

MARTIN CODEL'S

AUTHORITATIVE NEWS SERVICE
OF THE
VISUAL BROADCASTING
ARTS AND INDUSTRY

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Television Digest

WITH AM FM REPORTS

PUBLISHED WEEKLY BY RADIO NEWS BUREAU, 1519 CONNECTICUT AVE. N.W., WASHINGTON 6, D.C. TELEPHONE MICHIGAN 2020 • VOL. 6, NO. 18

May 6, 1950

(For Report on Sarnoff Color Testimony This Week, See Section II)

FREEZE HEARING BY FOURTH OF JULY? Beginning of freeze-allocation hearing seems well within sight, now that FCC has virtually set date for end of color hearing. It's believed Commission has accepted industry's evidence that color stations will require no different allocation from black-and-white. Hearing on uhf and allocations should begin by early July, or 21 months after freeze began. Here's the prospect:

(1) Additional color testimony and cross-examination, with CBS and RCA witnesses, is scheduled for as much of next week as necessary. Actually, all 5 days are set aside, if needed, obvious effort being made to speed up conclusion.

(2) Hearing moves to San Francisco May 17 for CTI demonstration of improvements. Comrs. Coy and Hyde, staffmen Allen, Chapin, Plotkin are scheduled to attend showing in St. Francis Hotel, leave by train May 12.

(3) Cross-examination of CTI in Washington May 25, and next day, if needed.

(4) Beginning of hearing June 5 on Bell Labs request for 470-500 mc portion of uhf band for common carrier use. Hopes are this will take only couple weeks, with decision very shortly thereafter.

(5) Start of general allocations hearing late June or early July, undoubtedly well before color decision.

TV TAX BEATEN, BUT END IS NOT YET: Keep your fingers crossed -- that's best advice of competent Congressional observers following Tuesday's 14-11 vote of House Ways & Means Committee against imposing 10% excise on TV sets. Rep. Jere Cooper (D-Tenn.), acting for Administration, offered motion to tax TV but, thanks largely to excellent case put up by Labor and the industry (Vol. 6:8), it was defeated. Cooper is ranking Democrat on committee after Chairman Doughton. Since committee has cut more than \$1 billion in excises, without compensating taxes, TV can't be considered off shoals yet. Proposed compromise that both radio and TV be taxed 5% (radio 10% tax having been retained) was refused by Administration forces.

Some committeemen say they're certain vote won't be reversed. Committee is now working on over-all revenue-raising program, is expected to have bill out by end of month. After bill is reported out, it must pass House, goes to Senate Finance Committee (Georgia's Senator George, chairman), then to Senate. Invariably, it winds up in Senate-House conference to iron out differences, then goes to President.

TV CLAIMS TO MAJOR MEDIA STATUS: Many broadcasters say current activity in AM rate field due to TV inroads (Vol. 6:12-15) is so much baseless talk -- some even call it a "conspiracy" on part of TV zealots. You heard such reactions at recent Chicago NAB convention (Vol. 6:16), and radio spokesmen lash out with counter-data every time anybody makes a case for TV. Be that as it may, this week brought forth even more potent ammunition for the TV salesman:

(1) NBC released survey by Hofstra College showing tremendous impact of TV advertising, containing figures bolstering TV's claim to major media proportions.

(2) Crosley's WLW, in current presentation to advertisers and agencies, frankly states that it foresees TV dominant in its market by 1954 -- rests hopes of own AM future on wider, more penetrating, cheaper 50-kw coverage.

(3) Latest Hooper ratings showing TV taking over much of broadcast audience

got streamer p. 1 headline treatment in Variety -- provoked so much reaction that CBS research chief Oscar Katz sent its network salesmen memo stating "Hooper's new ratings tend to show that TV gets more of the audience than is actually the case..."

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NBC-Hofstra findings were first submitted in presentation for Lever Bros. Released to press May 4, they cover 810 TV homes, 809 non-TV surveyed by the Long Island college researchers in January & May 1949. Questions covered purchases previous month of 8 consumer items: gasoline, dentifrices, cigarettes, cheese, coffee, soap, tea, razor blades. Fifteen TV-advertised brands, 13 non-TV-advertised brands were covered. Essence of results:

(1) Sales of TV-advertised brands were 30.1% higher among TV set owners than among non-owners. Sales of 13 competing brands, not on TV, had average loss of 19.1% among TV set owners.

(2) Effectiveness of exposure to TV sales message was indicated by fact only 23.5% of non-owners and non-viewers bought TV-advertised brands, compared with 40% of those owning TVs who recalled commercials and liked messages. That's a sales gain of 70.2%, says NBC.

(3) Bonus market's significance is shown by finding that two-thirds of non-TV set owners saw TV within study month. Their purchases of TV-advertised products were 12.8% higher than those of non-owners, non-viewers.

(4) Increased purchases by TV owners and extra viewers added up to 193 extra customers per thousand TV homes for TV advertisers. NBC also notes that TV advertisers average \$19.27 in extra sales for every \$1 they spend on video.

(5) Novelty factor in TV ownership is practically nil -- 32.9% of 1-9 month owners and 33.9% of 16-month-or-longer owners bought TV-advertised products.

(6) Citing Boston as example -- it had 25% TV ownership saturation at time of study -- NBC says national advertiser could get message across on NBC-TV for \$3.33 per thousand, compared with Life's \$3.43, This Week's \$3.59, Boston Post's \$3.95. (In Los Angeles, Paramount's KTLA issued brochure claiming its cost is \$1.83 per thousand vs. top AM network station's \$2.09.)

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Crosley presentation to advertisers and agencies, frankly forecasting TV's dominance by 1954, predicts 1,099,000 TV sets in the WLW-AM area by then; calculates if same program is offered on radio and TV then, audience would be 303,000 TV, 210,-000 AM. Thesis is smaller stations will suffer first and most from TV's inroads -- 37% audience decline and fewer advertising dollars (Vol. 5:42). Big stations like WLW, it holds, will weather transition.

WLW pitch is considered so ominous for radio, got so much attention, that president Robert Dunville was impelled to issue special statement: "It does not mean WLW has declared war on local operations within our service area...it is our belief that business will decline on these stations as a result of TV, without aggression on the part of larger stations, including WLW."

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Variety's banner over story May 3 read: "Baltimore TV 1st to Pass Radio." Radio-TV editor George Rosen quotes latest Hooper 42-city breakdown of share of total audience as between radio and TV: Baltimore, 50.7% TV as against 18% same time last year; New York, 49.6% vs. 15%; Boston, 38% vs. 10%; Chicago and Los Angeles, 40% vs. 10% -- to cite a few. Not noted in Variety story was Hooperating of 11 TV shows among top 15 sponsored network night programs (See Note, p. 4).

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Whether due to TV or not, AM stations are squirming under rate squeezes by Chevrolet and Chesterfield. Former is asking 600 stations to take 3-min. "entertainment" commercial at rate between 1-min. spot and 5-min. program -- and stations are crying "foul". Latter is asking that its year's contracts in principal markets for 5-6 spots weekly be revised to every-other-week basis but rates kept same -- and stations claim that's rate cutting. Lone Ranger summer deal by General Mills (Vol. 6:17) and Procter & Gamble 3-year Beulah rate freeze (Vol. 6:15) are still pending.

There was balm for broadcasters in adman Milton Biow's statement before New

SARNOFF'S ALL-OUT PITCH FOR RCA COLOR: FCC finally hit bedrock in color probe this week -- and now the end of 8-month-old hearing is in sight (see p. 1).

After 16 hours in witness chair Thursday and Friday, 10 of them one day, RCA chairman Sarnoff had convinced majority of his audience -- perhaps even Comr. Jones -- that RCA had thrown its giant resources into hastening advent of color TV. "RCA is 100% for color TV," Gen. Sarnoff asserted.

If standards are adopted, and commercialization of color TV is authorized soon, he promised RCA would be producing color sets at rate of 200 per week by June, 1951, 1000 per week by end of that year, substantial increases thereafter.

[For salient excerpts of Sarnoff statement, see Special Report herewith.]

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Gen. Sarnoff's extraordinary performance (he testified until 11 p.m. Thursday, so as to make board meeting Friday) lent force to this prediction (Vol. 6:13): That neither CBS nor CTI system, alone, appears to have much chance of being authorized. It may have increased possibility RCA system, alone, may be adopted -- though probably only after specified period of all-industry experimentation. Multiple standards, of course, may be Commission's easy way out, politically -- temporarily -- but no one, not even CBS or CTI, seems very enthusiastic about that.

It was manifest that the chief opposition to RCA lay in fear of building up its already strong patent structure by favorable decision.

Hearing's 2 highlight days drew blue chip audience: RCA's own top brass, including president Folsom and a dozen New York-Camden executives; CBS president Stanton, v.p. Joe Ream, et al; former top govt. figures like Ex-Sen. Burton K. Wheeler, now RMA counsel; Clark Clifford, ex-asst. to President Truman, now RCA counsel; Judge Samuel Rosenman, ex-aide to President Roosevelt, now CBS counsel -- to name just a few notables in record turnout.

Atmosphere from outset was surcharged -- everybody expecting fireworks that did flare occasionally. There were sharp passages particularly between Gen. Sarnoff and Judge Rosenman, even to recriminations about such irrelevant aspect of intense and bitter RCA-CBS competition as the 33 1/3-45rpm battle.

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Two basic FCC policy questions stood out clearly, for first time, during lengthy Sarnoff cross-examination:

(1) Should motives of rival systems' advocates, real or alleged, and their past records in TV have any bearing on choice of systems?

(2) Should RCA's strong patent position rule out its system or make multiple standards mandatory?

Clear answer to first was given by FCC Chairman Coy, who brushed aside major CBS pitch -- that RCA rushed in with color system simply to block CBS's. Coy said, calmly: "I suppose it's natural in a hearing of this kind that there's going to be a lot of competitive feeling, and a bit of acrimony. The Commission is very little concerned about 'Who struck John' and this and that."

Then he reminded proponents that FCC invited color in notice of May 5, 1948 starting uhf hearing; that no one came forth with it; that it wasn't until hearing notice of May 26, 1949, inviting 6-mc color, that anyone offered it.

As for patent question, Coy had no specific comment. But it was obvious from tedious and intricate cross-examination on that subject that courts, not FCC, would decide whether RCA's patent position is good or bad. It's also apparent that major-

ity of FCC, despite apparent predilections of some of its members, considers its job is to pick color system on basis of performance, not patents.

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What gave force to Gen. Sarnoff's testimony was his faith in RCA system, his willingness to back that faith with hard cash, his surprise commitments on color receiver and tube production, his analysis of what would happen if CBS field-sequential system were adopted, yet his commitment of RCA to make field-sequential sets if that's what FCC decides upon and public wants them.

He divulged RCA plans to spend "millions" on new plant to manufacture tri-color tubes [at Harrison, N.J.]. Mass production of tubes and receivers would be under way by June, 1951; tubes would be sold to other manufacturers who presumably would start set production as speedily as they could. NBC telecasting stations would be equipped for color and all others urged to do same.

Given proper standards, assured of compatibility with existing receivers, he maintained color could start and grow -- financed by a flourishing black-and-white manufacturing and telecasting industry.

In contrast, he warned, adoption of CBS's incompatible system would result in recession in set sales that would "cause the bankruptcy of many of the smaller TV set manufacturers of today." He also testified it would jeopardize telecasters, who would cut themselves off from their audiences whenever they put CBS-type signal on the air.

"The CBS system would never survive," said he, "no matter what decision the FCC makes." Nevertheless, he added, RCA would build whatever the public demands.

When Coy asked what he thought about FCC compelling manufacturers to put 405/525-line adapters into sets now, he asserted it was improper to require that. Coy asked whether FCC should ask Federal Trade Commission to require set makers put labels on receivers to indicate whether they had adapters. That was all right with Sarnoff, but he added:

"I'm against compulsion. If you believe you have power of compulsion, sit on it awhile -- see how things work out." "Right" system needs no compulsion.

Sarnoff's direct, hard-headed business approach was apparently to Commission's liking -- much more so than non-committal responses of some other witnesses. His quick mind, his great prestige, his record as one of radio-TV's great pioneers and builders, certainly added to the force of his testimony.

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Sarnoff was caught up a few times, generally on technical details. One question which arose several times dealt with his recommendation that color systems meet 3 basic requirements -- 6 mc, compatibility, quality as good as black-and-white. Yet he opposed multiple standards that would authorize several systems. But, he was asked, what if CTI improved and met those requirements? Wouldn't that mean adoption of both RCA and CTI -- meaning multiple standards? From his answers, it seemed he had written CTI off, had concluded it won't develop sufficient quality.

Then, he was asked embarrassing questions about those totally impractical 3-tube dichroic-mirror receivers RCA showed at first demonstrations (Vol. 5:42). He said RCA didn't claim those sets to be ultimate. On other hand, he wouldn't concede CBS system would improve even if it used tri-color tube, discarded disc.

Testing RCA's "we're ready now" assertions, FCC interrogators asked if he'd feel "more comfortable" if RCA had a few more months to work up exact numerical standards for system. He replied his engineers were ready now.

But it's obvious FCC is skeptical about that, inasmuch as RCA engineers had never recommended exact standards. But next day, Friday, RCA's Dr. George Brown came up with set of figures. Actually, FCC would probably hash those figures over, get others' opinions, before accepting them. As for getting NTSC to agree on them, Sarnoff thought it was too late for such procedure, said FCC could do the job.

Sarnoff dismissed number of other questions as details he was satisfied would be cleared up. For example, how did he know tri-color tube could be improved

in resolution and brightness? He countered that he wouldn't be risking millions if he had any doubts.

CBS pounced on those statements. "When you sweep aside all of this technical discussion in the record," asked counsel Rosenman, "and the experience of the witnesses, and the engineering testimony, the technical evidence, it becomes rather simple for you to say, does it not, that the RCA system is much better than the CBS system?" Sarnoff reiterated that questions of detail were minor.

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Cross-examination on patents was extremely complex, sought to show that RCA, through patent rights, controls what is produced, stifles invention and progress. It's hard to say what testimony produced, Sarnoff saying he wasn't familiar with details, his counsel constantly interposing objections that disclosures might jeopardize RCA's current litigation (with DuMont & Zenith). Sarnoff deferred most questions to RCA's Dr. Engstrom and patent v.p. Conway Coe, due to testify next week.

DuMont counsel William Roberts harried Sarnoff at great length, mainly on patent policies, pursuing every possible avenue as far as Commission would let him. It's apparent DuMont loves RCA even less than it does CBS.

As hearing moved into late hours Thursday night, observers were treated to strange spectacle of Sarnoff and Jones tossing flowery compliments at each other. Sarnoff said he was amazed that a "lawyer could learn so much" and Jones confessed "you disarm me." Sarnoff admitted that Jones, FCC in general and CBS have done much to stimulate color development.

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RMA engineering chief, GE's Dr. W. R. G. Baker, was on stand both Monday and Tuesday, made a rough witness.

His main contentions: No system is ready yet; color must be compatible; RCA is probably on right track; tri-color tube is key to whole problem.

His recommendations: FCC should make major policy decisions, such as stipulating compatibility, then turn job of writing exact standards over to NTSC or comparable technical group. This group would need some 10 months to come up with best system, perhaps a composite one. Sets could be on market 5-6 months thereafter. Multiple standards shouldn't be adopted.

Coy questioned Baker sharply on uhf as it related to compatibility. When uhf comes along, won't it be incompatible with present sets? Baker's answer was that uhf would be an added service, that it wouldn't take away any service now obtainable on vhf.

Focusing his attention on tri-color tube, Baker said he knew of 4 different approaches being worked on. He gave RCA credit for "elegant piece of work" in its tube. GE is working hard but has nothing to demonstrate yet. Another tube, apparently well along, has been developed by Prof. Ernest O. Lawrence, noted nuclear physicist of California Tech, he said. Apparently, Lawrence has actually demonstrated something. Jones knew about tube, said it has one phosphor on face, other 2 deposited on honeycombed screen. It's said to give more brightness than RCA's.

Machlett Laboratories is another company working on tube, Baker disclosed. It's building one for Chromatic Television Labs, into which Paramount recently bought (Vol. 6:17).

Baker urged FCC to get into freeze-allocation hearing just as soon as it's satisfied that color presents no extra allocation problems. Actually, Commission is gearing for just that.

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Specific standards for RCA color system, proposed during this week's FCC hearing for first time, include following, in addition to present black-and-white figures: 3.58-mc sampling; 15% duty factor for sampling; 9-cycle burst, at 3.583 mc, to occur 2½ microseconds after trailing edge of horizontal sync pulse; amplitude of burst to be ½ to ¾ of standard sync pulse; mixed highs to be used, with cross-over point about 2 mc, but with wide tolerance (.2 mc to 2.25 mc); color primaries as currently used by RCA.

Oscillator radiation problem on TV (6:14, 17) is being cleaned up gradually in new receivers, said RCA's Dr. George Brown during color hearing. He said RCA's KRK-5 tuner, used since September 1948, produces 14 to 141 uv/m at 100 ft on Channels 2-6, 110-160 uv/m for Channels 7-13 (FCC has suggested 15 uv/m as reasonable objective). RCA sets next fall, Brown added, will cut Channel 2-6 radiation in half, but 7-13 will remain about same. On uhf, problem is tougher, he said. Sets and converters used in Bridgeport tests (Vol. 6:5) run 56-204 uv/m. Over all, however, he was optimistic about feasibility of future improvement.

Hazeltine's demonstration of RCA color system with negligible dot structure (Vol. 6:17) is nothing new, testified RCA's Dr. George Brown this week. He said that earliest exhibits of RCA described "by-passed highs" principle by which job is accomplished. Reason RCA hasn't been using it up to now, he added, is because it somewhat complicates receiver. He insisted dots are not inherent in system. As for Hazeltine's work in reducing effects of interference on system, he claimed RCA has methods of doing it, too, but that problem isn't any greater than it is in CBS system with horizontal interlace and that it isn't much more serious, if any, than it is in black-and-white.

Condon Committee on TV is aiming for May 15 as date for color report to Senator Johnson. But difficulty in getting members together often enough makes it unlikely job can be done by then. It's understood group will recommend no specific system, will stick to listing advantages and disadvantages of each.

Surgical TV will be brought to 1500-2000 New York Medical Society physicians convening May 10-12 at Hotel Statler. RCA equipment will be set up at Kings County Hospital, Brooklyn, closed-circuited to 18 TV receivers in demonstration sponsored by E. R. Squibb & Sons.

Latest technical TV publications: (1) *Television Servicing*, by Solomon Heller (instructor, American Radio Institute) and Irving Shulman (chief engineer, Federal Television Corp.). Book is 434 pages, sells for \$5.50, published by McGraw-Hill, 330 W. 42nd St., New York. (2) *Television Components Handbook*, 160-page volume written by A. C. Matthews, Phileo TV cost engineer, available from Accessory Division, Philco Corp., Philadelphia, \$2.50.

TBA board has set up special committee to look into TV code, also drew up 10-point platform of objectives, at April 27 meeting in New York. CBS's Lawrence Lowman heads code committee. Board reiterated TBA position on freeze and uhf (lift it now where possible, don't mix vhf-uhf channels in same cities, allocate at least 4 channels to each city). New committee chairmen are: Membership, Frank Russell, NBC, and George Storer, Fort Industry; engineering, Frank Marx, ABC; commercial operations & legal, Joseph McDonald, ABC; finance, Dr. Allen B. DuMont; program, Lawrence Lowman, CBS; public relations, Paul Raibourn, Paramount; affiliates, Ernest B. Loveman, Philco; educational, Dr. Edward Cole, Yale.

TV program fare had new critic this week, but an earlier one admitted improvement. Rev. Thomas A. Dunn, radio director of Archdiocese of New York, told Catholic Broadcasters Assn in Washington TV shows "are getting away with such things as the movies won't allow," are sapping morals of children. Southern California Assn for Better Radio & TV, which castigated Los Angeles TV programs last November (Vol. 5:50), reported second survey made week of March 20, showed improvement—murders declined from previous 91 to 18, holdups from 7 to 2. But, president Mrs. Clara S. Logan said, there's still "abundance" of crime.

"Muscling In Is Out of Date" titles caustic statement released this week by Abram F. Myers, chairman, Allied States Assn of Motion Picture Exhibitors, big group of independents. Strongly opposing Zenith Phonevision, he makes point that manufacturer has right to select his customers—in reply to Zenith contention that film makers must rent their product to anyone who asks (Vol. 6:17). Myers also questions whether it's good business for film industry "to cheapen its products and dissipate its good will [by] offering its films for exhibition through a new and untried medium." Meanwhile, Zenith took page ads in Chicago newspapers asking for volunteers for its Phonevision tests, said 300-family sample would be chosen by Chicago U's National Opinion Research Center. And movie folks' opinion of Zenith's president E. F. McDonald, who rivals their best publicists, may be gleaned from these quotes in letter from executive of one of top exhibiting firms: "He's a shrewd cookie and is going to cause us a lot of headaches." As to threats of lawsuits, this man said: "Distributors, having recently taken licks in the courts, are apt to be gun shy and will settle the matter on some compromise basis. But this is one time they should have guts."

No more simulcasting, says *Variety*'s usually well-informed George Rosen. Doubling up techniques aren't working out, he states, and AM & TV must "travel different ways." He predicts *We the People* and *Firestone Hour* won't simulcast next season. "Virtually everyone . . . is reconciled to fact that they're playing around with two different techniques; that shows geared for radio invariably make poor TV fare unless properly adapted to the video medium. And vice versa."

Variety estimates gross network time sales in March as follows: CBS \$6,113,800, up 4.7% from March 1949; NBC \$5,839,850, same; ABC \$3,479,400, down 18%; MBS \$1,414,600, down 20.6%. For first quarter, *Variety* estimates: CBS \$17,854,900, up 4.8%; NBC \$16,789,800, down 1.3%; ABC \$10,186,500, down 16.2%; MBS \$4,493,950, down 15.7%. First quarter TV is estimated thus: NBC \$3,190,000, up 193% from same 1949 period; CBS \$1,810,000, up 324%; ABC \$780,000, up 1429%; DuMont, no figures. Comparison of *Variety* estimates with those of PIB (Vol. 6:17) shows them remarkably close.

Minimum fees for TV performers would be \$115 an hour, \$85 half-hour, plus \$6 an hour for rehearsals, if TV networks and advertising agencies accept proposals made May 4 by TV Authority (subsidiary of AFL's AAAA union). Another meeting is scheduled May 12. TVA also asked for ban on showing of films more than once in same area without extra payment at same rate as original, set minimum \$200-\$500 fee for special acts, depending on number of people involved, plus additional 2% for each station on network. Meanwhile, TVA officials asked NLRB to hold national election to determine whether it or West Coast Screen Actors Guild represents TV performers. Latter last week asked NLRB to hold election in southern California area only (Vol. 6:17).

An aid to both telecasters and religious groups is *The Production of Religious Television Programs*, 20-page booklet issued by National Council of Catholic Men, 1312 Massachusetts Ave., Washington, D. C. Though aimed primarily at Catholic groups, booklet's data on telecasting should prove useful to other faiths, civic groups. For example, it advises: get music clearance; avoid inexperienced dramatic groups; use children sparingly; realize costs of programs; check dimensions of slides, etc.

CBS affiliates advisory board meets May 9-11 in New York's Ritz-Carlton, some sessions to be attended by president Stanton and other officers.

York Fashion Group this week -- that TV won't replace radio as major medium for long time to come; that audience per dollar was about same in radio and TV, e.g., Bob Hope currently is delivering 283 listeners, Jack Carter 249 TV viewers per dollar. Radio need not worry, said Biow, so long as there are 80,000,000 radios and only 5,000,000 TVs.

CBS western sales manager Wendell Campbell also made good seasonal point before Chicago Radio Management Club in citing bigness and penetration of network radio and assuring that experienced advertisers "for next few years" will continue using network radio as basic medium. Only radio, said he, can reach people out-of-doors -- in cars, at picnics, at beach, etc. Along this line, promotion-minded WWDC, Washington, plans unsponsored spots to push portable radios, keyed to theme: "No one can make love to a girl in a canoe and watch TV at the same time."

POWER COST LOW, TUBE LIFE LONG: It costs $1\frac{1}{2}\%$ worth of electricity daily or \$5.40 yearly, on the average, to operate a TV set. That's nub of conclusions reached in 10-city survey by Edison Electric Institute, association of power companies.

Following are facts reported, during Institute's Chicago sales convention recently, by TV Committee chairman Frank Pesveyc, of Newark's Public Service Electric & Gas Co.:

(1) Average set draws 250 watts, is used $3\frac{1}{2}$ hours daily.

(2) Set actually uses 22-24 kilowatt-hours monthly, but reduced lighting and curtailment of other activities bring net gain (over normal home power usage) to 15 kwh. Average cost per kwh is 3¢ for country as a whole.

(3) Increased revenue to power companies, figured on 5,000,000 sets in use, is coming in at rate of \$27,000,000 yearly. In another year, it will be up to \$60,-000,000 rate. Although that's a nice piece of change, it's still peanuts compared with total revenue of U.S. power companies -- about \$4,250,000,000 in 1949.

(4) Size of tube -- and whether it's black, clear or aluminized -- has negligible effect on basic figures.

Principal job of power companies now, said Pesveyc, is to educate set-owners into better viewing habits, meaning more room lights during viewing. "Normal" lighting is considered optimum, he said. Part of educational program will be issuance shortly of booklet to promote better habits.

Increased daytime programming, Pesveyc noted, will also increase load -- even more directly than nighttime programming, since lights aren't on to be turned down.

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Another cost factor in owning a set -- life of picture tube -- is much harder to pin down. Curiously, there are still no definitive statistics to go on, after some $3\frac{1}{2}$ years of post-war experience.

Manufacturers find it too time-consuming and expensive to run large-scale life-expectancy tests. Besides, tube performance has exceeded expectancy; so need for such tests hasn't been considered urgent.

Originally, 1000 hours was thought good rule-of-thumb. But manufacturers now guarantee tubes, to their customers, for one year. So, if you take Edison Institute's $3\frac{1}{2}$ -hours-per-day figure, you get well in excess of 1000 hours guaranteed.

Actually, 2000 hours may be more realistic figure today, experts tell us, particularly since manufacturing techniques have improved considerably. E. Y. Bentley, engineering mgr. of DuMont's big new Allwood tube plant (Vol. 6:12), tells how he took one tube home after it had been on testing rack 3500 hours and has used it $1\frac{1}{2}$ years since.

Will picture tubes hold up, eventually, as do ordinary receiving tubes which frequently outlast rest of set? It's questionable, in opinion of R. T. Orth, general mgr. of RCA Victor Tube Dept., because of fact kinescopes have higher current drain per unit of cathode area and because they have fluorescent coatings not present in ordinary tubes.

Important fact to remember, over all, is that eye is far less tolerant of even slightly degraded picture than ear is of considerably degraded sound.

Telecasting Notes: NBC's own convention will be Oct. 18-21 at Greenbrier, White Sulphur Springs . . . NBC Station Advisory Committee henceforth to be split into TV & AM groups, 8 each, 6 new members for TV to be elected at White Sulphur convention . . . NBC's WNBT, New York, added 3½ hours to daytime schedule with 9:30 a.m. program days starting this week; DuMont's WABD, first to go all out for daytime, this week pushed starting time up to 9:30 from 10:45 . . . Hollywood newscaster Sam Hayes reports his Hayes-Parnell Productions Inc. (*TV Directory No. 10*) has bought up TV rights to some 3600 reels of movies, including Christie comedies, westerns, serials, sports . . . Columbia U has authorized TV program under title of *Pulitzer Prize Playhouse*, to be handled by Wm. Morris Agency . . . Bob Hope's "new find," Don (Creech) Hornsby, Hollywood comedian, has been signed to 5-year TV-radio contract by NBC . . . Philco has filed FCC application for experimental TV station in Philadelphia, 518-522 mc, 50 watts peak output; proposes to spend \$3000 . . . ABC-TV, dark Mondays and Tuesdays since early this year, will go back to 7-day schedule in mid-September . . . If and when Phonevision comes to Los Angeles, says release from KTTV, that *Los Angeles Times*-CBS station will get first rights, promised by Zenith's E. F. McDonald during recent Hollywood visit, when he appeared on station to explain system . . . Entire Truman cabinet (excepting Secretary of State Acheson) will meet in Chicago Civic Opera House May 14, will be telecast on CBS-TV via WBKB, Sun. 3-4.

Network Accounts: Procter & Gamble takes 8-8:30 segment of NBC-TV *Saturday Night Revue* for 4 weeks from May 6, Speidel sponsoring 8:30-9 and taking over full hour June 3 & 10, after which show goes off for summer vacation; New York segment goes off for summer after May 20 (Vol. 6:15) . . . Wander Co. (Ovaltine) joins Mars Inc. in sponsoring *Howdy Doody Show* on 14 more cities via kine-recordings; they also sponsor it on network, as do Colgate and International Shoe Co.

Station Accounts: Paramount TV's *Time for Beany* syndicated film show being sponsored 26 weeks from June 6 by H. P. Hood & Sons Inc. (dairy chain) on Boston's WNAC-TV; Providence's WJAR-TV; New Haven's WNHC-TV—making 19 stations now carrying it, nearly all sponsored locally . . . B. Altman & Co., latest of big-time dept. stores signing for TV, using partic. in *Market Melodies* on WJZ-TV, New York . . . General Foods (Sugar Crisp) buys 80-min. film partic. in DuMont Network's *Captain Video* on WABD, New York . . . Krueger Brewing Co. extending TV use in its territories, thru Geyer, Newell & Ganger . . . Dictaphone Corp., sponsoring *Manhattan Spotlight* on WABD last 13 weeks, reported considering promotion of its Time-Masters via TV in other areas, thru Young & Rubicam . . . Among other sponsors reported using or planning to use TV: State of Maine, thru Alley & Richards, Boston (after test on WJZ-TV); Jackson Industries Inc. (TVs, radios, phonos), thru Lawrence Adv., Chicago; Mrs. Schlorer's Inc. (relishes, mayonnaise), thru Cox & Tanz, Philadelphia; Jayvee Brand Inc. (baby goods), thru Nelson, Carvel & Powell, Portland, Ore.; Q-Ball Corp. of Pennsylvania (game), thru Philip Klein Adv., Philadelphia (WFIL-TV); Petri Wine Co., thru Young & Rubicam.

May 1 sets-in-use, reported by stations since NBC Research city-by-city "census" of April 1 (Vol. 6:16): Washington, 128,100, up 9850 from April 1; Memphis, 34,706, up 5706; Omaha, 22,705, up 2344; Fort Worth, 23,610, up 1310; Dallas, 28,890, up 1990; Utica, 13,200, up 1700; Greensboro, 11,475, up 1075.

Personal Notes: John S. deRussy leaves management of NBC national spot sales to become general sales director of WCAU & WCAU-TV, Philadelphia; Robert M. McGredy, ex-BAB, now sales mgr. . . . Alex Rosenman, ex-WCAU sales chief, now executive v.p. of Official Films Inc., TV syndicate backed by Leon & Isaac Levy . . . Dr. Allen B. DuMont speaker May 4 on "Progress in Television" at U of Missouri Journalism Week . . . Berne W. Wilkins, ex-WNEW & WMCA, now local sales mgr. of KDYL & KDYL-TV, Salt Lake City . . . Richard M. Dunn, ex-N. W. Ayer, new mgr. of radio-TV dept., Stockton, West, Burkhardt Inc., Cincinnati . . . Miss Jessie R. (Sally) Blaine named chief, FCC docket branch, succeeding Charles Worthy, retired . . . Ben Miller, ex-NAB, recently with Paint & Varnish Assn, joins *Television Digest* as associate editor . . . Maurice J. Condon resigns as radio-TV director of Roy S. Durstine Inc. to become gen. mgr. of WEOL, Elyria, O. . . . John S. Allen, ex-WMIE, joins Miami's WTVJ as business manager.

Four TV shows named for 1950 Peabody Awards May 4: Ed Wynn, CBS, entertainment; *Crusade in Europe*, ABC, education; *UN In Action*, CBS, news; *Kukla, Fran & Ollie*, NBC, children. AM honors: WWJ, Detroit, regional public service; KXLJ, Helena, Mont., local public service; Eric Severeid, CBS, Erwin Canham, ABC, and WMAZ, Macon, news; Jack Benny, CBS, entertainment; *Greatest Story Ever Told*, ABC, unclassified citation; WQXR, New York, music; *Author Meets The Critics*, ABC, education; *UN Project*, NBC, international understanding; WTIC, Hartford, children.

More fuel for TV vs. AM conversational fire is provided by April Hooperatings for New York, showing 11 of first 15 shows are TV compared with 9 of 15 in March. Low 25.9 rating in TV homes is higher than top 21.6 rating in radio only homes. April ranking: Milton Berle (TV), Godfrey's Talent Scouts (TV), The Goldbergs (TV), Toast of the Town (TV), Lights Out (TV), Godfrey and Friends (TV), Studio One (TV), Jack Benny (AM), Radio Theatre (AM), Godfrey's Talent Scouts (AM), Suspense (TV), Cavalcade of Sports (TV), Saturday Night Revue (TV), Bing Crosby (AM), Philco Playhouse (TV).

Omaha-Denver TV interconnection moved closer to reality this week when AT&T asked FCC to authorize 19 links in the 500-odd miles between 2 cities on 3730-4010 mc. Cost would be \$6,200,000, completion 8 months after FCC grant. Chicago-Omaha microwave is scheduled to be completed next October. Meanwhile 3-day AT&T-Western Union hearing on TV interconnections (Vol. 6:10, 15) this week saw network officials testify they'd take any common carrier that would give them best deal. Hearing was postponed indefinitely due to death of FCC examiner Johnson.

Salary hikes to \$11,200 were approved for FCC staff hierarchy last week: Ben Cottone, general counsel; William Norfleet, chief accountant; Curtis Plummer, chief engineer; Harold Cohen, chief, Common Carrier Bureau. Upper limit of grade is \$12,000, after 18 months.

Much ado in trade press about FCC chairman Wayne Coy quitting when term expires June 30, 1951—14 months hence—about which he's made no secret for long time. Nothing to story he's quitting earlier to take RMA post rejected by Gen. Lucius Clay (Vol. 6:17); it hasn't even been offered.

FCC chief examiner J. Fred Johnson, 57, died of heart attack in Washington May 3; he was in midst of hearing charges of bias against G. A. Richards' stations, set to be resumed in Los Angeles June 5 with James D. Cunningham as examiner.

MARTIN CODEL'S

AUTHORITATIVE NEWS SERVICE
OF THE
VISUAL BROADCASTING
ARTS AND INDUSTRY

Television Digest

WITH AM FM REPORTS

PUBLISHED WEEKLY BY RADIO NEWS BUREAU, 1519 CONNECTICUT AVE. N.W., WASHINGTON 6, D.C. TELEPHONE MICHIGAN 2020 • VOL. 6, NO. 19

May 13, 1950

PITCHING INTO SET-RADIATION PROBLEM: Seriousness of oscillator radiation (Vol. 6:14, 17,18) now seems well-appreciated throughout industry -- right up to top management. Problem, you'll recall, is one wherein TV receivers (and other devices) act as miniature transmitters, raising hob with neighbors' pictures and various other radio communications services.

Work of various committees is beginning to bear gratifying fruit. For example, RMA's R15 Committee on Radio Interference (K. A. Chittick, RCA, chairman) has come up with 14 manufacturers' recommendations of methods for reducing radiation. But even a glance at report shows complexity of problem; it's difficult even to determine how to measure the various radiation components.

FCC is holding club over industry, threatening direct or indirect regulation of receiver manufacturers to enforce minimum standards. Throughout color hearing, scarcely a manufacturing witness escaped Chairman Coy's sharp queries on subject. No one minimized problem. FCC counsel once asked RCA's Dr. George Brown if he didn't agree that problem was "frightening." Replied Brown: "We needn't be frightened by these things...We just need to face up to them."

"Wait and see" is still policy at Commission. Whether FCC has, or can get, authority to enforce requirements has never been tested. But there's fairly strong disposition to try, if industry doesn't come across voluntarily.

THEY STILL LIKE TO GO TO THE GAME: TV not only doesn't hurt sports attendance -- it actually helps. Backed by most comprehensive research on subject to date, covering 2 years, 21-year-old Princeton graduate student Jerry Jordan, son of N. W. Ayer executive v.p. Clarence L. Jordan, makes that categorical statement. In speech prepared for delivery May 15 at Milwaukee meeting of National Assn of Newspaper Promotion Managers, he presents these facts and figures on college football:

(1) Among men owning sets 3 months or less, last fall, 24% attended at least one game. Among 4-11 month owners, figure was 41%. For 1-2 year owners, number was up to 45% or "normal". And 2-year-or-more group actually hit 54%.

(2) Small colleges aren't harmed at all, even if located within range of big game telecasts. Last year, 58% of such schools increased attendance, while only 44% of small colleges in non-TV areas made gains. No harm to high schools was found.

Baseball showed similar pattern: Fifteen of the 16 major league teams were televised. The 7 clubs that improved their performance showed average attendance increase of more than 7%. The 9 clubs with poorer performance, including non-televised Pittsburgh, had average attendance decrease of 15%.

In Philadelphia 1949 baseball attendance, Jordan found that TV owners of less than one year saw 3.7 games, non-TV fans saw 4.4, while figure reached 5.9 among over-1-year TV owners.

TV just isn't a major factor in attendance, asserts Jordan. Fifteen other factors really count -- enumerated in 21-p. summary of his study released by Ayer, titled "The Long Range Effect of TV and Other Factors on Attendance at Sports Events." Principal factors are high incomes and shorter working hours, team management, performance and publicity.

"Competing for audience isn't necessary," Jordan concludes. "It's one of

the main causes of the differences that exist today. TV can and should work to promote attendance at the sports events which it covers." TV increases the home audience without decreasing sports attendance, he said, simply by getting more people interested in sports.

Survey was based on 1203 personal interviews in Philadelphia area. Conclusions were then matched with attendance figures of 460 major and minor baseball clubs, 192 colleges, 32 high schools, 100 arenas, racetracks, etc. in 572 cities in every state; 124,000,000 paid admissions were involved.

Only weak point in survey that suggests itself is fact that "older" set owners, particularly those of 2 or more years, have higher incomes, thus bringing in another factor which Jordan has already classified as quite important.

RADIO HITS BACK AT CLAIMS FOR TV: Radio's counter-attack against TV's inroads on audience this week took form of (1) charges that Hooper is "selling radio short," and (2) spate of ads bolstering thesis that radio is better than ever.

Yet AM operators aren't closing eyes to TV's impact. This week, another big station revised rate card -- Detroit's 50-kw WJR hiking daytime but retaining night rates. Like others (Vol. 6:12,14,15,18), it also revised time classifications.

Vigorous attack on Hooper's share-of-audience ratings (Vol. 6:18), by WOR sales v.p. R. C. Maddux, claims Hooper covers only telephone homes, so figures are TV-inflated. He pointed to Pulse figures giving TV only 34.4% of New York radio-TV audience (vs. Hooper's 49.6%). He also quoted WOR survey crediting TV with only 17.5% of 5-8 p.m. audience vs. Hooper's 34.6%.

Radio survey should be radio, not radio-TV, asserts Herbert Kreuger, commercial manager, WTAG, Worcester, in May 8 Broadcasting. He wants Hooper to drop "all others" column. Worcester is in fringe TV reception area (has no local TV station), yet clients are smirking, "Wow, TV is sure cutting into your audience, isn't it?" BAB thought well enough of article to recommend it in its May 5 house organ "Pitch".

Station ads in trade journals are slanting more and more toward laying the TV bogey, boosting own stock. Boston's WHDH captions ad in Standard Rate & Data "TV stole what PM audience from what AM?" -- goes on to claim own night audience up, admit other AMs may have lost to TV, even quote Hooper's "all others" rating. Washington's WTOP, owned 51% by Post, 49% by CBS, headlines newspaper and Broadcasting ads (in color) thus: "More people listen to WTOP than any other radio or TV station in Washington."

FCC Comr. Jones sees TV cutting into big AM stations' audiences, thinks smaller stations can thank lucky stars they're small. He foresees little locals staying in business -- contrary to prognostication of big WLW (Vol. 6:18). Speaking to N. J. Broadcasters Assn May 5, he said FCC figures reveal TV tapping new money to greater degree than it has raided other media.

In Washington, 5 peripheral local and daytime stations banded together to sell themselves jointly as package -- a new departure that may reflect their increasing difficulty in getting local business.

Novel sidelight on Hofstra College study of TV's commercial impact (Vol. 6:18) was caught by Billboard. May 13 issue headlines "Hofstraws in the Wind" and notes that excellent TV results will probably benefit all other TV networks and stations more than NBC, which underwrote the study. Reason: NBC-TV is about sold out.

* * * *

C. E. Hooper was quick to reply to critics, speaking before New York U business school Friday. Criticisms, said he, are coming from sales folk in radio, not research. "We do not aim to displease [radio] but the record of audience behavior at this time in TV cities cannot please everyone," he said. "However, we are not hired to please, we are expected to report."

"If the criticism is more severe now, it is because the impact of TV and the rapidity of change in audience behavior in TV cities caught the industry flat-footed, unprepared. This has caused confusion. Confusion has not been diminished by the spawning of literally scores of survey services, the contents of which appear to be designed more to please than inform."

Telecasting Notes: Next week may bring determination whether and to whom Don Lee properties will be sold by R. D. Merrill, who inherited \$9,000,000 Tommy Lee estate. Among reported bidders are Music Corp. of America, representing unnamed principals; Ed Pauley, the oilman; and CBS's Wm. Paley, seeking only TV outlet KTS... NBC-TV carrying full pages (starting with *New York Times* May 11) claiming to be "America's No. 1 Television Network in every way"—programs, ratings, stations per program, choice of advertisers... Following New York stations' pattern, NBC's Hollywood KNBH goes to morning time in Sept., with 9 a.m. to 1 p.m. schedules now being prepared... KTTV, Hollywood, on May 15 adds 6 hours, 15-min. to its weekly schedule, begins daily operations 4:30 p.m. Mon. thru Fri., with 5-6 o'clock programmed entirely for children... Hearst newspapers going in for TV news in bigger way, with radio editors writing columns; in Los Angeles, *Times* now runs full page Sundays, regular column weekdays (Walter Ames, TV-radio editor)... Clark Griffith thinks TV hurts baseball, so he doesn't intend renewing Chesterfield contract next year for Washington Senators. "I wouldn't be surprised if the major leagues vote to eliminate it next year," he said... *New Orleans Times-Picayune* request for reinstatement of CP for Channel 10, in lieu of grant for Channel 7 that was dropped (Vol. 5:31), returned by FCC as "out of order"... WSAZ-TV, Huntington, W. Va., has asked FCC for authority to erect microwave relay to bring in network programs from Cincinnati, 120 mi. away; relay would be at So. Portsmouth, Ky., 80 mi. from Cincinnati, 40 mi. from Huntington... CBS asked FCC to exempt it from paying AT&T for experimental use of coaxial during Jan.-Feb. color demonstrations, but Commission said law didn't permit... Kalamazoo's WKZO-TV, now testing, was granted microwave relays from Detroit this week, but FCC took occasion to remind telecasters that privately-owned relays should be amortized quickly (Vol. 4:8, Vol. 5:37).

Personal Notes: Charles C. (Bud) Barry becomes NBC-AM program v.p. June 5, taking over national program duties of Thomas C. McCray, shifted to Hollywood; Barry's ABC program vice presidency is left vacant, with Leonard Reeg handling radio and Alexander Stronach TV for time being... George W. Bailey reelected president of American Radio Relay League... Thomas Freebairn Smith named operations mgr., WCAU-TV, Philadelphia... Harold J. Bock now director of artists relations, NBC Hollywood... Dick Doan, ex-Martin Stone Associates, appointed program director, WCBS-TV... B. Walter Huffington, ex-mgr. of WSAP, Portsmouth, Va., named field secretary of NAB devoting full time to seeking and contacting membership... Donald E. Hyndman, ex-chairman and still member of TV committee of SMPTE, named sales mgr. Eastman Kodak professional motion picture film dept., Rochester... Richard H. Close promoted to mgr. of NBC national spot sales.

More May 1 sets-in-use figures reported since NBC Research "census" April 1 (Vol. 6:16): St. Louis 128,000, up 23,000 in month; Milwaukee 125,800, up 24,800; Kansas City 34,267, up 2767; Des Moines 10,366, up 2266; Boston 367,631, up 28,631; Providence 56,511, up 7511; Norfolk 15,374, up 7474; Davenport 10,428, up 1328.

TV newspaper lineage in March was 1,903,405 lines, up 122% over same month in 1949, according to Neustadt report of newspaper advertising.

Station Accounts: Big, old-line Davidson Chemical Corp. (fertilizers & other chemicals) sponsoring *Johns Hopkins Science Review*, featuring staff and faculty of university, on WAAM, Baltimore, Fri. 9:30-10... A. Hollander & Sons (fur processing) sponsoring Wendy Barrie on WNBT, New York, Thu. 10:45-11... Participating sponsors, including Pabst Beer and Hoffman beverages, will be sold on *Today's Racing*, films of same day's Belmont Park races on WPIX, New York, Mon. thru Sat. 7:30-8... Among sponsors reported using or planning to use TV: Parker Pen Co., thru J. Walter Thompson; Banner Specialty Co. (vending machines), thru Weightman Inc., Philadelphia; Midland Mfg. Co. (toys), thru Denman & Betteridge, Detroit; Illinois Meat Co., thru Arthur Meyerhoff; Chicago; Pennzoil Co., thru Mayers Co., Los Angeles; C. A. Swanson & Sons (canned & frozen chicken), thru Tatham-Laird Inc., Chicago; Ward Products Corp. (TV antennas), thru Burton Browne Adv., Chicago; Skilsaw Inc. (*Home Shop Show*, on KTTV, Los Angeles); Bonnee Frozen Foods Co., thru Oakleigh R. French & Associates, St. Louis; Borg-Erickson Corp. (bathroom scales), thru Wallace-Ferry-Hanly, Chicago; Minerva Waxed Paper Co., thru H. Grider Adv., Cleveland; Sho-Form Brassiere Co., thru Larry Pendleton & Associates, Los Angeles; Curtis Publishing Co. (*Holiday Magazine*), thru BBDO (WABD).

Network Accounts: Manhattan Soap Co. starts June 3 to sponsor *One Man's Family* on NBC-TV, Sat. 7:30-8... Skippy Peanut Butter Co. June 7 assumes Wed. sponsorship of *Captain Video* on DuMont Network, 7-7:30... Frigidaire's next 90-min. *Star-Spangled Revue* with Bob Hope on NBC-TV, first booked for Mother's Day, moved to Sat. May 27, 9-10:30... Gillette sponsoring Preakness on CBS & CBS-TV from Baltimore Sat. May 25, 5-5:30... American Safety Razor Co. in September to start to sponsoring half of CBS-TV *The Show Must Go On*, featuring Robert Q. Lewis... Block Drug Co. (Ammi-Dent Toothpaste) signed by CBS-TV for September start, show undecided; half hour will follow Auto-Lite's Tue. 9:30-10 *Suspense*... Tidewater Oil Co. May 17 starts *Broadway to Hollywood Edition of Headline Clues* on DuMont, Wed. 10-10:30.

Grocery chains in 10 cities will be presented plan of newly formed Grocers Television Co. for one-hour daily daytime network show, to be sponsored jointly with products and carried with local tie-in announcements. Plan is counterpart of drug chains' *Cavalcade of Stars* and *Cavalcade of Bands* now carried on DuMont. It's project of Philip Klein Agency, Philadelphia, and will be shown at New York's Gotham Hotel May 24-26 to foodmen from New York, Boston, Philadelphia, Washington, Chicago, St. Louis, Pittsburgh, Milwaukee, Cincinnati, Detroit—cities that would comprise initial hookup.

TV stations' network and local hours are analyzed in NBC breakdown of its owned stations and of affiliates, submitted by RCA as exhibit in color hearings. Of its own 5 stations: WNBT programs 32 hours 43 minutes network and 10 hours 13 min. local; WNBQ, 34:39 & 13:32; WNBW, 34:12 & 22:47; WNBK, 32:9 & 8:43; KNBH, 11:00 & 22:57. Interconnected stations (all unidentified) in 3-station markets program from 62:30 network and 15:30 local to 33:45 and 49:15; in single-station markets, range is from 41:30 network and 3:35 local to 15:15 network and 35:15 local. In non-interconnected markets, division, as expected, is heavier in local programs. Report is Exhibit 360 in Docket 8736.

Zenith's Comdr. E. F. McDonald, on personal Phonevision "selling" tour, called on FCC chairman Coy, Comr. Webster in Washington May 9, cut short visits due to illness. Next week, he meets with board of TOA in New York, following up visit with TOA's Gael Sullivan. In Kansas City this week, Kansas-Missouri exhibitors were told by Allied States' president Trueman Rembusch (reflecting bitter opposition to pay-as-you-look-TV plan): "Obviously this film [Zenith's industrial film on subject] was produced in order to take the motion picture producers up on the mount and show them the false pleasures and profits they would garner through giving their film to phoney [sic] vision." During week, North Central Allied convention in Minneapolis tabled most drastic anti-TV move yet put forth by theatremen—calling on IATSE union to help ban release of all feature films to TV, feature being any film over 4 reels. In Washington, FCC Chairman Coy replied to Senator Tobey's recent letter (Vol. 6:17), said he thought failure of movie firms to supply Zenith with film would be good subject to take up if and when Hollywood producers apply for TV stations.

Provocative thinking about TV and movies is expressed by radio-theatre-movie producer John Houseman in "Battle Over TV," in May *Harper's Magazine*. Article envisages "early marriage" between broadcasters and moviemens, sees forthcoming alliance between "sponsor-selected" TV programs for free and "freely-selected" shows for pay (latter could be Phonevision, he says). Houseman sees TV winning over movies, because public goes for technological improvements even though at beginning its inferior to original (cites talkies vs. silent pictures in early '30s). As to radio, Houseman says, "Radio was never more than a transitional step toward TV . . ."

Effect of TV on school children isn't as dark as painted, judging from 2 new surveys. In Washington, associate supt. Carl F. Hansen sampled 500 elementary school children, found 56% have TV in own homes, more than half watch TV "to some extent" every night. Sampling 546 teachers, 49% said TV is harmful to children, 44% said it isn't, 7% had no opinion—yet 58% answered "yes" when asked if TV is contributing to "educational achievement." Among 54 parents, all but 9 thought TV beneficial to their children, stimulating interest in news, science, travel, etc. In Chicago, asst. principal Philip Lewis, South Shore High School, studied grades of 500 students having TV at home, reported: "Excellent and superior students can view 15 hours or more per week without harmful results. Good or lower-grade students can't."

Excellent preview of allocations hearing, in May 6 *Business Week*, is recommended reading for industry and laymen alike—now that FCC is about to get into problem. Article shows unusual care in preparation, good appreciation of reasons for freeze, problems of vhf-uhf intermingling, processes involved in ending freeze and resuming normal station construction. It has considerable analysis of FCC's proposed allocation and DuMont's counter-proposal. To refresh yourself, you may want our reprints of both plans—Supplements 64 & 65 for FCC's, Supplement 68 for DuMont's.

Warning Canadian sports promoters to "keep clear of TV," ex-heavyweight boxing champ Jack Dempsey April 25 told Montreal sportsmen that "many money-grabbing stadium owners [in the U. S.] are selling out their shows to TV and the sport is gradually being taken away from the original promoters."

Trend to more beer drinking at home, less in public places, was attributed to TV by R. J. Cheatwood, president of National Beer Wholesalers Assn, speaking before New York convention this week.

FCC chairman Wayne Coy, after CTI color demonstration in San Francisco May 17, goes to Portland to speak before City Club May 19, then speaks to Denver Rocky Mountain Radio Council May 22. Subject is "TV and the Freeze"—and he's expected to tell those cities why they missed out on TV service, when they can reasonably expect it.

Proposed FCC rule defining how far telecasters can go in operating audio transmitters without related video (Vol. 5:2-3) will be argued June 2—postponed from May 12. Following have filed briefs, most making point that music is necessary with test patterns to demonstrate and install sets: ABC, NBC, NAB, TBA, KPIX, KSL-TV, KTLA, KTTV, WBTV, WKRC-TV, Fort Industry, RCA Service Co., Television Installation & Service Assn.

Another source of TV interference, of sort brought to light only by experience, is reported by Cleveland's WEWS. New receivers with high gain, using 25.75 IF, in weak signal areas, has third harmonic (77.25 mc) troubling Channel 5 reception. So far, trouble has been noted on new RCA, Admiral and DuMont sets. It's understood there are various methods of reducing effect. One veteran receiver engineer's comment: "A big reason for such trouble stems from fact that people watch pictures produced by very weak signals, far weaker than we thought they would. We used to think in terms of a 500 uv/m minimum, because that's what FCC would protect, but we find folks looking regularly at signals as low as 50-80 uv/m."

Newspaper sales decline of 17% due to TV was privately estimated by circulation managers attending recent Western Conference of Circulators in San Francisco. Charles Thieriot, manager of *San Francisco Chronicle's* KRON-TV told circulation managers that newspaper sales, especially in evening field, would decline because of TV's impact. He based forecast on survey of 500 local set owners, plus reports from Washington, Los Angeles, Baltimore, St. Louis. "Newspapers are losing advertising to TV," Thieriot said. "That will reduce the number of pages and tend to reduce the percentage of business as a whole." Of recent evaluations of TV's effect on newspapers, these were most pessimistic so far. But that 17% decline didn't seem right to Matthew G. Sullivan, circulation director of Gannett Newspapers. His poll of circulation managers, as reported in April 22 *Editor & Publisher*, showed estimates ranging from "no effect" in such cities as Tulsa and Rochester to "down 12% from year ago" in Los Angeles.

TV freeze here has served Canadian Broadcasting Corp., which not only operates radio stations and networks commercially but regulates the private stations with which it competes, as good excuse for delaying advent of TV in Dominion. Nevertheless, Canadian RMA members reported at recent Quebec meeting, about 50,000 TV sets will be sold in Canada this year—in areas like Toronto, Hamilton, Windsor, Vancouver, capable of getting signals from U. S. stations. CBC is reported to have ordered TV transmitter equipment from British Marconi for early 1951 delivery, but stations it plans in Montreal and Toronto aren't expected on air before end of next year. Meanwhile, no private telecasting licenses are being granted.

TV sets with earphones—reminiscent of old "hornless" radio days—have been put on market recently. Hearing aid as well as TV manufacturer, Zenith equipped 1500 of its sets with multiple headphones for hard-of-hearing. For the harried non-viewer—who wants to read, write or converse without cacaphony of TV audio—Skinner & Pelton Inc., 100 N. LaSalle St., Chicago, is advertising "Silavox," attachment permitting earphones to be used with TV.

END OF COLOR SQUABBLE IN SIGHT: It's hard to believe, almost too good to be true -- but FCC's color hearing is just about wrapped up. Don't hold your breath, though, for an immediate decision. Few expect it before late July or early August. But the few remaining steps are clearly spelled out.

CTI demonstration in San Francisco next Wednesday, May 17, which we'll attend, will be viewed by FCC Chairman Coy, Comr. Hyde, staffmen Allen, Plotkin, Roberts. Then CTI witnesses come to Washington for cross-examination May 25-26.

Then, each of the 3 color proponents must file, within 20 days, "proposed findings and conclusions" (meaning their opinions of what record shows) regarding their own systems. They may do same with opponents' systems if they desire. Other hearing participants may also file analyses of systems, if they like; but few are expected to. Thereafter, all participants have 10 days to reply to those briefs.

That takes it to June 25 or 26. Commission is on its own from there on.

* * * *

This week's windup involved principally cross-examination of RCA v.p. Conway Coe about patents and Dr. Goldmark's claims of CBS's advantages over RCA.

Coe was attacked by FCC counsel Wm. Bauer, DuMont's Wm. Roberts and Comr. Jones, attempting to show that RCA keeps people confused about its patents so they'll take full licenses; that it suppresses patents; that it wants to tie TV standards tightly to its patents; that it discourages competitive research, etc.

How much they succeeded in impressing Commission, is impossible to determine. At one point in the wrangling, commissioners recessed for brief meeting and Chairman Coy then announced:

"The Commission is concerned about the general patent picture with respect to standards established by the Commission in the television field or to be established in the color television field. We are likewise concerned as to whether or not there has been any restraint upon development of a color system or upon improvements in any television system, and particularly whether or not the dominant position, or as General Sarnoff put it, the position of leadership in the patent field held by RCA has in any way [restricted] development of a new art."

He made it clear, however, that FCC wasn't going into interminable pursuit of all charges and denials.

* * * *

Dr. Goldmark's parting shots were concluded with: "I think that the possibility of the RCA System ever becoming a practical broadcast service for home use is extremely doubtful."

RCA has grave problems of registration, CBS system's inventor said, will probably have them forever. Cameras are particularly tricky, he added; and construction of single-tube camera would be "fantastically" difficult job.

He questioned whether RCA color fidelity would ever be any good.

Resolution of RCA pictures is degraded in color or black-and-white, he testified. He thought that black-and-white pictures from color transmissions are always fuzzy, that higher resolution can't be appreciated even if it's there.

RCA system is critical with regard to oscillator radiation, ghosts, other interference, he maintained.

RCA's receivers would always be more costly than CBS's, he claimed. Station operating costs would be excessive. He asserted that cost of maintaining camera tubes would run \$30,000 annually for single camera.

All this, he said, contrasts with CBS system which is good, cheap, simple -- and ready now.

RCA counsel kissed off Dr. Goldmark's arguments with categorical denial, saying RCA's engineers had already completely refuted them.

* * * *

RCA, meanwhile, claims new developments almost daily. Dr. Engstrom said they had already operated 3-gun tri-color tube with 50% more brightness, 1-gun with 100%. During week, FCC staffmen were shown RCA color transmissions with reduced dot structure (Vol. 6:17,18). It's understood that handful of components, involving

"high Q" coil, does trick. And RCA is now taking its system to the public; ads in Washington papers are heralding demonstrations on 2 receivers being shown at May 12-21 Home Show in Washington's National Guard Armory.

First showings weren't so hot, Friday night. They were way below previous demonstrations. There was considerable color contamination and misregistry. We heard several people remark that they didn't compare at all with CBS pictures they saw in Walker Bldg. (Vol. 6:2 et seq).

* * * *

Industry has come to realize that FCC is bound to come up with some sort of pro-color decision. For example, Philco president Wm. Balderston issued statement to effect that Philco has made important contributions in color and uhf fields, strengthening its patent position. Further: "When the Commission establishes color television standards, Philco will be in a position to put color receivers on the market at least as rapidly as any other manufacturer...Philco believes that a successful compatible system is definitely attainable and is devoting its research and engineering work to achieve it."

Watch the rumors fly now, with daily reports of "inside dope" that FCC has made up its mind to do this or that. We suggest you take all of them with grain of salt, for a time, at least. One hot summer day the rumors will be right, but you may as well relax for a little while -- if you can.

NEXT, HOW TO PUT UHF TO WORK? Uhf is again FCC's prime objective, now that the color alley has been thoroughly explored. Full expansion of vhf, of course, is regarded as an immediate and substantial job. But Commission feels vhf is a going concern in great demand, doesn't need impetus uhf does. And uhf, says FCC, is essential to real nation-wide service. Most of industry has accepted that, for the 12 available vhf channels just aren't enough. If all uhf (470-890 mc) were made available to TV, it would provide 70 more channels.

Here's pattern you can expect during forthcoming allocations hearings:

Telecasters and applicants will naturally make every effort to capture coveted vhf channels -- "the bird in the hand." FCC will do all it can to encourage uhf pioneering. Applicants will accept uhf only when it's all that is left.

Telecasters' and applicants' shyness of uhf is understandable, since that kind of pioneering means the bluest of blue chips. Nevertheless, there are some noteworthy venturers into the field already. Besides such manufacturer-telecasters as RCA, Westinghouse, Philco and DuMont, there are John Poole of Long Beach, Edwin Pauley of San Francisco, the Steinman (Pennsylvania) stations, Scranton's WQAN, Pawtucket's WCFI (for full list of Experimental Stations, see TV Directory No. 10).

Enthusiasm is growing gradually, particularly among those AM broadcasters who aren't able to get vhf. Fairly favorable results attained by RCA-NBC at Bridgeport (Vol. 6:5,14) are raising uhf hopes. New Haven's WELI is already sold on uhf (Vol. 6:6). Now Hartford's WTIC is getting excited, after it's engineers reported continuous reception from 55-mile-distant Bridgeport.

Manufacturers' attitude seems to be this: Transmitter makers want to be ready to sell whatever stations need. Receiver makers are looking forward to new markets created by uhf; also, they're ever alert for any device enabling them to make a sales pitch based on something "extra".

Virtually all major manufacturers are doing something in uhf. A few cover the whole front -- propagation, transmitters, receivers. Others, such as Collins and Eitel-McCullough, are concentrating on transmitter tubes. And there has been a constant parade of set makers to Bridgeport, trying out new tuners and converters.

In a unique category is wealthy young John Poole. He commissioned Stanford Research Institute to tackle both receiving and transmitting ends of uhf. Last year, Institute came up with receivers it considered pretty good (Vol. 5:13,18,32). Now, it has built 530-mc transmitter, producing 150 watts but "capable of being amplified to powers in the tens of kilowatts using relatively simple radio frequency amplifiers." Men from big research outfits, who've achieved mere 1 kw so far, say: "We'd love to see those 'tens of kilowatts' on the air."

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Television Digest

WITH AM FM REPORTS

PUBLISHED WEEKLY BY RADIO NEWS BUREAU, 1519 CONNECTICUT AVE. N.W., WASHINGTON 6, D.C. TELEPHONE MICHIGAN 2020 • VOL. 6, NO. 20

May 20, 1950

WHAT'S BEING DONE ABOUT THE FREEZE: Because most trade and political interests think FCC need merely nod its head -- and, presto, the TV freeze can be lifted -- we reprint as Special Report herewith salient excerpts from nearly identical texts of FCC Chairman Coy's Portland and Denver speeches on "TV and the Freeze." This is "must" reading for prospective telecasters, and particularly for local trade interests in non-TV areas, for it relates in easily understandable language exactly why freeze was imposed, spells out in simple terms channel allocation problems, explains what color issue is all about.

The TV freeze was forced by technical considerations solely -- that much is clear to anyone studying the facts. It was designed to halt helter-skelter growth, lay groundwork for a technically sound and orderly system of channeling to ensure adequate service over the years to the greatest number of people. It was, unhappily and unexpectedly, prolonged by color issues, whose overtones were admittedly political -- but it's hoped these will be resolved reasonably soon.

Indeed, Chairman Coy predicts "once the freeze is lifted, TV will move ahead with Seven League boots toward its goal as America's dominant form of broadcasting."

Pressures were getting so great that Coy felt he had to reply, and it was particularly apropos that he should tell the story in Portland, where 2 granted CPs were dropped last year by principals who got cold feet, and in Denver, where local interests applied too late but are now crying loudly for TV -- home, too, of Senator Johnson, whose color campaign unquestionably contributed to delay in lifting freeze. This much Coy and colleagues make clear:

(1) FCC is now pressing (may not even vacation this summer) to solve color, uhf and allocation problems by end of year, then be able to authorize more stations.

(2) FCC is thinking (see text) in terms of potential 645 vhf stations, 1600 uhf metropolitan (high power) stations -- 2245 stations in 1400 cities -- plus another 1000 or so uhf community (lower power) stations. That many probably will never be built, but opportunity to cover country adequately, eventually, is implied.

THE LAWRENCE & DuMONT COLOR TUBES: More tri-color direct-view tubes, perhaps the real "Holy Grail" of quest for color TV, will be found (or reported found) from now on. Some details about 2 more were learned this week -- the Lawrence and DuMont tubes. Strong claims are made for their potentialities, some seemingly justified. Soon, they'll be demonstrated, compared with RCA's, as yet the only one actually brought into open (Vol. 6:13-19).

Lawrence tube is engendering a lot of quiet excitement among those who know about it (Vol. 6:18). Prestige of the inventor -- Dr. Ernest O. Lawrence, famed U of California nuclear physicist, Nobel Prize winner -- and character of his backers has dispelled much customary skepticism. But full-fledged tube has yet to be shown.

In San Francisco this week, we discussed tube with officials of Chromatic Television Laboratories Inc., formed to develop it (Vol. 6:17-18), and were told:

(1) Claims: simple construction, consequent reasonable cost; resolution enough to handle any proposed color system; brightness as high as standard black-and-white; no registration problems or critical tolerances.

(2) Status of development: demonstrations of illustrative apparatus and

principles have fully satisfied Dr. Lawrence and his associates; description powerfully impressed FCC delegation which saw him in San Francisco this week; Machlett Laboratories, Springdale, Conn. is making first 3 or 4 tubes, 16-in., with delivery expected in June or July.

Details of actual workings of Lawrence tube aren't disclosed, even though group feels it has adequate patent protection. This much we've been told: green phosphor covers face of tube; red and blue are deposited on numerous small plates immediately behind face; single gun used.

Principle is said to be astonishingly simple. One of Dr. Lawrence's associates says: "It's the kind of novel approach to be expected from someone looking at problem with totally different eyes from those of a radio engineer." Dr. Lawrence has been a TV hobbyist ever since his student days at Yale.

Here's setup of CTL: Dr. Lawrence is largest stockholder and a director; Richard Hodgson, assistant to Paramount's Paul Raibourn, is president and director; Raibourn is also director; H. R. Gaither Jr., member of San Francisco law firm Cooley, Crowley & Gaither, director. Other people involved, we're told, "will open up your eyes when you hear who they are." Paramount owns substantial interest, non-controlling, will be patent assignee -- no connection with its DuMont stockholdings.

* * * * *

DuMont made its bid for tri-color tube attention at New York press conference Thursday, hot on heels of May 16 patent grant (No. 2,508,267) to employe Henry Kasperowicz who filed it Oct. 26, 1945. Nothing is ready for demonstrations yet, but research chief Dr. T. T. Goldsmith said he expected to have tube in about month.

Patent covers both receiving and camera tubes. Looking at patent, some people hazard guess that claims concerning receiving tube are aimed at beating RCA to punch on its own tube. Patent specifies putting red, blue and green phosphor dots on face, apparently with arrangement similar to RCA's.

Camera tube may prove even more important -- sounds interesting, at any rate. Patent mentions use of color filter mosaic placed over photo-sensitive surface, thus breaking up light properly. Demonstration is expected in "several" months.

Goldsmith claims DuMont is well on way to licking one problem of the RCA receiving tube -- too few dots. He said DuMont knows how to get 60 phosphor "triads" per lineal inch, about twice what RCA has shown. DuMont researchers are also working on tubes larger than 14-in. (in 16-in. envelope) currently used by RCA.

WHAT CTI SHOWED IN SAN FRANCISCO: Color Television Inc., at San Francisco demonstration Wednesday, asked FCC for delay in color proceedings -- but it is evident Commission is getting impatient, feels it has leaned over backwards to give CTI every possible break, wants next week's cross-examination and rebuttal in Washington (May 25-26) to wind things up.

Chairman Coy made it clear FCC isn't disposed to let color hold up allocations hearing much longer. It's apparent that if CTI does get more time, it won't be very much -- and that target date then set will be final.

Whether CTI improved its chances with hometown demonstration (viewed by Comrs. Coy & Hyde, staffmen Allen, Plotkin, Roberts, plus about 100 West Coast notables) is hard to say. Predictions that neither CTI nor CBS will get exclusive FCC nod (Vol. 6:13,18) still have good support. In wide-open multiple-standards decision, CTI might get in.

* * * * *

We sat right in front row during San Francisco demonstration, 7 times picture height from receivers. These are our frank observations:

(1) CTI showed its brightest, sharpest pictures yet, on borrowed RCA 3-kinescope dichroic-mirror set. But, ironically --

(2) Faults of system, continuously predicted by virtually everyone outside CTI, were clearly apparent for first time.

CTI's best quality, color fidelity, was better than ever on 3-tube set. More brightness and improved registration did the trick.

But very coarse line structure and distracting "jitter" (or line crawl) were

definitely there. These factors were particularly bad on standard black-and-white set. This, in spite of new double "Interlaced Shift" which helped a little.

* * * *

RCA was chief object of attack by CTI president Arthur Matthews in testimony after demonstration, though CBS also got very rough treatment in his 14-page statement (copies available on request). His 4 principal points, as elucidated by commissioners and staff in cross-examination:

(1) RCA system should be turned down, even assuming it were best (which he didn't), because RCA is too powerful.

(2) CBS's incompatibility, alone, is enough to rule it out.

(3) CTI needs a little more time, principally to try its system out with one or other of the various tri-color tubes.

(4) Multiple standards won't work, would be tantamount to granting RCA exclusively. RCA would overwhelm all other systems by sheer economic weight.

RCA never pushed color, Matthews charged. It's a "Johnny-come-lately" in 6-mc color, he said, and its system is "still embryonic." The system is "altogether too complicated for the average serviceman to handle," he said, "or for the average viewer to adjust successfully, and certainly for TV's largest audience, the children, to operate." And tri-color tube, he thought, is still an experimental device.

Matthews was scornful of RCA's "more than a hundred engineers who had been struggling day and night to make the dot-sequential system presentable." CTI, he said, had developed system with only 3 engineers and 4 technicians and has been spending "100-cent dollars" on its effort.

RCA technicians "practically had to rebuild" WNBW's standard transmitter (in Washington) before it would handle RCA color, he charged, challenging RCA to transmit over "neutral unaltered" station.

As for CBS, Matthews said: "The successful public absorption of a non-compatible color system would be almost an impossibility...The hour [is] too late."

It would take 2-3 years to adapt or convert existing sets to CBS system, he estimated. In interim, he ventured, only CBS and NBC "could withstand the impact of such a situation, and the little broadcaster as well as the little manufacturer would, we believe, be forced to the wall.

"More dangerous than this, however, would be the effect on the millions of set owners [who] could be expected to be heard from in no uncertain terms.

"Doubtless CBS would indignantly refuse even to consider taking on the financial responsibility of paying all, or any part of the cost to all present set owners of adapting or converting their sets. Yet this vast cost is fundamental to the CBS proposal." Those factors cooked the CBS goose, he figured.

Multiple standards, Matthews continued, are a "delusion and a snare." No one would be able to compete with RCA system, he asserted, as long as RCA maintained its powerful patent position, manufactured sets, operated NBC.

On other hand, CTI wouldn't manufacture sets, would be glad to join open patent pool, he said. In fact, if composite color system is possible, he's for it.

* * * *

CBS counsel Richard Salant dismissed Matthews' statement as pure "argument," saying there was nothing in it to cross-examine. However, Salant did try to get him to agree that cheap conversion of existing sets to color is important. Matthews thought it is, but that tri-color tube offers only practical means for doing it.

"A lot of rhetoric," is what RCA counsel Joseph Heffernan termed Matthews' testimony. But he did try to break down a few remarks. For example, he asked Matthews his basis for saying RCA practically had to rebuild WNBW transmitter and where Matthews got idea that RCA asked for standardization of its simultaneous system in 1946. Matthews said he got information from his engineers and counsel. Heffernan asked permission to cross-examine them in Washington next week.

* * * *

For demonstration, signals came from CTI laboratories at 30 Sterling St., fed to KPIX via microwave, transmitted on Channel 5, received in St. Francis Hotel

on 2 projection receivers, plus the RCA 3-tube set, plus one 12½-in. RCA black-and-white receiver.

RCA 3-tube receiver didn't work first half of show and, for a while, demonstration looked very much like Washington showings (Vol. 6:8,11). CTI took blame for set's failure, finally got it operating. RCA had sent receiver and 2 engineers, at FCC's request, for purpose of getting brighter, well-registered picture.

Ambient room lighting was .1 ft-lambert. CTI technician measured highlight brightness of 4 & 1.8 ft-lamberts, respectively, on projection sets, 7 on RCA set, 20 on black-and-white.

Resolution was estimated by FCC's Edward Allen and Wilmar Roberts, taking 2 sets of measurements: on 3-tube RCA set, 225-250 lines horizontal, 260-275 vertical; on projections, 175-250 lines horizontal, 160-250 vertical. Black-and-white was 150-275 horizontal, 300 vertical. Reason for large differences stemmed from fact system wasn't working too well during first group of readings. Allen and Roberts generally didn't differ much. CTI's Donald Lippincott claimed that capabilities of image orthicon, not system, limited resolution.

Singing cowboys, Indians, models, grocery products were shown first -- and color fidelity usually was quite good. Technical tests included rotating paddles, keyboard pattern, introduction of oscillator interference.

On keyboard pattern, of type used at Laurel comparative demonstration (Vol. 6:8,9), jitter was really bad in the smaller keys. Paddles gave no trouble -- no breakup. At signal-to-interference ratio of 10-to-1, picture behaved about same as black-and-white under same condition. At 5-to-1, near or on carrier, color information was lost and colors varied widely.

* * * *

What really worried Chairman Coy is fact CTI hasn't yet presented any figures on co-channel and adjacent-channel operation of system. He made it clear FCC can't consider freeze and allocations until it knows. He insisted data be presented by time hearing resumes in Washington. CTI people went right to work on project.

Coy also asked Matthews his insistent uhf question (Vol. 6:14): What do you think of moving all TV to uhf eventually, allowing time to amortize vhf first? Coy wondered if 6-year period would be adequate, noting that Internal Revenue has that schedule for transmitter amortization. Matthews replied he hadn't thought about it. It's possible that FCC would like to accomplish vhf-to-uhf move, if it can be done, but it isn't getting much encouragement from telecasters. They're waiting for uhf to prove out, receivers to become available.

* * * *

Hearing next week will be in Room 6121, New Post Office Bldg. Everyone hopes May 25-26 will wrap it up, except for briefs due within 30 days thereafter.

RCA demonstration at Home Show in Washington's Armory continued no better than fair this week. Blame was placed on faulty phone company microwave link and interference from other TV displays and electrical equipment. Although RCA officials felt they had pretty well solved problems by week's end, pictures still weren't up to previous showings to press and FCC.

KALAMAZOO STARTING, MORE APPLYING: June 1 is formal debut date for Michigan's newest TV outlet, the nation's 105th -- WKZO-TV, Kalamazoo, Channel 3. It widens populous TV areas already partially served by Lansing's WJIM-TV, which started May 1, and Grand Rapids' WLAV-TV, operating since last August. NBC Research already accredits Kalamazoo area with 9600 TV homes, after some 2 months of testing (Vol. 6:14). WKZO-TV itself claims some 11,000 in Kalamazoo-Battle Creek region, 45,000 within 40-mi. radius, 55,000 within 50 mi. Its own microwave relays from Detroit and Toledo (it will be basic CBS-TV) won't be ready until later in June, with stations at Albion & Manchester, Mich.

Though TV applications filed now mean no priority post-freeze, they're dribbling in -- 2 this week, from Lancaster, Pa., WLAN seeking Channel 9; from Sioux Falls, S.D., KELO seeking Channel 11. [For details, see TV Addenda 10-S herewith.] That makes 349 applications now in FCC files.

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PUBLISHED WEEKLY BY RADIO NEWS BUREAU, 1519 CONNECTICUT AVE. N.W., WASHINGTON 6, D.C. TELEPHONE MICHIGAN 2020 • VOL. 6, NO. 21

May 27, 1950

ROCK ISLAND'S WHBF-TV READYING: Next after Kalamazoo's WKZO-TV, which starts June 1 (Vol. 6:20), comes Rock Island Argus' WHBF-TV, Channel 4 -- giving Quad Cities area (Davenport-Rock Island-Moline-E. Moline) their second outlet. Davenport's WOC-TV has been operating since last October, and area's May 1 receiver count shows 10,300 (Vol. 6:20). WHBF-TV starts testing next week, now looks to July 1 formal debut.

Houston's KLEE-TV becomes KPRC-TV as of July 3, FCC this week approving \$740,000 sale to Houston Post (Vol. 6:13). Jack Harris, new manager, plans big promotions July 2-5 in collaboration with area distributors. Special edition of rich, powerful ex-Gov. Hobby newspaper will also commemorate 25th anniversary of its KPRC. Harris will build new TV staff from nucleus of old KLEE-TV personnel.

Note: WHBF-TV will become 106th TV outlet. Now on FCC books are 4 CPs, 349 applications -- new one having been filed this week by Columbus (Ga.) Ledger & Inquirer (WGBA) for Channel 3; last week's by WLAN, Lancaster, Pa., for Channel 9, was returned by FCC because no such channel has been assigned yet. [For details, see TV Addenda 10-T herewith.]

THE TELECASTING VOLUME MUSHROOMS: If 4 TV networks, 13 network-owned TV stations and 84 other TV stations achieved gross revenues of \$33,800,000 in 1949, as officially reported by FCC (Vol. 6:16), what can we expect will be telecasting's dollar volume in 1950?

Our guess is \$75,000,000 or more.

It's only a guess, frankly, and it can't be substantiated until end of year when usual industry trade sources come out with their calculations, subject to FCC's official accounting the following spring. But it's a guess based on what might be called "feel" arising out of increasing network and station sponsorships, longer program days, higher time rates.

Consider these factors, if you think a \$75,000,000 guesstimate for 1950 is out of line as against last year's \$33,800,000 -- the latter figure coming from FCC Public Notice 49197:

(1) Number of TV stations rose gradually from 49 to 97 during 1949, now is 105, may be 108 by year's end -- and most are still operating only part of day.

(2) Network service reached only 16 areas at start of 1949, now reaches 33 areas, is gradually expanding to others.

(3) Rorabaugh Reports listed 727 TV advertisers (network, national spot, local) on 46 reporting stations in January 1949 -- rising each month until total was 2842 on 97 reporting stations at end of March 1950.

(4) Networks and stations are raising rates, almost without exception, apace with growth of TV sets-in-use, which totaled 1,000,000 in January 1949, now runs very close to 6,000,000, may hit 10,000,000 by year's end.

You get hint of enormous percentage increases in TV business in PIB network TV figures for Jan.-thru-April (Vol. 6:20), albeit they're incomplete (DuMont not reporting) and give no data on mounting national spot and local revenues. Our conjecture is also strengthened by confidentially reported current billings at rate of \$1,000,000 or more by each of a half dozen stations.

If 4-year-old commercial TV can report such mushrooming growth despite

freeze, let your own fancy decide its post-freeze potential. And with admitted inroads of TV, there are many who question whether radio broadcasting (pushing age 30) will this year, or ever again, achieve its record \$426,000,000 volume of 1949.

Note: FCC Public Notice 49197 breaks down 1949 TV revenue figures as follows: \$19,200,000 for 4 networks and 13 owned-and-operated stations vs. \$4,800,000 for 4 networks and their 10 stations in 1948; \$14,600,000 for 84 stations vs. \$3,-900,000 for 40 stations in 1948. Total of \$33,800,000 is cut to \$24,300,000 after Federal taxes. Same report's \$426,000,000 for AM-FM is up 4.4% from 1948, covers 4 national and 3 regional networks (\$97,000,000), 2054 combined AM-FM station operations (\$327,400,000), 114 separate FM stations (\$1,600,000).

CURSE OF (TV) BIGNESS—COMR. JONES: Looks like FCC Comr. Bob Jones is out to make himself the Galahad of the little broadcaster, Giant killer of the big interests -- most particularly the "multiple-interest broadcasters" (AM-TV, network, manufacturing folk) whom he suspects of seeking to put death spell on sound radio. Citing Aesop's fable, referring to "foxes slinking along the trail," he told Ohio Assn of Broadcasters at Columbus May 24:

"You sound broadcasters are not confronted with a competitor who is primarily interested to see this [AM] medium live, but one who may be interested in seeing it live just long enough to make the transition to the new [TV] medium." Between clear channels and TV, he saw "pincers movement against [those] who rely upon sound broadcasting exclusively for their livelihood."

Comr. Jones makes no secret about his antipathy toward bigness, manifested in his voting record; he's also FCC's most ardent protagonist of color now for TV. But what makes his approach particularly attention-getting is apparent contrast with that of FCC Chairman Coy, who sees march of TV as irresistible. Coy told NAB convention (Vol. 6:16), then reiterated statement in Portland and Denver speeches (Special Report; Vol. 6:20), that TV will become dominant broadcasting medium -- and has consistently urged broadcasters to go into it.

What's most ironical about Jones' attitude of mistrust of TV enterprisers' motives is that his native Ohio has quite a few "multiple-interest" broadcasters-telecasters, who would scarcely want to kill off the golden AM goose that's still supporting TV. Also, curiously enough, "trust buster" Jones is an Ohio (Taft) Republican, "conservative" Coy a New Dealer and onetime aide to President Roosevelt!

Note: If you want full text of his Columbus speech, write to Comr. Jones.

WESTERNERS HEPPED UP ABOUT UHF: Two West Coast groups -- Stanford Research Institute and Television California -- are so optimistic about uhf that one begins to figure they've either found the secret of uhf or are oversimplifying its problems.

'Achievement of real uhf transmitter power, up to 50 kw or so, isn't particularly baffling as far as SRI men are concerned. They feel they've pointed way with new "phase-to-amplitude" modulation method (similar to French "Chirix" system) used in 530-mc 150-watt transmitter they built for John Poole (Vol. 6:19). This, in spite of fact no one has yet put more than 1 kw or so on air.

Visiting their Stanford, Cal. labs last week, we asked obvious question:

"If it's so easy to get that kind of power, why haven't you done it?"

Answer was, first, that Poole felt he had financed all the research warranted until FCC adopts final standards; second, proper amplifying tubes aren't available. But they were quick to add that they're convinced right tubes can be made without extraordinary effort, because amplifiers for their system have no requirements of amplitude linearity. Resnatrons seem to offer best possibilities, with klystrons and traveling-wave tubes second choices.

We tried to pin them down to cost and time estimates. One year and \$100,000 would provide "good research risk" of achieving that kind of power, they said. And they'd welcome such an assignment. They feel basic job has already been done in "heart" of system, the phase modulator, for which they built special tube. What's more, no more difficulty is seen in achieving high power at 1000 mc than at 500 mc.

Leader of project has been W. E. Evans (ex-Bell Labs) who, with Stanford U's

Color Report
May 27, 1950

COLOR WRAPPED UP—BUT WHAT'S NEXT? It's hard to believe, but color hearing is over -- 8 months to the day after it started Sept. 26, 1949. In spite of that, color-freeze-allocations timetable from here on out is more confused than ever.

Color decision will come first, then FCC will take up matter of allocations, Chairman Coy said in his speeches last week (Special Report, Vol. 6:20). Nature of that decision won't be known until it is made -- whether partial, total or what. Until recently, it was thought FCC could go into allocations hearing after deciding, rather quickly, 2 factors about color: (1) Whether 6-mc is adequate. (2) Whether color requires different allocation from monochrome.

Feeling of several commissioners now is that job of deciding those 2 factors probably involves picking or rejecting color systems -- and that will take plenty of time. Since FCC has never met to discuss color decision, it's now likely it will start color deliberations, "play it by ear," make up timetable as it goes along.

* * * *

Another complicating factor is FCC's disappointment in limited interference data (station-to-station and signal-to-noise) supplied by color proponents. At closing session Friday, Coy delivered scathing remarks on subject, emphasized point by issuing public notice (No. 50740) containing verbatim excerpts.

He was provoked by flimsy CTI data but also made no secret of feeling that RCA, CBS, RMA, JTAC etc. had not submitted exhaustive data either. He castigated industry in general, calling attention to factors bringing on freeze in first place:

"It is merely a repetition of the situation where the industry appears to be perfectly willing to have the Commission allocate on the basis of inadequate interference data in the hope that things will work out well. However, when things do not work well, strong pleas are made to the Commission -- particularly by that portion of the industry which at that time happens to be favored by existing authorizations -- to relieve the situation by not licensing any further stations that would aggravate the interference problem.

"I hope that our experience in this proceeding will teach all of us the importance not only to the Commission but to the industry and to the public of securing and offering adequate data on interference so that sound decisions can be made on an allocation basis under which the industry can build with reliance on the fact that unforeseen interference conditions will not severely limit the service areas which had been anticipated and thus deprive many rural listeners of service. People who live in rural areas are important people!"

Continuing, angrily, Coy declared:

"All of you are aware that there is great fuss and feathers about the question of lifting the freeze, and all of you are aware and cannot help but be aware of the fact that the interference conditions with respect to color TV transmissions are an imperative must for the Commission in considering the lifting of the freeze. And yet we have had to continuously prod this industry to get the information. First they startle us with the assumptions that they have made, and I give you my word their assumptions are not borne out by the evidence that is in this record. They are not identical. And yet they would have us go ahead and take risk and make an allocation on the basis of inadequate information."

Where and when FCC will get data it wants isn't known. Nor is it known how far it can get in its color deliberations without them.

(Over)

Further beclouding any schedule, is matter of FCC vacations. Number of members are visibly exhausted by hearing. Some of them wonder whether they can do justice to subject without some rest first.

Then there's question of fairness to CBS and chances of implementing a decision in its favor if FCC makes such decision. Every black-and-white set built makes it tougher for CBS's incompatible system. There are over 6,000,000 now, and there may very well be 8-9,000,000 by time of decision.

All of which adds up to delay and more delay in ending freeze. Some within Commission now think it reasonable to hope for color decision and beginning of allocations hearing by Sept. 1, end of freeze by Jan. 1. Others consider that a pipe dream. One staff member who has been pessimistic (therefore accurate) from the start can't see freeze's end before May 1, 1951.

As freeze drags on, pressures on FCC are likely to become enormous. Just this week, Chicago City Council finally got impatient, filed formal petition demanding grant of city's remaining 3 channels. Previously, it had twice passed resolutions, forwarding them to Commission. Many other cities are being heard from, too.

Only dates to go on now are June 5 and July 10. Former date is beginning of hearing on Bell Labs 470-500 mc petition (Vol. 6:18) which doesn't really affect freeze schedule. Latter date is new deadline (moved from June 26) for filing of briefs and counter-briefs by color participants. FCC staff is already preparing background and digesting record.

* * * *

CTI's principal contention, during May 25-26 windup, was that its defects, if any, are due wholly to present apparatus limitations. Chief witness Donald Lippincott, CTI's patent counsel, freely admitted pictures weren't perfect, renewed request FCC hold off decision until it sees all 3 systems operating with same type of receivers -- namely, with tri-color tube.

He also asserted that perfect compatibility is probably an impossibility. He said he'd seen no demonstration, including RCA's, showing it. However, he thought degree of compatibility shown so far is adequate for public, will improve.

As a leading radio patent authority (he was Signal Corps' top expert during war), Col. Lippincott was questioned closely.

He was "appalled" by concentration of power in RCA's setup, he said, but thought it had been of great benefit to public and industry because of low single royalty and RCA's industry service laboratory. However, he favorable a pool into which single royalty would be paid -- something like British setup, which he helped establish. He'd like to see royalties distributed more widely.

He thought little of automotive industry's patent pool, which gets no royalties. "The reason we're using auto engines not much different from those of 1910," he said, "is because there has been no incentive."

* * * *

More and more outfits are getting into color act. Don Lee notified FCC it has filed patents relating to 2 tri-color tubes, claiming them good for any system. Only details given: "Perforated plates are not employed. Rather, the electron stream is curved in a single plane."

Chromatic Television Labs and Paramount petitioned FCC, through attorney Paul Porter, for permission to testify on Lawrence tube (Vol. 6:20). They said they expect Machlett to have tubes done by June 15, then want to demonstrate them. They also want Commission to adopt standards broad enough to permit its use. Fear, apparently, is that standards might be so stringent as to favor only one kind of tube.

Chances are Lawrence tube will get its innings, through reopening of record or some other legalism -- since everyone wants any tube that will work. Regarding ease of construction claimed for tube, some engineers familiar with it say they like its principles but fear it may be tougher to make than RCA's.

Dr. Oswald G. Villard, used same principles in designing 50-kw AM transmitter for KFBK, Sacramento. This unit, says KFBK technical director Norman Webster, takes no more room than usual 10-kw transmitter, has operated 11,000 hours with virtually no trouble. Cost was about third that of commercial 50-kw unit.

SRI men are also casual about uhf tuners and converters. They've built continuously tunable units covering 475-890 mc, say there's nothing tricky about them.

Thomas H. Morrin, ex-Raytheon, heads electrical engineering dept. Paul G. Bohlke, ex-Sylvania, heads tube lab, supervised construction of uhf tube; he's also project leader on Geer tube research (Vol. 6:10), with Evans working on Geer's circuits. Group is young, full of zip -- scarcely any of them as old as 40. SRI was founded, postwar, by western businessmen. Although it works closely with Stanford U, there's no direct connection.

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Larry Reed, chief engineer for Ed Pauley's Television California, seems sold on uhf. After operating KM2XCW (600-mc, 1-kw ERP) for exactly a year now, he's satisfied that proper power can do adequate job in San Francisco. With transmitter atop St. Francis Hotel, he figures 1 kw can provide solid service to 80% of people within 10 miles. "If you can't get a good direct signal," he says, "you can almost always pick up a good reflection."

Currently, Reed is making tropospheric tests, picking up signals at KGO-AM site 28 miles away, line-of-sight, mostly over water. Signals vary daily between 50-250 uv/m, surprisingly large deviation for that distance.

Reed is using new system, multiplexing FM sound into video, so that only one transmitter is necessary. Unfortunately, system is "incompatible" with present standards -- to borrow word from color hearing. He and his men built virtually everything themselves, report only one hour of breakdown for entire year.

Uhf is getting well-publicized, what with speeches, articles, RMA and IRE committee meetings, etc. NBC's Raymond Guy and Westinghouse's Ralph Harmon have been particularly active. In general, they're more cautious than the West Coast experimenters. If you've missed their stuff, you may catch up by reading their FCC progress reports on Bridgeport and Pittsburgh work, respectively, in virtually all the technical publications during last few months; latest are in May edition of Milton Sleeper's TV-FM Radio Communication. Guy will have another progress report in June or July; he'll have limited number of copies for those seriously involved with uhf. Harmon's full report may be obtained by writing directly to him, 1625 K St. NW, Washington, D. C.

TECO INC. & THE PHONEVISION OUTLOOK: By own statement, Phonevision promoters this week cast doubt whether pay-as-you-look TV tests will come off in October as projected (Vol. 6:16). Despite much fanfare and repeated assurances, it's virtually admitted now that no first-run films are as yet available for 3-month, 300-family test authorized by FCC in Chicago. Hollywood boycott, especially by members of Motion Picture Assn (Eric Johnston), is alleged.

Statement May 25 was occasioned by spectacular rise in stock of Teco Inc. to \$38 bid, \$41 asked in little more than month. Teco was formed under Zenith's aegis to promote Phonevision (Vol. 6:15-16), Zenith stockholders being permitted to buy one share at \$10 par for every 5 Zenith shares held. Stock began to tumble immediately after news release, went down to around 16 at week's end. Zenith president E. F. McDonald was quoted as saying:

"Even if Phonevision is approved by the FCC [tests were authorized strictly on temporary experimental basis] and we get over all the many hurdles that still face us, it would be at least 2 or 3 years before Teco could be expected to have any revenue. In the interim, it is obvious that it must operate at a loss."

Press statement is first from Zenith publicity mill that reflects any doubt about project. It notes that offer has been made to film folk to rent films at same rate as theatre, Comdr. McDonald stating:

"Obviously, if enough acceptable films are not made available for the test,

it will be impossible to demonstrate to the FCC that the operation of Phonevision on a commercial basis will be in the public interest and that the people want it and are willing to pay a fee to see high class TV programs in their homes.

"Failure of the test because of refusal of films would unquestionably make it much more difficult to obtain the approval of the FCC to the adoption and use of Phonevision as a permanent commercial TV service.

"I might add that if the major motion picture producers continue to refuse to rent their films for the test and are not restrained by the courts, they would in all probability attempt to refuse to rent their films for use on the Phonevision system if it were approved and established on a commercial basis [by] the FCC."

Fact of Teco stock issue, extravagance of publicity claims for Phonevision while it is still merely an authorized but untried experiment, reluctance of most telecasters and manufacturers to go along with idea, are known to have caused considerable concern in FCC quarters. FCC Comr. Webster, who dissented (Vol. 6:7) from original experimental grant (FCC Public Notice 50-191), has been following matter particularly closely, still makes no secret of his misgivings.

Note: MPA's Eric Johnston might be expected to lend McDonald attentive ear, for his private business interests in Northwest include Zenith distributorships. Besides major film producers, Phonevision's chief opponents are theatre owners, big and little, frankly bucking it as potential boxoffice competitor.

Teletcasting Notes: Less than year ago KLAC-TV, Los Angeles, was put on block by Mrs. Dorothy (Thackrey) Schiff, then withdrawn when there were no takers; now, station not only claims some sort of record for average 92½ hours weekly on air, but manager Don Fedderson reports it operated in the black in March and April (doesn't say how much), looks like it will stay there, this year will gross close to \$1,500,000 . . . Iowa State College's WOI-TV, Ames (Des Moines area's only outlet) carried first live programs last week via DuMont Telecruiser, picking up baseball, parade, plays and other events incident to college's traditional Veishea Open House Celebration; station has no TV camera chain yet, carries films and kines only, is due to go on microwave in October . . . Ziv Television Programs Inc., owning rights to *Cisco Kid* films, has made deal with NBC-TV to produce new series specially for TV—and in color . . . Proctor & Gamble has cancelled Ralph Edwards' *Truth or Consequences* on NBC (AM), has offered to sponsor same show in film version on TV . . . NBC-TV verifies still-unresolved plans for "big" Wed. 8-9 show next fall (opposite Arthur Godfrey on CBS-TV), is discussing idea of "rotating" stars like Bob Hope, Fred Allen, Eddie Cantor, Martin & Lewis . . . Buffalo's WBEN-TV has filed for power increase to 100 kw visual, 50 kw aural (presently 16.2 & 10.2 kw), asks authority to change transmitter location to 7 mi. south of E. Aurora, N. Y., raise antenna to 1196 ft. above average terrain; it seeks to be classified as rural.

Network Accounts: NBC-TV *Saturday Night Revue*, which signed off for summer May 20, returns Sept. 9 all sold out. Half-hour sponsors: Campbell Soup, 8-8:30; Snow Crop Food, 9-9:30; Crosley, 10-10:30. One-minute sponsors (8:30-9): Whitman's Chocolates, Johnson's Wax, Wildroot; (9:30-10) Scotch Tape, S. O. S. Cleanser, Benrus Watches . . . Finals of *Roller Derby* to be co-sponsored on ABC-TV by Dodge (Chrysler) Sat. June 3, 10 p.m. and Sun. June 4, 3:30; Dodge and Blatz Beer will co-sponsor it Thu. June 8, 10 p.m. . . . George S. May Co., Chicago business engineers, to sponsor Tam O'Shanter golf tourney on ABC-TV Aug. 13, Sun. 5:30-6:30 (CDT) . . . American Safety Razor Co. signed by CBS-TV to sponsor first half hour of *The Show Goes On* with Robert Q. Lewis, starting Sept. 28, Thur. 8-9; second half again to be sponsored by

Columbia Records Inc.; show's summer hiatus starts June 22 . . . P. Lorillard & Co. (Embassy Cigarettes) July 11 starts *The Web*, mystery series, on CBS-TV, Tue. 9:30-10 . . . Magnavox in October will sponsor new dramatic series on CBS-TV, Fri. 9-10, alternating with *Ford TV Theatre*

Station Accounts: DuPont, for its Duco paint products, is sponsoring *Today in Europe*, 5-min. news review on WFIL-TV, Philadelphia. Among other sponsors reported using or planning TV [all agencies N. Y. unless otherwise stated]: Havatampa Cigar Co., thru Henry Quednau Adv., Tampa; Robertson Factories Inc. (Vogue Curtains) thru Badger, Browning & Hersey; Plaza Studios (blouses & scarfs), thru Yates, Wertheim & Babcock; Motorola (TVs & radios), thru Ruthrauff & Ryan; Swift & Co. (Table-Ready meat), thru J. Walter Thompson, Chicago; Carlson & Sullivan (steel tape rules), thru Steller-Millar-Lester Inc., Los Angeles; Newsweek Magazine (new picture news-digest), thru Lennen & Mitchell.

Personal Notes: G. Richard Swift, manager of CBS key WCBS, New York, appointed to additional post of gen. mgr. of WCBS-TV, soon expected to expand into morning operation; Clarence Worden named asst. to Mr. Swift; George R. Dunham Jr. sales mgr.; Richard Doan, program mgr. . . . Robert Matthews named supervisor of CBS-TV Hollywood facilities under George McCaughna, director of building operations . . . Colin M. Selph new sales v.p. of KPIX, San Francisco, Lou Simon continuing as commercial mgr. . . . Harry W. Witt, ex-KTTV, Los Angeles, July 1 becomes mgr. of new Los Angeles office of Calkins & Holden, Carlock, McClinton & Smith . . . David Kaigler Jr., ex-WCAU-TV, May 31 joins Adrian Bauer Adv., Philadelphia, as TV director . . . I. E. (Chick) Showerman, NBC Central Division v.p., elected president of Chicago Television Council succeeding George Harvey, WGN-TV . . . Robert J. Brewster, ex-WOR & WOR-TV, joins McCann-Erickson, Chicago, as executive asst. for TV-radio to Homer Havermale . . . Robert F. Levine, ex-Cinema-Television Studios, new radio-TV director, Hirschon-Garfield Inc.; same agency names media director Judah Katz as supervisor of radio-TV timebuying . . . Wm. M. Roden named NBC-TV personnel supervisor, replacing Neil Knox, now network TV salesman.

Trade Report
May 6, 1950

EMERSON CUTS 12½ & 16-in. \$70 EACH: Emerson this week had trade buzzing, production analysts scanning their cost sheets, following slash of \$70 each from 12½-in. wood table and 16-in. console models -- new prices \$160 & \$260, respectively. Now fifth ranking producer (Vol. 6:8), Emerson obviously has other set makers thinking hard about price levels of new June-July models now being planned. Most predictions had been for prices only slightly lower (5-10%) than now prevailing. Emerson not only slashed prices, but cut out all other models, will stick to these 2 until fall line.

Reason for drastic action was given as "softening" of markets in recent weeks, president Ben Abrams repeating to newsmen Wednesday that he sees real summer slump though not as severe as last year's (Vol. 6:14). Long a specialist in low-priced radios, Emerson is out, he said, "to show the way in TV values as it has in the radio field." Production, he said, will be hiked from present 1800 to between 4000 & 5000 daily by end of year. Big new plant in Jersey City recently acquired from Continental Can Co. (Vol. 6:6) goes into production May 22.

Mr. Abrams said price plunge had been planned for July 1, but early market conditions caused company to put it into effect this week -- even lower than originally planned. Sales dept. discloses enough large-scale orders already on hand to offset seasonal decline, so that there will be no cutback in factory operations. First 2 days after announcement, 3500 sets were shipped to Chicago alone.

Future Emerson lines won't have 7 or 10-in., will concentrate mainly on 14 & 16-in. rectangulars. Whether 19-in. and projections will be included hasn't been decided. The 16-in. console is already in dealers' hands, with rebates assured for those who ordered at old price of \$330. The 12½-in. will be delivered beginning May 15. Both sets are essentially same as already in line (TV Directory No. 10), though 12½-in. has new cabinet. Dealer discounts remain as before, 25-32%.

Nearest comparable prices for 12½-in. table models in current lines of other major producers are: Meck, \$150; Tele-tone, \$170; Admiral, \$180 (plastic); Air King, \$180; Hallicrafters, \$180 (plastic); Olympic, \$180. Other name brands are \$200 & up.

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Reactions in the trade were mixed, ranging from puzzlement as to how Emerson can do it to ire over "upsetting the applecart" of still-flourishing trade. Inclination of most was to ask time to think it over, but Majestic-Garod's Leonard Ashbach probably expressed instant reactions of many when he issued statement characterizing price cuts as tending "to strain trade relations rather than to improve them...A manufacturer should not destroy confidence by carelessly issuing announcements of price cuts, thereby devaluating the merchandise the dealer has in stock. Lack of confidence often leads to confusion, and that confusion is passed on to the public, and when the public is confused, they do not buy."

COLOR TV AND THE SELLERS' MARKETS: Would TV manufacturers and sellers have more to gain if color were held back or delayed while they saturated market with black-and-white sets -- then, when color came, could enjoy brand new market for replacements?

That question expresses or implies reason attributed from time to time (by CBS, Sen. Johnson, Comr. Jones) why set makers and merchandisers have been so luke-warm toward CBS "color now" campaign. It was raised again at current FCC color hearings this week while RCA's Gen. Sarnoff was on stand.

You have to read the record to get the full flavor and significance of the questions and replies (notably pages 10363-10369) -- and of course you need to know the background of the virtually unanimous industry opposition to any incompatible color system. But this reply by Gen. Sarnoff to questions put by CBS chief counsel Samuel Rosenman is worth verbatim report:

"At the present time, the whole industry is in a state of transition from

sound to sight. The pattern has not yet emerged. There is no such thing as a steady volume of sales.

"If you will read this morning's paper, as you probably have, you will have observed an announcement by one important radio manufacturer of TV sets, who already states that he is reducing his production because the market is becoming soft in the TV field, and the prices are going down.

"Now, under our private economy system, highly competitive, the production facilities very soon reach a point in excess of consumption, and then you have got demoralization in the market.

"There is liquidation, there is obsolescence. There are all kinds of things which are done in the trade; people are taken to Atlantic City and even to Europe -- dealers -- in order to get them to buy TV sets or radio sets.

"That fierce competition which goes on can only be improved by the introduction of new models, new types of instruments, which put the industry again on a new level.

"Now, if for 5 years there was nothing new in the TV industry except black-and-white TV receivers, I would expect that within a year or two from now, the competition would be so fierce that there would probably be an unprofitable business in the manufacture of TV receivers.

"If, on the other hand, you introduce a new element, color at the transmitting end and color at the receiving end, and new models, you offer new opportunities for increased merchandise; people who have black-and-white exchange for color..."

Gen. Sarnoff predicated this statement on compatibility, of course -- the fact that present set owners (he predicted 20,000,000 by 1952) would be able to receive colorcasts in black-and-white without need of adapters, could swap or replace old sets for either polychrome or monochrome sets as they choose and according to their pocketbooks. Also, that compatibility renders transition for both telecaster and receiver relatively painless.

TV EFFECT ON HOME HABITS & BUYING: Reasons why people are buying TVs and other "home centered" goods in such profusion lately, as adduced by New York Herald Tribune financial writer Harvey E. Runner in interview with chief economist Dr. Leo Barnes, of Prentice-Hall Inc.: (1) Many new families, and (2) they stay at home more. It's as simple as that.

"Young folks at home," is the way Dr. Barnes describes people today, noting dominance of "family" rather than "personal" buying, showing that 68% of women 20-24 are married whereas only 52% were in 1920. "Television, of course, fits right into the trend," he observes.

TV is credited with sparking small boom in furniture, according to May 1 Wall Street Journal. For example, hassock makers are grossing extra \$17,000,000 from sale of their products as extra TV seats. One chair maker actually reports seats for TV now constitute 50% of his business. Furniture items specially designed for TV include love seat on casters, barrel swivel chairs, slanted plastic chair, even snap-on tray.

Adding to pattern, RCA Victor's sales mgr. Allan B. Mills noted in Atlanta speech last week that TV, besides being tremendous retail business of itself, is stimulant for such appliances as new types of home lighting apparatus, and as an ad medium shows uses and features of electrical products. And set maker John Meck attributes to TV strong impact on other merchandise sales:

National average of retail merchandise sales first 2 months of 1950, he notes, was 3% above same months last year. But furniture was up 8%, musical goods 11%. Reinforcing Dr. Barnes' stay-at-home thesis, Meck shows on other hand that drinking places were down 8%, sporting goods 8%, cameras 7%, luggage 12%. While autos were up 30%, filling stations rose only 1%. Thus, he concludes people stay at home more after getting a TV, become more aware of home needs.

Topics & Trends of TV Trade: If you want to get freeze lifted, "time has come to take off the gloves and go to work for it," says National Appliance & Radio Dealers Assn in pungent letter to membership. NARDA recommends members write Congressmen, FCC, newspapers, etc., offers suggested resolution for civic and business organizations. Its attitude is that color TV, main cause of delay, is merely "icing on the TV cake"—and that most of its members don't even have the cake yet.

Senator Ed Johnson, back in Denver recently to open Western League baseball season (he's league president) saw some of the local radio dealers getting up giant 150,000-signature petition asking for end of freeze (Vol. 6:14). Since he sparked color campaign, constituents naturally contacted him. He told them he couldn't do anything about it since it was a technical matter not within his province. But said he had no objection, told them go ahead with petition and publicity campaign.

Johnson is noted for his independence and, though silent lately about color TV and the freeze, he obviously reckoned without his constituents when he helped start current color imbroglio. Denver is one of few major markets still without TV station; Salt Lake boasts 2.

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Continued good demand, no curtailment of production, second quarter TV sales that will be 30% ahead of record first quarter's \$46,291,409 (Vol. 6:15)—is report from Admiral's Ross Siragusa, who usually calls his shots. Third quarter production will be slightly under second quarter, said he, due to vacation shutdown in July, "but by end of the third quarter we'll be turning out sets at a new peak of 115,000 a month." Current capacity production will continue through June "because our distributor inventory reports across the nation, taken weekly, indicate they only have a 3-day supply of sets, whereas normally at this time of year they hold a 3-week supply."

DuMont's Ernest Marx, chief of receiver sales, reports Paterson plant putting on extra shift, 4:30 p.m. to 1 a.m., to augment present production. Though repeating markets are softening (Vol. 6:17), Marx says production is better than former rate and no cutbacks are in prospect—due to greater demand and wider distribution. DuMont now has 25 distributors, is still adding them. Second 13-week period will be better than first, Marx avers.

John Meek reports full 3-months production of "summer promotion" line, led by 10-in. table model at \$99.90 (Vol. 6:17), was ordered by distributors 3 days after April 26 announcement. Plants at Plymouth, Peru and Argos, Ind., he says, are working at capacity, and aim is still 250,000 receivers this year.

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Kaye-Halbert Corp., Los Angeles, has discontinued 12½-in. sets, new line comprising: 16-in. rectangular table \$250, with doors \$290, console \$289, in stylized consoles \$369-\$399; 19-in. console \$379, in stylized consoles with doors \$449-\$469. All sets have 19 tubes, 3 rectifiers.

Industrial Television Inc. will produce 54,000 TVs this year, states president Horace Atwood Jr. ITI has factory outlet in Newark, sells direct to consumer in northern New Jersey, has distributors everywhere else east of Mississippi. New Jersey situation was caused by price-cutting, says Atwood, and ITI has no plan to introduce factory-to-consumer selling anywhere else.

Philtain Electric Corp., 2131 S. Fairfield Ave., Fort Wayne, Ind., maker of portable and table radios, reports plans for TV production toward end of year, both of own brand and private label receivers.

Magnavox has 2 Normandy 16-in. consoles out—one at \$400, other with more sensitive circuit at \$450 . . . Regal has cut 16-in. table with AM-FM from \$400 to \$377 . . . Majestic reported due to show new models at Radio Parts Show in Chicago's Stevens Hotel, starting May 19 . . . Private-label Astoria 12½-in. table at \$130 advertised by Hecht-Washington this week (made by Tele King).

Admiral won't bid for TV contracts in housing developments unless other TV manufacturers also bid—as measure of prestige protection. That's what company told New York City dealers protesting \$400,000 Levittown contract (Vol. 6:11), which won't be cancelled.

GE will start production of new 24-in. TV picture tube (Vol. 6:8) in fall; details soon . . . Tele-Tech reports 3 new tubemakers (unnamed) due soon, one in Midwest, others in East; that would make 34, according to our list (*TV Directory No. 10*).

Henry L. Crowley Co., W. Orange, N. J., to offset bottleneck in powdered cores used in horizontal output transformers, deflection yokes, etc., announces new plant in Cleveland under joint ownership arrangement with Republic Steel. New company is Crowley-Republic Corp. . . . Canadian Admiral Corp. president Vincent Barreca reports new factory being built at Lakeview, near Toronto, will double capacity of present leased plant at Malton . . . Hoffman Sales moved May 1 to new, larger quarters at 325 W. Ninth St., Los Angeles, reports district manager Walter Epstein.

Viewing same set from different rooms is basis of novel TV design for new homes, reported by AP April 30. Architect Elmer Gylleck, Elgin, Ill., has TV set mounted on turntable in living room, viewable from dining area, kitchen (through glass wall), and even master bedroom when focused through opening in the wall.

Philadelphia Electric Assn reports average retail price of TV sets sold there first 1950 quarter was \$279. Philadelphia area accounted for 93,188 sets sold at \$26,-120,679 retail vs. 37,392 at \$15,045,866 same period 1949.

RMA membership at Chicago convention June 5-8 will vote on—probably approve—reorganization committee's proposal to change name to Radio-Television Manufacturers Assn.

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For clincher proof about trend in TV picture tube production and sizes, have a look at these RMA figures for March in comparison with February (Vol. 6:13), January (Vol. 6:9) and all 1949:

Total March output of CR tubes, 642,986—which is slightly more than 636,953 total for last quarter 1949 and compares with 3,305,673 in all 1949, 1,225,419 in all 1948.

7 & 8½-in.—5509 units or .86% of March total vs. .7% of February, 2.4% of January, 7% of 1949.

10-in.—6162 units or .96% vs. 3.4% of February, 5.8% of January, 34% of 1949.

12½-in.—394,057 units or 61.3% vs. 60.8% of February, 61.3% of January, 43% of 1949.

14-in. and up—237,181 units or 36.9% vs. 35.1% of February, 30.4% of January, 15% of 1949.

Projections—78 units vs. 52 in February, 130 in January, 9020 in 1949.

Dollar volume from CR sales to set manufacturers was \$15,588,979 in March, and \$37,728,460 for first quarter of 1950.

Sales of radio receiving tubes in March set all-time record of 33,663,494 vs. 24,865,546 in February and 14,-505,349 in March 1949. First quarter total was 80,801,064 vs. 40,658,043 in same 1949 period.

Financial & Trade Notes: There's good reason to believe that, given a continuingly flourishing TV trade, RCA may achieve close to half-billion dollar mark this year vs. nearly \$400,000,000 in 1949 and about \$357,500,000 in 1948 (Vol. 6:8). It got good start toward that fabulous goal in first quarter 1950 when gross income was \$127,369,550, net profit \$11,236,231 (75.3¢ per common share) vs. sales of \$92,327,827, profit of \$5,932,083 (37.1¢) for same 1949 period. At May 2 stockholders meeting, Chairman Sarnoff said TV accounted for about 50% of gross last year, about 60% first quarter this year. He didn't break down figures, but that would mean about \$76,400,000 attributable to TV. Credit \$3,000,000 to NBC-TV sales (Vol. 6:17), \$5,000,000 to royalties received from TV patent licenses (on basis of roughly 2% on industry's first quarter factory sales; Vol. 6:17)—and it would seem that somewhere near \$70,000,000 must have been done by RCA Victor in TV receiver, tube, transmitter and other TV equipment sales.

Philco proxy statement and notice of annual stockholders meeting May 19 reports these executive and director salaries and incentive compensations for 1949: Wm. Balderston, president, salary \$75,000, bonus \$33,000; John Ballantyne (deceased), \$35,750; Raymond Boyce, \$18,000 & \$7000; James T. Buckley, \$25,000 & \$16,500; Harold W. Butler, \$30,000 & \$19,500; James H. Carmine, \$60,000 & \$27,000; Joseph H. Gillies, \$30,000 & \$21,000; Larry E. Gubb, \$33,125; Larry F. Hardy, \$30,000 & \$25,000; Robert F. Herr, \$20,000 & \$15,000; Thomas A. Kennally, \$30,000 & \$22,500; Courtney Pitt, \$25,000 & \$12,500; David B. Smith, \$42,708 & \$5000; Wm. R. Wilson, \$20,000 & \$7500; Leslie J. Woods, \$33,750 & \$24,000. Among officer stockholdings: Balderston, 3997 shares; Carmine, 14,869; Hardy, 3819; Herr 13,032; Kennally, 13,836; Gubb, 13,831; Russell Heberling, 11,470; Gillies, 4494; John M. Otter, 2482; Smith, 1408; Woods, 5250.

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At Motorola stockholders meeting May 1, president Paul Galvin reported first 4 months of this year indicate company will maintain its No. 4 position as TV producer, predicted 6,000,000 TVs turned out by industry this year, admitted to stockholder that increased dividend rate and possible stock split are being considered later in year.

Trav-Ler Corp. public offering of 315,000 shares (Vol. 6:17) will include 240,000 shares of stock now held by company officials and families—including 157,000 shares by president Joe Friedman, 69,000 by Mrs. Friedman, 14,000 by v.p. Ellis Friedman. Thereafter they will hold 27.2%, 11.9% & 2.5%, respectively.

Olympic executives selling 80,000 shares through Van Alstyne, Noel Corp.: president Adolphe Juviler selling 60,000 of his 143,000 shares, and executive v.p. Percy Schoenen selling 20,000 of his 44,760 shares, reducing their holdings to 23.3% & 7.6%, respectively.

Corning Glass Works sales were \$22,702,746 in first quarter 1950, net income \$3,301,441 (\$1.22 per common share) vs. \$17,223,052 sales, \$1,271,913 profit (45¢) same 1949 period.

Television Fund Inc. reports net assets at market as of April 29 as \$6,080,000, or \$12.55 per share on 484,751 capital shares, compared with \$2,061,761 or \$8.76 per share on 235,408 shares as of April 30, 1949.

American Phenolic Corp. sales and earnings for first quarter 1950 and 1949 were inadvertently reversed in this column last week (Vol. 6:17). First 1950 quarter sales were \$2,765,336, net profit \$224,906 vs. \$2,788,759 sales, \$175,649 profit same 1949 period.

Economic potential of radio in 1950, as enumerated in May *Tele-Tech*: More than 6,000,000 receivers, factory value of \$900,000,000; 12,000,000 AM & FM sets, \$260,000,000; broadcast station, recording, studio & associated equipment, \$200,000,000; mobile, airplane, police, taxi radio, \$100,000,000; government orders, \$350,000,000; replacement tubes, parts, accessories & test equipment, \$190,000,000—total of \$2 billion for radio, TV and government alone. Industrial electronics output is estimated at \$50,000,000.

United States Television Mfg. Corp. reports 1949 net loss of \$195,094, after investment reserve credit of \$45,000, vs. profit of \$27,035 in 1948 after contingency reserve credit of \$20,000. Net sales were \$795,362 in 1949 vs. \$1,937,606 in 1948. At Dec. 31, 1949 current assets were \$240,788 vs. \$584,445 at end of 1948; liabilities \$306,795 vs. \$452,926; inventory \$210,155 vs. \$349,963.

Natalie Kalmus Colorvision Television Corp. stock issue to be underwritten by Edgerton & Wykoff, Los Angeles, according to May 3 report in *Retailing Daily*, quoting trade sources that 200,000 shares will be offered at \$2 per share.

Noblitt-Sparks (Arvin) reports \$718,496 net profit (\$1.21 per share) for quarter ended April 2 vs. \$502,067 (85¢) same 1949 period.

Muntz TV Inc. reports profit of \$436,323 (71¢) for 4 months ended Feb. 28, on sales of \$6,563,747. For year ended Oct. 31, 1949 Muntz sales were \$6,548,766, profit \$283,864 (46¢).

Packard-Bell reports sales of \$3,203,531, profit of \$506,793 (\$2.10) for 6 months ended March 31; comparisons unavailable.

National Union reports sales of \$2,485,746, profit before taxes of \$310,383 for March 31 quarter vs. \$1,663,792 sales, net loss of \$91,630 for same 1949 period.

Note on why TV stocks have "quieted down in past few weeks," from one of major brokers and analysts in field: "This was inevitable. The speculation simply got out of hand and was carried to an absurd extreme; people were multiplying first quarter results by four to get a full year estimate without making any allowance for seasonal factors. The current seasonal downturn in production is going to give the late bulls a lot of headaches."

Trade Personals: Capt. David R. Smith, USN retired, has left executive v.p. post at Farnsworth to join Raytheon May 15 as asst. to Wallace L. Gifford, Equipment Divisions v.p. . . . W. E. McWhorter promoted to adv. mgr. of Owens-Illinois Kimble Glass Div. and American Structural Products Co. . . . Robert Cheshire new asst. Eastern Regional sales mgr., DuMont receiver div., under James Tait . . . Harold Dittenhoefer promoted to sales engineering mgr., Tele-tone . . . J. S. Muller now TV dept. sales mgr., Electrical Products Div., Corning Glass Works, formerly under supervision of T. S. Wood Jr. . . . A. Earle Fisher, ex-Southeastern div. mgr., named merchandising mgr., Westinghouse Home Radio Div. . . . John H. Ganzhuber, ex-mgr. of Western Electric broadcast equipment sales, named v.p. in charge of sales and product development of Standard Electronics Corp., newly acquired subsidiary of Claude Neon Inc. (Vol. 6:15) . . . G. A. Bradford appointed ad mgr., GE Tube Divisions, Schenectady . . . Monte Cohen new president-treas. of F. W. Sickles Co., components subsidiary of General Instrument Corp., succeeding R. E. Laux who remains president of parent company . . . Marvin Hobbs, Chicago consulting engineer, appointed deputy director of Joint Electronics Committee, Munitions Board, Dept. of Defense.

Special Report

May 6, 1950

COLOR TV — SARNOFF'S VIEWS & RCA PLANS**From Statement by Brig. Gen. David Sarnoff, Chairman of Board, RCA
With Statement of Policy Regarding Patents**

Before En Banc Session of FCC Color Hearing, May 3-4, 1950

These are salient portions of Gen. Sarnoff's opening statement, omitting some of his emphatic criticisms of CBS system—which were much the same as those reported in our Special Report of April 1, 1950: 'The Tri-Color Tube—and RCA Policy.' Lengthy cross-examination included questions about patents and many other matters posed by FCC commissioners and counsel, as well as sometimes acrimonious exchanges with CBS chief counsel Samuel Rosenman. Gen. Sarnoff's testimony and cross-examination were undoubtedly the most comprehensive thus far in color hearings, particularly noteworthy for its exposition of RCA's 'accelerated color' philosophy. We strongly recommend reading of the verbatim official transcript (Part II, Vol. 54 & 55), purchasable from Electreporter Inc., 1760 Pennsylvania Ave. NW, Washington 6, D.C.

* * * *

IN MY OPINION, the demonstrations made and the testimony submitted in these hearings, have proved that color television has advanced technically to a point that justifies the Commission in setting standards now on a regular commercial basis. This would enable broadcasters and manufacturers to proceed promptly with their plans for providing the public with programs and equipment to receive the benefits of color television.

I do not agree with the opinion expressed to you by Dr. Allen B. DuMont, that color television, as a service to the public, is many years away.

I respectfully recommend to you, that on the conclusion of the present hearings, the Commission set standards that would enable the industry to go forward with its plans for color television, without delay.

Basic Requirements for Color Standards

I believe that the standards to be set by this Commission should meet three basic requirements.

(1) The Commission has proposed that the width of the channel should be six megacycles. That requirement should be met.

(2) The color pictures, by whatever system transmitted or received, should not be inferior in quality and definition to present black-and-white pictures.

(3) The color system should be compatible with existing black-and-white standards.

Broad standards based upon these three requirements will enable color television to move forward as a service to the public. In my judgment, a color television system that does not meet these broad standards will not be acceptable to the public and should not be approved by the Commission.

That is why the RCA has devoted its energies to the development of a system which meets each of these three broad standards. We are confident that our system will meet with full public acceptance and approval and it will enable the Commission and the industry to keep faith with the five or six million present owners of black-and-white receivers.

During these hearings, questions have been asked as to

what the policy of the RCA would be in the event of certain hypothetical decisions of the Commission. I shall now address myself to these questions.

A. If the Commission Approves the CBS System Only: Dr. Engstrom was asked a hypothetical question on April 11. In effect, this was: If the Commission were to adopt the CBS color television proposal only, what would RCA's policy be with respect to including adapters which would enable its future sets to receive CBS color transmissions in black-and-white?

If the Commission were to adopt the CBS proposal only, we would be confronted with a field sequential color system which gives a degraded picture and is non-compatible. We would then find ourselves saddled with a system which we firmly believe is inadequate and inferior and which we seriously doubt would prove acceptable to the public.

Nevertheless, my answer to this hypothetical question is as follows:

(1) We would make and sell transmitting equipment, on order, to anyone.

(2) We would make and sell tubes, including our tri-color kinescopes, and parts, to anyone.

(3) We would make and sell field-sequential color receivers, utilizing the tri-color tube, as the public demand for such receivers might exist.

(4) We would make and sell tri-color tube converters on the same basis.

(5) We would make and sell separate adapter units for television sets already in the hands of the public, as well as for new sets thereafter manufactured.

Won't Build Adapters

Building adapters into our sets at the factory presents an entirely different problem. This, we do not plan to do. It has been estimated that the present annual production of television receiving sets is at the rate of 5,000,000 a year. With an estimated minimal figure of \$20 for built-in automatic adapters, the public would have to pay more than \$100,000,000 a year for an adaptation to a degraded system which is non-compatible.

We do not believe that the public will want adaptation to a degraded CBS picture at this or at any other price. Nor do we believe that the public should be forced to pay this tax of \$100,000,000 a year in order to receive the CBS degraded picture.

If we are wrong, the public will prove us wrong. In all these plans we would necessarily be guided by public reactions and competitive conditions. We would have to modify or adjust our plans in accordance with such reactions and conditions. And we will have to make receivers with adapters, if future experience proves that this is what the public wants.

RCA stands on its record of energetically developing those things in which we have confidence and which we believe the public will want. We have done this even though on occasion we have stood alone. I think our record in the development of radio and television will fully confirm this statement. On the other hand, I do not assume that we would be expected to be in the vanguard of promoting any system in which we have no confidence and which we believe is inferior and unsound; a system whose length of life commercially, is open to serious question.

"The Best Will Sell Itself"

I thought I detected some intimation in the record of these hearings, that the hypothetical decision of this Commission might in some way be frustrated, unless all manufacturers will now commit themselves to full scale production of a system even though that system, in the judgment of the manufacturer, is inferior and not in the public interest.

I see no reason for the Commission to assume frustration now of the hypothetical decision it may make in the future.

Presumably the Commission would not decide to adopt the Columbia proposal on any theory other than the theory that it is "the best" system. If the Commission has adopted "the best" system then no one in our competitive and free enterprise economy of today is going to be able to keep the public from getting it—if it really is "the best". Consequently, any inference that an advance commitment by manufacturers, or even compulsion, might be necessary to ensure that the public will be able to buy that which has been assumed to be "the best," is unrealistic. For it goes without saying, that no commitment or compulsion will be needed to sell the public "the best". The best will sell itself on its own merits. Competition will see to that.

Of course we do not think the Columbia proposal is "the best". If it were the best, the Commission would not be faced with the need to get a commitment, or to apply force, to sell it. The need to apply force would come only from the opposite premise—that Columbia's proposal could not be sold on its own merits.

Now I wish to make it entirely clear that in answering this hypothetical question I have not anticipated, and do not expect, that the Commission's decision will be to adopt standards based on the CBS system exclusively. We cannot believe that the Commission would outlaw the RCA system and all other systems.

We are proud of what RCA scientists and engineers have done. Our presentation before the Commission and our plans for the future are based upon our sincere belief that we are right. I would be going contrary, not only to my own opinion, but also contrary to all the highly skilled and expert opinions I have received from others, were I to assume that the CBS system is better than the RCA system. I know of no reason, at this time, why I should assume that the CBS system will be adopted and that the RCA system will be outlawed by this Commission.

Asking RCA this question now is like asking a prize fighter who, after 9½ rounds, is way ahead on points and has been steadily gaining throughout the fight, what he

will do after the fight is over if he is felled by an unexpected blow in the last half of the last round and has to be carried from the ring. The only answer he can have is that while he may be felled, he will retain a fighting heart and will do the best he can under the circumstances.

B. If the Commission Approves the RCA System: Should the Commission adopt the RCA system; or any other system which meets the three requirements of the broad standards I have discussed, the road ahead is clear. Our policies under such a decision would be as follows:

I. Tri-color Tubes

Our confidence in the new RCA tri-color tubes, which have been demonstrated before this Commission and the industry, is so strong that we are already proceeding with plans for acquiring a new factory and the machinery necessary to produce these color tubes in quantity.

These steps involve heavy financial commitments on the part of the RCA.

By June of next year we expect to commence the manufacture of color tubes on a mass production basis. In the meanwhile we will have completed our commercial design and development of these color tubes. By that time also our pilot plant will have produced a sufficient number of color tubes, to meet not only our own needs for testing and design purposes but also to supply those tubes to competitors in the set and tube industries for the same purposes.

II. RCA Color Receivers

Within sixty to ninety days from now we expect to have about ten development model color receivers using the tri-color kinescopes available in the Washington area for field test purposes.

During September of this year we expect to build five or six receivers each week from a pilot assembly operation. This pilot operation will continue until a sufficient number of sets have been made to fulfill our testing requirements and to make color receivers available to other manufacturers for their testing and design purposes.

You understand, of course, that the manufacture of any new product requires extensive planning and other pre-production preparation. Tools, jigs, dies must be designed and manufactured. Testing equipment to insure a uniform high quality of product must be devised and manufactured. Production lines and schedules must be set up. We must make arrangements with the thousands of independent suppliers throughout the United States with whom we deal to secure the parts and material necessary for the sets. Each of these in turn must set up his own production schedules. All of this takes time.

If final standards are adopted and commercial operation in color is authorized soon, the RCA could and would be in factory production of color television receivers by June of next year. This would amount to a weekly production rate of 200 color receivers. By the end of that year our color receiver rate of production will have reached over a thousand per week. Thereafter, we expect production quantities to rise substantially.

We assume, of course, that competing manufacturers would likewise gear their facilities for production of color tubes and receiving sets once the Commission determines the standards.

We do not believe that turning our facilities to the production of RCA color television sets will be any more or any less difficult, or take any more or any less time, than has been required in the past for similar projects. We are confident that within a year after standards are adopted, we will have a substantial manufacturing capacity for color sets. Within that capacity we will produce and sell as many color sets as the public will buy from RCA. Our

entire tube making and receiver manufacturing facilities will be available for color tubes and sets depending upon public demand.

The question was asked as to what percentage of the 20,000,000 sets, which it was estimated will be in the hands of the public in 1954, will be black-and-white if the Commission should adopt the RCA system.

I think the estimate of 20,000,000 sets by the end of 1954 is too low. If normal business conditions prevail and if more television stations go into operation reasonably soon, it will be much greater than 20,000,000. In my opinion, there will be 20,000,000 television receivers in the hands of the public by the end of 1952.

We have faith in the RCA color system and we feel strongly that if it is approved by the Commission a large percentage of the sets outstanding in 1954 will be color sets.

III. Converters

Within the next six weeks we shall demonstrate an RCA color converter utilizing an RCA tri-color kinescope. This all-electronic converter will provide a method of converting existing black-and-white television receivers to color.

C. If the Commission Approves the CTI System Only: I am informed by our engineers that the CTI system has not been demonstrated to have satisfactory picture quality in color, nor to give a satisfactory picture on present sets. However, if the CTI system overcomes these defects, if it meets the three requirements of the broad standards I have discussed, and if the Commission should adopt the CTI system only, then in general, our policies would be the same as if the RCA system had been adopted.

D. If the Commission Approves Broad Standards: If the three basic requirements—the 6 megacycle bandwidth, compatibility and picture quality equal to existing black-and-white—are adopted as broad standards, our policies would be the same as if the RCA system had been adopted.

E. If the Commission Approves Multiple Standards: If multiple standards are adopted by the Commission, and by that I mean standards that will permit not only the RCA system but also systems which do not meet the three basic requirements of the broad standards, we would do what I have outlined in the event the RCA system were adopted.

The question has arisen as to what our policy would be with respect to the manufacture and sale of a receiver capable of receiving and reproducing transmissions of all the various systems. I have not yet seen a multiple receiver. Such a receiver would necessarily be more complex than one built for a single standard and would involve

substantial additional expense to the set owner. However, we would manufacture and sell multiple receivers to the extent of public demand.

Summary and Conclusion

I should like to conclude my statement with a summary of the CBS system and the RCA system, as each relates to the three basic requirements of the broad color television standards I have discussed; namely, the 6 megacycle bandwidth; picture quality equal to present black-and-white pictures; and compatibility.

Both CBS and RCA accept the 6 megacycle bandwidth.

By the adoption of horizontal dot interlacing, CBS has conceded that its system ought to have improved picture quality. If CBS, in spite of its testimony that it cannot visualize the tri-color tube being made in quantity, adopts a tri-color tube such as the RCA has developed and demonstrated, and throws away its mechanical disc, CBS may be able to overcome a few more of the defects in its system.

Nevertheless, the CBS system will still have important limitations not found in the RCA system. The CBS picture will still have only 405 lines, will be non-compatible and will have other defects as well.

One system—the RCA system—is compatible and the other—the CBS system—is non-compatible. It is the unanimous opinion of all parties to these proceedings that compatibility is of the utmost importance. In fact, the president of CBS himself has testified that he would "love" to have a compatible system. In this statement he is giving voice to the basic needs of the entire television industry and of the viewing public.

As I understand it, it is the field sequential aspect of the CBS system which prevents compatibility. CBS already has adopted RCA's image orthicon camera tube. CBS already has embraced the RCA single tri-color kinescope in order to eliminate the mechanical disc with its limitations of viewing angle and picture size. CBS already has embraced horizontal dot interlace in order to obtain increased definition in its pictures.

All that remains is for CBS to adopt the dot sequential method of transmitting color. CBS would then be in a position to achieve that compatibility which its president so ardently desires. This would end needless argument and color television could go forward immediately.

We firmly believe that with the development of its all-electronic, high-definition, compatible color television system and its tri-color tubes, RCA has shown the way for the adoption of color standards now. We recommend that the Commission set color television standards based on the RCA color system.

RCA STATEMENT OF POLICY REGARDING PATENTS

By RCA Chairman Sarnoff at May 3 FCC Hearing

IN ANSWER to that I should like to make a statement with respect to RCA's patent policies and patent position in the industry.

RCA has been licensing its own inventions in the radio and television industry for a great many years. It has also for many years been licensing the inventions of others in those instances where it has sub-licensing rights. The basic structure of this patent licensing was approved by the Department of Justice and the United States District Court for the District of Delaware in 1932.

At the time the 1932 consent decree was entered, the agreements with the American Telephone & Telegraph Co., the General Electric Co., and the Westinghouse Electric Corp., pursuant to which RCA received the non-exclusive right to grant licenses under the patents of these companies

were described by the Department of Justice as being manifestly in the public interest.

From time to time since 1932 RCA has acquired licenses for itself under the patents of others and in some instances sub-licensing rights for the benefit of the rest of the industry as well.

In 1942 the Department of Justice through the Assistant Attorney General Mr. Thurman Arnold sought to set the consent decree aside. After full argument, the decree was reaffirmed by the Courts. The Attorney General withdrew his appeal to the Supreme Court of the United States on this issue.

I believe that the beneficial nature of RCA's licensing policies are apparent from the assistance which the industry has received as a result of these policies.

As I have said, we have been in the patent licensing business for many years. No one can conceivably claim that the radio industry has been anything but helped by RCA's patent position or RCA's patent policies. The history of the whole radio industry has been one of rapid expansion and keen competition.

Patents and the TV Industry

Coming to the television industry, I believe it will be conceded by all concerned that we would not have the highly competitive, highly successful television industry that we have today were it not for the affirmative assistance which the RCA has made available through its patent licenses and otherwise.

As a result of this, we now have a television industry of a billion dollars a year. RCA not only gave this industry the benefits of its television patents at no extra charge, but its licensees got blueprints and manufacturing assistance. Competing television manufacturers were invited to our plants and greatly helped to get into competition with RCA.

Our patent licenses contain no restrictive provisions whatever. There is no effort to fix prices, to limit production or to do anything but to further the industry to the fullest possible extent. We maintain an Industry Service Laboratory as a part of our licensing policy to help licensees. Our licenses are uniformly non-discriminatory and our royalty rate is low.

Now, I do not wish to be drawn into detail in this hearing. It is no secret that we are engaged in patent litiga-

tion of the greatest importance in AM, in FM and in television. We are either the defendant or the plaintiff in several litigations of far reaching importance to us and we believe to the entire industry.

In these litigations we have been called all the names which the ingenuity of opposing counsel can imagine. We have been accused of every nefarious practice which the fertile imaginations of these gentlemen could breed. We categorically deny all these characterizations and charges and we fully expect to prove them false in open court.

I believe it is sufficient for these proceedings that we stand on our record and I believe you will respect the situation in which we find ourselves with regard to these litigations.

So far as our agreements with others for obtaining licensing or sub-licensing rights are concerned, most of these agreements are on file with this Commission. They speak for themselves. The consideration paid for the value received was arrived at by the combined best judgment of many experts in our organization. As we have stated on other occasions, however, we can not indulge in the public evaluation of the significance of particular patents which belong to others.

We have also submitted to the Commission all patents which we own or under which we can grant licenses which we believe to read on the transmission standards already existing or which are proposed in these proceedings.

Further than this, however, I do not think we should be asked to go.

TV-RADIO AT THE SUMMER MARTS: We may begin to get inklings of fall-winter receiver lines and prices at Chicago's Home Furnishings Market, June 19-29 -- but quite a few manufacturers aren't too keen about revealing them that early. These are the TV-radio exhibitors thus far booked, though that doesn't necessarily mean they'll show their new stuff then:

American Furniture Mart: Admiral, Bendix, GE, Hallicrafters, Mercury Records Corp., Motorola, Noblitt-Sparks, Philco, RCA, Sparton, Westinghouse.

Merchandise Mart: GE, Crosley, Sentinel, Bendix, Air King.

July 10-13 National Music Merchants Show in Chicago's Palmer House should bring out many of foregoing plus others as exhibitors -- Belmont, DuMont, GE, Hallcrafters, Starrett and Stromberg-Carlson being among those who have already indicated plans to show there. Los Angeles Summer Furniture Market is set for July 17-27, San Francisco's Western Merchandise Mart July 24-28, Pacific Electronics Exhibit in Long Beach Auditorium Sept. 13-15.

Unlike last year, Parts Distributors Conference & Show in Chicago's Palmer House May 22-25 is not expected to bring out many set exhibitors; it's mostly devoted to components. RMA convention this year will be held entirely apart from that show, in Hotel Stevens, June 5-8. And National Assn of Electrical Distributors meeting is set for June 12 week in Atlantic City's Convention Hall.

AS MAJOR PRODUCERS SEE THE MARKET: Has the TV market softened, or hasn't it? Mindful of last summer's price cave-in (Vol. 5:26-29), some set makers and quite a few distributors and dealers have been showing signs of jitters. They've anticipated doldrums ever since Easter, which in radio trade is traditionally followed by a few dull weeks. That has been pattern this year, too.

What caused more goose bumps, though, was Emerson's action last week, cutting prices \$70 each on 2 basic models and eliminating all but those 2 from current line (Vol. 6:18). More dealers began playing their cards close to vest, some began crying "the slump is on us."

What's the real story? Checking with top half-dozen manufacturers, this is sum of what they said: (1) Business continues good at the retail level -- extraordinarily good, in some instances. (2) Production is still running along at or near capacity. (3) Summer recession in demand is inevitable, but they've geared for it and it won't be as bad as last year. (4) No substantial cut in production is planned by any of them, except for usual vacation shutdowns, and by July-August they will start delivering new merchandise for a "terrific fall and fourth quarter."

April was a big month, generally equalling March in average weekly production, said several. Retail business has been "going great guns" so far in May, said one. Another said he was still under pressure for his allocated sets, his distributors having less than 3 days inventory on hand.

One big producer admitted he was tapering down production -- the same who told us several weeks ago he intended to reduce to "more normal operation" (Vol. 6:17). Signs of softening were admitted in spots, but not generally, by most spokesmen. Several thought some smaller manufacturers might find it necessary to liquidate stocks during summer.

There was perplexity as to Emerson's cut at this time, while business was still good, but consensus was that it didn't upset anything and won't hurt anybody except perhaps the private brands. There was some thought that maybe Emerson had felt softening of markets before others; admittedly, the Emerson sets were undergoing the closest scrutiny of rival cost engineers.

An Emerson distributor proffered this view: Emerson has had \$230 table (12½-

in.) since beginning of 1950. Admiral broke one last winter at \$180, Motorola at \$190, and RCA's at \$230 included matching table. For 5 months, Emerson made no move to meet these prices, albeit its reputation was built in low-priced field. Therefore, it was "about time" for Emerson to come forth with cheaper numbers (table at \$160, console at \$260).

From one of the small but strong manufacturers, Frank Andrea, came prediction that "the shoe will start pinching about July 1 or sooner." Majority of set makers, said he, will reduce prices in new lines to be announced in June and July. "But it will not be as drastic as last year," he said.

FIRST U.S. EXPORTS OF TV APPARATUS: First large-scale shipment of American TV receivers to any foreign country occurred this week when GE sent 2000 chassis (12½ & 19-in.) to Brazil in preparation for August opening of publisher-broadcaster Dr. Assis Chateaubriand's Station TUPO, now being installed by GE atop Rio de Janeiro's famed Sugar Loaf Mt. (Vol. 5:43). Chassis will be built into cabinets made by GE Sociedade Anonima, local affiliate. Altogether, Brazilian government has authorized importation of \$500,000 worth of TVs.

To Mexico City, RCA will soon ship 500 non-synchronous TV sets (10-in.) -- these to be adjusted by RCA Mexicana S.A. to work on local 50-cycle current. They're on order of publisher Romulo O'Farrill, who has ordered RCA transmitter to be built in National Lottery Bldg. (Vol. 6:16).

Thus far, U.S. manufacturers have sold 5 transmitters to Latin America, and GE has sold one to Radio Italy in Turin. GE has also sold one to Emilio Azcarraga, Mexico City. RCA's other sales were to Dr. Chateaubriand for his second station, in Sao Paulo, Brazil (Vol. 5:43), and to Goar Mestre (CMQ) for Havana (Vol. 5:53).

Colombia's director of cultural extension in Bogota has let U.S. govt. trade officials know he's interested in receiving bids for station and receivers. It's reported Colombia has already had British bid of \$500,000 and Dutch of \$650,000 for transmitter and 500 initial sets, for which it's preparing to spend \$300,000-\$700,-000. Bidder must also train Colombian technicians.

Uruguay last year evinced interest in U.S. equipment and standards, but nothing ever came of it (Vol. 5:45, 51). One problem with exports is that some current is 50-cycle, which means U.S. 525-line apparatus has to be adapted. There's also question of monetary exchange, not so serious with some of our Latin American neighbors but practically prohibiting exports to Europe and rest of world. Even British haven't made much dent in that field. Russia, of course, continues to beat propaganda drums about "inventing TV" and superiority of its TV system (including color) -- but nobody, not even American correspondents who have been stationed in Moscow, appears ever to have seen Soviet TV.

Trade Personals: Capt. David R. Hull, USN (ret.) joins Raytheon May 15 as asst. to Equipment Divisions v.p. Wallace R. Gifford—and not David R. Smith, as erroneously reported here last week; we sincerely regret the inadvertancy . . . L. M. Clement, Crosley director of engineering, named technical advisor to v.p. & gen. mgr. John W. Craig; D. B. Nason appointed mgr. of electronic engineering, O. E. Norberg mgr. of appliance engineering . . . George S. Eveleth Jr. elected executive v.p. of GE International . . . Alfred C. Lindquist shifted from mgr. of TV Antenaplex Systems to mgr. of sound products and associated electronic activities, RCA Engineering Products Dept . . . Charles Grean new mgr. of RCA Victor recording div. popular artists and repertoire, succeeding Joe Csida, resigned to return to Billboard . . . A. Earle Fisher named merchandising mgr., Westinghouse home radio div. . . . Edgar H. Wimpy promoted to director of quality control, Hytron.

Cost of converting black-and-white station to RCA color, according to exhibit introduced by RCA in color hearing: \$54,440 for one camera chain, \$26,750 for each additional camera.

Senator Johnson issued his own color-freeze timetable this week, after group of New York-Hollywood showfolk known as National Society of Television Producers waited on him with their counsel, former FCC chairman James Lawrence Fly, to protest freeze. His estimate, which sounds off kilter to us, is that FCC can't start allocations hearing before making color decision; and color, he figures, isn't likely to be decided before Sept. 1. Actually, there's nothing to stop FCC from plunging into allocations hearing in latter June, right after 470-500 mc hearing which starts June 5 (Vol. 6:18). The Senator said he looks for final allocation decision in later November or early December. If color isn't decided first, said he, "I am informed on the highest authority that . . . commercial advent of color would be set back a generation." He expects Condon Committee color report in early June.

Webster-Chicago, after planning demonstration of CBS color at Chicago Parts Show (Vol. 6:17), postponed it with announcement that "attention to this planned showing of closed-circuit color TV has threatened to build it into far more than was intended, to the possible detriment of the industry."

Trends & Topics of TV Trade: GE's 24-in. tube (Vol. 6:8,18) goes into "limited production" this fall, says official announcement, affording picture "almost as large as a newspaper page." It's round, metal-coned, dark-faced, aluminized, will be installed in at least one GE model in September. Tube will be sold to other manufacturers, production geared to demand.

Hallcrafters president Wm. J. Halligan fears "serious trouble in TV sales in 1952" if FCC holds off decision to lift freeze until end of this year. Following FCC's refusal to permit his company to appear in color hearings (Vol. 6:17), he issued statement this week observing that it takes nearly 18 months to get TV transmitter on air after CP has been issued, refers to stymie of TV's employment potential, asserts: "TV is the one thing that can create jobs at a rate greater than the population increase if it is released from this freeze situation."

One of those new tubemakers reported last week (Vol. 6:18) apparently will be Reeves Soundcraft Corp., which has acquired picture tube division of Remington Rand Inc.'s laboratory of advanced research at South Norwalk, Conn. Reeves is setting up plant at Stamford, Conn., to which Remington Rand equipment is being moved.

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Pioneer radioman Frank A. D. Andrea, celebrating his 30th year in radio manufacturing, is out with new line of TV sets this week and with these observations: "Next step in TV is color. I believe that [RCA's] 3-color element tube has cut the time for the advent of commercial color TV in half." Then, said he, you can expect 3-dimensional TV pictures, which he saw demonstrated at Princeton some years ago. "I feel strongly that this, combined with color, is the ultimate to expect in TV."

Andrea's new line of 6 models, all with FM: Saybrooke, 12½-in. table, \$250; Mayfield, 16-in. table, \$320; Sutton, 16-in. console with doors, \$420; Fleetwood, 16-in. console with phono, \$500; Normandy, 19-in. console with doors, \$595 (reduction of \$55 on preceding model); Caronia, 19-in. console with phono, \$795. Normandy and Caronia also include AM.

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Zenith has new 12½-in. table (Buchanan) at \$240; it's in wood cabinet, same set as leatherette Garfield which sells at \$220 . . . Stromberg-Carlson has priced 16-in. rectangular console combination at \$625 . . . Tele King has 16-in. rectangular console on casters, \$260 . . . Meck has new 19-in console at \$350, not part of "summer promotional line" (Vol. 6:17) . . . Starrett cut 16-in. table from \$300 to \$270.

Sylvania has discontinued making 10-in. set (\$170), line now begins with 12½-in. table at \$200 . . . John Wanamaker, New York, began advertising own-name private-label this week on 16-in. console, \$299; also offered own Ranch House brand, 16-in. table, at \$219—maker of sets unidentified.

Hallcrafters has new, interim 16-in. console with phono jack, which advertising mgr. Charles Nesbitt says will be without list price "because price may vary with tempo of different markets." *Retailing Daily* says price is expected to be \$50 less than comparable \$330 model.

Emerson reports April sales largest in its history, president Ben Abrams stating May 9 that it had in previous week received \$10,000,000 in orders for its newly priced 12½-in. table, 16-in. console (Vol. 6:18).

Wells-Gardner & Co. has purchased, for unnamed cash sum, Zangerle & Peterson Co., 2161 N. Clybourn Ave., Chicago, cabinet and furniture manufacturer.

Webster-Chicago's aggressive sales and promotional moves are featured in May 6 *Tide*. Article relates how company shifted emphasis from parts supply to consumer sales; latter amounted to 60% of last year's \$11,089,364 volume. Company's current big drives are on new 3-speed record changer to modernize sets and a wire recorder. Work on CBS color (Vol. 6:17) is termed "strictly exploratory."

Jackson Industries, in May 11 *Retailing Daily*, advertised 14-in. rectangular table model at \$180; it's reported pushing present 200 per day production up to 600 as of July 1 . . . Sylvania's Colonial plant hopes to hike production from present 3000 per week to 5000-6000 by early August . . . Tele King says it will be putting out 1000 TVs daily in June, claims \$10,000,000 backlog.

DeWald has 2 new 14-in. rectangular receivers—table at \$220 (replacing 12½-in. at \$240), console at \$270; deliveries start June 10 . . . Starrett has promotional summer line of 5 models—12½-in. leatherette table \$130, wood table \$140, consolette \$180; 16-in. table \$190, consolette \$220 . . . Bendix is coming out with new 8-model line next week, including 14 & 16-in. rectangles, 19-in. console.

Scott Radio by end of May will be turning out 150 radio-phono and TV units daily, president John Meek reported to stockholders this week. Added to list of v.p.'s (Vol. 6:16) was Leslie Evan Roberts.

Tele-tone has 16-in. console at \$230; president S. W. Gross says it's \$30-\$50 lower than any comparable unit.

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Reprehensible set-servicing practices in New York area are brought to light and castigated in May 10 *Radio Daily*. Article is written in narrative form by anonymous technician who obtained employment in several places, generally received these instructions: "It's more essential that you make 10 calls a day than worry about how well the set operates." Idea seems to be to keep set owners in line with promises and threats to take set to shop.

Steel industry expects to sell TV manufacturers about 45,000 tons of silicon steel this year, predicated on production of 5,000,000 sets, reports May 13 *New York Times*. It adds that indications are the goal will be attained unless cutbacks occur later in year.

Ad-packed special TV section of *Baltimore Sun*, Sunday, May 7 (32 p.) doesn't indicate that that "hot" TV area, claiming 169,000 sets as of May 1, is suffering any diminution of interest.

"Distributors here," says May 10 letter from telecaster in big Southern city, "think they recognize a slight softening in the market, but their sales are still running ahead of last year. I am beginning to wonder whether the distributors and dealers aren't going to talk themselves into a summer slump to a point where it will affect the consumers' thinking."

Quest for paid president of RMA will continue, possibly beyond June 5-8 convention in Chicago—committee coming to no conclusion at this week's meeting in New York. President Ray Cosgrove has made it clear he doesn't want reelection at June convention, is anxious to turn to personal business affairs. Committee has many names before it, but hasn't yet fixed on any one man it really wants. Committee consists of Jerry Kahn, Standard Transformer, chairman; Fred Lack, Western Electric; W. A. MacDonald, Hazeltine; Max Balcom, Sylvania; Paul Galvin, Motorola; W. R. G. Baker, GE; W. J. Barkley, Collins; Leslie Muter, Muter Co.; George Gardner, Wells-Gardner; Ray Carlson, Tung-Sol; A. D. Plamondon Jr., Indiana Steel; A. Liberman, Talk-A-Phone.

Financial & Trade Notes: Philco's first quarter sales totaled \$79,187,000, up 50% from \$53,006,000 for same 1949 period. Net income first quarter was \$4,074,000 (\$2.37 per common share) vs. \$915,000 (49¢) same period last year. President Wm. Balderston reported that TV was largely responsible for this record first quarter, that March output reached 20,000 per week rate, that radio business continues "very satisfactory," that demand for refrigerators and ranges continues high, and that "sales of all products are continuing at high levels in the second quarter." Plants are being equipped, he added, to increase TV output throughout last 6 months of the year. At annual meeting May 19, stockholders will be asked to elect 2 additional directors—John M. Otter, general sales v.p., and William H. Chaffee, purchases v.p.

ABC reports net profit of \$93,000, equal to 5¢ per share on 1,689,017 shares of common stock outstanding, on first quarter business—this despite considerably reduced revenues (Vol. 6:17). In first quarter last year, ABC had loss of \$64,000; for all 1949, loss was \$519,085 vs. profit of \$468,676 for 1948.

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Stewart-Warner reports first quarter sales \$15,550,516 vs. \$14,706,155 in same 1949 period. Profits nearly doubled—\$762,676 (59¢) vs. \$404,292 (31¢). Improved operations in several units are reported by chairman-president James Knowlson, TV shipments running considerably ahead of same 1949 period and radio recovered considerably from slump of early last year.

CBS board declared dividend of 40¢ payable June 2 to stock of record May 19 . . . Oak Mfg. Co. declared extra of 30¢ and regular quarterly dividend of 25¢, both payable June 15 to stock of record June 1 . . . Magnavox declared dividend of 25¢ on Class A preferred, payable June 1 on stock of record May 15; also 25¢ on common, payable June 15 to stock of record May 25.

Televista Corp. of America, Long Island City, N. Y., has filed petition in bankruptcy in Brooklyn Federal Court, proposes to pay creditors 100% on basis of 2% per month; liabilities are about \$28,000, assets \$10,000 . . . Sonora reorganization has been approved and company released from all claims of creditors under order of Referee Austin Hall in Chicago Federal district court.

Magnavox elects 2 new directors—Arnold S. Kirkeby, president, Kirkeby Hotels, and Alva J. McAndless, president, Lincoln National Life Insurance Co., Fort Wayne.

* * * *

Television Fund Inc.'s semi-annual statement of assets and liabilities as of April 30 shows assets at new high of \$6,082,747, up more than 115% from \$2,780,795 shown at end of October. Net assets per share rose to \$12.55 from \$9.33. Over 4400 shareholders owned 484,751 shares at end of April.

"The Fund has continued to move toward a heavier representation in the field of telecasting and electronics," states president Chester F. Tripp, "and we have for the present reduced moderately the percentage invested in teleset manufacturers. Television broadcasting is approaching a profitable basis, and while network operations are still in the red, many individual stations are in the black and some are making substantial profits."

Stockholdings in Television Fund's portfolio as of April 30 are listed as follows: Primarily TV (18.24%) Admiral 4000, DuMont 6600, Emerson 4000, Motorola 4000, Philco 5000, Zenith 1000, TV & Electronics (33.49%)—Aerovox 1000, ABC 6000, American Phenolic 1000, CBS 'A' 7000, Corning Glass 2000, Fansteel 4000, GE

6000, Mallory 1000, Muter 2400, Oak Mfg. 3000, Owens-Illinois 4000, Pittsburgh Plate Glass 1000, RCA 12,000, Raytheon 5000, Sprague 1500, Stromberg-Carlson pfd. 200, Westinghouse 7000. Electronics Other Than TV (22.85%)—American Bosch 4000, Bendix 2000, Consolidated Engineering 2000, Cutler-Hammer 8000, Fairchild Camera 2000, General Precision Equipment 3500, IBM 1000, Minneapolis-Honeywell 7000, Remington-Rand 7000, Sperry 3000, Webster-Chicago 3000. Miscellaneous (25.42%)—AT&T 1800, Bell & Howell 500, Burgess Battery 1200, Capitol Records 3000, Decca Records 5000, Disney Productions 5000, Eastman Kodak 5000, Joslyn Mfg. 2000, Loew's 6000, Otis Elevator 5500, Paramount Pictures 2500, Reliance Electric 2500, Time Inc. 2000, Twentieth Century-Fox 5000, United Paramount Theatres 2500, Warner Bros. 2000.

Additions during 6-month period were Bendix, Remington-Rand, Raytheon, Stromberg-Carlson, AT&T, Decca, Otis, Reliance, Time, Warner. Eliminations were: IT&T 4000, General Instrument 1300, Hoffman 1000, Magnavox 2000, National Union 1000, Burgess Vibrocrafters, 1200.

* * * *

Observation on TV stocks by *Wall Street Journal's* Oliver J. Gingold (May 12): "The television shares are not in quite as weak a position technically as they were a few weeks back. There has been a lot of profit taking in some of these and many are on firmer ground. However, the booming industry is going to suffer a lot of growing pains and the race will be won by the strong and not those which have developed on high prices and indifferent financial structure. This is a boom year for companies selling television sets and sales have mounted sharply. However, already the inroads of competition are being felt and in the next year this is likely to be an even more important factor in the situation. This will be a year of highly satisfactory profits for many television companies but it remains to be seen if these shares have not discounted most, if not all, the good news for 1950. What portends in this growing competition for 1951 is another story and still has to be registered in markets."

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What TV has done for Hopalong Cassidy (William Boyd), hero of the westerns, is noted up by Walter H. Oxstein in May 10 *Wall Street Journal*. Here's the take: \$250 to \$1000 per picture for each TV showing; \$1,250,-000 royalties from sales by 90 licensed manufacturers, who figure to sell \$50,000,000 worth of "Hopalong" brand merchandise this year—such as roller skates with spurs, bicycle with built-in gun sling, even special castile soap, as well as run-of-mill watches, knives, guns etc.; \$5000 weekly from radio; \$1000 for brief daily appearances with Cole Bros. Circus, of which he is one-third owner and which concentrates its summer itinerary in TV areas.

CBS's 42-year-old president Frank Stanton is subject of article by Robert McFetridge in financial section of May 8 *New York Times*, who writes: "He's the last person in the world you'd expect to find heading up the CBS. He'd probably be the nation's No. 1 idol of movie fans, if he wished, or he could be that college professor that makes the girls swoon. Instead, by applying education to business he has achieved an unusual niche in American industry."

Eighteen RMA directors, participating in poll "guessimating" 1950 TV set production, ranged from 4,500,000 to 6,500,000—average of 5,350,000. Two months ago, similar informal poll ranged from 3,200,000 to 6,750,000—average 4,500,000.

VACATION SHUTDOWNS, THEN NEW MODELS: July's the month wherein (a) most TV plants will shut down, generally for the traditional 2-week vacation, and (b) many manufacturers will disclose new fall-winter models and prices to distributors and dealers.

Matter of fact, several big set makers are already tooled for and producing (though not yet shipping) some new models. This time, no one wants to get caught short when the fall-winter boom begins.

Surveying the major producers, we found majority shutting down first 2 weeks in July, namely: Admiral, Arvin, Belmont, Emerson, GE, Hoffman, Magnavox, Meck, Philco, RCA, Sentinel, Stromberg-Carlson, TeleKing, Tele-tone, Westinghouse, Zenith.

Others with different vacation schedules: Hallicrafters, June 30-July 10; Bendix and Motorola, June 26-July 8; Olympic and Wells-Gardner, June 30-July 19; DuMont, July 4-18; Stewart-Warner, July 17-29; Packard-Bell, first 3 weeks in July; Crosley and Sparton, not shutting down -- Crosley's W. A. Blees stating: "We are not closing our plants for vacation as we need all the production we can get."

* * * *

More significant was timing of first new model showings to distributors, dealers and public, as reported by most of the foregoing companies:

Admiral -- Chicago distributor convention in June, date not yet set.

Arvin -- distributor convention June 19-20 in Chicago; to show at Furniture Mart beginning June 20.

Belmont (Raytheon) -- distributor convention in latter June, then exhibit at National Music Merchants Show (NAMM) in Chicago, July 10-13.

Crosley -- distributor convention late in summer.

DuMont -- new models sometime in July, possibly at NAMM show.

General Electric -- distributor showings in Syracuse first, then at NAMM show.

Hallicrafters -- distributor meetings in Knickerbocker Hotel, Chicago, June 16-18, then at Furniture Mart June 19-29, possibly also at NAMM show.

Hoffman -- distributor meetings in mid-July.

Magnavox -- no plans for new models, other than those recently introduced (Vol. 6:13, 14, 16); will convert some 16-in. rounds to 19-in. rectangulairs.

Meck -- distributor convention in Chicago latter August or early September.

Motorola -- new line "some time after" plant vacation, ending July 8.

Olympic -- showings in New York City in August, date and place undecided.

Packard-Bell -- first showings at San Francisco Furniture Mart July 24, then convention in Los Angeles about week later.

Philco -- Atlantic City distributors convention June 17-19, dealer convention June 19-21, Philco footing all bills for 5000 invitees (Vol. 6:12).

RCA -- no distributor convention, time of local showings unannounced.

Sentinel -- regional meetings start July 10.

Stewart-Warner -- distributors convention in Chicago July 14.

Tele-tone -- some time in June or July.

Sparton -- first showings at American Furniture Mart, Chicago.

Stromberg-Carlson -- distributors meeting in latter June, then NAMM show.

Wells-Gardner -- no new models planned before October (private-label only).

Westinghouse -- at American Furniture Mart, then local distributor meetings.

Zenith -- Chicago convention late June or early July.

Telecasting Notes: This Sunday (May 21) Dallas' KBTX formally changes call to WFAA-TV, tying up with new owner *Dallas News*' AM outlet WFAA (Vol. 6:4, 11) . . . Phoenix's KPHO & KPHO-TV change hands third time this year (Vol. 6:6), Rex Schepp selling his 43% interest in AM and 5 shares in TV outlets. New TV stockholdings include: hotelman John B. Mills, 28.5%; *Tucson Daily Citizen*, 19.8%; Dr. J. N. Harber, 15.2%; attorney John Mullins, 13.3%; KPHO-AM, 11.4%. Mr. Mills also owns 48% of AM . . . Transfer of title of Wm. Nassour Studios to *Los Angeles Times-CBS* station KTTV, to be used for producing live shows as well as films for syndication, is expected within next week or so . . . ABC's New York key WJZ-TV returns to 7-days-a-week schedule Sept. 11, starting daily at 12:30 p.m.; has been dark Mon. & Tue. since last Nov. 14 . . . Don Lee Network's KTSL, Hollywood, going to afternoon programming in August . . . KDYL-TV, Salt Lake City, expands to 3-5:30 & 6:30-10:30 p.m. daily as of May 20; heretofore was silent Sat., Tue. & Thu. . . . WXYZ-TV, Detroit, offering sponsor identifications on feature films at bottom of screen, obviating need to halt films for commercials . . . Young & Rubicam, New York, has installed TV-movie "conference room" with RCA Vidicon camera chain to test proposed TV shows and commercials . . . Now-building WSM-TV, Nashville, has asked FCC for microwave relay link from Louisville—links to be at Bethpage, Tenn.; Bonnieville, Fairdale, Smith's Grove, Elizabethtown, Ky. . . . KMLB, Monroe, La., will apply shortly for TV, has placed conditional order for DuMont equipment.

CBS quit NAB this week with its 7 AM and other stations—and status of other 3 networks was regarded shaky. ABC has hinted it will do likewise, NBC's "present inclination" is to stick, MBS plan is indeterminate. CBS withdrawal means \$40,000 annual loss in dues, total from all 4 networks being about \$100,000. CBS executive v.p. Joseph Ream said NAB services are "duplicated" by those it provides for itself, added: "We do not wish our resignation to be taken as an example to be followed by any independently-owned station. The manifold problems of [radio] attest to the need for a trade association . . ."

Screen Actors Guild met with TV networks May 17, explored jurisdiction over TV film performers. SAG agreed it had no jurisdiction over kines, reported that it would file requests for NLRB election in other part of U.S. as well as Southern California (Vol. 6:17). SAG has called membership meeting on TV question for June 4 in Hollywood Legion Stadium.

FCC this week approved merger of *Atlanta Journal* (WSB) and *Constitution* (WCON) radio properties (Vol. 6:12-13). Plan is to retain WSB-AM, drop WCON-AM; drop WSB-TV (Channel 8), retain WCON-TV (now on Channel 2 equipment tests)—depending whether its 1060-ft. radiator overcomes current propagation troubles. All stations will eventually carry WSB call letters.

FCC denied Yankee Network request for special authority to change its Boston WNAC-TV from Channel 7 to Channel 2 in order to avoid receiver oscillator interference between Channel 7 and WJAR-TV's Channel 11 in Providence (Vol. 6:13). Commission said interference was due to improper receiver design, and manufacturers and servicemen should be called on to clear up problem—not FCC by changing allocations.

FCC has named Cyril M. Braum chief of TV engineering, succeeding Curtis B. Plummer, recently named chief engineer (Vol. 6:10); Braum was chief of FM engineering, combined with AM into new division called Aural Broadcast, under James E. Barr.

Count of TV Sets-in-Use by Cities

As of May 1, 1950

Sets-in-use totaled 5,846,000 as of May 1, according to NBC Research's monthly "census" report estimating TV receivers within 40-mi. service areas (.5Mv). NBC no longer publishes family figures, but those here listed are best available estimates of 1948 families within 40-mi. radius of city; note, however, that there are some overlaps, so that family figures are sometimes higher than actually served. May report includes Kalamazoo, due to have own station on regular schedule from June 1. Total represents 503,000 increase over April 1 count (Vol. 6:16).

Interconnected Cities

Area	No. Stations	No. Families	No. Sets
Baltimore	3	732,000*	166,000
Boston	2	1,175,000*	368,000
Buffalo	1	323,000*	91,200
Chicago	4	1,438,000	496,000
Cincinnati	3	384,000*	120,000
Cleveland	3	695,000	223,000
Columbus	3	225,000*	66,400
Dayton	2	291,000*	62,100
Detroit	3	839,000*	231,000
Erie	1	112,000	21,100
Grand Rapids	1	182,000*	21,600
Kalamazoo	(a)	143,000*	9,600
Lancaster		85,000*	44,800
Lansing	1(b)	168,000*	7,400
Memphis	1	177,000	34,700
Milwaukee	1	327,000	110,000
New Haven	1	557,000	77,500
New York	7	3,597,000*	1,300,000
Norfolk	1	196,000	14,000
Philadelphia	3	1,184,000*	491,000
Pittsburgh	1	742,000*	105,000
Providence	1	1,011,000*	56,500
Richmond	1	130,000*	29,100
Rochester	1	208,000*	39,400
Schenectady	1	258,000*	78,000
St. Louis	1	474,000	128,000
Syracuse	2	199,000*	43,400
Toledo	1	241,000*	40,000
Utica	1	127,000*	13,200
Washington	4	691,000*	128,000
Wilmingtton	1	183,000*	32,700
Total Interconnected	57		4,648,700

Non-Interconnected Cities

Albuquerque	1	22,000	3,100
Ames (Des Moines)	1	126,000	9,100
Atlanta	2	233,000	37,500
Binghamton	1	131,000*	12,400
Birmingham	2	196,000	12,400
Bloomington	1	104,000*	5,900
Charlottesville	1	171,000	14,600
Davenport	1	133,000	10,400
Fort Worth-Dallas	2	269,000*	23,600
Greensboro	1	277,000*	28,900
Houston	1	165,000	11,500
Huntington	1	217,000	21,000
Indianapolis	1	132,000	8,500
Jacksonville	1	281,000*	34,100
Johnstown	1	94,000	9,900
Kansas City	1	250,000*	21,300
Los Angeles	7	275,000	34,300
Louisville	2	1,372,000	494,000
Miami	1	188,000	32,000
Minneapolis-St. Paul	2	117,000	24,800
New Orleans	1	333,000	88,700
Oklahoma City	1	225,000	26,100
Omaha	2	138,000	27,500
Phoenix	1	132,000	22,500
Salt Lake City	2	49,000	7,000
San Antonio	2	93,000	15,700
San Diego	1	130,000	15,300
San Francisco	3	113,000	37,100
Seattle	1	825,000	55,000
Tulsa	1	307,000	29,000
Total Non-Interconnected	47		1,197,300
Total Interconnected and Non-Interconnected	104		5,846,000

* Family figures are based on estimates of 1948 population. Note that following coverages (hence total families) overlap: Bloomington-Indianapolis; Grand Rapids-Lansing-Kalamazoo; Detroit-Lansing; Detroit-Toledo; Syracuse-Rochester-Utica-Binghamton; Binghamton-Utica; Philadelphia-Wilmington; Rochester-Syracuse-Schenectady-Utica; Pittsburgh-Johnstown; New York-Philadelphia; Boston-Providence; Buffalo-Rochester; Cincinnati-Columbus-Dayton; Lancaster-Baltimore; Dallas-Fort Worth.

(a) WKZO-TV now testing, due to start scheduled operation June 1.

(b) WJIM-TV began scheduled operation May 1.

WHYS AND WHEREFORES OF THE TV FREEZE

Excerpts from Addresses by FCC Chairman Wayne Coy

Scheduled for Delivery Before Portland City Club May 19 and Denver Rocky Mountain Council May 22

*Chairman Coy spells out, in lay language, the technical reasons for the TV freeze, the problems of color TV, how and when local communities not now served by TV may reasonably expect service. His happy facility for making complex problems understandable merit this complete treatment, even though all the information has been reported piecemeal by *The Digest*. This is a document that should be read particularly by prospective telecasters and by manufacturers, distributors and dealers so that they can impart the basic facts to their local constituents. Local allusions to Denver and Portland are equally applicable to other areas as yet without TV stations of their own.*

IT is becoming more and more apparent to me—and especially on occasions like this one here tonight—that Daniel would have been an ideal choice to serve as a member of the Federal Communications Commission.

Daniel was perhaps the only person I ever heard of or read about who had all the necessary requirements for the job. The Bible tells us that Daniel was skillful in all wisdom, cunning in knowledge, and understanding in science. He had an understanding in all visions and dreams; in all matters of wisdom and understanding he was ten times better than the magicians and astrologers in all the king's realm. He could make interpretations and dissolve doubts.

No wonder he was the king's favorite bureaucrat. Try as they might, his enemies could find no occasion to trip him up because there was just no error or fault in him.

Finally, however, these discontented conspirators cooked up a plot and managed to have Daniel thrown into the lions' den.

Daniel was saved because the Lord found "innocency" in him and sent an angel to shut the lions' mouths.

The only similarity between Daniel and me is that I'm in the lions' den but I see no angel hovering about.

Roar from Deprived Citizens

Of course, as between Daniel and a commissioner of the FCC, the advantage was all with Daniel. He was never put into the position of dangling the prospect of such an exciting, enchanting delight as television before the citizens [of Denver], then suddenly withdrawing it. We at the FCC have been hearing the roars [of Denver, Portland and other areas] hit by the freeze all the way back there in Washington.

I believe it is safe to say that never before has a freeze generated so much heat. Ever since the FCC ordered the freeze, it has been in hot water.

And sometimes it seems to me that whenever we try to explain the freeze, we are promptly called upon to explain the explanation.

The reasons for the continued freeze on the construction of new TV stations—the reason why TV cannot be authorized [for Portland & Denver] at this time—are really not too difficult to understand. All you have to do is to understand the implications and relationships of a few simple things as, for example, tropospheric phenomena, compatibility, incompatibility, dot interlace, line interlace, color break-up, threshold flicker, iso service contours, median field intensities, signals in decibels, equatorial

planes, time fading factors and vestigial sideband transmission.

It's as simple as that, and perhaps what I have said will be so clarifying as to eliminate the need for any future questions.

To get the full picture of the progress and problems of today's TV, we must go back 5 years. World War II had brought many new advances in electronics. To prepare for what it knew would be a post-war boom in all branches of radio, the Commission, while the war was still raging, conducted a lengthy hearing, participated in by the leading electronic scientists of the nation. As the result, it drew up an elaborate table setting forth frequency allocations for many new services. These included frequency modulation (FM), broadcasting, railroad radio service; general mobile radio service for streetcars, interurban buses, transcontinental trucks, etc.; citizens "walkie-talkie" service, rural telephone service, radar; radio heating, and many industrial applications of radio.

And, of course, among these many new services was TV. The Commission was bound to allocate space to these services in the public interest, convenience and necessity just as it is bound by the Communications Act to grant licenses to permittees on the basis of public interest, convenience and necessity.

At the time of the 1945 allocation, there were only 6 TV stations on the air, giving very limited service. It was apparent, however, that TV would be one of our greatest post-war activities. For the immediate post-war development of TV, the Commission allocated 13 channels (later reduced to 12) in the Very High Frequency Band. This was all the space that could possibly be given in that band to TV.

The Interference That Results

The Commission's first proposal for this band was a separation of 200 miles between co-channel stations and 100 miles between adjacent channel stations. But because of the very limited channels, the Commission revised the table to provide separations of 150 mi. and 75 mi. It is fair to say that the Commission acted in this particular matter on the basis of industry advice in which the Commission concurred. Of course, the closer you put stations together, the more you can crowd into a band. On the other hand, the more stations you crowd in, the less area each station will have to itself which is free of interference from other stations.

With the war over, the TV boom started and stations went on the air over the country. As more and more sta-

tions went into service, we began getting reports of interference caused by the bouncing back of signals from atmospheric layers in the troposphere. The troublesome elements in the troposphere extend from about 300 feet above the earth to about 6 miles above the earth.

This effect caused television signals to be carried farther than anticipated by the Commission and the industry and many of the stations were invading each other's territory. Obviously, there was only one remedy and that was to draw up a new table locating the stations farther apart. It is also obvious that the prudent thing to do was to make this change before too many additional stations were permitted to go on the air.

This meant the deletion or shifting of channels in many areas. The Commission, therefore, on Sept. 30, 1948, ordered a freeze on all new construction of TV stations not already authorized. It did not halt construction already started. Under this order, we have 104 stations on the air today and 5 more being completed.

Now the ironic aspect of ordering wider mileage separations and reducing the number of stations in the present VHF band was that at the same time the Commission was receiving many applications from over the United States for more TV stations. Improving reception in the VHF threw fuel on the flames of this demand.

New Channels Available Only in UHF

The only place to get additional channels was in a comparatively unexplored part of the spectrum—the higher Ultra High Frequency band. The Commission had foreseen in 1945 that eventually space for more channels and for color would be needed and had set aside this important reserve in the public domain of the spectrum for that purpose. The Commission in its 1945 allocation report said, in part:

"As was pointed out in the proposed report, the Commission is still of the opinion that there is insufficient spectrum space available below 300 mc to make possible a truly nationwide and competitive television system. Such a system, if it is to be developed, must find its lodging higher up in the spectrum where more space exists and where color pictures and superior monochrome pictures can be developed through the use of wider channels. In order to make possible this development of TV the Commission has made available the space between 480 and 920 mc for experimental TV."

The need to use that upstairs space arose much more rapidly than had been anticipated.

So even before the freeze of September 1948 was ordered, the Commission decided to investigate the feasibility of employing the UHF space to get additional channels. This had to be done at once so that both the VHF and the UHF could be considered simultaneously in making a fair distribution of channels over the country. We could not make sound, equitable assignments of channels without knowing what we had available in both the VHF and the UHF.

But now a further complication developed.

Then Came the Color Issue

In opening up the UHF we would be going into TV's last reserve. If we were going to have color, this was the only place we could hope to have it—at least in our time. The kind of standards we set for the VHF and the UHF might tie our hands with regard to future color. We might be ruled by the dead hand of the past. For color, it was now or never. And coincidentally, color, which had for some years seemed rather remote, was now reported to have made sudden strides. The Commission had rejected color in 1947 because, among other reasons, the systems demonstrated needed channels 12 to 16 mc wide. But now we had reports that the scientists had managed to squeeze

color into 6 mc—the same width we were using for black and white.

So we had on our hands three problems:

(1) Interference and allocations in the VHF.

(2) Allocations in the UHF and engineering standards which would minimize interference conditions.

(3) Color—whether color was feasible in a 6-mc bandwidth, and if so, which system or systems to choose.

Our hearing is one of the longest, most complex and most controversial in the history of the FCC. On it hinges the future course of the fastest growing industry in the United States.

Status of the VHF and UHF Problems

Now as to the status of our progress in dealing with each of these problems:

The VHF: A committee of engineers representing the industry, the Bureau of Standards and the FCC studied the VHF interference problem for several months. Basing its action to a great extent on this committee's findings, the Commission has proposed to place co-channel stations approximately 220 mi. apart (as against 150 mi.) and adjacent channel stations 110 mi. apart (as against 75). This will substantially reduce interference caused by tropospheric propagation.

In the distribution of these 12 VHF channels to cities and towns throughout the country on the average separation of 220 and 110 mi., the mathematical possibilities would indicate that 645 stations would be possible. In this connection, it should be pointed out that as a practical matter there will not be that many stations in operation because some of these channels in some areas would be available only in communities too small to support a station.

What I have said may need further clarification. Unused channels in cities and towns are not automatically available for use elsewhere unless it can be shown that their use elsewhere will not cause interference. This figure of 645 VHF stations engineeringly possible includes five in Denver. [For allocations to other cities, see *Television Digest Supplement No. 64*.]

2245 Stations in 1400 Communities

The UHF: The Commission proposes to add 42 6-mc channels in the UHF. Again, from purely an engineering standpoint, but not at all necessarily from a practical standpoint, these 42 UHF channels would make possible 1600 metropolitan stations. These, added to the 645 VHF stations I have just discussed, would give us 2245 metropolitan stations in 1400 communities. [See also Supplement No. 64.]

In addition, about 1000 low-power community type stations are provided for in the UHF. These stations will have a maximum power of 20 kw as compared with a maximum power of 100 kw for the metropolitan VHF stations and 200 kw for the metropolitan UHF stations on the basis of an antenna height of 500 feet.

As a rule these stations will be assigned only in those communities which are not a part of a metropolitan district. It should be pointed out in connection with UHF that the Commission proposes the same separation between co-channel stations and adjacent channels as in the VHF.

With 2245 metropolitan stations and 1000 low-power community stations provided for in our table and even taking into account the channels which may fall in areas where they cannot be utilized because of economic reasons, you can see that America is assured of an abundance of TV. We are confident that if this proposed table is adopted we will have the truly competitive service which will assure diversity of TV programming to the American people.

As to Color: The Commission has witnessed several demonstrations of three color systems—those of the Columbia Broadcasting System, the Radio Corporation of America, and Color Television, Incorporated, of San Francisco. The latest demonstration of the latter system was given in San Francisco Wednesday [May 17].

I do not propose to try to evaluate for you all of the technical details of the color systems proposed. I do think it important that you know something about the systems in order that you may see the character of the problems which the Commission must decide in writing engineering standards for color TV.

For example, the system proposed by CBS involves a change of transmission standards in two important respects. First, the number of lines is reduced from 525 to 405. Secondly, the number of fields is changed from 60 for black-and-white TV to 144 for color—that is, a substantial increase in the number of fields scanned per second. Present black-and-white receivers in the hands of the public will not receive a black-and-white picture from CBS color transmissions without the addition of a manual or automatic adapter capable of converting the receiver to receive pictures under the color TV standards proposed by CBS.

In the case of both RCA and CTI, the standards as to number of lines per picture and number of fields per second are identical for both color and black-and-white. Therefore, with color transmissions from these systems, present-day receivers in the hands of the public will receive black-and-white pictures from both RCA and CTI color transmissions.

Many Technical Considerations

Another example of the technical details of the color systems which create problems in the decision making process arises from the method employed by the various systems in showing color pictures. At the present stage of development, the CBS system uses a mechanical rotating filter in front of the tube of a TV receiver as the means of producing color. Since the mechanical filter must be more than twice the size of the tube due to the fact that it rotates upon an axis, it is obvious that the direct view tube, as a practical matter, cannot be larger than 10 to 12 in. It is theoretically possible to build mechanical rotating filters for tubes of larger size, but the size of an ordinary living room is not conducive to the manufacture of receivers of this type for 16, 20 and 24-in. tubes.

Until a few weeks ago the RCA system utilized 3 tubes, one for each color, and a system of dichroic mirrors to converge the signals from the 3 separate tubes into a single picture. This was a costly and cumbersome procedure and you can see that it involved a fundamental problem of registration of the complete picture.

A little more than 6 weeks ago RCA demonstrated a single tri-color tube to replace the previously employed cumbersome mechanism for reproducing a color picture. This tube is in the early stages of its development and RCA relies quite heavily upon this development in expressing their belief that their system is now ready for standardization. The Commission, therefore, must judge whether the tube is sufficiently developed on which to base a judgment that the apparatus employed in the RCA system is ready for public utilization.

It should be said that if and when the RCA tube is ready for public use and can be produced in quantity the tube can be employed by the CBS system and, by its use, CBS can then discard the use of the mechanical rotating filter.

Color Television Inc. displays color through the employment of a projection method. It is claimed that they can display color by a direct view tube just as the other systems claim they can do, but up to this point, all of their demonstrations have been from projection model receivers. The RCA direct view tri-color tube now in the process of de-

velopment, and other such tubes being developed in other laboratories throughout the country and not yet demonstrated to the Commission, can probably be utilized by CTI to better advantage than the projection method which they are now using.

Questions the FCC Must Resolve

I hope I have not in any way indicated that the Commission or that I presently favor one of these systems as against the other. The Commission has never discussed the merits or lack of merits of any of these systems for the purpose of reaching a decision in this part of the television proceeding. The record will be completed at hearings scheduled . . . May 25, and will continue for one or two days. When the hearing is finished, the parties will file proposed findings of fact and proposed conclusions, and when those documents are before us, the Commission can then get at the decision making process.

All 3 systems have shown marked improvement since their first demonstrations. These improvements were coming at the rate of one a week during the April and May portions of the hearing. There is no question but what the Commission's order stating that they would entertain proposals for color TV has spurred the development of these techniques by months and years.

When all the testimony is in, here are some of the questions the Commission must decide regarding color:

How important is it to have a system whose color transmissions can be received in black-and-white on existing receivers without the expense of an adapter? This is compatibility and it would mean that existing receivers would continue to bring in black-and-white pictures.

Should we give all of the systems more time for experimentation and development?

If more time were to be allowed for experimentation and development of all color TV systems, could the freeze be lifted and permit black-and-white TV to go ahead? Or must the freeze be kept on until it is practical to write engineering standards for color TV?

What Would Set Makers Do?

If there were to be time for further experimental and developmental work, is there any action which, taken now, would protect the public presently buying TV receivers in a manner which would reduce the obsolescence factor in the event the Commission decision favored a color system incompatible with present black and white standards?

Given the assumptions I have just stated, could it be expected that the TV manufacturing industry would immediately build manual or automatic adapters in all TV receivers? Would the relative small cost for such an addition to a set be worth it in terms of giving the widest possible latitude for decision after further experimentation extending perhaps a year or more?

Or must we write multiple standards and let the public decide in the market place which is the better system? Is there any way to assure the future use of all color sets if such a proposal is followed? Is it a proposal in which the public will willingly accept the risks and costs involved?

Or must we reject all of the systems and say that we will proceed immediately with black-and-white TV in both bands and let color wait until another generation or two, and in another, and now unexplored, portion of the spectrum?

Lifting of Freeze at Year's End?

The color phase of our hearing will be completed by May 26. The Commission will then have the task of studying some 10,000 pages of testimony and 250 exhibits. Just how long it will take us to arrive at a decision on the color question, I don't know. After we issue the decision we will take up the matter of allocations.

My best judgment today is that all this cannot be completed and the freeze ended much before the end of this year. If the freeze is lifted by the end of this year, the Commission will begin processing applications early next year.

In some cities there will be more applications than there are channels available. In such cases the Commission will have to hold a hearing to determine the applicants best qualified to receive the grants. In cases where the number of applications is less than or equal to the number of available channels, hearings will not be held unless for some specific reason it becomes necessary to decide the qualifications of some of the applicants. Where hearings are not necessary, we expect to be able to process the applications expeditiously. When the freeze is lifted, a reasonable time will be permitted for other applicants to file. . . .

A question we are frequently asked is why we cannot lift the freeze in a certain community without waiting for the conclusion of the present hearing and the general lifting of the freeze over the nation.

The answer to that is that any changes that might have to be made in the present proposed allocations in one city might set up a chain reaction of changes elsewhere. In TV no city lives unto itself alone.

Suppose that we now permitted the construction of stations in Denver—or any other city—and later found that the weight of the evidence should indicate that the 220-mi. and the 110-mi. channel spacings are insufficient to provide an acceptable interference-free TV service? It would be extremely difficult to change the allocations in a region in order to eliminate potential interference. If changes were to be made in allocations plans after the construction of a station has started, the permittee might be put to considerable expense.

When we proceed with construction in TV, when we give the green light to TV's coming expansion, an expansion that will involve billions of dollars, we must be sure that we are right. We cannot expect people to make costly investments in TV stations unless they are assured that the channel allocation plans are based upon the most complete and the most competent engineering testimony available.

To jump the gun and begin making piecemeal allocations now would not be calculated to insure the stability of what should be one of America's greatest industries. . . .

Color and the Freeze

The point has also been made that none of the color systems proposed would cause any interference problems that would affect the proposed allocation table. Hence, they suggest that we need not wait until the color issue is resolved before lifting the freeze.

The answer to that is this: The Commission cannot make any assumptions on so important a matter except on the basis of all the testimony—the full record and on the basis of demonstrations and field tests. It must be completely satisfied on a scientific basis that the picture quality and the performance of the proposed systems can be accommodated by a 6-mc channel.

The Commission must also satisfy itself that the interference and propagation characteristics of the proposed systems will be accommodated by the 220-mi. and 110-mi. separations. We have asked the proponents of the 3 systems to conduct field tests to establish this point. The results which we have received in the hearing up to this point from CBS and RCA indicate that the channel separations on which our proposed allocations are based would be adequate for color and black-and-white. However, we do not yet have information on the separations that would be required for the CTI system. I do not think that any of you here in the West would want the Commission to disregard the proposal of CTI because that interference information is not yet available to us.

The Commission has still to hear testimony from all interested parties on the proposed VHF allocations. To take any other course would be arbitrary and unsound and might result in future difficulties, comparable to the difficulties which resulted in the present freeze. In fact, it might well be jumping from the frying pan into the fire.

In fact, any change in those allocations could be made only at the expense of deleting or changing the channel assignments made to permittees elsewhere. If changes had to be made in allocation plans after the construction of a station has started, the permittee might be put to a considerable expense to replace transmitter equipment, secure a new antenna and perhaps build a tower at another location. Verily, in TV no city lives unto itself alone. . . .

The kind of TV system we are now working on will be worth waiting for. It will be a better service for the public, and a more stable, attractive enterprise for the broadcaster and the manufacturer.

TV Will Move Fast After Freeze

Once the freeze is lifted, TV will move ahead with Seven League boots toward its goal as America's dominant form of broadcasting—as America's dominant medium of mass communications. Already it is having far-reaching repercussions in our home life, our social life, our educational and informational techniques, our entertainment industries and on commerce.

Already there are 5,500,000 sets in the hands of the public, and in 3 years from now, there should be around 25,000,000.

The TV stations already on the air cover areas occupied by more than one-third of all the families in the United States.

According to a recent survey, more people in the city of Baltimore are now watching television than are listening to the radio. And in Washington, D. C., the schools have just come up with a survey showing that nine out of ten pupils are now watching TV and 2 out of 3 watch as many as 4 programs a day.

Approximately \$35,000,000 was spent in TV broadcasting by advertisers last year.

TV can have an almost magical effect in uniting this nation, in speeding a mutual understanding of the problems of our diverse social, economic and racial groups and in overcoming the barriers of geography.

Our coaxial cable and radio relay facilities to exchange television programs between cities will be more than quadrupled this year. By the end of the year more than 40 cities will be bound together. These facilities are moving steadily westward.

TV Relays Extending Westward

The New York-Chicago radio relay system is now nearing completion and the installation of equipment for the Chicago-Des Moines and Des Moines-Omaha links is under way. The link from Omaha to Denver will be completed in May of next year . . .

The great day when the Atlantic Coast and the Pacific Coast are finally joined by TV will come sometime in the latter part of next year by the completion of a radio relay link between Omaha and San Francisco. The present coaxial cable between Portland and Sacramento, now used for telephone service, can be converted for TV transmission. Thus Portland can look forward to being connected with the Atlantic Coast by TV almost 70 years after it was connected by railroad.

I give you my pledge that we will lift the freeze at the earliest practical date and that in all our planning we will insure that [Portland & Denver] will share fully and freely as is her right in the exciting, challenging future development of American television.

105,000 TVs WEEKLY IN APRIL, TOO: TV receiver production through April continued to maintain RMA's March weekly average of about 105,000 units -- RMA reporting 420,026 sets, which projects to 525,000 when you add 25% to account for non-RMA production. There were signs of lag toward end of month, weekly RMA totals being: first week 112,319, second 104,418, third 105,865, fourth 97,424. No figures are available yet for any week in May, but month is expected to run somewhat under April.

Projected April figure compares with 5-week March's 655,000 (Vol. 6:17), February's 460,000 (Vol. 6:11), January's 420,000 (Vol. 6:7) -- totaling 2,060,000 units thus far this year. Add these to the 4,000,000 counted at start of 1950 (Vol. 6:3), and cumulative at end of April was 6,060,000. RMA economists say 6,250,000 -- and NBC Research estimated 5,846,000 sets-in-use as of May 1 (Vol. 6:20).

RMA April tally sheet shows receivers by tube sizes for first time: 139,342 table models and 85,771 console-consolettes in 12 to 15-in. classification (mostly 12½); 67,188 table models and 104,492 consoles-consolettes 16 to 18-in. (mostly 16); 12,134 sets 19-in. (including 5 table models); small residue 10-in. or under. There were 454 projections.

April breakdown by models: table, 216,995; TV-only consoles or consolettes, 164,625; combinations (with AM and/or FM), 9996; combinations (with phono), 28,410. Of the 420,026 total, 36,987 contain FM.

Also reported by RMA were 882,706 radios in April, of which 234,354 were auto sets and 201,284 battery portables. Total compares with 980,364 in March (5 weeks); significant is fact that RMA total of TVs (420,026) is almost equal to number of radios excluding auto and battery sets (447,068).

LARGER TUBE SIZES & LOWER PRICES: It's apparent that 16 & 19-in. will dominate fall-winter market, that 12½-in. will gradually take back seat, that 10-in. will all but disappear. Also, that more and more rectangulars will make appearance -- 14, 16, 17, 19 & 21-in. diagonals, competing with 12½, 16 & 19-in. rounds.

As for GE's 24-in. direct-view job, DuMont's 30-in. and others variously reported (Vol. 6:8,18,19), they're frankly experimental -- they'll require big and probably ungainly cabinets. It remains to be seen whether, when brought out, they will be bought for homes (built-in) or only for public places.

Thing that stands out in trend to larger pictures, oft pointed out in these pages is that nearly everybody in the industry now agrees that 12½-in. is usable wherever 10-in. is used, 16-in. usable wherever 12½-in. is used -- regardless of room size -- and, as in cheap car days, small TV set owners are ambitious to get larger ones. All of which spells big trade-in business, for the 7, 10 & 12½-in. sizes are by far most numerous among the 6,000,000 or more sets sold to date.

April RMA CR tube sales figures show 14-in. and up category (mostly 16-in.) taking lead away from 12-in. (12½). Breakdown of 498,624 total sold to equipment manufacturers for \$12,054,207 last month: 6 to 8.9-in., 2459 units (.5%); 9 to 11.9-in., 736 (.15%); 12 to 13.9-in., 240,063 (48.14%); 14-in. & over, 255,251 (51.9%); projections, 115 (.02%). [For comparisons with prior 1950 months, see Vol. 6:18.]

* * * *

Summer slowdown, lowered costs of production, competition from rectangulars were reflected in picture tube price reductions just announced. RCA and Sylvania posted prices to manufacturers of \$17.50 on 12½-in. rounds (down from \$19) and \$25 on 16-in. rounds (down from \$29), effective June 1. Sylvania additionally announced new price on 14-in. rectangulars as \$19.50 (down from \$20.50), on 16-in. rectangu-

lars \$27 (down from \$29); no changes in 7, 10 or 19-in. Neither released new distributor, dealer, list prices yet.

DuMont made all foregoing price changes, plus others, effective June 15 (for details see item next page) -- and it's presumed others have or will set same or nearly same rates, though none had made formal announcements at week's end.

New CR tube maker is Federal Telephone & Radio Corp., IT&T subsidiary, now in full production at Clifton, N.J. plant. Quietly, it started producing for sister subsidiary Capehart about 9 months ago; 2 weeks ago its 12½ & 16-in. rounds and 14 & 16-in. rectangulars went into full production -- shipments going also to Crosley, Hallicrafters, Sentinel, Tele-tone, Tele King, Lytle & Cannon (Chicago private label maker). Production now runs 300 per day, goes to 600 daily in about month, then aim is 1500 daily. Prices are same as RCA's and Sylvania's (above).

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You seldom hear about projections these days. First quarter RMA production of only 260 projection tubes (Vol. 6:18), plus April's 115 and mere 9000 or so in 1949, do not betoken much interest in them. North American Philips, of course, imports its tubes from Holland; no figures are available -- though it's the chief remaining proponent of projections in this country.

Yet from National Union Radio Corp., tubemaker of Orange, N.J., we hear of new type projection CR which president Kenneth C. Meinken says is based on "an entirely new approach...and from preliminary results we will be in a position to bring forth for the manufacturers a tube that will allow them to manufacture and merchandise a low price projection set with a very large screen.

"This principle will be the answer," Meinken adds, "to large size picture without having big glass or metal direct-view CR tubes." National Union isn't disclosing details yet, but from other sources it's reported tube may utilize Skiatron principle of using outside source of light (Vol. 5:46).

* * * *

Sylvania reopening its Altoona, Pa. tube plant, with limited assembly lines, to meet increased demands for receiving tubes; it was closed down last July...RCA has bought new building with 126,000 sq. ft. to expand receiving tube facilities in Harrison, N.J.

USING THE PRINTED-CIRCUIT TUNER: First user of RCA's printed-circuit tuner (Vol. 6:10) turns out to be Hallicrafters. Company announced it (called "Dynamic Tuner") with gleeful claims that it has 6-months jump on rest of industry, says it will absorb all RCA can make for that period. President Wm. Halligan tells us he's genuinely enthusiastic about tuner, feels it's a real technical advance.

Pilot production of 5000 TV sets already have tuners in them; full line, due in June, will contain it. Currently, new tuners cost slightly more than conventional units, but Halligan guessed that mass production might, by fall, bring them down 25% below conventional tuners of comparable quality. Since tuners are most expensive component in set, next to CR tube, Halligan thinks they may eventually permit as much as 10% reduction in receiver prices; others think he's too optimistic, that 3-4% may be more reasonable.

Improved performance in several ways is claimed: increased oscillator stability; greater sensitivity (twice present tuner average, Halligan estimates); higher interference rejection; easier manufacturing and servicing.

Hallicrafters may have head start, but it's hard to believe other tuner makers won't come up with similar units soon. Virtually all have been working hard on it. Other than those set makers who build their own tuners, principal suppliers are: Standard Coil, Sarkes Tarzian, General Instrument, American Steel Package.

Printed circuits were a wartime marvel, contributed heavily to success of the vital proximity (VT) fuse. What's surprising is that it has taken so long to make use of them in commercial receivers. You can be sure that manufacturers aren't stopping with a tuner; several propose to use them in other parts of TV sets.

Topics & Trends of TV Trade: To our list of 26 TV manufacturers reporting their vacation shutdown schedule (Vol. 6:20), we can add belated reports from Capehart-Farnsworth (first 2 weeks in July) and Air King (June 30-July 17).

Capehart president Fred D. Wilson also reports distributor convention will be held in Fort Wayne in latter July, when new fall-winter models will be shown. Air King sales chief R. D. Payne adds:

"It is our planned program to build an inventory prior to that [vacation] time so that any emergency orders may be filled . . . We adhere to policy of not bringing out a complete new line at any one time but continuously adding new models to pep up our line from time to time."

GE's distributor meetings have now been announced for June 16-17 in Syracuse, with first public and trade showings of new models at National Music Merchants Show (NAMM) in Chicago, July 10-13.

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DuMont tube prices change June 15 for all save 19-in., which changes June 30. New prices to manufacturers (old in parentheses) are: 12-in., \$17 (\$18.50); 12½-in., \$17.50 (\$19); 14-in. rectangular, \$19.50 (\$20.50); 15-in., \$24.50 (\$28.50); 16-in. round, \$25 (\$29); 16-in. rectangular, \$27 (\$29); 17-in. rectangular, \$29 (no previous price); 19-in. \$45 (\$54.50). Prices to distributors: 12-in., \$19 (\$20.50); 12½-in., \$19.50 (\$21); 14-in. rectangular, \$21.50 (\$22.55); 15-in., \$27 (\$31.75); 16-in. round, \$27.50 (\$32.25); 16-in. rectangular, \$30 (\$32); 17-in. rectangular \$32 (no previous price); 19-in., \$49.50 (\$60). Prices to dealers: 12-in., \$23.50 (\$25.50); 12½-in., \$24 (\$26.25); 14-in. rectangular, \$27 (\$28.15); 15-in., \$34 (\$39.75); 16-in. round, \$34.50 (\$40.25); 16-in. rectangular, \$37 (\$40); 17-in. rectangular, \$40 (no previous price); 19-in., \$62 (\$75). List prices: 12-in., \$31.50 (\$34); 12½-in., \$32 (\$35); 14-in. rectangular, \$36 (\$37.50); 15-in., \$45.50 (\$53); 16-in. round, \$46 (\$53.50); 16-in. rectangular, \$49.50 (\$53.50); 17-in. rectangular, \$53 (no previous price); 19-in., \$82.50 (\$100).

Dumont's 30-in. tube (Vol. 6:12) will go into commercial table model, to be called "Club 30," and will be offered next fall. It won't be ready, though, by time of NAMM Show in Chicago when DuMont fall line is due to be shown. Tube will be 20 to 24-in. long, will have 15 to 20-kv input. Exact description hasn't been released, nor price decided. It's expected to find market mainly for public places.

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This week's Radio Parts Distributors Conference & Show at Chicago's Hotel Stevens had estimated 3000 distributors on hand, more than 8000 visitors. Of some 200 displays, 26 were TV antennas, 8 radio-TV chassis, remainder usual run of components and accessories. Tone of show was as optimistic as receiver trade—everybody looking to boom months toward end of year, most enjoying orders placed far in advance of fall season.

Although Parts Show itself doesn't have receiver lines, some of smaller TV manufacturers set up showrooms in nearby hotels—among them Air King, Atwater, Automatic, DeWald, Jackson, Majestic, Philmore, Regal, Starrett, Tele King, Video Products Corp.

Among new sets shown were Air King's 14-in. rectangular table at \$200; Atwater's 14-in. rectangular table \$200, 16-in. round table \$220, 16-in. rectangular console \$240, 16-in. round console with doors \$300, 19-in. console \$300; DeWald's 10-in. table cut \$30 to \$170, with doors \$180, 16-in. table \$270, 19-in. console \$370, 16-in. console cut \$40 to \$300; Regal's 19-in. console \$320.

New models are emerging gradually, these being reported this week: Tele-tone 16-in. rectangular console with AM-phono, \$300; Trav-Ler 14-in. rectangular consolette \$200 (has ceased 12½-in.); Jackson 14-in. rectangular consolette, \$220; Trans-Vue 12½-in. table \$190, consolette \$230; Mars 16-in. stylized console \$595, 19-in. console \$665, combination \$1195; Peerless 14-in. rectangular table \$200, 16-in. rectangular table \$280, console \$300 (has ceased making 12½-in.); Conrac 16-in. console with doors \$390, 19-in. \$450 (has ceased making 12½-in.). [For full names and addresses of companies, see *TV Directory No. 10*]

Industrial Television Inc. lists 12½-in. table \$149, console \$249; 16-in. table \$199, console \$299, with doors \$319, with remote control \$379; 19-in. remote control \$469, in metal cabinet \$660 . . . Bace has cut 16-in. table from \$385 to \$325, consolette from \$423 to \$385; 19-in. consolette from \$595 to \$485, with commercial remote control from \$795 to \$660. Bace also has new 16-in. console with half doors \$395, same with 19-in. \$495, with remote control \$595 . . . Air King's forthcoming metal 16-in. rectangular table (Vol. 6:13) will be priced at \$200.

Admiral's \$100 trade-in allowance on used 7 & 10-in. sets, applied toward purchase of any one of its five 19-in. models, was big news this week—had some rivals calling it just another price cutting device. Sales v.p. Wallace C. Johnson said it was "designed to educate viewers to the advantages of the larger sized tubes, which can be viewed comfortably from a distance of 3 feet." The trade-in applies to TV-only consoles listing at \$495, \$515 & \$535, and to TV-radio-phono combinations at \$695 & \$775.

Motorola made news this week in announcing an estimated \$15,000,000 national and local advertising budget for 1950—triple last year's, said ad chief E. L. Redden. Ruthrauff & Ryan is handling TV-radio advertising; Warwick & Legler, newspapers; Gourfain-Cobb, magazine.

Lowest priced projection TV yet offered is table model at \$299 announced by Scott (now owned by Meck). Set uses Protelgram, formerly was \$495. Scott also has 16-in. rectangular combination at \$695, will show radio-TV line in Chicago's Hotel Blackstone June 1.

Capehart has new 16-in. period console with doors, \$380; it has new, more sensitive chassis (Vol. 6:20).

Trade Personals: H. Ward Zimmer, Sylvania operations v.p., recently made a director (Vol. 6:17), elected this week as executive v.p. . . . Maj. Gen. Roger B. Colton, U. S. A. retired, elected president of Federal Telecommunications Labs, IT&T research unit, succeeding Harold H. Buttner, appointed v.p. and deputy technical director, IT&T . . . Bell Labs' Wm. H. Doherty gets honorary degree June 7 from Catholic University of America in recognition of his scientific achievements . . . Five new Philco promotions, in line with company policy to develop own executives: John F. Gilligan, named v.p. in charge of advertising; Henry T. Paiste Jr., v.p., TV-radio service & quality control; Ray B. George, v.p., TV-radio merchandising; Walter H. Eichelberger, v.p., refrigeration merchandising; James M. Skinner Jr., shifted from v.p. in charge of service & parts div. to v.p. & gen. sales mgr., refrigeration div. . . . James C. Affleck, ex-adv. & sales promotion mgr., Radiomarine Corp. of America (RCA), joins DuMont as sales promotion mgr., receiver sales div. . . . Sam Norris elected president of Amperex Electronic Corp.; was executive v.p. . . . Vinton K. Ulrich named mgr. of renewal tube sales div., National Union Radio Corp. . . . Glenn E. Webster, ex-Collins and Turner, named distribution mgr., Scott Radio.

Financial & Trade Notes: Whisperings from some of the majors: Admiral second quarter probably will be well ahead of first (Vol. 6:15) due to continued TV production and seasonal upturn in refrigerators . . . Motorola's second quarter won't be off much . . . Zenith said to have had very big final quarter to its April 30 fiscal year . . . DuMont estimates 1950 earnings will "conservatively" run between \$5,000,000 and \$6,000,000 on volume of \$75,000,000 to \$80,000,000 (vs. \$3,269,880 net on \$45,267,089 in 1949.)

Philco TV output won't slow down until July-August, accelerating rapidly thereafter, in September should run ahead of record 220,000 units produced in March; refrigerators enjoying good season; plans to expand radio output second half of this year, concentrating on radio-phono consoles.

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Emerson reports new record earnings for 26 weeks ended May 6, in report mailed to stockholders this week. Net income rose to \$3,048,948 (\$3.46 per share) from \$1,896,126 (\$2.37) earned in corresponding 26 weeks ended April 30, 1949. On May 6, 879,805 shares were outstanding; on April 30, 1949, 800,000 shares.

Trav-Ler filed SEC report showing net profit of \$314,931 (\$2.10 a common share) on sales of \$3,281,262 during quarter ended March 31. No comparable figures for period are available, but firm's 1949 earnings were \$299,122 (\$1.99) on sales of \$7,014,971, and in 1948 earnings were \$70,213 on sales of \$5,322,148.

Pacific Mercury Television Mfg. Corp. (formerly Pacific Cabinet & Radio Co.) report to SEC for 11 months and 4 days to March 4, 1950 shows net profit of \$171,502 on sales of \$4,372,230, compared with \$42,081 profit on \$1,774,168 sales for fiscal year ended March 31, 1949. Major portion of TV and radio-phono sales are to Sears Roebuck.

Hallicrafters has revised previous report (Vol. 6:16), filing with Midwest Stock Exchange statement showing \$14,404,300 net sales, \$748,228 profit (\$1.11 per share), for 7 months to March 31.

Reeves-Ely Laboratories Inc. reports 1949 net profit of \$731,420 (95¢) vs. \$636,868 (79¢) in 1948.

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IT&T chairman Sosthenes Behn reported to stockholders this week that subsidiary Capehart-Farnsworth should exceed \$35,000,000 in gross sales this year, twice that of 1949—and he also predicted 1951 will double this year's. Company plans to turn out Capehart equipment on assembly line at Federal plant in September, he said. IT&T is expanding domestic activity to assure greater dollar volume, but dividend resumption (after 18 years of non-payments) is still indefinite. This year's net, Mr. Behn stated, should be at least twice the \$4,685,000 earned last year; first quarter income was \$2,100,000, compared with \$1,500,000 same period last year.

Television & Radar Corp., organized in April, has become parent company of Plastoid Corp., Hamburg, N. J., making coaxial cable, insulated wires, etc., and "also planning the development of converters which may be used in changing over present TV sets to receive color when color broadcasting is undertaken as it is believed that in about a year, if color broadcasting is ready for use, there will be a demand for some 5 to 10 million converters." Quote is from May 15 circular offering 747,500 shares of Television & Radar Corp., sold at 40¢ through Tellier & Co., New York. President of company is Louis Danenberg, head of Plastoid since 1941.

That CBS plans own TV in Hollywood, separate and apart from its 49% interest in KTTV (*Los Angeles Times*, 51%), was made clear this week when it announced it will build a "Television City" on site of Gilmore Stadium, extending 3 blocks along Beverly Blvd. and one block on Fairfax Ave. Purchase of property is being completed, construction due to start in July 1951. Meanwhile, KTTV has occupied and acquired Nassour Studios (Vol. 6:20); CBS is trying to buy Don Lee's KTSF (Vol. 6:17,19); and CBS presumably will be in there pitching, post-freeze, to acquire limit of 5 TV outlets of its own (now owns only WCBS-TV outright and the minority in KTTV). NBC & ABC each has 5 stations, DuMont 3—and nearly all of these are now reported at or near profit point.

Most authoritative roundup on TV interference to date was presented by FCC chief engineer Curtis Plummer in May 25 talk to Canadian Manufacturers Assn. in Toronto. He listed 3 broad categories of complaints: (1) Attempted reception beyond normal range. (2) Apparatus deficiencies, particularly poor set design. (3) Misunderstanding of TV's inherent limitations. Oscillator radiation (Vol. 6:8, 14, 17-19) was termed "a most insidious type." Of 3 cures (reallocation, change of IF, limiting radiation), it seems FCC considers last most desirable. For co-channel trouble, he said, greater spacing seems best solution—offset carrier helping, but not enough. Also covered were harmonic radiation, ignition, diathermy, TV interference to AM, incidental radiation devices. If you desire full text, write to his office.

Improved kine recordings, call Vitapix, were announced by ABC this week with claims of quality good as professional 16mm film and cost about 30% less than ordinary kines. According to engineering chief Frank Marx, development took 18 months and improvement stems from special film processing, lighting, camera angles, new devices. He said new equipment will be installed immediately in ABC's New York, Chicago and Los Angeles stations, supplied to all affiliates as soon as possible. First recordings from Los Angeles are due East in 2 weeks.

First use of tri-dimensional TV is by Atomic Energy Commission's Argonne National Laboratory, Chicago. DuMont closed circuit (12 mc) monochrome was modified for purpose, which is to enable handling of radioactive materials from safe distance. Two lenses are placed in front of camera tube. In one arrangement, 2 images appear on receiving tube, are combined by means of polarizing filters; operator wears polaroid spectacles. In another setup, 2 CR tubes are used; several observers may watch simultaneously without wearing spectacles.

Looks like ASCAP-TV per-program agreement is long way off. This week, industry committee chairman Dwight Martin (WLWT) indicated funds would be sought for continuing committee's activities. In sending interim report to stations, Martin said committee had met with ASCAP 9 times since September 1949—but were near no final solution. He revealed also ASCAP was seeking per-program rate for spot announcements adjacent to programs using its music.

CIO's International Union of Electrical Workers won majority of votes among GE's 100,000 employees in NLRB election May 25. Vote was 53,970 for IUE vs. 36,683 for left-wing United Electrical Workers, recently expelled from CIO (Vol. 5:46, 49). IUE now represents 28,000 Westinghouse, 8000 RCA, 35,000 GM electrical workers.

Hazeltine's work on RCA color (Vol. 6:17, 18) will be shown to hearing participants and press June 14, at Little Neck, L. I. labs, now that its licensees have seen it.