. C., 50:2
WSIL-TV, Harrisburg, Ill., 50:2
KOAM-TV, Pittsburg, Kan., 50:2
WAIM-TV, Anderson, S. C., 50:2
KOMU-TV, Columbia, Mo., 51:4
WRTV, Asbury Park, N. J., 51:5
KATV, Pine Bluff, Ark., 51:5
WDAN-TV, Danville, Ill., 51:5
WEAU-TV, Eau Claire, Wis., 51:5
KID-TV, Idaho Falls, Ida., 51:5
WJHP-TV, Jacksonville, Fla., 51:5
KOA-TV, Denver, Colo., 52:4
KSLA, Shreveport, La., 52:4
WFBC-TV, Greenville, N. C., 52:5
WLBT, Jackson, Miss., 52:5
KTVU, Stockton, Cal., 52:5
KMID-TV, Midland, Tex., 52:5
NEWSPAPERS, TV'S IMPACT ON (see also Surveys)
Cleveland TV-newspaper battle over crime programs, 3:6
Wyman blames TV for newspapers' loss, 5:1
Biggers see little danger from TV, 18:7
'Collier's' goes bi-weekly, blames TV, 19:10
ownership of TV stations, 27:1
New York strike, 49:8, 50:12
PATENTS (see also Anti-Trust)
GE-RCA litigation, 24:13
Westinghouse releases 200 patents, 34:11
Armstrong grants \$50,000 for study of courts, 47:11
dispute over color, 52:11
POLITICS
campaign expenditures, 1:12
CBS's Paley asks shorter campaigns, 3:12
Miami U survey favors short campaigns, 9:9
Ingle leaves Republican committee, 20:6
Eisenhower-cabinet telecast, 23:8
demagogue on TV feared by Canham, 24:14
ex-Sen. McFarland buys 40% of applicant, 28:12
PREDICTIONS
all facets of industry in 1953, 1:2, 51:11
station & receiver growth, 1:10, 2:9, 4:7, 25:12, 51:11
telecasting income, 15:14, 16:16, 33:3
receiving tube sales, 17:12, 25:12
business generally, 35:12, 51:11
TV-appliances by 1960, 38:14
PRICE CONTROLS—see Mobilization
PROFITS, TV STATION — see Financial Activity
PROGRAMS AND PRODUCTION
George S. Kaufman episode, 1:6, 2:7
Coronation, 2:7, 19:10, 23:8, 24:14, 25:6
Inauguration coverage, 4:4
Administration TV-radio "open door," 4:5
birth of son to Lucille Ball-Desi Arnaz, 4:5
NBC's Robert Sarnoff sees film comprising 70% of TV fare in 5 years, 5:6
CBS & NBC cooperate on Ed Sullivan program, 5:6
court holds giveaways legal, 6:12, 42:12
Voice of Democracy, 8:10
built-in TV facilities for public halls urged, 9:9
A-bomb blast, 11:9, 12:12
"road companies," 14:10
'TV Guide,' 14:14
Teleprompter, 15:12, 49:13
cost of programs, by 'Television Magazine,' 17:8
WAAM, Baltimore, underwrites African expedition, 25:6
Lucille Ball "red" charge, 38:16
UP telephoto service, 40:5
Morrow's "Case for Milo Radulovich," 43:7, 43:8
Godfrey fires La Rosa & Bleyer, 43:7, 44:8
WPIX "satellites," 45:8, 50:12
unions say telethons out, 45:10
New England uhf network, 49:5
gratuities attacked, 49:7
banks back program production, 49:14
'Aware Inc.' formed, 51:5
President's news conference taped, 50:7
Awards
'Look' magazine, 1:7, 51:6
'Radio Daily,' 2:12
Emmy, 6:4
George Polk Memorial, 11:13
Alfred I. duPont, 13:6
Sigma Delta Chi, 15:7
Ohio State Institute, 16:16
Peabody, 17:7
'Variety,' 18:7
Academy of Radio & TV Arts & Sciences, 20:7
Dr. Lee deForest, 35:16
Christopher, 42:6
Sylvania, 49:8
'McCall's Magazine,' 52:8
RADIO-ELECTRONICS-TELEVISION MFRS. ASSN. (RETMA)
spurious radiation, 1:10, 2:11, 3:10, 40:5, 43:12, 44:1
staff realignment, 3:10
Zbar named chief service instructor, 4:10
1952 TV-radio production report, 5:9
broadening scope, 6:8, 14:12, 17:12, 46:11
McDaniel elected temporary president, 25:10

manufacturer failures, 25:12, 48:11
set servicing booklet, 25:12
changes name to RETMA, 31:11
hi-fi standards, 36:10, 47:10
new boards, 37:10
committee chairmen, 38:13
west coast office, 39:12
RECEIVER INSTALLATION & SERVICING
Moch says 25,000 more servicemen needed, 2:10
Lang discusses TV servicing problems, 3:9
serviceman convicted of cheating, 8:12
Roper survey of public's attitude, 29:11
rhombic repeaters, 35:12, 51:5
annual bill estimated at \$250,000,000, 42:10
GE survey of servicemen, 52:12
RECEIVER PRODUCTION (see also individual manufacturers)
spurious radiation, 1:10, 2:11, 3:10, 40:5, 43:12, 44:1
final report on 1952 by RETMA, 5:9
KWKH making receiving antennas, 9:9
compared with auto production, 9:11, 45:13
RETMA 7-year cumulative shipments, 11:12
DuMont adjacent-channel filter, 13:11
printed circuits planned for TVs, 13:14, 50:10
set distribution, by Market Research, 15:11
vacations, 18:11, 20:9
top producers, 20:8, 39:12
parts show, 21:8
GE automatic production technique, 23:13
manufacturers in Factbook No. 17, 28:8
RCA printed-circuit IF amplifier, 29:11
AEPEN officers, 31:13
Census reports 1952 volume, 32:10
coin-operated, 34:10
high-fidelity pushed, 35:11
'Project Tinkertoy,' 38:15
receiving tube prices up, 39:11
inventories, 42:9, 45:11
NEMA officers, 46:11
manufacturers' predictions for 1954, 51:11, 52:12
trade-marked words, 52:11
REPRESENTATIVES, TV STATION
John E. Pearson Television Inc. formed, 3:7
'Billboard' reports billings, 16:16
station ownership by reps, 23:4, 29:12
Katz forms Station Films Inc., 25:6
number of TV stations per rep, 27:5
SEA asks FCC to halt network "encroachment," 30:6
Raymer takes over Taylor, 48:7
SALES, TV STATION
WTVN, Columbus, 3:7, 9:14
KFMB-TV, San Diego, 5:3, 9:14, 23:3
WPTZ, Philadelphia, 8:1, 12:12, 22:12
KONA, Honolulu, 11:1, 23:2
KING-TV, Seattle, 25%, 11:1
WBRC-TV, Birmingham, 13:3, 21:10
KDYL-TV, Salt Lake City, 14:4, 26:16
WAFM-TV, Birmingham, 15:1, 17:7, 24:14
WALA-TV, Mobile, 23:3
KOLN-TV, Lincoln, 30:3, 34:12
KRTV, Little Rock, 30:3
KDZA-TV, Pueblo, 31:1, 47:12
WABI-TV, Bangor, 31:1
KRBC-TV, Abilene, 35:6, 38:8
stations in negotiation stage, 35:6, 48:12
KCMO-TV, Kansas City, 40:14, 41:12, 46:12
WSUN-TV, St. Petersburg, 41:12
KPIX, San Francisco, 45:15
KLAC-TV, Los Angeles, 46:12, 49:6, 52:14
KFSD-TV, San Diego, 46:12
KFDA-TV, Amarillo, 46:12
KXLY-TV, Spokane, 49:6
KAFY-TV, Bakersfield, 50:12
SATELLITES—See Boosters & Satellites
SERVICING & SERVICEMEN—see Receiver Installation
SMPT—see Movies
SPORTS
Baseball
major league TV schedules, 5:6, 33:12
Sen. Johnson bill banning TV, 12:7, 19:6, 22:8, 24:14, 25:7, 28:12
Boxing
1952 TV-radio income, 1:7, 23:8
Green calls TV "threat," 18:7
WOV defies Marciano-La Starza blackout, 38:16
Football
NCAA controls voted, 2:12
NCAA plan, 18:7
GM sponsoring NCAA schedule, 20:6, 25:7
dissents from NCAA plan, 21:5, 22:13, 39:14
Tatum blames TV and traffic, 45:15
court NFL decision, 46:3
Bert Bell wants more TV, 52:8
bowls' TV take, 52:14
STATION CONSTRUCTION CONTROLS — see Mobilization
SUBSCRIBER-VISION—see Subscription TV
SUBSCRIPTION TV
Advertest survey of N. Y. public, 8:13
Howard-Yale booster, 13:16
depreciated by Sarnoff, 18:1, 19:6
Leonard Goldenson dubious, 21:5
worth a try, says Jack Gould, 25:13
opposed by 'Motion Picture Herald,' 28:7
Hinshaw bill to make service common carrier, 31:9, 41:11
uhf grantees petition, 32:3, 37:8, 38:10, 41:11, 43:8, 48:8
Comr. Webster's views, 38:10

Subscriber-Vision
public demonstrations, 23:15, 28:7
Western Union tieup seen, 24:7

Telemeter
Palm Springs inauguration, 45:8, 49:7

SURVEYS (see also Home Life, TV's Impact on)
'Life' study of TV-radio vs. magazines, 25:6
Woodbury College, 25:13
Boni, Watkins, Mounter, set sales, 30:8
Federal Reserve Board, 30:8
Videotown, 37:12
Advertent, summer viewing, 39:14
Market Research, set distribution, 46:10

TAPE RECORDINGS & RECORDS
TV tape recording, 1:4, 13:16, 18:5, 26:16, 43:13,
45:4, 49:1, 52:14
improved kines, 2:4
new MMM tape material, 5:12
business booming, phono makers tell NPA, 6:10
RIAA officers, 7:10
Armour tape playback head, 17:12
RCA's Sacks sees \$200,000,000 year, 26:15
Soundsciber 24-48 hour unit, 33:11
roundup in 'N. Y. Times,' 42:10
"best year," says 'Wall St. Journal,' 49:12

TAXES
Wisconsin set levy, 1:12
excess profits, 23:14, 25:13, 50:12, 52:13
movie admission, 30:12
color set exemption asked, 32:8
TV set evaluation in Denver, 40:14

TELEMETER—see Subscription TV

TELEVISION FUND—see Financial Activity,
General

THEATER TV—see Movies

TRANSISTORS
in hearing aids, 1:11, 2:11, 3:10, 4:10
Bell Labs production rate, 4:10
substitute for germanium, 4:10
Clevite buys control of Transistor Products, 6:11
Shockley awarded prize, 8:13
Hydro-Aire announces production, 9:11
'Fortune' article, 11:13
CBS-Hytron production, 11:13, 16:15
IRE convention "glamour baby," 13:11
Zenith reports failures, 16:16
Westinghouse & DuMont production, 17:12
new GE production technique, 17:13
RCA commercial availability, 20:11
RCA 425-mc unit, 28:9

Sylvania tetrode and pentodes, 30:11
Bell Labs evaluates first 5 years, 31:13
first use in TV visualized, 32:11
GE all-welded units, 35:15
Fink evaluates progress, 37:11
BDSA assistance, 43:13, 44:11
CBS-Columbia test equipment, 43:13
Minneapolis-Honeywell power unit, 45:15
Philco "surface-barrier," 49:12

TRANSIT FM—see Frequency Modulation

TRANSMITTERS—see Equipment, Telccasting

TUBES, TV PICTURE (see also individual manu-
facturers & Color)
RCA's Thees predicts shortage, 2:10
phosphors \$3,000,000 annual business, 2:11
24-in. for fall-winter, 11:11, 14:11, 22:9
GE internal magnetic focus, 13:10
16-in. history cited in color petition, 26:10
National Union reports brighter gun, 26:15
GE transparent, 28:11
high demand for aluminized tubes, 29:10
bent-neck, 31:13
RCA reorganization, 44:11

UHF (Ultra High Frequency) (see also
individual manufacturers)

Receivers
survey of supply & demand, 1:8
Howard Sams tests, 3:12, 13:10
Waters Conley Co. plans production, 6:5
NARDA urges members to put uhf across, 7:12
Hooper survey of Atlantic City, 9:7
tuner trends, 10:11, 21:7, 23:12
new antenna makers, 10:11
sales, 21:7, 34:9, 45:6
estimate of set & converter output, 27:4, 38:5,
45:6, 50:9
vhf reception of uhf suggested, 33:7
first uhf booster, 40:11
installment plan for conversions, 51:13

Stations
FCC's Allen discusses allocation plan, 4:11
problems of WFPG-TV, Atlantic City, 5:5
summary of experience to date, 8:4, 17:2, 39:5
WHUM-TV start with high power, 8:5
interference problems, 8:5
WHYU-TV proposes "marker" signal, 8:6, 23:12,
28:5, 35:10
RCA's Taylor on coverage, 14:10
booklet by KCTY, Kansas City, 19:8
DX reception, 23:16, 25:8, 27:12, 40:5
American Research Bureau studies, 24:1, 28:1,
41:4

Comr. Hyde on vhf-uhf competition, 24:3
promotion of WVEC-TV, Norfolk, 25:1, 29:7,
31:9
WROV-TV, Roanoke, quits, 26:4, 29:3
Comr. Sterling comments on uhf, 26:11
FCC studying network-uhf relations, 31:1, 33:1,
34:6, 38:1, 51:4
NBC promotion booklet, 35:5
replace vhf with ubf in St. Louis, FCC asked,
42:8, 44:12
UHF TV Assn., 43:7, 48:8, 52:8
ABC's "P's & Q's of V's & U's," 43:8
FCC rejects channel switch applications, 44:12
Doerfer's analysis, 47:6
WBES-TV, Buffalo, quits, 51:3
FCC defends vhf-uhf intermixture, 52:3

Case Studies
Atlantic City & York, 6 (special report)
Wilkes-Barre-Scranton, 7:1
South Bend, 9:3
Youngstown, 10:4
Roanoke, 12:3, 26:4
Reading, 15:3
roundup, 17:2, 39:5
Pittsburgh, 43:4

Transmitting Equipment
directional antennas, 8:14, 46:6, 47:6
KFEL-TV offers experimental equipment, 9:7
GE 5-kw & 250-watt tubes, 12:11
Eimac & Varian high-powered tubes, 13:10, 24:4
DuMont antenna, 13:10
Tarzian plans production, 22:8, 44:6
Continental Electronics plans, 24:4
Stanford U tests 30-kw klystrons, 34:8
Eimac 15-kw klystron, 35:10
RCA tetrode, 36:12, 44:6, 52:3
RCA magnetron, 40:13

UNIONS & GUILDS
Doherty urges legislation re music on TV film,
13:16
CIO plans \$1,000,000 on public relations, 23:9
IUE-GE contract, 25:11
strike at WDAF-TV, 25:14
IUE Washington conference, 33:9
WOR-TV strike, 34:11, 35:8, 37:4, 40:6
AFM collections from TV film, 35:16
ASCAP royalties, 35:16
DuMont-IUE contract, 41:11
actor suspended for insulting sponsor, 50:4
Supreme Court upholds firing of technicians,
50:6

WAGE CONTROLS—see Mobilization

MANUFACTURERS AND MERCHANDISERS

ADMIRAL CORP.
Palo Alto laboratories, 2:11
dollar volume, 4:7
old markets most important, says Siragusa, 4:7
export subsidiaries, 5:10
"Peter Pan" promotion tieup, 5:10
new sets, 5:10, 23:10
optional continuous uhf tuner, 6:9
price increases, 6:10
ad expenditures, 7:10
financial reports, 12:11, 15:12, 17:14, 18:13,
33:11, 44:8
officer stock options, 14:13
favors premium selling 39:12
Siragusa sees little export market in Europe,
48:11

AEROVOX CORP., 5:11, 10:13

AMERICAN PHENOLIC CORP., 14:13, 23:14

AMERICAN TELEVISION INC., 9:11

ARVIN INDUSTRIES INC., 14:13, 26:14, 35:15,
45:14

AVCO—see Crosley

BELMONT—see Raytheon

BENDIX RADIO DIV., BENDIX AVIATION
CORP., 2:10, 26:14

BRUNSWICK DIV., RADIO & TELEVISION
INC., 20:9

CANADIAN MARCONI CO., LTD., 32:11

CAPEHART-FARNSWORTH CORP.
new sets, 2:10, 26:14, 32:10
IT&T financial reports, 15:13, 24:13, 39:13
IT&T absorbing domestic subsidiaries, 22:10

CBS-COLUMBIA INC., 2:10, 25:11

CBS-HYTRON
expansion, 8:13
color tube, 41:1, 42:3, 47:10

CLAROSTAT MFG. CO. INC., 18:13, 20:10

CLEVITE CORP., 9:13, 15:12, 45:14

COLLINS RADIO CO., 13:15, 44:8

CORNELL-DUBILIER, 3:11, 5:11, 9:13, 20:10,
31:9

CROSLLEY DIV., AVCO MFG. CORP.
financial reports, 7:13, 15:12, 20:10, 27:11, 39:13
new sets, 25:11
Avco buys Moffats Ltd., Toronto, 28:11
Avco consolidates Crosley-Bendix distribution,
30:10
portable clock-radio-phono combination, 35:14
reorganization, 36:8
takes Lawrence color tube license, 45:12

DELCO (GENERAL MOTORS), 10:12

ALLEN B. DuMONT LABORATORIES INC.
expansion, 10:13
financial reports, 13:15, 15:12, 19:9, 28:11, 43:13,
51:8, 52:13
"Du-mitter" shipments, 14:10
film scanner, 14:10, 19:10
handling Motorola microwave, 16:13
new CR tube plant, 20:11
new sets, 25:11, 34:10, 50:10
equipping Statler hotels, 31:12
transmitter div. staff realigned, 38:15, 40:12

EITEL-McCULLOUGH INC., 13:10

EMERSON RADIO & PHONOGRAPH CO.
financial reports, 3:11, 9:13, 17:14, 22:11, 35:15,
40:12
proposed merger with Webster-Chicago, 4:11,
5:11, 6:11
price increases, 7:12
new sets, 27:10
air conditioners, 36:11
"Autobrader" for printed circuits, 39:13
\$700 color sets, 40:6
Washington laboratory, 51:13

ERIE RESISTOR CORP., 16:15, 20:10, 23:14

FEDERAL TELEPHONE & RADIO CO. (IT&T),
45:15

GABRIEL CO., 8:10, 20:10, 36:8

GENERAL ELECTRIC CO. (GE)
Sahloff says company will double production, 3:9
50 fellowships at Union College, 6:9
internal magnetic focus picture tube, 13:10
strike, 15:11, 23:7-12, 24:12
financial reports, 17:14
new sets, 26:14
light bulb anti-trust decision, 40:11
consent judgment on electrical equipment, 41:10
wants "rightful share" of TV market, 43:13
robot factory control, 45:15

GENERAL INSTRUMENT CORP.
financial reports, 3:11, 20:10, 24:13, 29:11, 40:12,
42:11
expansion, 12:10
anti-trust judgment on condensers, 41:10

GENERAL PRECISION EQUIPMENT CORP.
tieup with Fye Ltd., 3:10
financial reports, 14:13, 35:15, 45:14
directors, 18:13

HALLICRAFTERS CO.
new sets, 2:10, 32:10
financial reports, 12:11, 29:11, 47:11

HARVEY-WELLS ELECTRONICS INC., 47:10

HAZELTINE ELECTRONICS CORP.
financial reports, 13:15

Loughren awarded Sarnoff medal for color work,
40:6

HOFFMAN RADIO CORP.
financial reports, 12:11, 16:15, 30:11, 41:11, 50:11
Kansas City plant, 18:12
new sets, 28:10
eastern distribution, 35:14
views on color, 46:9

INDIANA STEEL PRODUCTS CO.
fight over Plamondon, 11:10, 13:14, 14:13, 15:13,
16:14, 18:13
financial reports, 24:13, 38:15, 51:8

INTERNATIONAL RESISTANCE CO., 13:15,
24:13, 32:11, 51:8

INTERNATIONAL TELEPHONE & TELE-
GRAPH CORP.—(see Capehart-Farnsworth)

I-T-E CIRCUIT BREAKER CO., 20:10, 39:13

JACKSON INDUSTRIES INC., 12:10, 13:15, 18:12,
22:10, 24:11

JEWEL RADIO CORP., 48:11

KAYE-HALBERT CORP.
industrial TV, 4:10
financial reports, 19:9
buys Pacific Instruments & Control, 40:11

LEAR INC., 16:15

MAGNAVOX CO.
new sets, 2:10, 26:14
Freimann says no markets "saturated," 5:10
financial reports, 5:11, 17:14, 22:11, 31:9, 40:12,
43:13
Freimann questions hi-fi claims, 26:14, 29:9
ads on color, 44:11

MAJESTIC RADIO & TELEVISION CORP., 2:10

P. R. MALLORY & CO., 7:13, 10:13, 13:15, 43:13,
47:11

MOTOROLA INC.
new sets, 2:10, 27:10
communications-electronics subsidiary, 2:11
2-lb. "Handie Micro-Talkie," 4:10
financial reports, 5:11, 14:13, 16:15, 19:9, 31:9,
44:8
Holsten analyzes Buffalo potential, 25:8
views on color, 40:6
describes challenges to engineers, 40:13
featured in 'Wall St. Journal,' 45:13
color publicity, 46:11

MUNTZ TV INC., 10:13, 25:13, 50:9

MUTER CO., 15:12, 17:14, 31:9, 43:13

NATIONAL ELECTRONICS MFG. CO., 2:10,
16:13

NATIONAL UNION RADIO CORP., 5:11, 15:12, 18:13, 31:9, 35:15
OAK MFG. CO., 13:15, 25:13
OLYMPIC RADIO & TELEVISION INC.
 new sets, 2:10, 26:14
 Schoenen retires, 14:10
 financial reports, 15:12, 18:13, 39:13, 45:14
 buys Electrona Corp., 17:12
PACIFIC MERCURY TELEVISION CORP.
 closed-circuit TV meeting, 1:10
 expansion, 4:10
 new sets, 26:14
 fire, 37:10
PACIFIC VOGUE RADIO & TELEVISION CO., 12:10
PACKARD-BELL CO.
 financial reports, 5:11, 18:13, 31:9, 38:15, 43:13, 50:11
 stock registration, 13:15, 16:15
PATHE TELEVISION CORP., 2:10
PHILCO CORP.
 new sets, 1:10, 23:10
 expansion, 2:10, 15:11
 plant in Israel, 2:11
 ad budget, 8:12
 James M. Skinner Sr. dies, 8:12, 11:13
 financial reports, 10:13, 31:9, 32:11, 47:11
 first quarter sales rate, 13:14
 flying-spot scanner, 16:15
 officer holdings, remuneration, 20:10
 convention, 24:12
 uhf film, 31:12
 washing machines & dryers, 50:10
PLAMONDON MAGNETICS CO., 46:11
PYE LTD., 3:10, 35:15
RADIO CORP. OF AMERICA (RCA) (see also Color)
 factory in Spain, 2:10
 loans, 3:11, 16:15
 Sarnoff & Folsom stock options, 8:10, 42:11
 payments to suppliers in 1952, 9:11
 financial reports, 9:13, 19:9, 30:11, 43:13, 51:8
 backs musical comedy, 12:12
 TV tape recording, 13:16, 45:4, 49:1
 TV technical clinic, 14:10
 Sarnoff NARTB address, 18:1
 rumored buying Kelvinator, 22:10

'Fortune' article on CBS vs. NBC, 29:6
 Zworykin shows electronic-controlled car, 30:11
 Navy 1.2 mw transmitter, 46:11
 Jolliffe sees "electronic home of future," 46:11
 building new Camden headquarters, 51:13
 shifting from J. Walter Thompson, 52:7
Receivers
 uhf, 2:2
 new sets, 23:10
RAYTHEON MFG. CO.
 financial reports, 1:7, 14:13, 24:13, 30:11, 32:11, 38:15, 40:12, 51:8
 new sets, 2:10, 31:12
 expansion, 5:11
 technical programs for public, 11:12
 ultrasonic machine tool, 30:11
 memory tube, 31:12
 salaries, 33:10
 radar for small craft, 40:13
REEVES SOUNDRAFT CORP., 15:12, 39:13
REGAL ELECTRONICS CORP., 52:12
SCOTT RADIO LABORATORIES, 32:11
SENTINEL RADIO CORP., 2:10, 27:11
SHELDON ELECTRIC CO. (Allied Electric Products Inc.), 14:13, 35:15
SIGHTMASTER CORP., 25:13, 38:15
SONORA RADIO & TELEVISION CORP., 26:14
SPARKS-WITHINGTON CO. (Sparton)
 new sets, 2:10, 34:10
 financial reports, 6:11, 17:14, 34:11, 36:8, 49:13
SPRAGUE ELECTRIC CO., 13:15
STANDARD COIL PRODUCTS INC.
 82-channel tuner ready, 9:10
 financial reports, 14:13, 17:14, 24:13, 34:11, 47:11
 officers' remuneration, 23:14
 Thias Research Div. formed, 42:10
 color decoder, 45:12
STANDARD ELECTRONICS CORP.
 50-kw vhf transmitter, 14:10, 49:9
 new camera, 17:14
STEWART WARNER CORP., 2:10, 14:13, 18:13, 45:14
STROMBERG CARLSON CO.
 financial reports, 9:13, 17:14, 27:11, 31:9, 44:8
 new sets, 28:10

part owner of Electronic Control Systems Inc., 35:15
SYLVANIA ELECTRIC PRODUCTS CO.
 financial reports, 1:7, 13:15, 18:13, 30:11, 43:13
 tubes stolen, 6:10
 expansion, 8:13
 stock increase, 15:13
 merchandising idea, 23:12
 estimates position in industry, 27:11
 new sets, 28:10
 5,000,000th picture tube, 33:10
 Mitchell discusses executive training, 40:11
 FTC adverse ruling on tube sales, 52:10
TELE-TONE RADIO CORP., 4:10
TRAD TELEVISION CORP., 3:9
TRANSVISION INC., 39:11, 41:11
TRAV-LER RADIO CORP., 13:15, 16:15, 32:11
TUNG-SOL ELECTRIC CO., 19:9, 26:11, 32:11, 45:14
VARIAN ASSOCIATES, 1:10, 13:10
VIDEO PRODUCTS CORP. (Sheraton), 38:14
WEBSTER-CHICAGO CORP.
 proposed merger with Emerson, 4:11, 5:11, 6:11, 16:14, 18:13
 financial reports, 15:12, 34:11, 45:14
WELLS-GARDNER & CO., 14:13
WESTINGHOUSE ELECTRIC CORP.
 42-tube color set, 1:9
 new sets, 1:10, 28:10
 financial reports, 9:13, 18:13
 estimated production, 43:12
 price cuts, 46:8
 changes name of broadcasting subsidiary, 51:14
WESTON ELECTRICAL INSTRUMENT CORP., 18:13, 45:14
WILCOX-GAY CORP., 12:10, 15:12, 18:13, 23:14, 39:13, 49:13
ZENITH RADIO CORP.
 financial reports, 4:11, 7:13, 12:11, 18:13, 24:12, 34:11, 45:14
 officers salaries, 13:15
 Teco Inc., 20:10
 defends strips, 26:15