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ARTS AND INDUSTRY

Television Digest

WITH AM FM REPORTS

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GAUGING GROWTH OF THE TV INDUSTRY: TELEVISION DIGEST's quarterly "barometer" of the TV industry -- our 72-page TV Directory No. 8: Television Rates & Factbook -- went into the mails this week to all full-service subscribers. It gauges significant changes since the 64-page edition of last April 1, some worth recapitulating:

As of July 1, exactly 72 stations were operating on commercial schedules (vs. 61 three months ago); 45 CPs outstanding (vs. 59); 338 applications pending (vs. 320). Of the 75 stations whose rate cards are published (3 additional starters being scheduled for July), all but 16 have local AM affiliations, usually common ownership. Rate cards of the 4 networks also list affiliates and prospective affiliates. Noteworthy is fact that station rate cards show trend toward standardized format (NBC and Katz patterns prominent); also that they offer more participation periods designed to attract smaller sponsors.

The 72 operating stations cover 41 market areas containing 21,484,000 families and an estimated 1,858,000 TV sets-in-use. On basis of Census Bureau's average 3.64 per family, that means about half the population of U.S. is now within reach of TV signals. Thus, more than 9 out of 10 families in TV-served areas remain to be equipped with TV sets. Margin really is wider inasmuch as sets-in-use estimate, by NBC as of June 1, includes the many sets in public places.

TV Directory No. 8 lists 106 U.S. and Canadian manufacturers making or planning to make some 500 different models of TV sets -- plus 8 kitmakers, 6 special installation firms, 12 private brands. These are detailed, along with 30 tubemakers, 22 makers of magnifying lenses, 5 transmitter manufacturers. Last April, there were 116 set manufacturers, 7 kitmakers, 8 special installers, 8 private brands. New list omits those who pulled out or never got started, includes many new companies.

Also included in Directory is list of 404 firms syndicating film or live program material to telecasters and advertisers (vs. 376 on April 1); a directory of experimental TV authorizations (including uhf); monthly TV receiver output figures since 1946; pre-freeze allocation table; coaxial-microwave network map, etc.

Note: Extra copies of TV Directory No. 8: Television Rates & Factbook are available to subscribers at \$2.50 each; to non-subscribers, \$5.

WANING DEMAND FOR AM-FM FACILITIES: Whether due to TV or (more likely) to tighter business conditions, mounting broadcasting costs, excessive competition, demand for AM-FM facilities is definitely in a slump. Any consulting radio engineer or attorney will attest to slowdown in AM-FM activity, and so do FCC records. Matter of fact, 12 AM licenses and 19 CPs were turned back to FCC during first 6 months of this year (see AM Addenda 3-A to 3-Z).

Statistics illustrate what's happening. At mid-year, there was net gain of only 52 new AM stations authorized, going from total of 2,131 AMs as of Jan. 1 (1,864 licenses, 267 CPs) to 2,183 as of July 1 (1,965 licenses, 218 CPs). In other words, 1,965 AM broadcasting stations are now in full operation.

That early postwar rush for new AM stations has almost pooped out, is manifest from fact that since Jan. 1 only 92 such applications were filed -- but 78 were dismissed. Improved facilities, however, continue to be sought, though at reduced rate: 99 applications filed, 26 withdrawn. As things stand now (July 1) there are

384 new-station applications pending, 260 for changes in facilities. Six months ago, score was 471 and 252.

In FM, water was really being squeezed out during first 6 months. While 31 new grants were made, 120 CPs and 3 licenses were cancelled. Only 7 new applications came in, while 6 were withdrawn. Nevertheless, number on air increased from 687 to 724. Figures at mid-year are: 361 licenses, 524 CPs and conditional grants (363 on air with STAs), 57 applications (see FM Addenda 2-0 to 2-NN). On Jan. 1, there were 212 licenses, 764 CPs and conditional grants (475 STAs), 85 applications.

FCC TAKES THE BALL ON THEATRE-TV: "Put up or shut up", is purport of FCC's call on Paramount, 20th Century and SMPE July 1 for statements of intent about theater-TV. FCC letter came just after its June 29 action taking away two experimental authorizations from Paramount on grounds frequencies hadn't been used for year. Coincidentally, too, joint New York meeting of TOA-SMPE-MPA heard warnings from TOA's TV chairman Mitchell Wolfson and SMPE's chairman Don Hyndman that movie industry has only 3-5 months in which to justify to FCC its demands for such frequencies.

FCC's letters asked: (1) views on frequency requirements, (2) whether theater TV could not be performed just as well by wire lines, (3) why common carrier couldn't handle signal distribution just as well. This latter idea seems strong in FCC thinking; it specifically alluded to 1945 "Report of Allocations" which suggested common-carrier operation of theater-TV.

Other theater-TV news: DuMont and sponsor Chevrolet will cut Paramount and Comerford theater chain (in Pa.) in on Notre Dame grid games (Vol. 5:23); contracts will be signed shortly approving big-screen showings in New York Paramount Theater and Balaban & Katz's big Chicago Theater, also in one or more Comerford houses. Terms expected to be same as Walcott-Charles prizefight showings (Vol. 5:26), or \$1,250 each...Rumors have either Fabian or Walter Reade chains planning to institute theater-TV in 40-50 houses in New York City area...Of 500 attending SMPE lighting techniques demonstration Tuesday in New York, some 350 were TV and ad executives; demonstration was also seen by Chicago SMPE via DuMont Network, telecast in some cities...SMPE president Earl I. Sponable is in Los Angeles surveying microwave routes for theater-TV experiments with group of Fox West Coast (20th Century) theaters in that area (Vol. 5:22).

PROVIDENCE & CHARLOTTE ARE NEXT: Providence's WJAR-TV starts Sunday, July 10 -- that's now definite, says John J. Boyle, radio manager for The Outlet Co., big dept. store. It will operate 7-10:30 p.m. daily, with test patterns 10-12 a.m. and 1:30-4:30 p.m. NBC-TV programs will be picked off-the-air direct from Boston's WBZ-TV, about 35 air miles away, pending AT&T microwave link promised in September. WJAR-TV thus becomes the 73rd station, Providence the 42nd market area opened to TV.

It's also definite that Charlotte's WBTV will start July 15, test patterns with multiscope having started July 1. These will continue 12 noon-7 p.m.

Three new applications this week: For Asheville, N.C., Channel No. 5, by onetime film actress Mary Pickford, who also recently applied for Durham and Winston-Salem (Vol. 5:17). For Sherman, Tex., No. 6, by 6 Dallas business men represented by Dallas attorney Ross Bohannon, who had also filed for 3 other Texas cities last week (Vol. 5:26); this is new group, however. For Green Bay, Wis., No. 4, by St. Norbert's College (WBAY). [Details on these applications will be in TV Addenda 8-A next week.] Note: There's no TV Addenda this week because TV Directory No. 8, now in mails, brings log of stations, CPs, applications up to date through June 30.

FCC cited San Antonio's KEYL and Phoenix's KTLX for delays in construction, gave them 20 days to decide whether they want hearing or will forfeit CPs. Both are held by same Texas oil group, but KTLX last week reported it was taking in new capital (Vol. 5:26). Minneapolis Star-Tribune (Cowles), holding CP for KTRV, in effect told FCC to take back grant since it can't work out divestment arrangement with Minnesota Tribune Co., owning 14.6% of Star Tribune stock and 50% of Minneapolis' WTCN. FCC had conditioned KTRV grant on end of alleged "interlock", which Cowles interests regard as unfair in view of lack of control -- claiming FCC is thus depriving Twin Cities of TV service they're willing and eager to provide.

Worried lest FCC ignore what they consider allocation practicalities, Haley, McKenna & Wilkinson law firm submitted huge (125 pages) petition Friday. Their principal points: (1) Station should be protected to 2 Mv/m contour over 90% of metropolitan area, 50% of metropolitan receiving locations. (2) 50 kw/500 ft. formula is mythical; smaller cities need less, larger more. They've analyzed all applications, found vast majority asking less than 50 kw/500 ft. (3) Offset carrier should be authorized actually pushing 2 Mv/m contour protection out to about .5 Mv/m. (4) Channels 7 to 13 give less tropospheric trouble than 2-6 and need more power/height for coverage, thus should be allowed more. (5) Power, not height, is the troposphere hell-raiser. Therefore, you can improve primary coverage of stations by allowing higher towers, holding powers same or reducing them. Yet interference to others won't be increased. (6) Directional antennas should be authorized, not to squeeze in new stations, but to increase coverage of existing grants. (7) Don't take half of uhf for same system as present, or you'll kill off chances of improved systems in uhf—not enough spectrum left. And furthermore, there really isn't that kind of demand for uhf.

FCC proposed to move TV remotes, STLs and inter-city relays from experimental to regular status this week. Rule would give each station a frequency in each of 3 groups of bands—1990-2110, 6875-7050, 13,025-13,200 mc. Stations would also share 6 frequencies between 12,875 and 13,025 mc with common carriers. Coming perhaps as surprise is assignment exclusively to common carrier of 7050-7125 and 12,700, 12,875 mc bands. Sound channels to accompany above video-only channels range from 890.5 to 910.5 mc. Unattended (remote control) would be permitted, provided operator keeps close tabs on remote station's operation with indicating devices. FCC again reminded stations that inter-city relays are temporary, allowed until common carrier comes along, should be amortized as quickly as possible.

Comr. Webster's reappointment is expected to be cleared for Senate approval after hearing July 6 before Interstate & Foreign Commerce Committee. Reappointment of Webster, whose term ran out June 30, was first held up by unknown questions, since resolved, some Senators (not on committee) wanted to ask. Now, Sen. Tobey (R-N. H.) seems only one left with queries. Guesses are they're about his old sore spots—FM and clear channels. Sen. McFarland (D-Ariz.) is still working on his FCC streamlining bill (Vol. 5:23-25), will need all the breaks to get it through this session.

FCC's interpretation of audio-video rule to insure full use of video (Vol. 5:26) brought complaints from TBA, NAB, several individual stations. FCC answered TBA and NAB with letters giving them until July 20 to file comments, but said nothing about suspending or enforcing interpretation in meantime.

FCC politely shelved TBA's proposal for partial lifting of TV freeze (Vol. 5:25), telling TBA it looks as if there will be channel changes in some cities TBA mentioned and, besides, let's see what new allocation, due shortly, looks like first.

Emerson will have \$25 uhf converter when uhf is in use, president Ben Abrams told distributors in New York this week. But, he added: "It is doubtful that such a change can become effective for at least 2 years." Color, he said, is still 4-5 years off.

NBC affiliates' annual convention has been scheduled for Sept. 7-10 at Greenbrier, White Sulphur Springs, W. Va.

Magnavox was very much in the news this week, or since its stock broke to surprising low of 5 (1949 high, 19¾)—but its situation seems to be clarifying, as described to stockholders at June 29 meeting. First of all, it secured extension to Dec. 15 of \$3,550,000 loans. Then, president R. A. O'Connor reported (1) that though in first 3 months of its new fiscal year (March, April, May) it operated in the red (amount unstated), sales that quarter totaled \$4,600,000 vs. about \$4,000,000 for same period last year (profit then, \$125,000); (2) that June sales of \$1,600,000 compare with \$1,000,000 in June, 1948 and this June will be profit month; that he expects rest of 1949 to show profit; that February inventories of about \$8,000,000 have been reduced last 4 months by \$1,250,000; that bulk of these inventories are not in radio-phonographs but in components for radio and TV sets. Mr. O'Connor also asserted belief market for radio-phonos is not "dead"; said Magnavox dealers sold 10,000 such sets in May, double number sold during same month last year.

Zenith Radio's profits dropped for fiscal year ending April 30, amounting to \$2,706,889 (\$5.50 per capital share) vs. \$3,484,515 (\$7.08) for preceding year, according to annual report released July 1. Sales for fiscal year ending April 30 were \$77,146,861 compared with \$79,406,133 for preceding year. Inventories on April 30 totaled \$9,022,877, down \$698,993. They consist mostly of TV materials and have been further reduced since April 30, company stated. Earned surplus account at fiscal year's end was \$10,646,540. *Note:* Annual report devotes page each to "Phonevision" "Theatre Projection Television," promising "merchandising and operations test of Phonevision in the Chicago area" before end of this year and stating Zenith-Rauland have perfected theater-TV equipment that's now ready.

Hoffman Radio Corp., Los Angeles, reporting accelerating TV set sales in West Coast TV areas in which it markets (Los Angeles, San Diego, San Francisco, Seattle), had sales of \$2,582,459 and profit of \$78,421, or 30¢ per share on the 255,051 common shares outstanding, for 5 months ended May 31, 1949. For same 1948 period, sales were \$1,111,355, with loss of \$11,006. June 16 report to stockholders shows H. L. Hoffman, president, owner with wife of 47,167 shares, drew \$42,500 remuneration for 1948; R. J. McNeely, sales mgr., 800 shares, \$14,000; C. E. Underwood, secy-treas., 7,640 shares, \$14,000.

Nickel-in-the-slot TV is subject of experiment by GE and AMI Inc., 127 N. Dearborn, Chicago, juke-box manufacturer (Vol. 5:9). Experiment involves 2 booths in Hoboken (N. J.) luncheonette, with TV sets on wall above each table, 10-in. tube mounted vertically so viewers can see pictures on slanted mirror at eye level. Fee is 5¢ for 3 minutes. Proprietor of eating establishment controls master unit for program. Each "master" set can run up to 20 "slave" units, says GE.

New CBS contract with Madison Square Garden Corp. gives network radio-TV rights to all St. Nicholas Arena fights, all Garden-promoted outdoor championships, out-of-town Garden-promoted fights—but NBC retains rights to fights in Garden Friday nights. CBS recently sold to Garden its stockholdings in Tournament of Champions (Vol. 5:22).

Mounting TV costs, rather than any diminution of AM income, causing CBS to let out about 150 employes next week in move to cut operating expenses by 10%. ABC recently dropped nearly 100 from payroll, NBC about 80.

Chicago Tribune's WGN-TV started transmitting from new antenna atop Tribune Tower Wednesday, after having operated from Chicago News building last 18 months. New location is 180-ft. higher.

Personal notes: Joe McConnell elected executive v.p. of RCA at July 1 board meeting; has been v.p. for finance, having gone to New York from Camden when Frank Folsom became president . . . Frank Folsom sails for Europe on *Queen Mary* July 6, accompanied by Meade Brunet, v.p. of RCA International . . . E. Patrick Toal, ex-GE, joins North American Philips as TV sales mgr. . . . Frederick Coe, ace producer, named NBC-TV mgr. of new program development . . . CBS appoints Hal Hudson mgr. of CBS network TV Dept., Hollywood, Robert Forward replacing him as acting program director of KTTV; Stuart M. Osgood, new director of CBS-TV production; H. Grant Thies, director of film procurement; John J. Derr, asst. director of TV sports . . . Martin Begley, veteran producer, director and writer, named NBC-TV talent procurement supervisor under Charles Prince . . . M. Clay Adams new RKO Pathe commercial and TV dept. mgr., replacing Phillips Brooks Nichols, resigned . . . R. A. Hackbush, long prominent in Canadian radio, elected president-managing director of Stromberg-Carlson Ltd., Toronto . . . William S. Paley, CBS chairman, sailed July 1 to spend 7 weeks in France and Italy. . . Charles M. Odorizzi, ex-Montgomery Ward v.p., joins RCA Victor July 5 as v.p. in charge of service.

Appointment of NAB's Jess Willard as TV director (Vol. 5:18-23) won't be made until after board meeting July 11 at Wentworth-by-the-Sea, N. H. He still hasn't indicated he'll accept. Meanwhile, NAB has been extremely active in TV matters: Willard sent letter to all TV stations warning operators to check music rights before telecasting. BAB is sending out first batch of card file on advertisers who have co-op deals with dealers and distributors (TV items will number more than 150). Sales managers executive committee voted to enlarge TV subcommittee, headed by WOIC's Gene Thomas, new names not yet announced. Legal Dept. fought San Francisco antenna ordinance, got city to eliminate \$2.50 fee.

Some points about retailers' use of TV, made at sales promotion and visual merchandising convention of National Retail Dry Goods Assn. in Chicago this week: TV hasn't produced mass results obtained from newspaper space because of reluctance of retailers to promote low-priced mass-appeal merchandise on their shows, tending rather to prestige advertising, according to M. J. Markowitz, Alexander's Dept. Store, New York. He noted: Newspapers don't get complete attention that TV commands, but can be read and reread, whereas TV message, once missed, is gone forward. Allied Stores' Walter Dennis predicted "syndicate" field in TV will become more important to local advertisers than it has been to radio; Allied's radio-advertising chief added that radio formula ("consistency, quality and repetition") also applies to TV.

Commercial success story from Milwaukee's WTMJ-TV: Single one-minute announcement on 4-4:30 p.m. *What's New in the Kitchen* participating show, June 23, offering a 29¢ plastic whiskbroom free on written request, resulted in 1,239 requests for sponsor Otto L. Kuehn Co., wholesale grocer. Only one TV announcement was carried and no other medium used; return is the more remarkable because June 1 count shows 26,738 TVs in area.

TV rate guarantees for not more than year were recommended by National Assn. of Radio Station Representatives this week to its members "out of consideration for the interests of TV station owners." Understood NARSR didn't like deal General Mills got from ABC for *Lone Ranger* telecasts—guaranteeing rates more than year.

CBS will now sell time for "the expression of opinion on public issues" since it intends to broadcast editorial opinion of own in view of recent retraction of Mayflower decision (Vol. 5:23), president Frank Stanton said July 1.

Network sponsorships and programs: ABC-TV has sold *Hollywood Screen Test* to Best Foods Inc. (Hellman's Mayonnaise, Nucoa Margarine) starting Sept. 3 on WJZ-TV, New York, and to Duffy-Mott Co. (apple juice, jellies) starting Sept. 24 on 6 other stations, Sat. 7:30-8 p.m.; 52-week co-op involves \$200,000 in time and talent . . . B. F. Goodrich's *Celebrity Time* July 3 moved to Sun. 10-10:30 p.m., expands to 13 ABC-TV stations July 17 . . . Ipana expanded its Tue.-Thu. segments of *Lucky Pup* on CBS-TV to 8 stations June 28; Popsicles sponsors Mon., Phillips Soups Tue., Keds resumes Fri. Aug. 12; as of July 7, *Lucky Pup* moves to 6:45-7:15 p.m. . . . *Bigelow Show* with Paul Winchell and Dunninger ends NBC-TV run July 7, goes to CBS-TV in fall; its Thu. 9:30-10 p.m. period on NBC-TV will be taken by Buick's *Olsen & Johnson* at end of summer . . . NBC's *Bell Telephone Hour* has been kine-recorded to determine whether it should be simulcast or put into separate TV production . . . No definite plans yet to telecast Jack Benny, he said when he left New York for Hollywood this week after conferences with CBS and Lucky Strike . . . CBS building up Ed Wynn for TV show, assigning producer Ralph Levy to Hollywood for chore; it will be kine-recorded . . . Talk in trade is that General Foods will spend about half its 1949-50 radio budget on TV . . . Gillette will sponsor July 12 all-star baseball game from Ebetts Field on 14 CBS-TV outlets.

TV station sponsorships: RKO providing its local theaters with trailers on *The Big Steal* for TV placement; also 6 trailers for new promotion of *The Outlaw* to be released in August, thru Foote, Cone & Belding . . . Richfield Oil using film spots on all Pacific Coast stations; also sponsoring *Pantomime Quiz* on KTTV, Los Angeles, and newsreel on KTLA . . . RCA distributor for Oklahoma sponsoring *Telenews-INS* on WKY-TV 5 times weekly . . . Carter Products (Arrid) buys participations in *Six Gun Playhouse* and *Film Theater* on WPIX, New York . . . Reddi-Whip Co. sponsoring *Mrs. Philadelphia Contest* on WPTZ, starting July 7, Thu. 9-9:30 p.m., winner competing in Asbury Park finals . . . Cushman Sons Inc., for bakery products and ice cream, buys 5 one-min. weekly on WABD, New York, following *Small Fry Club* . . . Howard Buick dealers sponsoring *Tele-Word* on Los Angeles' KTTV Fri. 7:45-8 p.m., based on crossword puzzle game.

Comic Fred Allen's dim view of TV is theme of slashing article by Joe McCarthy in July 4 *Life Magazine*. Sample of gag-packed (but serious) criticism: "Aside from the rapid consumption of creative material . . . the thing about TV that makes Allen leery is its current technical shortcomings. The screen on the average set is too small for his taste. He feels that it prevents subtle touches of expression from getting across to the audience. 'The screen isn't the only small thing in TV,' Allen said. 'Smallness seems to be the outstanding characteristic of the whole medium right now. It has small minds, small talents, small budgets. In fact you can take anything connected with TV, and you'll find it so small that you can hide it in a flea's navel and still have enough room beside it for the heart of a network vice president.'"

Correction: Our recapitulation of 1948 advertising expenditures, based on June 17 *Printers' Ink* report, erred in that breakdown of the estimated 1948 total of \$4,830,700,000 was taken from 1947 rather than 1948 column. Here's the correct breakdown, in millions: newspapers, \$1,749.6 or 36.2% (8.1% national, 28.1% local); radio, \$596.9 or 12.4% (7.8% national, 4.6% local); magazines, \$512.7 or 10.6% (5.3% weeklies, 2.8% women's, 1.8% general, 0.7% farm); farm papers, \$20.4 or .4%; direct mail, \$574.5 or 11.9%; business paper, \$230.1 or 4.8%; outdoor, \$132.1 or 2.7%; miscellaneous national, \$578.8 or 12%; miscellaneous local, \$435.6 or 9%.

CUTBACKS SEEN TEMPORARY EXPEDIENT: Cutbacks are the order of the day at most TV set, tube and component factories -- but it's almost impossible as yet to calculate the extent. On the other hand, sales chiefs of some top producers won't concede that the condition is anything but seasonal and temporary, though doubtless aggravated by excessive competition. They're confident current shakedown will result in a stabilized industry (though with fewer set and tube makers) before end of year -- despite currently erratic price structures, illusory bearishness of radio-TV stocks on the exchanges, and talk of recession.

No one we've contacted is yet singing the blues. Nor does any industry leader indicate he thinks output will fail to achieve predicted 2,000,000 this year -- first 5 months having already brought forth some 865,000 units (Vol. 5:26). Actually, Admiral's Ross Siragusa told New York Times last week: "Admiral production is continuing on schedule at the rate of 40,000 units monthly. Naturally, we anticipate a slight decline in July and August but it will not be a sharp one. We foresaw this at the beginning of our year when we set our 1949 goal at 400,000 TV sets. I am confident we are going to achieve it."

You'll be hearing big news soon about new models from leaders like RCA, Philco, DuMont -- some of it timed for major expositions like American Furniture Mart, Chicago, July 5-15; Music Merchants Show (NAMM), Hotel New Yorker, New York, July 25-28; Western Furniture Mart, San Francisco, Aug. 1-6. Later there will be National Television & Electrical Living Show in Chicago Coliseum, Sept. 20-Oct. 9.

SET, PRICE & MERCHANDISING NOTES: Emerson, Bendix and Westinghouse highlighted an otherwise dull summer week in the TV trade -- first 2 announcing new sets, each announcing some price cuts.

Emerson's new line includes 10-in. wood consolette at \$249.95; 10-in. table model with AM-FM and phono-jack, \$269.50; 10-in. console with AM-FM-phono and 45rpm, \$369.50; 16-in. table, \$399.50. Planned are 12½ and 16-in consoles with AM-FM-phono and 45rpm, not priced. Emerson also reduced 7-in. portable from \$179.95 to \$169.95.

Bendix has new 10-in. consolette at \$239.95 with 16 tubes and expanded picture. Its plastic \$199.50 table model (Vol. 5:21) will be known as Shamrock, pilot model having been built for prospective bulk order for millionaire Glenn McCarthy's fabulous 1400-room Shamrock Hotel in Houston. Bendix also has consolette with 12½-in. tube to show, but hasn't priced this yet nor decided on production. Continued are its 10-in. \$259.95 table model, and its console with AM-FM-2 speed phono originally priced at \$625, then cut to \$499.50, now \$399.95.

Westinghouse cut its 10-in. table model from \$269.95 to \$249.95, consolette from \$369.95 to \$299.95; also has reduced 16-in. console from \$599 to \$499.95. Prices of new 10 and 12-in. table units (Vol. 5:23) were also announced as \$259.95 and \$325, respectively...GE's first 16-in. set, consolette ensemble (receiver with matching table), is priced at \$495, due for July shipments...Arvin Division of Noblitt-Sparks, makers of small radios, in trade ads announces entry into TV manufacture with line of 10, 12 and 16-in. models to be introduced at Chicago Furniture Mart, no prices or data yet...Hallicrafter's new line, to be marketed through regular distribution channels, will be shown at Chicago Furniture Mart next week, consists of 10, 12½ and 16-in. wood table models, 12½-in. consolette, 16-in. console, 16-in. in better furniture -- all still unpriced. Deliveries will begin Aug. 31.

Reports Pilot was closing out its 3-in. Candid TV were branded false by v.p. E. L. Hall, who tells us it's still being manufactured. Tiny-picture set is listed at \$99.50, but was being offered at \$59.95 by New York's Davega chain and Macy's, which Mr. Hall found "incomprehensible" in view of dealer's price at \$77.60.

Correction to Trade Report in Vol. 5:26: Federal Television has 3 new 16-in. sets -- table, \$349.50; consolette, \$399.50; console with AM-FM-3 speed phono, \$499.50...Zetka Television Tube Inc.'s entry into large-sized picture competition (Vol. 5:26) is 16-in. flat-faced glass tube that's 1-in. shorter than 15-in. glass and 2-in. shorter than 16-in. metal-coned...Watch for more about that shorter, sturdier, lighter 20-in. tube we reported on last week...Trav-Ler breaks ad campaign in

all TV areas in latter August, thru Jones Frankel Co., Chicago agency...Templetone, New London, Conn., has ceased making TV sets.

Merchandise notes: "Name your price on any famous make Television and we'll try to meet it," captioned ad of Time Square Stores chain in Wednesday's New York Times; ad offered discounts from "20% up to 70%" on 2,072 sets, listed 9 brand names (Admiral, Crosley, Emerson, GE, Motorola, Olympic, Philco, RCA, Trav-Ler), stated that some were floor samples, some in sealed crates, all fully guaranteed...Price guarantees for 30 days from time of new TV set purchase, is new policy announced by Emerson. Company will rebate to dealers any reduction in price ordered during such period; dealer in turn is required to rebate customer...Second Lyratone TV set, made for Brooklyn's Abraham & Straus store by Sightmaster (Vol. 5:22), is 15-in. console for \$339...Macy's New York has 15-in. private label Artone for \$379...Spiegel Inc., Chicago mail order house, has 4 private-brand sets (Aircastle) listed in fall catalog now in mails: 7-in. portable and 7-in. table models, \$124.95; 10-in. table, \$174.95; 12-in table, \$229.95...Private label Delco, made for General Motors' United Motors Service by Hallicrafters, reported to have new 16-in. console at \$595, with other new models due in August and September...DuMont using "Telecruiser," its \$100,000 TV studio on wheels, to hypo sales. It's parked in front of dealers' stores, where camera chain is set up to televise crowd and store, 2 receivers operating on sidewalk and one on truck so crowd can watch.

* * * *

Increasing number of private-label TVs is indicated in our July 1 TV Directory No. 8, whose section on manufacturers and receivers lists 12 such brands as compared with 7 last April (when Muntz was erroneously listed as private brand). List may not be complete (for new ones are cropping up regularly) but it includes: Montgomery Ward's Airline, Spiegel's Aircastle, Affiliated Retailers' Artone, Vim's Bestone, General Motors' Delco, Firestone's Firestone, Lafayette-Concord's Lafayette, Abraham & Straus' Lyratone, Davega's Raleigh, Sears Roebuck's Silvertone, Sunset Electrical Co's Sunset, Western Auto's Truetone.

VHF-UHF 'COLD FRONT' GETTING WARM: FCC holds firm to target date of July 8 (next Friday) for issuance of its major attack on freeze -- proposed vhf-uhf allocations plus statement on rules and standards. It will propose channels for virtually every city with AM or FM stations.

JTAC has given FCC its approval of Ad Hoc report, saying just about what Ad Hoc itself said: report is limited, but no one could do any better. Then JTAC has set up subcommittees to scrutinize new proposed allocation and rules, to suggest stand JTAC should take at fall hearings. Committeemen are: Siling and Jett on allocation, Smith and Fink on color, Hogan and Bown on Bell Labs' request for 475-500 mc mobile communications system. July 19 is tentative date for their reports, depending on when FCC issues proposal.

Offset carrier will be demonstrated July 6-7 at RCA Princeton Labs, with 100 or more observers on hand. JTAC is particularly interested in subjective reactions to picture improvement. ABC is now showing active interest, particularly since Wilmington's WDEL-TV took to air, between New York's WJZ-TV and Washington's WMAL-TV -- all on Channel 7. The way everyone's figuring it is that any improvement, even if less than claimed by system's proponents, is worth a few new crystals.

New England offset operation has brought kudos from Jerome Respass, La-Pointe Plascomold Corp., Unionville, Conn., whose business was almost killed off by troposphere. He makes long-distance receiving antennas and has complained vigorously to FCC, Congress, RMA, that FCC's existing allocation was a terrible mistake. Now, however, he writes us: "I am pleased to report that the results [of offset] have been very gratifying and that reception from any one of these 3 stations [WBZ-TV, WRGB, WNBT] is now quite satisfactory." Also, "situation between WCBS-TV and WMAR-TV is very much improved." However, he'd like to see New Haven's WNHC-TV and Philadelphia's WFIL-TV offset on Channel 6, same with Newark's WATV and Baltimore's WAAM on No. 13. He's also somewhat troubled by summertime freak 500-600 mi. transmissions (Vol. 5:23), suggests offset even for stations separated that much.

MARTIN CODEL'S

AUTHORITATIVE NEWS SERVICE
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VISUAL BROADCASTING
ARTS AND INDUSTRY

Television Digest

WITH AM FM REPORTS

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July 9, 1949

NBC PICKS PAT WEAVER, TO SPLIT AM-TV: NBC is trending inevitably toward division of its Television and Sound setups into separate and distinct organizations with their own sales, program and technical staffs. That's the logical result to be expected from its current Booz, Allen & Hamilton management survey. And this week's appointment of Sylvester M. (Pat) Weaver Jr. as v.p. for TV is step in that direction. Weaver quits Young & Rubicam Aug. 1, along with his personal assistant Frederic W. Wile Jr. He takes over post that Hollywood v.p. Sidney Strotz held for a time; now TV operations chief Carleton Smith and staff will report to him. Later, his department will become wholly self-sufficient -- possibly even competitive with NBC-AM -- though under common management. That Pat Weaver is eminently qualified for big job, is manifest from his record first as Don Lee program director, which he left in 1935 to produce Fred Allen and other shows for Young & Rubicam; then as radio ad chief for Lucky Strike, 1938-47 except for 4 years of war service; then last few years back at Y&R where he handled such network TV accounts as Arrow, Bigelow, GE, General Foods, Gulf, Lipton, Time-Life; plus spots for Borden, Goodyear, Simmons, Sterling.

FCC's TV INTENTIONS—FACTS & GUESSES: FCC's detailed end-of-freeze proposals will be out Monday. That's definite, since it was approved late Friday. The usual rumors about contents of proposals, some quite reliable, others not, whipped about town even as Commission decided what they were. We'll publish the detailed allocations and data when issued. Meanwhile, for your own speculation, here are some of the more substantial rumors of Commission's intentions -- not verifiable at FCC:

- (1) Power/height maxima: 100 kw/500 ft for vhf, 200 kw/500 ft for uhf.
- (2) Co-channel separation of 220 mi., adjacent channel 110 mi., for both vhf and uhf, meaning that many non-granted but eagerly-sought vhf channels are deleted from present allocation.
- (3) Offset carrier for extending coverage, but not for closer station spacing.
- (4) Addition of 43 uhf channels, numbered from 14 to 56 -- 33 to be allocated now, 10 reserved for community station assignments and for later demand. Vhf and uhf are intermingled.
- (5) "Open door" for 6 mc color ajar same degree as before (Vol. 5:22 et seq).
- (6) New methods for computing service and interference (Vol. 5:26).
- (7) Only 3 existing grants to be shifted to different vhf channels.
- (8) Simple directional antennas permitted (possible 10-to-1 suppression).
- (9) Discussion of issues for forthcoming hearing beginning probably late August.

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If you have any idea color is a minor issue in the whole TV freeze problem, you should read transcript of Wednesday's 3-hour Senate committee hearing on Comr. Webster's reappointment. It's almost all color. Senator Tobey (R-N. H.) lit into Webster with a list of 252 questions apparently directed at: (1) Showing that TV industry, principally RCA, is villain holding back color while exploiting black and white. (2) Getting assurance FCC will do more than talk about color, but will actively labor for it. Hearing isn't over yet; it resumes Wednesday (July 13) but Webster's chances are considered good for confirmation.

Flavor of hearing can be sensed from such questions as: Have you heard talk

that RCA and CBS are dickering to give RCA rights to CBS's color? Webster said he hadn't. What if industry doesn't come forth with information on how to produce color compatible with present receivers; would you subpoena them? Webster couldn't visualize industry failing to produce data at hearing, but said he'd be for subpoena if necessary. Doesn't this compatibility idea favor RCA's patent claims? Not that he knew of, replied Webster. Wasn't FCC ready to fire acting chief engineer John Willoughby a few weeks ago because he's for color and against RCA? Webster said he knew of no intentions to fire Willoughby.

A torrid inquisitor, violent critic of RCA, close friend of FM inventor Maj. Armstrong, Sen. Tobey probed deeply into Webster's concept of obsolescence -- seeking (in vain) to get admission present sets would be obsolete when uhf and/or color is authorized. Scope of questioning included movie and newspaper ownership of TV, even opinions on ranking of prominent radio engineers. Webster volunteered names of Prof. Everitt and Armstrong as tops. How about Jolliffe, Jansky? asked Tobey. Right up there, too, Webster replied.

It was Webster's tough luck to have his reappointment come up at this particular time. Any other commissioner would probably have faced same rugged treatment from Tobey, abetted by Chairman Johnson. In his quiet-spoken but bluntly frank way, Webster handled himself well -- but it was a pretty rough voyage for the veteran engineer and wartime communications chief of Coast Guard.

CAROLINA COVERAGE & OTHER TV NOTES: Charlotte's WBTV is all set for July 15 bow, reports its test patterns since July 1 not only cover 50-mi. radius but are being picked up well in such Carolina cities as Asheville, Winston-Salem, Greensboro, High Point, Raleigh, Spartanburg, Greenville, Columbia -- and even in Augusta, Ga., and Johnson City, Tenn. Well-heeled TV adjunct of 50-kw WBT (owned by powerful Jefferson Standard insurance interests) will program daily 6:30-9 p.m., with patterns and multiscope 12 noon-6:30.

Providence's WJAR-TV definitely debuts July 10, so WBTV will be station No. 74 on the TV roster. [For rates and data of both, see TV Directory No. 8.]

A third application for Durham, N.C., was filed this week -- by WDNC-Durham Herald & Sun, seeking Channel 4. [For details, see TV Addenda 8-A herewith.] Added to list of CP holders cited for delays in construction was KTVU, Portland, Ore., projected by group of Hollywood radio men who got CP April 29, 1948. WJAX-TV, Jacksonville, Fla., cited last May for delay (Vol. 5:19), was set for hearing Sept. 21. And FCC law dept. is objecting to examiner's recommendation to grant extension of Raytheon's WRTB, Waltham, Mass. (Vol. 5:26), which CBS is particularly anxious to see get going in order to secure an exclusive Boston affiliation.

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Notes on upcoming new stations: KRLD-TV, Dallas, building downtown quarters opposite Times-Herald plant, now says it expects to get started Oct. 1...WOW-TV, Omaha, starts test patterns July 11, running 10-12 noon and 2-4 p.m. weekdays; Sept. 1 is T-Day...Kallett Theaters' WKTV, Utica, N.Y., to debut in September, is placing series of full-page ads in local newspapers to tell about forthcoming station, receivers, antennas, etc.; also to urge public to buy sets now, since they can already pick up Syracuse's WHEN. Dealers are cooperating enthusiastically (also doing lots of advertising) and 1,000 sets are already reported in use in the area.

Though proposed decision would deny Crosley's purchase of WHAS Inc. (Vol. 5:26), FCC now proposes to give Louisville Courier-Journal until Feb. 1, 1950 to build WHAS-TV, also cited for delay (Vol. 5:10); Crosley intends to fight decision ...Sept. 11 test date still looks good for Kansas City Star's WDAF-TV, which has issued Rate Card No. 1 effective Nov. 1, though expects to take commercials well before that; base rate is \$250...Columbus' WTVN, also due in September, has issued rate card with \$150 base...ABC's KECA-TV, Hollywood, finally sets Sept. 16 as debut date, coinciding with first UCLA-USC home grid games it has signed...We erred in reporting (Vol. 5:26) that new WDEL-TV, Wilmington, would be affiliated with all 4 TV networks; it's tied up, thus far, only with NBC, DuMont -- and other Philadelphia outlets, claiming coverage, are opposing its effort to sign with ABC and CBS, too.

Offset carrier was guinea-pigged by JTAC at RCA Princeton Labs this week, testing some 100 people for degrees of interference they can detect and tolerate. We went up and came away frankly impressed by offset carrier. JTAC hasn't yet reported its conclusions to FCC, but it was evident they liked evidence they were gathering. For example, we watched offset completely erase venetian blind Washington's WNBW placed on New York's WNBT, same with Baltimore's WMAR-TV and New York's WCBS-TV. New York and Washington are 205 mi. apart, New York and Baltimore 172 mi., and Princeton is 42 mi. from New York. ABC engineers John Preston and Robert Morris seemed really sold on offset as they watched venetian blind ripple through New York ABC station WJZ-TV picture, caused by Wilmington's WDEL-TV and Washington's WMAL-TV. They'll offset them as soon as crystals are available. Only about 15 people had been tested when we left, but evidence leaned in these directions: (1) Improvement of better than 20 db with offset seemed probable. (2) Difference between offsetting stations 10,500 cycles and 7,875 cycles seemed negligible.

Divide NAB into AM-FM-TV divisions, is sentiment of more than half broadcasters queried in survey reported in July 4 *Broadcasting Magazine*, which has been increasingly critical of NAB leadership in recent months. Additional 25% think NAB ought to merge with TBA and FMA, only 14.8% believe no change in structure necessary, 10.6% that NAB should be an AM-only association. Interesting was answer to question on fairness of NAB: 41.3% said NAB gave proportional representation to all segments of broadcasting, exactly same number said No (but 60% of non-members said No). Of those who said No, 31.7% thought TV was overemphasized, 26.8% said networks, 17.8% independents. NAB's structural organization is scheduled to get the treatment at July 11 board meeting at Wentworth-by-the-Sea, N. H., at which time also TV director may be named. NAB executive v.p. Jess Willard, in all but name already acting as TV chief, is on vacation, won't be back until end of July.

Spyros P. Skouras to 20th Century-Fox stockholders, with latest quarterly report: "Television deserves separate discussion . . . regarding its impact on the motion picture. [Television] development can go forward only as a part of the motion picture field and [the] great commercial success of TV will come through the theatre, because *all theatres of the country some day will be equipped with large TV screens.*" [Italics ours, see also Vol. 5:26]

Radio station prices have declined as much as 50% during last 2 years, yet radio isn't a "dead duck" by any means. That's opinion of Albert Zugsmith, executive v.p. of Smith Davis Corp., radio-newspaper brokers, as stated to *Advertising Age*. Main reason for plummeting station prices is that most owners had fixed "fantastic" prices on their properties; also that FCC has authorized more stations in some communities than they can support.

Extent of slump in TV-AM-FM transmitter business is shown in RMA first quarter statistics: only \$1,622,468 in orders received, \$1,490,930 in sales billed—not a cent of it TV. Govt. orders are only bright spot. First quarter orders received amounted to \$37,342,885, sales billed \$32,353,433. Figures for same period last year were \$11,448,007 and \$18,053,969, respectively.

Reason England can sell 9-in. table TVs at \$150, Emerson's president Ben Abrams noted on recent visit, is that they tune in only one channel. Though it started TV many years before U. S., Britain has only about 100,000 sets in use and present 13,000 per month output exceeds demand.

So you want to own a TV station? "TV: The Money Rolls Out" aptly titles article in July *Fortune Magazine* calling TV "the most dynamic single element in the entire American economy" and predicting "within a few years—perhaps 5—it will be one of the first 10 industries of the U. S." To readers of our reports, there's little new in way of statistics and conclusions that *Fortune* presents, but its sprightly treatment of "hard business facts about the huge new industry whose rate of climb is matched only by its dollar losses" makes fascinating reading. Actually, article is sort of handbook for prospective TV enterprisers, emphasizing TV's bigness (at least twice as costly as radio, requiring 2 of everything); its deficits (*New York News'* WPIX with income of nearly \$100,000 a month losing over \$100,000 a month). "Indeed, they [telecasters] are proud of their losses—a state of mind that seems un-American . . . losses are magnificent, epic, reaching out to new frontiers of red ink."

Zenith's management has concluded "that some separate and independent entity should assume the burden of promoting Phonevision and bringing about its acceptance"—and so has proposed to stockholders that at July 26 annual meeting they authorize contract with newly formed Teco Inc. (Television Entertainment Co. Inc.) for that purpose. Authorized capital is \$1,000,000 (10,000 shares at \$10 per share), and Zenith officers have started off by subscribing to \$10,000 worth: Comdr. E. F. McDonald, 590 shares; Irving Herriott, director, 194; Hugh Robertson, executive v.p., 76; Frank A. Miller, director, 100; Ralph Hubbard and Karl E. Hassel, directors, 20 each. Zenith contract gives Teco 7 months to sell rest of stock. Proxy statement also says: "Phonevision has from time to time been explained and demonstrated to various telephone companies, motion picture producers, television broadcasting organizations and others. While many of these organizations have expressed interest, up to the present time it has not been possible to procure their adoption of the system or any agreement to use it or put it into operation."

Consent judgement against Scophony-Baird Ltd., British firm formerly known as Scophony Ltd., was entered in Federal district court in New York this week, ending Dept. of Justice action pending since 1945. Company agrees to dispose of interest in Scophony Corp. of America, allegedly set up to hold TV patents in western hemisphere; also agrees not to allocate markets or restrain competition. Scophony Corp. of America, Paramount Television Productions Inc. and General Precision Equipment Corp. consented to similar decrees last January.

Rorabaugh Report on June network TV advertising shows \$905,547 in billings, down from May's \$1,010,518 and bringing January-June cumulative to \$4,416,605. Biggest June expenditures: Admiral, \$50,710; General Motors, \$48,990; Chesterfield, \$45,810; Ford, \$44,670; DuMont, \$43,380; Camels, \$41,240; RCA, \$34,980; Old Gold, \$34,960; General Foods, \$33,320; Texaco, \$28,200.

Reason for only 25 FM-only sets reported in RMA May production (Vol. 5:26), explains FMA, is fact Zenith inadvertently lumped those sets with its AM-FM. Zenith says June production of its FM-only "Major" passed five figure mark. Company has also made trial run of FM sets for autos; they're powered by converter plugged into cigarette lighter socket.

"TV as an Advertising Medium," Commerce Dept. study covering 41 existing TV markets, is due within 10-14 days. It's compiled by Philip A. Bennett, Office of Domestic Commerce.

Personal Notes: FCC chairman Wayne Coy returns Aug. 19, sailing from Southampton on *Ile de France* Aug. 13 . . . Everard W. Meade now v.p. and director of Young & Rubicam radio dept. taking over from Pat Weaver, new NBC v.p. for TV . . . John Sirica now member of Hogan & Hartson Washington law firm . . . Keith Kiggins back in station consulting, leaving Television Associates Inc., Chicago equipment firm, but retaining stockholdings therein; Capt. Wm. Eddy now running company . . . George R. Sommers, ex-Pacific Coast sales chief for Sylvania, now asst. to C. W. Shaw, gen. sales mgr., Radio Tube Division . . . Warren Wade quits NBC-TV to become program director of WPIX, New York . . . James T. Buckley, Philco president 1939-43, new chairman of board to succeed late John Ballantyne.

TV sponsorship notes: Hoffman Radio Corp. signs with ABC-TV to sponsor all home grid games of UCLA and U of So. Calif. on KECA-TV, Los Angeles, starting Sept. 16 . . . Filming of TV versions of *Lone Ranger* started July 7, daily takes being shown to technicians; General Mills sponsors 52-episode series on ABC-TV starting in fall . . . Shaeffer Pen reported probable sponsor of Felix de Cola's *Enchanted Piano*, now on Los Angeles KTLA, plans being to film it for network . . . Marcus Breier Sons Inc. (Bantamac jackets) includes TV in new ad plans, thru Chernow Co. Inc. . . . Eastern Airlines sponsoring Telenevs-INS newsreel on WSB-TV, Atlanta . . . Ballantine Ale to sponsor CBS-TV telecasts of Wed. night boxing from St. Nicholas Arena starting Oct. 5 . . . Forstner Chain Corp. (wristwatch bands, costume jewelry) buys *WNBT Weatherman* Thu. and Fri., 10:30, 26 weeks.

TV program notes: Nostalgia stuff being featured by WNBT, New York, in *Yesterday's Newsreels*, 15-min. films of historic events from early 1900s to present, Tue. & Fri. 11:30 p.m.; on WMAR-TV, Baltimore, *A Year Ago Tonight*, films of front-page news of same date last year, Fri. 7:15 . . . Case histories of neuroses with experts as judges feature *Theater of the Mind* on NBC-TV, starting July 14, Thu. 9:30 . . . NBC-TV's *Candid Camera* now Thu. 9, CBS-TV's *Ted Steele* now Mon.-Fri. 7:15-7:30 . . . Hunting and fishing news, interviews etc. on CBS-TV as *Your Sports Special*, Mon.-Fri. 7-7:15 . . . *News and Clues* titles new show on WABD, New York, with news commentator George F. Putnam, Mon.-Fri. 12:30-1 p.m.; opens with summary of day's news, then Putnam phones viewers to ask questions about news and awards prizes for correct answers.

Interesting trade angles in Newell-Emmett ad agency's latest "Videotown" survey based on town of 40,000 pop. within 35-40 mi. of New York City (see also story on p. 4): Set ownership increased in year from 208 to 1,241. Average price paid was \$384; 40% of sets were financed in 1947, 42% in 1948, 44% in 1949; table models accounted for 64.8%, consoles 18.9%, combinations 16.3%. During first 1949 quarter, 12-in. and larger accounted for almost 50% of sales. Thirty brands were represented, unnamed 2 accounted for 40%.

Metered TV got blessing of first major manufacturer this week when Crosley began selling sets with "Visimeter" device in Cincinnati and announced that New York market would have same thing next week. Similar to last generation's pay-as-you-use gas meters, and once used by some refrigerator makers, device permits hour of TV for 25¢, money being collected periodically by dealer and applied against purchase price of set.

Significant trend in broadcast practices: CBS is tape-recording TV sound of Monday's *It Pays to be Ignorant*, then repeating show aurally on Tuesdays. NBC plans same for *Who Said That?* when it returns in fall.

Life of Philo Farnsworth, titled *The Story of Television*, is recent 266-page book by George Everson, the inventor's discoverer and subsequent business associate. As Everson relates story of Farnsworth, a Mormon boy on a Utah farm with a dream of all-electronic TV, there seems little question about the authenticity of the man's genius. Apparently only real competition he recognized came from RCA's Vladimir Zworykin. Now only 43, Farnsworth is described at book's end (as of 1948) as considerably recovered from long illness stemming from nervous breakdown, working enthusiastically on new tube and optical system for brighter, more compact projection receiver. Publisher is W. W. Norton & Co. Inc., 101 Fifth Ave., New York (\$3.75).

"The American Market—by 1960" will change radically, avers NBC research chief Hugh Beville, Jr., in a thoughtful article thus titled in July 1 *Printers' Ink*. Among reasons: More than 5 of every 10 adults will be high school graduates, which means greater comprehension, wider interests. Each year brings more uniformity in tastes, belief, behavior. More population will be concentrated in metropolitan suburbs and on West Coast. There will be fewer farm workers, more women workers. Wealth will be shared more equally, people will have more leisure, families will be smaller.

Reporting long-distance TV reception has become something of a summer fad (Vol. 5:24). Here's some more: WNBQ, Chicago, to Phoenix, 1,450 mi.; WMCT, Memphis, to Phoenix, 1,200 mi.; KSL-TV, Salt Lake City, to Iowa, Minnesota, Missouri, Illinois; KNBH, Los Angeles, to Fair Play, Mo., 1,440 mi., to Frederick, Okla., 1,110 mi., to Ft. Smith, Ark., 1,375 mi. New England has received WBRC-TV Birmingham; WMCT, Memphis; WTTG, Washington; WAGA-TV, Atlanta. Johnstown (Pa.), area has picked up WTMJ, Miami, and KLEE-TV, Houston.

Sorely needed data on receiving antenna installation, design, etc., for servicemen is beginning to come through, latest publications being *Television Antennas* by Donald A. Nelson, published by Howard W. Sams & Co. Inc., 2924 E. Washington St., Indianapolis (\$1.25); *TV-FM Antenna Installation*, by Ira Kamen, of Commercial Radio Sound Corp., and Lewis Winner, of Bryan Davis Publishing Co., book's publisher, 52 Vanderbilt Ave., N. Y. (\$2).

Latest in TV gadget line is "Telespex," pair of spectacles which cuts down glare from TV set, same as ordinary filters, also reduces headlight glare for "safer night-driving." It's advertised by Radio Merchandise Sales Inc., 550 Westchester Ave., New York 55, N. Y., in June issue of *Radio & Television Journal*.

To ease TV set servicemen's job, RCA has new "Pict-O-Guide" handbook with photographs showing how common troubles manifest themselves on screen. Repairman can compare actual troubles with pictures, speed up location of faults. Handbook can be obtained from RCA Tube Dept., Harrison, N. J., or RCA tube distributors.

Read "Come the Revolution: Radox" in July 9 *Billboard* for good sizeup, illustrated, of electronic system of measuring audience, TV as well as AM, developed by Sindlinger & Co., Philadelphia. As we did after seeing it last year (Vol. 4:49), *Billboard* hints this method may make "Hooper and Nielsen old hat."

DuMont's uhf converter to tune 475-900 mc continuously, first described by R. F. Wakeman at Cincinnati IRE meeting (Vol. 5:18), is subject of article by Wakeman in July *Electronics*.

Sylvania Electric has compiled TV tube-complement chart, listing 148 models of 43 manufacturers; it's available from Advertising Dept., Emporium, Pa.

WHAT THE FURNITURE MART REVEALED: More dizzying arrays of new TV models are in prospect for fall market. That's the one big impression we carried away from Chicago Furniture Mart this week, supported by reports from the trade at large and talks with manufacturers. It looks almost like an overhaul of present receivers is in prospect, emphasis for the moment being (1) on unloading inventories while (2) factories gear for new production lines.

Furniture Mart turned out handful of only 9 TV set makers, most candidly admitting they were merely showing "interim models." Only 3 displayed new lines: Arvin (Vol. 5:26), Hallicrafters (Vol. 5:27), Sparton (see page 4). Exhibitors made no bones about disappointment over sparse attendance at steaming Chicago mart.

Yet almost to a man they expressed confidence, held belief that current sales slump is due to summer doldrums (vacations, poorer programs) and such confusing factors as changing prices, picture sizes, uhf, color. All look to fall for sharp upturn in sales. Many new models and lines will begin emerging next month, maybe a few at New York Music Merchants Show July 25-28. Aside from confidence in upsurge in demand, what most impressed us at Chicago show were:

(1) More and more makers showing sets with switches permitting optional rectangular or circular pictures -- Westinghouse and Zenith joining such other previous displayers as Belmont, Garod, Hallicrafters, Stromberg (TV Directory No. 8). Indeed, Zenith sales staff explained away company's retreat from circular-only picture (Vol. 5:26) by stating that truncated circle picture, which practically all now have, can be attributed directly to Zenith's publicity pitch for big, round picture.

(2) Motorola plugging hard on portables for summer viewing, as answer to seasonal sales decline. Among others pushing portables (TV Directory No. 8): Belmont, Crosley, Emerson, Hallicrafters, Meck, Sentinel, Tele-tone -- and private brands Aircastle (Spiegel), Airline (Montgomery Ward).

(3) Manufacturers shooting for smaller price spread between models with different picture sizes, and between tables and consoles. Spread used to be \$100 or more, now seems to be trending nearer \$50.

(4) Dealers invariably demanding higher markups, getting them from lesser known (and factory-to-dealer) brands -- and so contributing to rash of price-cutting. Crosley announced 6% increase in distributor discounts on TV sets, sales manager W. A. Bles recommending they pass it on to dealers.

(5) Furniture makers showing impact of TV by their displays of sectional sofas, swivel chairs, rotatable table tops, etc. TV section of show's market book listed 28 furniture manufacturers. Salutary effect of TV on sales of furniture and household wares was theme of talk by RCA's Joe Elliott before July 6 meeting of National Wholesale Furniture Salesmen's Assn.

TV set makers exhibiting at Chicago Furniture Mart: Arvin, Bendix, Hallicrafters, Philco, RCA, Sparton, Stewart-Warner, Westinghouse, Zenith. Additionally, Crosley and GE displayed at nearby Merchandise Mart.

TRENDS & TOPICS OF THE TV TRADE: If there's one basic trend discernible in the TV trade, it's the increasing number of under-\$250 table models with 12½-in. picture tubes. In addition to Sparton and Starrett, which announced such sets this week, our TV Directory No. 8 lists them for Garod, Hallicrafters, Jackson, Meck, Philharmonic, Regal, Telequip, Vidcraft. Still unverified is report RCA's new line will have 12½-in. models; RCA makes such tubes but hitherto has plumped mainly for 10 and 16-in. And it won't be surprising if Philco's new line competes in this size. Bulb and tubemakers also report demand for 12½-in. is up in an otherwise depressed market.

Philco's distributors' convention, where its new sets will be unveiled, has at last been scheduled: July 25-26 at New York's Waldorf-Astoria. This news coincides with July 7 announcement that dynamic and popular 47-year-old Jimmy Carmine, who started with Philco in 1923 as Pittsburgh district salesman, has been promoted from distribution v.p. to executive v.p. -- top dog after president Balderston.

Open secret in trade is that RCA has cut down length of 16-in. metal-coned tube, which should be reflected in its own and other manufacturers' product by way of smaller cabinets, lower prices, etc. RCA officials won't confirm or deny. Only

other tube-maker known to have stubbier tube is DuMont (Vol.5:26), which will announce new 19-in. receiver within few weeks.

Notes on new sets and prices: Sparton's new line has prices of \$199.95 on 10-in. table model, \$249.95 on 12½-in. table, \$319.95 on 12½-in. console. Price of 16-in. console is cut from \$495 to \$449.95. Brand new is 16-in. console with AM-FM at \$499.95. Deliveries are scheduled for August, production geared for 4,000 sets per month...Muntz selling 400 sets per week in New York area, now planning to move into Philadelphia, Boston, Detroit, according to Retailing.

Starrett enters low price field with 12½-in. table at \$249.95, 16-in. table \$349.95, 16-in. console \$399.95 -- all in addition to regular period furniture line (TV Directory No 8)...Tech-Master Products Co. has \$168.50 price on its 10-in. kit, \$184 on 16-in. kit, both less CR. Also offers 10-in. table "Videola" with FM, \$325; 16-in. console with FM, \$475; and under same name has line of 10, 12, 15-in. chassis at \$275 and 16, 20-in. chassis at \$285...Reeves Soundcraft Corp. (Tele-Video) has new large-screen commercial Videon console with AM-FM at \$3,325.

New TV sets and lines will come soon from Admiral, DuMont, Motorola, Philco, RCA, Stewart-Warner, Zenith...Zenith line, it's said, will be "completely new" and competitively priced...Unverifiable, but bearing ring of truth and emanating from components sources, is report Zenith purchasers are buying many miniature components for lab men working on tinier and tinier TV chassis; best guess is it contemplates small lightweight portable unit, possibly with 8½-in. tube, V or built-in antenna.

As did DuMont a few months ago (Vol. 5:18), Hallicrafters has decided to sell through regular distributors instead of direct to retailers, is now appointing ...Philco shuts down for vacations July 15-Aug. 7; Admiral and Zenith, July 18-30... Zenith created little stir with last word on "uhf" and "obsolescence" ad controversy (Vol. 5:11 et seq), releasing July 6 trade ads reading: "Zenith Told You and Your Customers The Truth About Television! The FCC announced on May 26, that it expects to open new ultra high frequency channels this year. Thus -- as Zenith predicted -- when you sell Zenith Television, your customers are protected for the proposed new channels. Yes, Zenith told you -- and America -- the truth about Television."

TV's INROADS—MEBBE YES, MEBBE NO: More TV "impact" surveys and conclusions:

Duane Jones, the ad agency head, had cheerful words for Newspaper Advertising Executives' Assn. meeting in New Orleans last week. He polled several thousand people who had sent in box tops or labels in response to TV offers, found 24% said they read newspapers less since getting TV sets. Six months later, only 16% of same people reported reading less.

Further, said Jones, indications are TV works hand-in-glove with newspapers in ad campaigns, same as radio does -- instead of getting TV's pull plus newspapers' pull, you get both with a bonus because of their interaction. In fact, 66% of his pollees said they read up in newspapers on details of something they'd seen on TV. Full 35% stated they've increased perusal of sports pages. Theater page is read less, however. "And you can understand this," said Jones, "because TV is really in direct competition with the theater."

Jones' survey, plus other recent newspaper vs. TV polls, impelled July 2 Editor & Publisher to take heart editorially, observe "TV is not going to spell the doom" of newspapers. E&P concludes, as does virtually every other observer sensing TV's competition, that a better product is best insurance against inroads.

Only other TV-affected activity Jones touched on was movie-going: 84% of his respondents said they went less since TV. A recent big TV vs. movie survey was conducted May 10-June 26 in Los Angeles by Hal Evry, Woodbury College professor, collaborating with Foote, Cone & Belding. As reported in July 5 Variety, his students interviewed 1,800 sets owners, found 66.2% reporting less movie attendance. Also, novelty of TV doesn't seem important factor: after a year, only 6% reported drop in viewing. Likewise tending to refute novelty theory is Newell-Emmett's second Videotown study of unnamed model town (40,000 pop.) 35-40 mi. from New York. After a year's lapse, interviewers queried all of town's 1,241 set owners, detected "only a slight drop in usage."

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MARTIN CODEL'S

AUTHORITATIVE NEWS SERVICE
OF THE
VISUAL BROADCASTING
ARTS AND INDUSTRY

Television Digest

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PRINTED COPIES OF THE FCC REPORT: Last Tuesday, we sent you who are subscribers to our full services, printed copies of Supplement No. 64 containing full text of FCC's Proposals Regarding VHF-UHF Rules and Standards with Table of TV Channel Allocations by Cities, as released previous day. Our 16-page Supplement, printed, makes much easier reading and reference (particularly the allocation tables) than FCC's 76-page mimeographed release. It also contains a substantial number of corrections of FCC's hastily-mimeographed July 11 release, which we were able to catch thanks to the kind cooperation of FCC staff itself. If there are further errors, we'll issue an errata sheet. Extra copies of Supplement No. 64 are available to subscribers at \$2 each -- or \$1 per copy in quantities of 10 or more.

I—HOW FCC PROPOSES TO END TV FREEZE: Last week, we came pretty close to major facets of FCC's proposals regarding new TV rules and standards (Vol. 5:28). But, to recapitulate and condense its highly technical report, these would appear to be main points -- plus procedure plans and hearing date:

1. Metropolitan vhf stations to have 100 kw maximum power, 10 kw minimum, and 500 ft. antenna height, spaced 220 mi. co-channel, 110 mi. adjacent. Metropolitan uhf stations to have 200-10 kw limits, 500 ft., spaced 200 mi. co-channel, 100 mi. adjacent. Community stations to come only from upper 10 channels of uhf, have 20-5 kw limits, 500 ft., 140 mi. co-channel, 60 mi. adjacent.
2. Addition of 42 uhf channels, top 10 not allocated to specific cities now (a few exceptions), but to be used as community stations where they can fit in.
3. Allocation philosophy set forth in series of "Priorities," which would, in following order, provide for (a) at least one TV service to all parts of U.S.; (b) at least one TV station in each community; (c & d) double each of foregoing; (e) fit in remaining channels wherever most needed.
4. Establishment of 3 grades of service, defined in decibels, showing field strengths required and interference permitted -- with technical description of how these figures are computed.
5. Offset carrier and directional antennas to be encouraged to increase coverage, but not to fit in new stations.
6. Information invited, at hearing, on "compatible" 6 mc color (Vol. 5:22 et seq) and on polycasting, Stratovision, or any other system.
7. Ordered all those owning patents or holding rights to sublicense patents covering systems or equipment proposed by FCC or to be proposed by others must show the claims of the patents when they file comments with FCC.
8. Full vhf-uhf allocations set forth for U.S., territories and neighboring countries, by cities (see table, Supp. No. 64; see analyses on pages 3, 4).
9. Administrative procedure outlined: (a) Aug. 8 set as date by which all comments on proposal should be filed. (b) Aug. 19 deadline for oppositions to those comments. (c) Aug. 29 date of hearing in Washington on whole proposal. And it asked that no applications for stations be filed until final decision on whole matter.

II--HOW INDUSTRY REACTS TO PROPOSALS: Confused howl arose almost immediately the proposals came out. But reactions still weren't clearly defined by week's end. It was one of the most complex propositions FCC has ever issued, and obviously needs lots of time for study.

Objections, many quite violent, seemed localized among applicants' consulting engineers and legal counsel -- even though major outlines of FCC's thinking have been rather apparent for some time, particularly since Comr. Sterling's Canadian speech (Vol. 5:24). But those who had anticipated the proposal weren't much happier with it than those who had.

Receiver makers may turn critical later, but first reactions leaned towards approval of: (a) A concrete plan to hasten end of freeze. (b) More people to be covered by vhf -- even though by fewer stations. (c) An attempt, even though it can't be fully realized with present techniques of telecasting, to put every man, woman and child within range of a TV signal. RMA's TV committee (Vol. 5:25,26) will meet in about 10 days to decide stand.

No official reaction from Senator Johnson or his committee colleagues was forthcoming. They hadn't had time to get the report digested. For example, Sen. Tobey didn't even know about proposal until we told him Thursday when he concluded questioning Comr. Webster (see insert page) about some of very matters FCC proposal attempts to settle. However, it's assumed Sen. Johnson will like plan since it so obviously aims to achieve many of his desires, viz., establish uhf, invite color, end freeze, minimize vhf interference, inquire into patents.

But it's the criticisms you'll be hearing most about until freeze's end. Most aim at FCC for apparently regarding uhf as a "live" TV service -- something more than a flock of typewritten channel numbers -- whereas, actually, little is really known yet about uhf, and even less equipment is in sight (though this will certainly encourage development). To enumerate their points:

1. Basic FCC philosophy of getting wide-area vhf coverage through greater separation and power and fewer stations relies on a "paper" service (uhf) to relieve the vhf monopolies thereby created. "The haves get even more," they say, "while the have-nots are offered nothing but theories and hopes."

2. FCC has ignored critical technical evidence, both in vhf and uhf. First, man-made noise is likely to ruin much of the weak vhf signals the FCC intends to protect. Second, uhf will probably need far more than 200 kw to cover cities.

3. Chances for a much improved TV system in future (such as wide-band color, high definition) are kaput in uhf, since insufficient space will be left for a nation-wide service. Proposed 6-mc color isn't good enough. And just a few 6-mc uhf channels added to present monochrome system would satisfy economics of TV.

4. Why penalize the lone uhf-er in such cities as Philadelphia and Washington? Faced with several vhf competitors, he'll be like an FM-only station surrounded by AM. Give him some uhf company. Or keep vhf and uhf cities entirely separate. (Though even the most ardent critics say this would be very difficult.)

5. If you're going to use up most of uhf, eliminating its availability for a wide-band-band service anyway, why not go whole hog and allocate even more? Give even New York, Chicago, Los Angeles a flock of them; allocate enough for everybody.

6. You can't cover some metropolitan districts as FCC specifies with any amount of power with merely 500-ft. antenna height.

7. Proposed allocation already violates FCC's own 220-mi. co-channel and 110-mi. adjacent channel objectives. For co-channel examples: Milwaukee-Lansing, 170 mi.; Dallas-Shreveport, 178; Milwaukee-Peoria, 180; Washington-Pittsburgh, 185; Richmond-Winston-Salem, 185; Jacksonville-Charleston, 195 -- and even Ft. Worth-Lawton, Okla., only 142. Adjacent channel examples: Richmond-Norfolk, 78 mi.; San Francisco-Sacramento, 78; Charlotte-Columbia, 82; St. Louis-Springfield, Ill., 84; Chicago-Milwaukee, 90 -- and Marquette-Iron Mountain, Mich., only 57.

8. Use of 1940 U.S. Census is unrealistic. There's legalistic "sleeper" in Appendix A, Sec. III-D-2, which apparently makes allocation so rigid no change can

(Continued on inside back page)

CINCINNATI'S WCPO-TV IS No. 75: Cincinnati's third TV station, Scripps-Howard's WCPO-TV, began tests this week, reports it definitely will make promised July 26 T-Day -- thus becoming 75th outlet. Mortimer Watters is manager, John Patrick Smith sales chief. Already signed (for rate card, see TV Directory No. 8) are Burger Beer, baseball; Rubel Bread, Mohawk Mart, Griffith Distributing Co. (Zenith), Model Laundry, Home Federal Savings & Loan. WCPO-TV affiliates with ABC and DuMont.

Application this week from WTHI, Terre Haute, Ind. asks for Channel 4, but that town gets uhf-only under new allocations. [For application details, see TV Addenda 8-B herewith.] City of Jacksonville's WJAX-TV, cited for lack of diligence (Vol. 5:28), has had hearing date changed to Sept. 19.

Notes on upcoming new stations: WOR-TV, New York, should be ready for tests Aug. 1-15, but schedule before Oct. 1 is doubtful... KRON-TV, San Francisco, tests latter September, joins NBC-TV as of Oct. 1... WLAV-TV, Grand Rapids, plans tests next week, still plans Aug. 15 opening, has asked FCC for 2 intercity relays to link with Chicago... WJIM-TV, Lansing, due in October, planning relay from Detroit, single hop... Greensboro News' WFMY-TV, due on air in August, has appointed exclusively-TV rep firm of Harrington, Righter & Parsons Inc., New York (ex-Petrymen).

NAB CUT DOWN BUT ADDS TV DIVISION: Long-contemplated overhaul of NAB, as ordered by board this week, includes oft-discussed "functional" divisions: (1) Audio Division, serving AM-FM stations, (2) Video Division, serving TV. AM-FM members with TV stations would pay \$10 per month additional dues; TVs without AM-FM licenses or CPs may join at \$1,500 per year. Note: There are relatively few of latter -- only a half dozen TV operating stations without any AM and/or FM connections at all, in fact (see TV Directory No. 8). Otherwise, new structure and changes boil down to:

President and secy-treas. continue, but office of executive v.p. (A. D. Willard) abolished. These departments remain: legal, govt relations, employe-employer relations, research, public relations, engineering. Program dept. abolished (Harold Fair). Offered Video Division, Mr. Willard has declined and resigned. Engineering dept. will concentrate on govt rather than service angles, and Royal Howard's status reduced. No other dept. changes, though there may be staff cuts.

Budget for fiscal 1949 (also calendar year) is reduced to \$701,511 -- from last year's approximate \$790,000. Dues are reduced 12%% after Aug. 1, or pending new dues structure. BAB will be supported as projected, but must aim to be separate and independent corporation. Board meetings will be held 3 times yearly, standing committees cut to maximum of 10. President Justin Miller says he has no one in mind yet for either Audio or Video division chief, though many names are being submitted.

COLOR, COLOR, WHO'S GOT COLOR? Color TV again took up most of Comr. Webster's "trial by Tobey" at this week's Senate committee hearing on his renomination to FCC -- the fiery New Hampshire Senator's questions being aimed at getting FCC to push color, not wait for it. Again, Webster was given a rough time -- yet committee voted favorably on confirmation, 11-0, presumably including Tobey.

Tobey wanted to know why FCC hasn't gone to present black-and-white telecasters and told them it won't cost them much to convert their stations to color, thus removing potential political block to color. Webster said he didn't know the cost, hopes to learn it at coming hearing, estimated whole TV decision would be out by Jan. 1, hoped FCC would be able to authorize color, expected it would take about 2 years thereafter for first color station to get on air. Tobey thought Senate subcommittee might call in Peter Goldmark, William Everitt, Edwin Armstrong, C. B. Jolliffe, et al, for answer on cost of converting stations to color.

CBS president Frank Stanton got peeved over Tobey's implication that CBS and RCA are "dickering" over CBS color patents and that CBS might not volunteer color data at FCC hearing. He firmly denied both charges, adding: "Not only is CBS doing nothing to hinder the development of color TV but CBS has done more than any factor in the industry to foster its development."

Webster was at disadvantage, for questions were mostly on broadcasting,

whereas he's more of a specialist on fixed and mobile services. Surprising, for example, was his unwillingness to admit FCC had erred in its existing TV allocation.

Here's Tobey's philosophy in a nutshell, as he gave it to reporters after hearing: "I want a group of men up there [at the FCC] who listen to the 150,000,000 people in back of them and who don't hearken to the 'voice of the master' -- the dog and the phonograph." He makes no bones about his antipathy toward RCA.

* * * *

Bureau of Standards' "status-of-color" committee (Vol. 5:25) is geared for action, now that Dr. Condon is back. All "nominees" to committee have accepted: Stuart Bailey, William Everitt, Donald Fink -- in addition to Condon as chairman and the Bureau's Newbern Smith as vice chairman. First meeting is set for first week in August; Condon hopes to have report for Sen. Johnson by November. Committee will cover questions of bandwidth, transmitters and receivers, propagation, compatibility with existing system, etc.

With so many people studying color, its status should really be known by year's end. RMA has just invited 10 men to serve on new color TV committee to meet early next month and report to RMA TV Committee (Vol. 5:25,26): F. J. Bingley, WOR-TV; Louis Clement, Crosley; R. B. Dome, GE; E. W. Engstrom, RCA; D. G. Fink, Electronics Magazine and JTAC; T. T. Goldsmith, DuMont; Peter Goldmark, CBS; G. E. Gustafson, Zenith; R. F. Guy, TBA; D. B. Smith, Philco.

Personal notes: CBS president Frank Stanton, who left Ohio State U faculty in 1935 to become CBS research director, will be awarded honorary degree by OSU at summer commencement Sept. 2 . . . Harry M. Bitner Jr., WFBM-TV, Indianapolis, elected to NAB board vacancy succeeding Harry Bannister, WWJ-TV, Detroit, resigned . . . Kenneth L. Yourd, since 1941 on CBS law staff, new director of CBS Hollywood program operations; Martin Leeds, associate director . . . Fred Freeland, new TV director of Ruthrauff & Ryan, Chicago, succeeding Fran Harris, who goes to Hollywood office . . . Larry Walker, asst. mgr. of WBT, Charlotte, named mgr. of its new WBTU; Charles Bell, production mgr. . . E. P. H. (Jimmy) James, MBS advertising-research v.p., resigns as of Aug. 1, has not announced plans . . . CBS Radio Sales staff shifts: Richard C. Elpers, of Detroit office, named Los Angeles mgr., replacing Henry R. Flynn, going to New York staff; Edwin Buckalew, Western Div. station relations mgr., heads San Francisco office.

TV sponsorships: International Silver Co.'s *Silver Theater* goes on CBS-TV in fall with Conrad Nagel, probably Mon. 8 p.m. . . Berke Brothers, Distilleries (Old Mr. Bin bottle wines) having spots prepared by Screen Gems Inc., now at 729 Seventh Ave., New York; Screen Gems has absorbed Telespots Inc., producer of BVD spots . . . Santa Fe Railway to sponsor Burton Holmes travel films, thru Leo Burnett Agency . . . Monarch-Saphin Stores (appliances) sponsoring Nick Kenny, song-writing radio editor of *New York Mirror*, presenting different composer each week with best songs, on WJZ-TV, Wed. 7:30-7:45 . . . Camden Trust Co., Camden, N. J., sponsoring *Kieran's Kaleidoscope* on WPTZ, Philadelphia, Sun. 6:45-7 . . . Western Auto Supply sponsoring *Polly Calling*, singer-pianist Polly Clark employing "talking camera"—talks to TV camera, which talks back via offstage voice—on KSD-TV, St. Louis, Thu. 8:30-9 . . . NBC-TV will have Perry Como for Chesterfield in fall, Sun. 10-10:30.

WJR, the Goodwill Station Inc., controlled by George (Dick) Richards but stock traded on exchange, reports sales for 6 mo. ended June 30 were \$1,627,385, profit \$296,593 or 57¢ each on 518,000 shares. This compares with \$1,562,078 sales, \$296,571 profit (57¢) for same period last year.

Noteworthy AM station sales proposed in recent weeks, subject to FCC approval: WCHS, Charleston, W. Va., by John H. Kennedy to Lewis Tierney, Bluefield, W. Va. (Kennedy will retain WSAZ, Huntington, which also has CP for TV); WLIB, New York, by Dorothy S. Thackrey, *New York Post Home News*, for \$150,000, to group headed by consultant Morris Novik (to aim for Jewish and Negro audiences); KOWH, Omaha (with FM), by *Omaha World Herald*, for \$100,000, to local group headed by Robert H. Storz for his son Todd Storz; KGA, Spokane, by Louis H. Wasmer, for \$425,000, to Gonzaga U (veteran radioman Wasmer sold KHQ there in 1946 to local newspapers); WALE, Fall River, Mass., to Basil Brewer newspaper-radio interests (New Bedford); KVOR, Colorado Springs, Colo., for \$100,000, by Aladdin Radio & Television Inc. (owning KLZ, Denver, and seeking TV), to James D. Russell, Danville, Ky.

TV program notes: CBS-TV tells story of TV as "nation's fastest growing industry" in special program *Giant in a Hurry*, Thu. July 21, 9-9:30 . . . CBS-TV *This Is Broadway* variety show with Clifton Fadiman host became simulcast July 15, Fri. 9-10 . . . NBC-TV resumes *Lights Out* melodramas on NBC-TV July 19, Tue. 9-9:30 . . . ABC-TV planning *Kate Smith TV Hour*, *Lil Abner* series with live actors, *Boris Karloff* series in fall . . . DuMont's WABD "block programming" 3 children's shows for consecutive showings, starting next week: Bob Emery's *Small Fry Club*, Mon. thru Fri. 6-6:30, Pat Meikle's *Magic Cottage* 6:30-7, *Capt. Video* 7-7:30 (except Wed.).

FCC Law Dept. takes exception to FCC Examiner Hugh Hutchinson's recommendation that Raytheon's WRTB, Waltham, be given 90-day CP extension (Vol. 5:26)—filed report this week questioning Raytheon intentions to build, noting that it sought financial assistance from 6 different parties before agreeing last October to sell to CBS, urging Commission to deny extension (which would open additional vhf channel to competition in Boston area).

First advertising agency for TV exclusively is newly formed Philbin, Brandon & Sargent Inc., 277 Park Ave., New York. Principals are Edward Philbin Jr., ex-New York Life Insurance Co.; Peter J. Brandon, ex-MBS; C. D. Sargent, ex-Young & Rubicam, J. Walter Thompson.

be made regardless of existing population or future shifts. Some flexibility should be allowed; 1950 Census isn't far off.

9. Some sizeable cities aren't even listed in allocation, e.g., Connecticut's Stamford, pop. 61,000; Norwalk, 40,000; New London, 30,000; Torrington, 27,000. Or Ohio's Ashtabula, pop. 21,000; East Liverpool, 23,000; Findlay, 20,000; Lancaster, 22,000. Or Pennsylvania's Sharon, 26,000; Washington, 26,000. These are only random few -- yet scores of tiny villages down to few hundred population are listed with allocations.

10. Color should have no place in hearing, which should be devoted to ending freeze and making allocations. Since FCC has said color must be compatible with present system (6 mc), facts regarding black-and-white allocations will be just as applicable to color.

Here are a few typical irate comments we've heard: "I'm telling my clients, 'No vhf, no TV for you.'" "We're stuck with Model T television for a long time." "The research boys are in control; no consideration of practical aspects." "I'm taking this up to the Hill." "I'm going to blow my top at the hearing." "These mistakes aren't small -- they're big ones."

First concrete action taken by critics was request for extension for time to file comments.-- to move date from Aug. 8 to mid-September or October. They're torn between desire to end freeze quickly and desire to end it right.

* * * *

Commission will probably prove difficult to shake loose from plan. Said one commissioner: "If they try to 'shoe-horn' more vhf stations in, through directionals or anything else, it will be over my dead body. I think TV is so wonderful that everyone should enjoy it. My ideal is to give TV service to every person in this country. True, it's an ideal, but it's something to keep in front of us."

III--WHO GETS THE CHANNELS AND WHERE: Most of you concerned with telecasting should know, by now, how your local areas fare under FCC's proposed new TV allocations -- what they would gain or lose in the way of existing channels, whether they would get both vhf and uhf, or uhf only. Your own analyses of the local impact of the proposed allocations are better than any we might make. But for sake of summary and illustration, here are some vital statistics -- remembering, of course, that all the new allocations are merely proposals, subject to hearing and final FCC action.

(1) Exactly 1,432 communities of the U.S. and Territories (ranging down to village of Palisades, Nev., pop. 75) are allocated channels, either vhf or uhf or both. Also, 99 in Canada (both vhf and uhf), 14 in Mexico (all vhf), 3 provinces in Cuba (6 vhf channels). It's noteworthy that, though FCC says allocations to Canada, Mexico, Cuba are merely "illustrative," they were put down on paper only after radio administrations of those countries approved.

(2) Exactly 207 U.S. communities are allocated 496 vhf channels, while 12 in the Territories get 45 vhf-only. Presently, only the 131 top market areas, with 394 vhf channels, are definitely allocated (see p. 50, TV Directory No. 8) -- though there has also been pending since May, 1948 a previous proposal to extend vhf to many more communities (see p. 43-46, TV Directory No. 7). Latter plan is discarded.

(3) Exactly 1,329 U.S. communities are allocated 1,679 uhf channels.

(4) Intermingling of vhf-uhf is frequent, but not the rule, in major market areas, common in smaller cities. Uhf-only go to few big towns, but many small ones.

(5) Unaffected by proposed allocations are all but one of today's 74 operating stations, namely, Rochester's WHAM-TV which would shift from Channel No. 6 to 5 (agreement already obtained); and 2 of the 43 CP holders, namely, Syracuse's WSYR-TV, put on No. 3 instead of originally allotted No. 5; Cleveland's WXEL, No. 11 instead of No. 9.

For case and example of impact of proposed allocations, we point to...

IV—WHAT HAPPENS IN TOP 50 MARKETS: Considering the first 50 market areas of U.S. by sales rank, here's how they come out in the proposed new allocations (for channels already occupied or granted, refer to TV Directory No. 8):

25 retain same number of vhf channels as presently allocated, though with frequency shifts here and there: New York 7, Chicago 7, Los Angeles 7, San Francisco 6, Washington 4, Baltimore 3, Milwaukee 4, Kansas City 4, Providence 1, Seattle 4, Houston 4, Portland, Ore. 5, Atlanta 4, Denver 5, Dallas 3, New Orleans 5, Louisville 2, Toledo 1, Memphis 5, New Haven 1, Omaha 3, Birmingham 3, Dayton 2, Syracuse 3, San Antonio 5.

10 lose 1 vhf channel each from present allocations, and are left with this number of vhf: Philadelphia 3, Detroit 3, Boston 4, Cleveland 4, Buffalo 3, Cincinnati 3, Columbus 3, Norfolk-Newport News-Portsmouth 3, Richmond 3, San Diego 3.

7 lose the single vhf channel previously allocated them, leaving them with none: Scranton-Wilkes-Barre, Springfield-Holyoke, Akron, Youngstown, Worcester, Allentown-Bethlehem-Easton, Lowell-Haverhill-Lawrence.

4 lose 2 vhf channels each -- Hartford-New Britain, left with none; Pittsburgh, left with 2; Indianapolis, left with 3; Rochester, left with 1. Losing 4 and left with 1 is Albany-Schenectady-Troy.

Gaining 1 vhf channel would be St. Louis, up to 6. Gaining 2 each, the only other gainers among top 50, would be Minneapolis-St. Paul, up to 7, and Miami, 6.

In top 50 market areas, uhf channels would go to following: 1 each to Philadelphia, Washington, Buffalo, Portland, Indianapolis; 2 each to Detroit, Pittsburgh, Cleveland, Baltimore, Cincinnati, Providence, Seattle, Albany-Schenectady-Troy, Atlanta, Scranton-Wilkes-Barre, Springfield-Holyoke, Louisville, Toledo, New Haven, Worcester, Allentown-Bethlehem-Easton, Dayton, Lowell-Haverhill-Lawrence, Norfolk-Newport News-Portsmouth, San Diego; 3 each to Hartford-New Britain, Rochester, Akron, Youngstown, Richmond.

All rest of the top 50 areas, 20 all told, would remain vhf-only cities.

* * * *

Other communities (not among top 50) which previously had vhf channels allotted them but are left with none, so presumably would have to plan for uhf-only, are San Jose, Cal.; Stockton, Cal.; Waterbury, Conn.; Columbus, Ga.; Decatur, Ill.; Rockford, Ill.; Evansville, Ind.; Fort Wayne, Ind.; Terre Haute, Ind.; Waterloo, Ia.; Flint, Mich.; Saginaw-Bay City, Mich.; St. Joseph, Mo.; Atlantic City, N.J.; Asheville, N.C.; Durham, N.C.; Altoona, Pa.; Harrisburg, Pa.; Reading, Pa.; Austin, Tex.; Galveston, Tex.; Waco, Tex.; Madison, Wis. There are no CPs issued for any of these cities, but plenty of applicants for most (see Part III, TV Directory No. 8).

Among smaller cities not previously allocated any vhf but now getting one vhf channel, thanks to their distances from other cities, are: Texarkana, Ark.; Bakersfield, Cal.; Tallahassee, Fla.; Paducah, Ky.; Jefferson City, Mo.; Manchester, N.H.; Wilmington, N.C.; Muskogee, Okla.; Abilene, Tex.; Ogden, Utah; Montpelier, Vt. -- and a flock of even smaller towns. None before, but now getting 2 vhf: Flagstaff, Ariz.; Pocatello, Ida.; Garden City, Kan.; Augusta, Me.; Helena, Mont.; North Platte, Neb.; Reno, Nev.; Medford, Ore.; Sioux Falls, S.D.; Wichita Falls, Tex. -- to mention a few. Among those now getting 3 vhf: Alexandria, La.; Great Falls, Mont.; Las Vegas, Nev.; Santa Fe, N.M.; Fargo, N.D.; Brownsville, Tex. Getting 4 vhf: Tucson, Ariz.; Boise, Ida.; Billings, Mont.; Butte, Mont.; Albuquerque, N.M.

Note: If you want to size up status of others among the 1,432 communities covered in the projected allocations, study the tables -- they are, quite conveniently, alphabetical by states and cities.

* * * *

Into the ashcan, possibly, would go record of hearings already conducted (but decisions held up due to freeze) on Philadelphia, Detroit, Allentown-Bethlehem-Easton, Harrisburg, each with 2 applicants for the one previously remaining vhf channel (none left now). Also Atlantic City, 3 for 1, but none now left. As for others also heard last year, it's still 6 for 3 in San Francisco, now 4 for 2 in San Diego, 3 for 3 in Milwaukee.

MARTIN CODEL'S

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VISUAL BROADCASTING
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TABLE OF CITIES ON EACH VHF CHANNEL: Lacking in FCC's proposed new allocation tables, which we printed along with proposed rules and standards last week and sent to full-service subscribers as Supplement No. 64, was a breakdown of the allocations by channels -- showing precisely what cities get each of the 12 vhf channels. We were asked to supply that lack, and so have printed Supplement No. 65 (Proposed VHF Allocation by Channels) derived from FCC's state-by-state tabulation for U.S., Canada, Mexico, Cuba. This should be useful for quickly ascertaining co-channel and adjacent channel spacings. And channels already occupied are so indicated. As we did with Supplement No. 64, we're making extra copies of No. 65 available at \$2.

Note: We didn't break down uhf allocations because uhf is still in "paper" stage (no commercial stations yet on air or authorized) and initial demand will inevitably be mainly for vhf. Uhf breakdowns will be supplied later, when needed. Also, FCC says there are a few errors in its vhf tables; when it reports these, probably next week, we'll issue an errata sheet so you can correct Supps. 64 & 65.

WORRIES IN WAKE OF THE TV PROPOSAL: Dilemma facing critics of FCC's big TV proposals (Vol. 5:29) is more evident than ever: How to end freeze quickly but correctly? The objectors, most of them engineers and lawyers desiring to protect their clients, feel they must have more time to study effects of proposal -- and some are already asking for extensions of time to file comments from FCC's Aug. 8 to mid-September. Belief is FCC will allow more time if it gets plenty of requests.

In regard to delay in ending freeze, there's concern lest disgruntled applicants or left-in-the-cold communities haul FCC to court on proposal, tie it up for couple years. Some even see possibility of such a move from certain interests who would just as soon try to stymie TV that way. But FCC lawyers don't seem worried, feel they could lick that trick in short order.

Further troubling consultants and counsel is diversity of their clients' feelings about proposal: "haves" vs. "have nots." For example, here's quote from one nicely-situated TV station operator who said with a chuckle, "This is the best Commission we've ever had."

Although they may want more time, networks and TBA aren't asking for it, since they've continuously urged quick end to freeze and don't want to be charged with delaying it now. Actually, there seemed to be very little disposition on part of networks to attack plan -- and none on part of receiver manufacturers.

Engineers and attorneys may try to present united front to FCC. There's talk of proposing that objectives of allocation should be to provide, as minimum service, Grade A coverage (as defined in FCC proposal) to principal city of metropolitan district and Grade B coverage to 90% of area within metropolitan district.

"Rigidity" of FCC's proposed rules and allocation plan (for full text, see TV Supplement No. 64) isn't as severe as some fear, say people at Commission. After all, they point out, it isn't expected to stand forever. In fact, 1950 Census, available in a few years, will probably bring changes. The applicants' answer to that is: "Yeah, and by then there won't be any worthwhile channels left to change."

FCC is acting fast to lay more groundwork for hearing. This week it asked all operators of experimental TV stations (see TV Directory No. 8, page 65) to file

statements by Aug. 15, telling everything they've done and learned about anything in TV. Then it wrote AT&T and Western Union, asking them to tell, by Aug. 15, exactly what they're doing and planning to do about providing adequate intercity and intra-city hookup facilities for existing and prospective stations -- vhf or uhf, monochrome or color. FCC also wants to know why full 4.5 mc bandwidth for picture (it's about 2.7 mc now) isn't available on networks and when it will be.

NOT MANY MORE NEW TV STATIONS ON TAP: As things stand now, what with FCC's upcoming "anti-freeze" hearings (see p. 1), it's safe bet that until about end of 1950 the only new TV stations than can go on the air must come from the 40-odd pre-freeze CP holders still on the books (see TV Directory No. 8 and Addenda). Actually, as of July 26 debut of Cincinnati's WCPO-TV as nation's 75th station, the number is just 40 -- for Jacksonville's WPDQ-TV pulled out this week (decided it couldn't afford TV yet) and it seems highly unlikely Minneapolis Star & Tribune's KRTV can get clearance from its involved interlock situation (Vol. 5:27). Then, too, there are a few other CP holders, cited as laggards, who may never make grade.

Good guess is that this year's total will fall short of 100, that all next year won't add more than dozen or so. Even assuming FCC hastens its allocation plans, these factors can't be blinked: (a) Vhf will be first quarry, and most big-city applicants will be forced to competitive hearings while few small-towners will hurry to build even if granted. (b) Uhf is still merely a "paper deal" and those who have plumped hardest for them will probably be slowest to apply and push construction, even when equipment becomes available. (c) Court actions could conceivably delay whole vhf-uhf allocation, to say nothing of individual grants.

This week, FCC received 2 vhf applications -- for Channel No. 9 from new group in Moline, Ill. (set down for No. 4 & 5 in proposed new allocations); and for No. 6 in Oelwein, Iowa, pop. 7,800 (not even listed in new allocations). These, of course, are merely pro forma, for FCC has asked no applications be submitted yet (Vol. 5:29). [For details about these applications, see TV Addenda 8-C herewith.] It's understood, too, that Providence Journal, FM operator, is readying a TV application, though that city's sole vhf channel is already occupied.

FCC approved \$375,000 sale of KRSC-TV, Seattle, with FM, to KING (Vol. 5:20, 23). And set for Sept. 8 hearing in Washington extension of CP of WSEE, St. Petersburg, cited as laggard.

UHF EQUIPMENT STILL ONLY BLUEPRINTS: Tempo of uhf research is bound to be stepped up, now that FCC has proposed specific allocations to cities. It won't get really hot, however, until applicants are willing to put cash on the barrelhead for transmitters. And that's not likely until applicants know that uhf will do job of coverage and vhf is definitely unavailable to them.

Meanwhile, RCA-NBC hope to get their Bridgeport, Conn., uhf "guinea pig" station (Vol. 5:7,8,13,18) going by mid-November, and RCA Camden says it will be able to duplicate its 1 kw (approx.) transmitter at that time for any buyer. In reply to request from potential uhf customer, RCA reported progress on 5-10 kw uhf tube, but said it will be 2-3 years before it's perfected and put into properly-designed transmitter.

RCA-NBC fear test of uhf coverage in Bridgeport won't be as conclusive as desired, since New York's vhf signals can be picked up there, albeit with difficulty. They'd prefer a town with no TV signals within reach, but expense of getting programs to such a place is considered prohibitive.

As for others working on uhf transmitters: DuMont is still putting out only about 60 watts from its New York test station, hopes shortly to increase it to 1 kw; CBS still has its old color transmitter, with no power changes as far as we know; Eitel-McCullough, Machlett and Collins are working away on tubes (Vol. 5:8,15,16), but have reported nothing new lately; GE has 5 kw tube program underway, but offers no prediction as to when it will mature.

Uhf receivers, which offer much smaller problem, can be found in various stages of development in labs of nearly all major set manufacturers (Vol. 5:13,18).

COLOR TV TAKES TO AIR—6 mc, VHF: Two new color TV tests are in the works preparatory to Aug. 29 hearing on FCC's overall TV proposals of July 11 (Vol. 5:29 & Supp. No. 64). First, and presumably prodded by criticisms from Senators, CBS will take to air with experimental 6-mc color transmissions from its vhf station WCBS-TV, New York (Channel 2), for 30 days beginning Monday, July 25, and operating under STA when regular black-and-white programming is off air. Experiments will also cover compatibility of system with present monochrome receivers.

Second, and surprisingly, Baltimore Sunpapers' WMAR-TV, whose chief is ex-Comr. E. K. Jett, will do same sort of experiment Aug. 17-19. Latter's demonstration will have these additional flourishes: Programs will be originated 10 a.m.-2 p.m. daily from Johns Hopkins U, microwaved to station, pumped out on Channel 2, picked up at Washington's National Guard Armory, and rebroadcast by Washington's WMAL-TV.

Purpose of both tests is to gather data for hearing, as CBS said it would. Additionally, WMAR-TV is prepping for mid-winter American Medical Assn convention in Washington Dec. 6-8, and using Smith, Kline & French equipment employed at Atlantic City (Vol. 5:8,22-25); CBS's Peter Goldmark will supervise work of both stations.

There's no new word on color out of RCA, which some time back intended (then dropped plan) to move its experimental color transmitter to Washington for demonstration in FCC's back yard. As yet, it has formulated no plans for demonstrations.

Speculation continues as to CBS's attitude towards color. However, there's no change. Though convinced as much as ever that its color system is "the best TV in the world," CBS is wholly committed to existing black-and-white system. And it shows no sign of relaxing its monochrome expansion plans, certainly isn't telling its affiliates (as it once did) to eschew present system.

Speculation also continues as to what FCC really thinks of 6-mc color and what are chances of getting what FCC specifies in way of compatibility with present TV (Vol. 5:22,24). Comr. Jones' convictions in favor of 6 mc are well known, but here's feeling of at least one other commissioner: "Color has to be 6 mc. Only an expert can tell the difference between it and 8 or 10 mc. A greater bandwidth is just too expensive spectrum-wise and in cost of networking. With a greater bandwidth, many cities would never see network color."

Now that Bureau of Standards has announced its color TV study program (Vol. 5:29), Sen. Johnson has released his letter requesting the study. He told Bureau director Condon he wants to determine if and/or why FCC has held up color, asserted: "It is not necessary that the art be fully developed for minimum standards to be outlined." RMA's color committee meets July 29, overall TV committee Aug. 2.

VALIANT IS THE WORD FOR THIS ONE: This is the most unusual new-station starting plan yet: When Scripps-Howard's WCPO-TV, Cincinnati, goes on schedule next Tuesday (July 26) it will sign on at 12 noon and operate until 11 p.m. every day in week! Not mere test patterns or still pictures, mind you, but with full-blown programs. How come? we asked manager Mortimer Watters, for this hasn't ever been done before and Cincinnati's other 2 stations seldom telecast before 3 p.m. Essence of his reply:

WCPO-TV, like its AM adjunct, will specialize in disc jockey programs, will put jockeys Paul Dixon, Malcolm Richards, Art Jarrett on for at least 4 hours of the 11-hour-per-day schedule. They'll play requests, have pretty girl assistants, visiting artists, guessing games, caricaturists doing "concepts" of those who phone in requests, etc. Rehearsals thus far have indicated show can be made lots of fun; test telecasts July 21 elicited 1,000 responses, some from as far away as Vincennes, Ind. and Huntington, W.Va. Participations or blocks of time will be sold.

"Maybe we're crazy," quoth veteran radioman Watters, "but maybe what TV needs is more fools who plunge where angels fear to tread." Certainly, he continued, TV can't be self-sustaining, let alone profitable, if operated only a few hours a day -- and he intends to turn corner by next year. Rest of schedule? Usual material available, including ABC-DuMont kine-recordings, and, consuming as much time as the disc jockeys, all games of Cincinnati Reds (Burger Beer sponsoring). WCPO-TV will pick up all home games (WLWT 11 of them jointly) but will also carry out-of-town games fully via an animated playing field scoreboard, Waite Hoyt simulcasting.

Count of TV Sets-in-Use by Cities

TV sets-in-use as of July 1 rose to 2,010,000 in 46 areas, up 152,000 from June 1 (Vol. 5:26), according to NBC Research's monthly "census" report estimating families and sets within 40-mi. service areas (.5 Mv):

Interconnected Cities

Area	No. Stations	No. Families	No. Sets
Baltimore	3	732,000	66,800
Boston	2	1,175,000	105,000
Buffalo	1	323,000	25,200
Chicago	4	1,438,000	163,000
Cleveland	2	695,000	64,500
Detroit	3	839,000	72,000
Erie	1	112,000	5,100
Lancaster	1	85,000	9,600
Milwaukee	1	327,000	28,400
New Haven	1	557,000	34,300
New York	6	3,597,000	685,000
Philadelphia	3	1,184,000	190,000
Pittsburgh	1	742,000	22,000
Rochester	1	208,000	3,400
Richmond	1	130,000	13,100
Schenectady	1	258,000	27,500
St. Louis	1	474,000	35,000
Toledo	1	241,000	18,000
Washington	4	691,000	51,000
Wilmington	1	183,000	8,500
Total Interconnected	39	13,991,000	1,627,400

Non-Interconnected Cities

Albuquerque	1	22,000	1,000
Atlanta	2	233,000	12,500
Birmingham	2	196,000	3,100
Charlotte	1(a)	171,000	1,000
Cincinnati	2	384,000	27,600
Columbus	1	225,000	7,500
Dayton	2	291,000	8,300
Fort Worth	1	269,000	5,500
Dallas	—(b)	277,000	6,000
Greensboro	1(c)	165,000	100
Houston	1	217,000	6,500
Indianapolis	1	281,000	6,500
Los Angeles	6	1,372,000	150,000
Louisville	1	188,000	8,100
Memphis	1	177,000	6,200
Miami	1	117,000	7,000
Minneapolis-St. Paul	2	333,000	20,300
New Orleans	1	225,000	4,600
Oklahoma City	1	138,000	4,200
Omaha	2(d)	132,000	1,200
Providence	1(e)	1,011,000	11,700
Salt Lake City	2	93,000	5,600
San Diego	1	113,000	4,500
San Francisco	2	825,000	9,500
Seattle	1	307,000	7,500
Syracuse	1	199,000	5,300
Utica	1(f)	127,000	1,200
Others	—	—	49,500
Total Non-Interconnected	39	8,088,000	382,600
Total Interconnected and Non-Interconnected	78	22,079,000	2,010,000

(a) WBTB began operation July 15. (b) Dallas included in coverage of Ft. Worth's WBAP-TV. (c) WFMY-TV due to begin tests in August. (d) WOW-TV and KMTV testing, due to go on schedule Sept. 1. (e) WJAR-TV began operation July 10. (f) WKTV starts in September.

Personal notes: President Truman has appointed Paul A. Porter, ex-FCC chairman, now Washington lawyer, to succeed *Louisville Courier-Journal's* Mark Ethridge as U. S. member of the United Nations Palestine Conciliation Commission, meeting in Lausanne, Switzerland . . . Edwin K. Wheeler, asst. to Harry Bannister as head of WWJ and WWJ-TV, promoted to business mgr. of Detroit News . . . Willis E. Phillips now v.p. and gen. mgr. of Rauland Corp., Zenith tube-making subsidiary . . . NBC producer Edwin Dunham takes 6 mo. leave to manage China's first commercial station, in Macao, owned by Macao Ltd., Hong King . . . George Whitney, ex-partner in Harrington, Whitney & Hurst agency, new Don Lee general sales mgr., Henry Gerstenkorn promoted to national adv. mgr. . . . Albert W. Reibling, NBC-TV business mgr., resigns Aug. 1 to become business mgr. of Kudner's TV dept., taking with him his asst. John P. Marsich.

First NAB appointment since reorganization ordered by board (Vol. 5:29) is Ralph W. Hardy, asst. mgr. of KSL, Salt Lake City, who on Sept. 1 becomes chief of new Audio Division. He's 33, Utah U graduate, onetime Mormon missionary, has been with KSL since 1937, is chairman of NAB's educational standards committee. This week, Royal V. (Doc) Howard tendered his resignation as head of engineering dept., post being taken over by his aide Neal McNaughten, who with Forney Rankin, ex-State Dept., now director of NAB govt relations dept., will represent NAB at NARBA conference in Montreal, Sept. 13. TV Division chief remains to be appointed. Among names advanced are E. P. H. James, ex-MBS v.p.; Philip Merryman, ex-NBC, now consulting engineer; Ralph Austrian, TV consultant; John Koepf, ex-Fort Industry Co. TV director, now public relations director of Cincinnati's Green Line Transit Co.

FCC Comr. Webster back at his desk following Senate confirmation, unanimous, July 20, not much the worse for rough hearing treatment at hands of New Hampshire's evangelical Senator Tobey (Vol. 5:28, 29).

Sidelight on FCC's TV proposal (Vol. 5:29): 500-watt vhf "community" transmitters, built or planned, would be virtually unmarketable. They'd give coverage FCC desires only from a few very high transmitter sites.

TV network sponsorships: CBS-TV starts Sept. 29 *Inside U. S. A. with Chevrolet*, Thu. 9-9:30 p.m., original musical revues to be done by Arthur Schwartz and Howard Deitz . . . Ed Wynn's long-heralded *Perfect Fool* show starts Oct. 6 on CBS-TV, via kine-recordings, Speidel Co., Providence (watch bands) sponsoring . . . Bigelow-Sanford Carpet Co.'s *Bigelow Show* with Paul Winchell and his dummy Jerry Mahoney moves to CBS-TV Oct. 5, Wed. 9-9:30 . . . Westinghouse renews *Studio One* on CBS-TV as of Oct. 3, Mon. 10-11 . . . Ted Mack's *Original Amateur Hour*, Old Gold probably sponsoring, due to move to NBC-TV in October . . . General Foods (Jello) starts Meredith Willson in 4-week series of variety shows on NBC-TV July 31, Sun. 8:30-9, replacing *Author Meets Critics* . . . Lucky Strike reported planning NBC-TV simulcasts of Saturday night *Hit Parade*, Pall Malls TV version of its NBC *Big Story* . . . Lever Bros. takes option on NBC-TV's *The Clock* . . . duPont reported contemplating film version of *Cavalcade of America* . . . General Mills and Wilson Co. (sporting goods) will jointly sponsor Dec. 18 pro football championship on ABC and ABC-TV.

TV station sponsorships: Reported planning spot TV campaigns are Wrigley, thru Arthur Meyerhoff Agency; Peerless Fountain Pen & Pencil Co., thru Chernow Co.; Jelke Margarine, thru Tatham-Laird . . . Using 4 N. Y. stations with marionettes depicting Elsie, Elmer and Beauregard, is Borden Co., thru Young & Rubicam . . . On KTTV, Los Angeles, children's telephone quiz game *Playtime* has these partic. sponsors: Universal Films, Coca Cola, Kaiser-Frazer, Kern Foods, Dr. Ross Dog Food, Longran Aircraft Co., Wilshire Tennis Club . . . Liebmann Beer sponsoring *Miss Rheingold Contest* on 5 N. Y. stations . . . Minkplastic Corp. (pillow, mattress, blanket covers) buys spots in *Your Television Shopper* on WABD, New York . . . Ft. Worth's WBAP-TV starts first daytime live show, *Dream Kitchen Time*, Thu. 4-4:30, Graybar and Hotpoint sponsoring . . . Sponsors on *Klavan's Diner*, Mon. 7 p.m. partic. on WAAM, Baltimore, include Western Maryland Dairy, Hausewald Bread, John Hoos Co. (restaurant supplies), Lord Calvert Coffee and Tea, Meadow Gold Ice Cream, Becker Pretzels.

CBS Affiliates Advisory Board meets in New York's Waldorf-Astoria Aug. 1-2, will discuss TV network plans.

MARTIN CODEL'S

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(For full reports on current trade activities, see Trade Report herewith)

TV MARKET'S OUTLOOK AND MISGIVINGS: You sensed a pervading note of optimism among the TV manufacturers and merchandisers at this week's National Assn of Music Merchants convention and trade show. Summed up, the sentiment is that the current "inventory recession" and "period of liquidation" are about over, that prices are now adjusting to reality, that the industry is approaching stability -- and, best of all, that the fall and winter markets look good.

Indeed, talking with TV folk on the scene, we detected hardly any pessimism. Short of a real depression, which doesn't seem to be in the cards, or a collapse of the TV program structure, hardly likely, they see good business ahead. There's plenty of buying on the part of distributors in anticipation of current lull's end.

Showings of elaborate new lines by the majors and minors alike back up these convictions and hopes -- and even more new lines are due in August and September. One thing has manufacturers and merchandisers quite disturbed, though, and that's the effect on buying public of current FCC proposals for uhf and color and the concomitant publicity. Said one pioneer radio-TV sales chief:

"We know uhf isn't going to be a factor for some years. There won't be any stations doing any sort of job on those frequencies for 2 or 3 years, if then. But sure as shooting, someone is going to promote a set as including all uhf bands. The public won't realize it's something that can't be used for a long time. The same goes for color."

Fact is we'll soon be hearing again about "buying for the future", and indeed Zenith's president Gene McDonald told his stockholders this week that FCC's current plans to open up uhf bear out his original contentions (Vol. 5:10). So it won't be surprising if Zenith again promotes its turret tuner (which Admiral also says it has) and if all sorts of other gadgets and gimmicks and claims for uhf-color are put forth before the rules and standards are finally laid down by Washington.

GEARING FOR FREEZE HEARING SEPT. 26: Objectors to FCC's new TV proposals (Vol. 5:29-30) got extension of time they asked for and are now hustling like beavers, organizing to punch holes in proposal. New dates: comments and counter-proposals to be filed by Aug. 26, opposition to counter-proposals by Sept. 12, hearing Sept. 26.

Executive committees of both FCC Bar Assn and Assn of Federal Communications Consulting Engineers meet Aug. 1 and Aug. 2, respectively. There's strong element in each pushing for united attack on proposal. It's hard to say whether they'll get it, particularly from Bar group which has 430 members, half out-of-town. Renewed effort is underway to challenge legality of allocation under Sec. 307(b) of Communications Act, which says facilities are to be assigned where there's demand. If Bar Assn doesn't get behind argument, individual lawyers or clients undoubtedly will.

ABC came to FCC with suggestion which seems to have met with some favor there: hold hearing on philosophy of overall proposal first, specific channel allocations afterwards. Claim is this would avoid waste of last year when procedure was reversed. In short, if FCC can be convinced overall premises should be changed, there would be an entirely new allocation to argue about.

Particularly irksome to critics is FCC's proposal of 10 kw minimum for vhf

stations. One engineer analyzed first 140 markets, claims 93 need less than 10 kw for Grade A coverage to principal city and Grade B service to metropolitan district, 18 need 20 kw, 5 need 30 kw, 9 need 50 kw, 5 need 50-100 kw, 10 need 100 kw or more.

Note: Errata sheet to its proposals was issued by FCC this week. We are publishing the corrections and amendments as Supplement No. 66 herewith. You can correct your Supplements 64 and 65 therefrom.

TV ROSTER'S No. 76 & 77, ET AL: For all practical purposes, Omaha's WOW-TV is on the air commercially as of Aug. 1 -- so you can put it down as No. 76 in the station roster. Granted an STA by FCC effective Aug. 1, it's planning to sell test patterns commercially during August and also transmit an occasional commercial show. In other words, it's accepting sponsorships now, though formal T-Day is Aug. 29. Area already counts 1,687 sets, manager Joseph Herold estimating at least 3,000 by Sept. 1. Channel 6 tests during July have brought in reception reports from 119 counties, some as far away as 150 miles.

Though several more will go on tests, only other August starter going on full schedule is Leonard Versluis' WLAV-TV, Grand Rapids, Mich., Channel 7, definitely set for Aug. 15, planning daily program schedules starting 6 p.m. It has signed with ABC and DuMont, is seeking NBC and CBS programs too, via own Chicago microwave. Setup is 220-ft tower at Stevensville, Mich., 55 mi. from Chicago, which picks up off the air, then microwaves 36 mi. to Cedar Bluffs, Mich., which relays remaining 36 mi. to Grand Rapids. Station is operating without studios as yet, using local theater for big opening. Base rate is \$180 local, \$200 network.

"Sleeper" among the newcomers is Johnstown (Pa.) Tribune's WJAC-TV, which this week began testing preparatory to Sept. 15 formal opening. Operating on Channel 13 from 2,900-ft elevation, it claims exceptional coverage area, will pick up Pittsburgh's WDTV off the air occasionally, has signed for kine service from all 4 networks. Regular network link depends on AT&T's New York-Chicago microwave, tower for which is only 150 yards from WJAC-TV transmitter. Base rate is \$150. Station will open Pittsburgh sales office Aug. 1.

Other September openings tentatively scheduled include WFMY-TV, Greensboro, N.C.; KMTV, Omaha; WKAL-TV, Utica, N.Y.; KECA-TV, Los Angeles. Tests of Kansas City Star's WDAF-TV are due to start Sept. 11 and Dallas' KBTW Sept. 1. Latter station, being built by oilman Tom Potter, has DuMont transmitter due for delivery momentarily, 337-ft tower and antenna up, new building nearly ready at 3000 Harry Hines Blvd. (mile from downtown Dallas). It aims to beat Dallas Times-Herald's projected Oct. 1 start of KRLD-TV.

RCA STIRRED INTO COLOR ACTIVITY: Novel twist on increasingly warm color TV front is this week's FCC grant to RCA of authority to "investigate" 6 mc color on Channel 10 (192-198 mc) with its Camden experimental station W3XEP for 60 days starting Aug. 1. The novel angle is fact that work will be with sequential system -- the system used by rival CBS. RCA's objective, of course, is to gather authoritative data with which to confront CBS at hearing.

Second RCA development is sudden decision to move its simultaneous color transmitting equipment to Washington for demonstrations during forthcoming hearing. Spokesmen say present plan is to put it on uhf and closed circuit, not vhf. We can't get verification of bandwidth to be used, though we've heard 12 mc mentioned. RCA says it hasn't worked its system on 6 mc recently, but once did, found pictures degraded from wider bandwidth -- but no worse than CBS's system with 6 mc.

Speculation over RCA's strategy is endless, but everyone has been dubious about RCA's "nothing new" statements which have been continuous until this week. Here are a few possible tactics: (1) Show FCC a "glimpse of the future" with wide-band, high-definition picture and say, "Look, this is what public may never see if you limit color to 6 mc now." (2) Try again to show that sequential system, with any bandwidth, is inherently defective. (3) Concede that color must be 6 mc and try to show that simultaneous system is superior to sequential, even with 6 mc.

Although he says nothing publicly, George Sleeper (Color Television Inc., of San Francisco) is believed to be working feverishly on his system (sequential-type)

which some say is most likely to achieve degree of compatibility with present receivers stipulated by FCC. He's now planning to apply for experimental station. Sleeper is one-time assistant to Philo Farnsworth and later, CBS's Peter Goldmark.

CBS has had its 6-mc system on WCBS-TV since July 26, but hasn't been showing it to anyone outside of company. Someone might be picking it up with his own sets. However, FCC has asked for look-see, will get it shortly. Comr. Sterling won't be on hand, since he left July 31 for month's vacation at Maine home. He plans to fly down to look at Aug. 17-19 color demonstrations of WMAR-TV and WMAL-TV (Vol. 5:30). He's having FCC lab adapt receiver to get black-and-white pictures from color transmissions, hopes someone will lend him color set.

Note: Cute sidelight on color TV comes from Noran (Nick) Kersta, ex-TV chief of NBC, now v.p. of Wm. Weintraub agency, who wrote CBS chairman Wm. Paley, requesting option on first commercial color TV program for his client Revlon (cosmetics).

* * * *

Various color committees are now beginning to move. RMA group (Vol. 5:29, 30) met July 29, set up 4 subcommittees for following jobs: (1) Listing pros and cons of all color systems, chairman Electronics Magazine's Donald Fink. (2) Studying time needed to build color converters and sets, chairman Sylvania's Virgil Graham. (3) Adding up receiver costs, chairman Philco's David Smith. (4) Setting up field test requirements, chairman DuMont's T. T. Goldsmith. Last group will also recommend field test requirements for any change in TV standards, including those for monochrome. Committee is inviting non-RMA organizations to submit any data they have. Findings will be passed along to RMA's overall TV Committee (Vol. 5:25,26) which has moved meeting date back to Aug. 16.

Now that Fink is back from Zurich (Vol. 5:26), Bureau of Standards color committee (Vol. 5:25,29,30) will meet Aug. 3, and JTAC, of which he's chairman, will go over FCC's whole TV proposal Aug. 1.

CITATIONS, DEALS AND APPLICATIONS: One more CP went by the boards this week, leaving only 39 on the books -- and 8 of these on the "laggard" list. Surrendering its permit is New Orleans Times-Picayune's WTPS-TV, due to "serious and fundamental uncertainties confronting TV." Added to list of those cited for undue delays was WJIM-TV, Lansing, Mich., given 20 days to decide whether it wants to drop or request hearing. KTLX, Phoenix, previously cited (Vol. 5:27), was extended to Nov. 27.

Hearings have already been held on WRTV, New Orleans (Vol. 4:43, 5:6); WRTB, Waltham, Mass. (Vol. 5:6,7,26); WHAS-TV, Louisville (Vol. 4:40, 5:10,26). Hearings have been set for Sept. 8 on WSEE, St. Petersburg (Vol. 5:26) and Sept. 19 on WJAX, Jacksonville (Vol. 5:29), both in Washington. Hearings have been requested on KTVU, Portland, Ore. (Vol. 5:28) and KEYL, San Antonio (Vol. 5:27), but no dates set.

FCC this week apparently killed Warner Bros. deal to buy Dorothy Schiff (Thackrey) West Coast radio properties, including KLAC-TV, Los Angeles, by refusing to hear case before Aug. 1. Her "loan" deal with movie firm expires that date. She's understood to be seeking new buyer, oilman Edwin Pauley reported negotiating for KLAC-TV. (Note: It's also common knowledge now that San Francisco's KPIX is "on the block" and presumably will soon be sold.)

Two more applications this week: For Knoxville, by Scripps-Howard's WNOX, asking for Channel 6 designated under proposed new allocations (Supp. 64) but not under old ones. For McAllen, Tex., by Max Lutz, produce broker, proposing to take Channel 12 from San Antonio. McAllen (pop. 11,873) gets only one uhf in proposed new allocations. Commission accepted these for filing despite its recommendation against new applications under new allocations pending end of freeze (Vol. 5:29).

* * * *

Washington's WWDC buys WOL from Cowles in \$300,000 deal concluded Friday, subject to FCC approval. Katz-Strouse interests, operating WWDC as independent with 250 watts on 1450 kc, buy physical assets of WOL (5 kw on 1260 kc), will sell WWDC but retain its call letters and FM...FCC general counsel Ben Cottone will personally handle hearing ordered for "sometime in fall" on charges of editorial bias against G. A. (Dick) Richards, including citations of his WJR, WGAR, KMPC (Vol. 5:1 et seq). Also to be probed is his proposed trusteeship plan (Vol. 5:17).

Called "vicious" and "reckless" by Senator Johnson (D-Colo.), chairman of important Committee on Interstate Commerce in charge of radio legislation, plan of Schenley Distillers to go on radio and TV to advertise hard liquors is being pursued. Schenley adman S. D. Hesse says studies of public reactions indicate "public regards advertising of alcoholic beverages by radio in the same light as advertising in newspapers, magazines or any other media." Sen. Johnson sent letter to Treasury Secretary Snyder July 26 urging use of Alcohol Tax Unit's authority to "stop cold this reckless plan to invade the privacy of the home with liquor sales talk." He said any station would be "stupid" to take hard liquor ads. But, with business down, some stations are considering it, ABC is reported favorably inclined, CBS willing to consider a regional test.

First defections from Petry organization, publicly announced, are *Milwaukee Journal's* WTMJ-TV and *Buffalo News's* WBEN-TV, which have appointed Harrington, Righter & Parsons, 270 Park Ave., New York, exclusive TV rep firm recently formed by ex-Petry staffmen. Biggest rep firm for some time has been torn by internal dissension and litigation between partners Edward Petry and Henry Christal.

Something seems to be "cooking" as between CBS and Zenith—possibly latter's sponsorship, for first time, of a TV program. It's all pretty vague, but fact is Zenith's Phonevision will be plugged on Tex McCrary-Jinx Falkenburg *Preview* on CBS-TV, Monday, Aug. 1, 9-9:30 p.m. Zenith stockholders meeting this week, incidentally, approved management's plan to contract with newly formed Teco Inc. to promote and operate Phonevision (Vol. 5:28).

ASCAP has extended until Sept. 1 TV's use of its members' music. Meanwhile, progress is reported in negotiations between ASCAP and broadcasting music industry committee, one member expressing certainty this would be last extension required. Final agreement is expected to embody last ASCAP offer of prevailing AM music license fees plus 10% (Vol. 5:24).

Variety's TV "showmanagement" awards, announced in special 60-page Radio-TV section July 27, go to CBS, Milton Berle, Phillips Lord's *Black Robe* (NBC) and KTLA's Klaus Landsberg (for spot news coverage). AM "showmanager" awards went to CBS's Wm. S. Paley, KLZ's Hugh Terry, WNEW's Ted Cott. On subject of AM vs. TV, articles by network topkicks stress strength of AM interdependence of both media, business for both.

TV programs: NBC-TV working with Dept. of Defense on *Armed Forces Hour*, to start in autumn . . . Kyle McDonnell returns on NBC-TV July 30 in *For Your Pleasure*, Sat. 8:30-9, replacing *Television Screen Magazine* . . . *Couple of Joes* titles WJZ-TV vaudeville and giveaway show with Joe Rosenfeld and Joe Bushkin asking viewers in home to stump them with tunes they can't play, starting Aug. 12, Fri. 10-11 . . . CBS-TV on July 25 started *Classified Column*, Paul deFur demonstrating homemaking products and ideas, Mon.-Fri. 5:15-5:30.

Now's the time to consider package design in terms of TV, say members of the Packaging Panel, new feature series starting in July 22 *Printers' Ink*. "Due to lack of color and definition in television reception most packages considered good for store display and magazine advertising are no longer adequate," is conclusion. Packaging experts recommend redesigning with a motif of "bold visibility in black-and-white."

Republic Pictures quietly preparing to offer films from stock to TV buyers, spliced into 10-min. narrations titled *American True Stories*. Samples have been shown admen.

International conference on world-wide TV standards in Zurich, Switzerland (Vol. 5:26) wound up with unanimous agreement on: (1) Use of 4:3 aspect ratio; British have had 5:4 but are in process of changing to 4:3. (2) Use of interlacing with 2:1 ratio. (3) Making effort to divorce scanning-line frequency from country's power frequency to facilitate interchange of programs. There were 3 camps regarding number of lines and frames: U. S., 525 lines, 30 frames; British-French, 405 and 25; all others, 625 and 25. First and last are highly compatible; receiver built for one can easily be adapted to other. Participants were quite impressed with U. S. reports of offset carrier, since it would allow more stations in crowded Europe. They also liked inter-carrier system of receiver design because of its economy. U. S. representative Donald Fink reports only technical development impressing him was Swiss big-screen projection system employing light valve system completely different from our projections. Disadvantages seem to be tremendous complexity and expense. Another meeting, late this year or early next, may be tour of London, Paris, Eindhoven, New York.

Signs point to joint motion picture industry effort to get theater TV frequencies instead of depending on lines, deemed too expensive. MPA board, meeting in New York this week, heard SMPE's TV chairman Donald Hyndman recommend companies jointly petition FCC for public hearing on theater TV frequencies, while individual companies apply for licenses. MPA is due to take formal action next Tuesday.

Fabian's Brooklyn Fox Theater, where RCA instantaneous theater-TV equipment was successfully used for Walcott-Charles fight in June (Vol. 5:26), is first to order permanent installation. Cost is about \$25,000 for equipment, with 28-in. spherical mirror permitting projector to be slung from balcony, 60 feet from screen. S. H. Fabian, head of 50-theater chain, said he expects "TV in the theater [to] boost box office at a time when shot in the arm is helpful." Paramount's intermediate system now being operated in New York's Paramount and Chicago's Chicago theaters, will also be installed in houses in Los Angeles, San Francisco, Salt Lake City, Minneapolis, Detroit, Boston, Toronto—possibly London, Paris.

TV sponsorships: Separate NBC-TV version of *Martin Kane, Private Detective*, starring Wm. Gargan, is due to start shortly with United States Tobacco Co. sponsoring; radio version on MBS has same sponsor . . . It's now definite that *Admiral Broadway Revue* won't be back on NBC-TV this fall, due to costs, but big set maker is retaining half of ABC-TV *Stop the Music* and shopping for another half-hour network show . . . Definite, too, that Lever Bros. will sponsor NBC-TV's *The Clock* starting Oct. 5, Wed. 8:30-9 . . . Libby Foods reported buying *Three Johns* on NBC-TV for Sept. start, thru J. Walter Thompson . . . Gulistan Carpets planning big newspaper-magazine schedule this fall, with TV and radio added . . . General Baking Co. (Bond Bread) buys spots on WMAL-TV, Washington, renews on WFIL-TV, Philadelphia . . . WFIL-TV also reports signing *Cameo Curtains*, renewing *Evans Eye Lotion* for 1-min. film spots . . . Standard Oil of Indiana buys home grid games of U of Minnesota on KSTP-TV . . . Chevrolet Distributors buys home grid games of Ohio State U on WLWC, Columbus.

TV's threat to outdoor advertising is reflected in fact Texaco pulled off billboards entirely when it decided to sponsor Milton Berle. (It's also taking Berle off AM next fall.) Outdoor medium, however, expects this will be good year; it's the smallest of the media, accounting for \$132,100,000 last year, about 2.7% of total U. S. advertising as estimated by *Printers' Ink* (Vol. 5:27).

Statement of Aims
Proposals Regarding VHF-UHF Rules and Standards
with
Table of TV Channel Allocations by Cities
 Full Text of Report 49-948 issued by FCC, July 11, 1949 (Adopted July 8)
 As basis for hearing scheduled for August 29, 1949

- In the Matters of Amendment of Section 3.606 of the Commission's Rules and Regulations. } Docket Nos. 8736 and 8975
- Amendment to the Commission's Rules, Regulations and Engineering Standards concerning the Television Broadcast Service. } Docket No. 9175
- Utilization of Frequencies in the Band 470 to 890 mc for Television Broadcasting. } Docket No. 8976

Notice of Further Proposed Rule Making

1. Notice is hereby given of further proposed rule making in the above-entitled matters. For purposes of identification, the prior proceeding in the above-entitled matters shall be designated as "Part I" of these proceedings. The proceedings instituted by this notice shall be designated as "Part II" of these proceedings. The above-entitled proceedings are hereby consolidated, and the records therein are hereby reopened.
2. The caption of the proceeding in Docket No. 9175 is hereby amended to read as set forth above, and to eliminate the former reference to the FM Broadcast Service. The Commission is making no proposal at this time concerning the FM broadcast rules, regulations, or standards, and will consider no proposals on this subject from other persons in the above-entitled proceeding. If the evidence taken in this proceeding, heretofore or hereafter, should warrant a proposal for the amendment of the rules, regulations and standards concerning FM broadcast service, the Commission will institute a separate proceeding for that purpose.
3. The Commission's proposals for amendment of Section 3.606 of its Rules and Regulations containing the table of allocation of television channels set forth in the following notices heretofore issued in Docket Nos. 8736 and 8975, are hereby withdrawn:
 - (a) Notice of Proposed Rule Making (FCC-48-126) released January 20, 1948.
 - (b) Notice of Proposed Rule Making (FCC-48-1569) released May 6, 1948.
 - (c) Supplemental Notice of Proposed Rule Making (FCC-48-1812) released July 16, 1948.
4. In view of the withdrawal of the Commission's proposals in the above notices, all interested persons who have heretofore participated in the above-entitled proceedings, may participate further only by complying with the procedures set forth in paragraphs 14 and 15 hereof. Persons who have indicated their interest in allocation of television channels to specific areas (by petition, letter,

or application heretofore filed with the Commission) may participate in this proceeding only by complying with the procedures set forth in said paragraphs.

5. The Commission proposes to amend Parts 2 and 3 of its Rules and Regulations ("Rules Governing Television Broadcast Stations") and its "Standards of Good Engineering Practice Concerning Television Broadcast Stations" as set forth in *Appendices A, B, C and D* attached hereto.

6. It is evident that an understanding must be reached between the United States of America and Canada, Mexico and Cuba with respect to the allocation of television channels along their mutual borders. Such an understanding is necessary in order to prevent undue interference between television stations in the respective countries and in order to provide for a fair, efficient and equitable allocation of television channels between the United States and the above countries. Accordingly, in Appendix D herein, the Commission has included certain assignments for Canada, Mexico and Cuba which might be allocated on the same basis of the overall proposal if the borders between the countries did not exist. No formal agreements have been made and these potential assignments for Canada, Mexico and Cuba are included in the proposal only for illustrative purposes and to show the effect on the above "Table" of a reasonable number of assignments to Canada, Mexico and Cuba. The Commission proposes to recommend that the State Department request the Canadian, Mexican and Cuban Governments to enter into formal agreements as soon as possible.

7. In preparing the "Table" of television channel allocations set forth in Appendix C attached hereto, the Commission has not altered existing television authorizations except in three instances. These exceptions resulted from the Commission's efforts to arrive at an equitable allocation of television channels between the United States and the Dominion of Canada. The three cities so affected are Cleveland, O., Syracuse, N. Y., and Rochester, N. Y. The changes proposed by the Commission with respect to these cities and the basis for its proposals are set forth in the following paragraphs.

8. In the existing "Table" of television allocations set forth in Section 3.606 of the Commission's Rules and Regulations, Channels 5, 8 and 10 are allocated to Syracuse, N. Y. A construction permit to operate on Channel 5 in Syracuse is held by the Central New York Broadcasting Co. (WSYR-TV). In the proposed "Table" in Appendix C attached hereto the Commission proposes to

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delete Channel 5 from Syracuse and substitute Channel 3 in its place. Should this proposal be adopted by the Commission, it is hereby proposed to modify the construction permit held by Central New York Broadcasting Company for television station WSYR-TV in Syracuse by substituting therein Channel 3 in place of Channel 5. In the light of the information set forth in paragraph "7" above, it is the judgment of the Commission that its actions will result in the maximum utilization of television channels in the United States and Canada, and will promote the public interest, convenience and necessity, and the provisions of the Communications Act of 1934, as amended. Accordingly, pursuant to the provisions of sections 303(f) and 312(b) of the Communications Act of 1934, as amended, Central New York Broadcasting Co. (WSYR-TV), Syracuse, N. Y., is directed to *show cause* in these proceedings and in accordance with the procedures set forth in paragraphs 14 and 15 herein, why its construction permit should not be modified accordingly in the event the Commission deletes Channel 5 from Syracuse and substitutes Channel 3 in its place.

9. In the existing "Table" of television allocations set forth in Section 3.606 of the Commission's Rules, Channels 2, 6 and 11 are allocated to Rochester, N. Y. A construction permit to operate on Channel 6 in Rochester is held by the Stromberg-Carlson Co. (WHTM) [now WHAM-TV]. In the proposed "Table" in Appendix C attached hereto the Commission proposes to delete Channels 2, 6 and 11 from Rochester and substitute Channels 5, 22, 32 and 44 in their places. Should this proposal be adopted by the Commission, it is hereby proposed to modify the construction permit held by Stromberg-Carlson Co., for station WHTM [now WHAM-TV] by substituting therein Channel 5 in place of Channel 6. In the light of the information set forth in paragraph "7" above, it is the judgment of the Commission that its actions will result in the maximum utilization of television channels in the United States and Canada, and will promote the public interest, convenience, and necessity, and the provisions of the Communications Act of 1934, as amended. Accordingly, pursuant to the provisions of Section 303(f) and 312(b) of the Communications Act of 1934, as amended, Stromberg-Carlson Co. (WHTM), Rochester, N. Y. [now WHAM-TV], is directed to *show cause* in these proceedings and in accordance with the procedures set forth in paragraphs 14 and 15 herein, why its construction permit should not be modified accordingly in the event the Commission deletes Channel 6 from Rochester and substitutes Channel 5 in its place.

10. In the Existing "Table" of television allocations set forth in Section 3.606 of the Commission's Rules, Channels 2, 4, 5, 7 and 9 are allocated to Cleveland, O. A construction permit to operate on Channel 9 in Cleveland is held by the Empire Coil Co., Inc. (WXEL). In the proposed "Table" in Appendix C attached hereto the Commission proposes to delete Channels 2, 7 and 9 from Cleveland and substitute Channels 8, 11, 40 and 42 in their place. Should this proposal be adopted by the Commission, it is hereby proposed to modify the construction permit held by Empire Coil Co., Inc., for television station WXEL in Cleveland by substituting therein Channel 11 in place of Channel 9. In the light of the information set forth in paragraph "7" above, it is the judgment of the Commission that its actions will result in the maximum utilization of television channels in the United States and Canada, and will promote the public interest, convenience and necessity, and the provisions of the Communications Act of 1934, as amended. Accordingly, pursuant to the provisions of Section 303(f) and 312(b) of the Communications Act of 1934, as amended, Empire Coil Co., Inc. (WXEL), Cleveland, O., is directed to *show cause* in these proceedings and in accordance with the procedures set forth in paragraphs 14 and 15 herein, why its construction permit should not be modified accordingly in the event the Commission deletes Channel 9 from Cleveland and substitutes Channel 11 in its place.

11. On May 25, 1949, the Commission adopted an order (FCC 49-729), which added the following issue in Docket No. 8976:

"5. To receive evidence and data with respect to the question whether there should be an allocation of the band 470-500 mc to multi-channel broad band common carrier mobile radio operation in lieu of television broadcasting."

This issue was added to the proceeding upon the petition of The Bell Telephone Laboratories, Inc., requesting an allocation in the band 400-500 mc for multi-channel broad band common carrier mobile radio operation in lieu of television broadcasting. The Commission is not making any proposal with respect to the above issue but will consider all written comments and evidence supporting or opposing said petition. Interested persons may submit written comments or evidence concerning said proposal by complying with the procedures set forth in paragraphs 14 and 15 herein.

12. On November 30, 1948, Raymond M. Wilmette and Paul A. deMars filed with the Commission a petition entitled, "A Petition Regarding a System for Television at UHF", urging that Commission adopt a proposed system of television broadcasting referred to as "Polycasting". Petitioners, and other interested persons, may submit details concerning the said proposal and may offer evidence with respect thereto by complying with the procedures set forth in paragraphs 14 and 15 herein.

13. (a) Appendix A hereto describes the conditions upon which the Commission will receive proposals for a change in Transmission Standards on Channels 2 through 55, looking toward the establishment of color television. Persons with relevant information, especially those who have heretofore supplied information concerning color television or have demonstrated experimental color operation to the Commission, should file proposals in accordance with Appendix A and should be prepared to submit information concerning color breakup, flicker, color fringing, image registration, color fidelity, picture brightness, camera light efficiency, definition, field tests, and details with respect to modification of transmitters and receivers to provide the degree of compatibility contemplated by Appendix A, paragraph II-C-2.

(b) The Commission has heretofore received evidence concerning a method of airborne television, or "Stratovision", in Docket No. 8976.

(c) The Commission has received informal suggestions concerning the possible provision for non-commercial educational television broadcast stations in the 470 to 890 mc band.

(d) Interested persons desiring to submit comments or evidence concerning these matters, or concerning other matters upon which the Commission is making no proposal at this time, may do so upon complying with the procedures set forth in paragraphs 14 and 15 herein.

14. (a) On or before August 8, 1949, any interested person who is of the opinion that the proposals herein should not be adopted, or should not be adopted in the form set forth herein, may file with the Commission written comments (including data, views or arguments) concerning said proposals, and interested persons favoring the proposals herein may file such written comments in support thereof. All written comments must be clear and specific as to the proposals made therein and must be accompanied by supporting engineering statements. No comments or statements will be accepted after August 8, 1949, unless a later date is provided by Commission order. Any person filing comments who owns or has the right to sublicense United States unexpired patents with claims directed to or covering operations or equipment specifically called for by the transmission standards proposed herein, or which are proposed by other persons during this proceeding, shall file a statement on or before the opening date of the hearing or such later date as the Commission

may by order provide showing (i) the number of each such patent, and (ii) the pertinent claims therein.

(b) On or before August 19, 1949, any interested persons desiring to submit written comments (including data, views or arguments) *in opposition to comments or counterproposals* filed with respect to the Commission's proposals herein may file such opposing comments, which must be accompanied by supporting engineering statements. Oppositions to counterproposals will not be accepted by the Commission if such oppositions advance any new proposals, nor will they be accepted after August 19, 1949, unless a later date is provided by Commission order.

(c) In accordance with Section 1.764 of the Commission's Rules and Regulations, an original and 14 copies of such written comment, statement or exhibit shall be filed with the Commission.

15. (a) Notice is hereby given that a hearing will be held in the above-entitled matters, before the Commission *en banc*, commencing on August 29, 1949, at 10:00 a. m. in Washington, D. C., (at a place to be designated by subsequent notice) for the purpose of hearing testimony and receiving evidence regarding the Commission's proposals, such other proposals as are duly and timely filed by interested persons, and such other evidence as the Commission may consider desirable and pertinent. Any interested person who has filed written comments (including data, views or arguments) in accordance with the provisions of Paragraph 14 herein may participate in said hearing. The Commission reserves the right to require the presentation of evidence on any matter pertinent to this hearing by any person whether or not such person has filed a statement or comments. In order to expedite the conduct of the hearing and to enable all parties to be fully prepared in advance thereof, it is urged that every effort be made by interested parties to file 10 copies of their proposed exhibits at least 5 days prior to the date of hearing. Amendments and supplements to the exhibits should be filed as soon as possible prior to the hearing.

(b) Comments and statements directed toward specific allocations in the Commission's proposed "Table" in Section 3.606 of the Commission's Rules and Regulations shall show not only the effect which the proposals in said comments and statements will have on the service in the particular communities involved but also *the overall effect* thereof with specific reference to the priorities set forth in Section III-A-1 in Appendix A herein.

(c) Persons who have failed to file timely written comments or statements as required by paragraphs 14 and 15 herein will not be permitted to adduce testimony or to offer any exhibits in evidence at the hearing, nor will such persons be permitted to cross-examine any of the witnesses appearing at the hearing.

(d) In view of the comprehensive nature of the proceedings herein and the desirability of concluding the hear-

ing as soon as possible, it is requested that parties incorporate as much evidence as is practicable in the exhibits which they plan to submit. In this connection participants will be required to submit at the hearing at least 20 copies of each exhibit to the Commission. In addition, participants should plan, if possible, to have available 100 additional copies of each exhibit for distribution to interested persons.

(c) In appropriate instances the Commission will permit participants at the hearing to incorporate by reference portions of the records of prior hearings *provided* that notice of intention to make such offer at the hearing is set forth in the written comments filed by the offering party and that the docket number and transcript pages are specifically identified in said written comments.

16. Following the closing of the record and the conclusion of oral arguments, the Commission upon consideration of all proposals, counterproposals, and evidence in this proceeding will adopt such rules, regulations and standards, as will best serve the public interest, convenience or necessity.

17. Persons who are contemplating filing applications for new television broadcast stations, or filing amendments to pending applications for new television broadcast stations, are requested to postpone the filing of such applications or amendments pending a final determination on the rules, standards and allocations proposed in this proceeding. Upon the issuance of final rules, standards and allocations in this proceeding, the Commission will issue an announcement providing a reasonable period of time during which new applications may be filed and pending applications may be amended, in conformity with the new rules, standards and allocations. Applicants are requested to comply with this paragraph in order to eliminate unnecessary administrative effort and to save themselves the possibly needless expense of preparing and filing applications and amendments which may not be in conformity with the rules, standards and allocations as finally adopted.

18. A copy of this Notice will be mailed to each person who appeared in Part I of the proceedings in the above-entitled matters. Subsequent notices will be served only on persons who participate in the proceedings herein in accordance with the provisions of paragraphs 14 and 15 of this Notice.

19. Authority to issue the proposals herein is vested in the Commission by Sections 4(i), 301, 303(b), (c), (d), (e), (f), (g), (h), (r), and 307 (b) of the Communications Act of 1934, as amended.

* * * *

[Comr. Hennock, in separate view, stated that Commission "must take a vigorous and affirmative lead" in establishing a non-commercial educational television service.]

Appendix A

Proposals Regarding Rules and Standards

THE Commission proposes to amend its Rules and Regulations and Standards of Good Engineering Practice Concerning Television Broadcast Stations so as to accomplish the matters set forth below:

I. Number of Channels

A. In addition to the twelve VHF six mc channels presently assigned (numbered 2 through 13) for television broadcasting, the Commission proposes to add an additional 42 six mc channels which will be numbered consecutively channels 14 through 55. Channel 14 will begin at approximately 470 mc or 500 mc depending upon the action to be taken by the Commission with respect to the request of the Bell Telephone Laboratories, Inc., for

space in the UHF band for a broad-band system of Mobile Communications (See Order of May 25, 1949—FCC 49-729). The remaining channels will be in a continuous band immediately contiguous to Channel 14; 32 of these channels will be used for Metropolitan stations and 10 for Community Stations.

B. The balance of the band which is allocated to experimental television broadcasting will remain available for further experimentation in television broadcasting.

II. Transmission Standards

A. The Commission proposes that the Transmission Standards for channels 14 through 55 as well as for

channels 2 through 13 shall be those standards which are set forth in the Standards of Good Engineering Practice concerning Television Broadcast Stations under Heading 2 entitled "Transmission Standards and Changes or Modifications Thereof."

B. The Commission will give consideration to proposals for a change in Transmission Standards on channels 2 through 55 looking toward color television or other television systems. Any such proposed shall:

1. Be specific as to any change or changes in the Transmission Standards proposed; and
2. Shall contain a showing as to the changes or modifications in existing receivers which would be required in order to enable them to receive programs transmitted in accordance with the new standards.

C. It is proposed to consider changes in Transmission Standards for channels 2 through 55 only upon a showing in these proceedings that:

1. Such system can operate in a 6-mc channel; and
2. Existing television receivers designed to receive television programs transmitted in accordance with present transmission standards will be able to receive television programs transmitted in accordance with the proposed new standards simply by making relatively minor modifications in such existing receivers.

III. Allocation Principles

A. Allocation Table

1. The television channels available for use in the various communities are set forth in the "Table" in Appendix C. In setting up this table, the Commission has endeavored to meet the twofold objective set forth in Sections 1 and 307(b) of the Communications Act of 1934—to provide television service, as far as possible, to all people of the United States and to provide a fair, efficient and equitable distribution of television broadcast stations to the several states and communities. The Commission has set forth below the principles, in terms of priority, which form the basis of the allocation table. These priorities are as follows:

Priority No. 1—To provide at least one television service to all parts of the United States.

Priority No. 2—To provide each community with at least one television broadcast station.

Priority No. 3—To provide a choice of at least two television services to all parts of the United States.

Priority No. 4—To provide each community with at least two television broadcast stations.

Priority No. 5—Any channels which remain unassigned under the foregoing priorities will be assigned to the various communities depending on the size of the population of such community, the geographical location of such community, and the number of television services available to such community from television stations located in other communities.

2. As used in the preceding subsection "community" includes only those communities which had at least one authorization for a Standard, FM or Television broadcast station on July 1, 1949.¹ All communities within a metropolitan district shall be considered as a single community for the purpose of the preceding subsection except where the allocation table specifically otherwise states. Whenever an assignment is made in the allocation table to a metropolitan district, such assignment shall be available to any community located within such Metropolitan District, except where otherwise specifically provided in the allocation table. In the case of some metropolitan districts, some of the communities are located at such a distance from the principal city thereof that a better coverage of the metropolitan district results if a separate assignment is made to such com-

¹As to some of these communities, no provision has been made in the Allocation Table. It is contemplated that these communities will utilize community channels.

munities. The following are the exceptions mentioned above: Waukegan, Ill.; Gary, Ind.; Annapolis, Md.; Brockton, Mass.; Pontiac, Mich.; Asbury Park, N. J.; Uniontown and Greensburg, Pa.; New Brunswick, N. J.

Accordingly, the Commission proposes specific assignments in each of these cities on one of the ten community channels, 46-55.

3. Whenever an assignment is made in the allocation table to a community not within a Metropolitan District, such channel will also be available, without the necessity of rule-making proceedings, to any other community, not within a Metropolitan District, whose geographical center is located within 15 miles from the geographical center of the community in question.

4. Except as provided in "2" and "3" above, no application for a television station in a community specified in the Allocation Table will be accepted for filing which specifies a channel not contained in the Allocation Table. Persons desiring to apply for a channel not specified in the Allocation Table must first secure an amendment to such table through appropriate rule-making proceedings. Changes will be made in the Allocation Table only if a showing is made that:

a. Such change is consistent with the priorities set forth in III-A-1;

b. Such change will not result in the reduction of the basic service area of an existing television broadcast station or of a television station provided for in the Allocation Table as defined in III-D; and

c. Such change is in the public interest.

5. If a person desires to file an application for a community not within a metropolitan district and not specified in the Allocation Table, he may file an application for a community station on Channels 46-55, without the necessity of rule-making proceedings. If such person desires a Metropolitan station in a community not specified in the Allocation Table, he must first secure an amendment to such table through appropriate rule-making proceedings by making the showing specified in the preceding paragraph.

6. As used in this part, Metropolitan Districts are as defined in the United States 1940 Census.

B. Grades of Service²

1. Television broadcast service is classified into three grades of service which are defined in the table below:

Grade of Service	Permissible Interference Ratios		Service Availability	
	Co-Channel	Adjacent Channel	Percent Time	Percent Locations
	Desired to Undesired	Desired to Undesired		
A	55 db	20 db	90%	90%
B	46 db	12 db	90%	70%
C	40 db	6 db	90%	50%

It is recognized that by means of synchronized or offset carrier operation some improvement in the interference ratio is possible. The Commission hopes to encourage such operations but does not intend to use them as a means of reducing separation between stations but rather to extend the service area of stations and to improve the quality of television reception.

2. The following median field intensities are required for service:

Grade	Field Intensity in db above 1 uv/m		
	Channels 2-6	Channels 7-13	Channels 14-55
A	74(5000) ³	77(7000)	80(10,000)
B	68(2500)	71(3500)	74(5000)
C	47(220)	56(632)	62(1264)

²The methods and assumptions used in establishing the grades of service and the required field intensities in accordance with the above definitions, are set forth in Appendix B.

³The field intensities are expressed in db above one microvolt per meter. The numbers in parentheses are the field intensities in microvolt per meter.

3. The Commission proposes the use of iso-service contours which express service in terms of the ratio between desired and undesired signal in decibels, or the minimum required signal levels in decibel above one microvolt per meter. This has been done in order to facilitate computation of service and interference field intensities. Likewise, the same terms may be carried over to the output of the transmitter, transmission line loss and antenna gain. This has the advantage of using the same unit throughout the service whether in the transmitting equipment or in the field and has the additional advantage that a decibel of power added at the transmitter results in a decibel of increased field intensity. In order to place these matters on a related basis, the decibels with respect to transmitter power and antenna gain as well as field intensity must be expressed as decibels with reference to some given level.

Field intensity is expressed either in decibels above an undesired signal or decibels above a reference level which has been chosen as one microvolt per meter. A convenient reference level of transmitter power is 1 kilowatt. The propagation curves of the Report of the Ad Hoc Committee, Volume I,⁴ referred to in Appendix B, are based upon the radiation in the equatorial plane of a half wave dipole antenna having an effective radiated power of one kilowatt. Antenna gain is expressed as the ratio in db of the maximum radiation from the antenna to the radiation in the equatorial plane of a half wave dipole with equal power input.

C. Classes of Stations

1. *Community Stations*—Television channels Nos. 46 to 55 will be assigned exclusively to community stations for use only in those communities which are not part of a metropolitan district (except for those special cases set forth in III-A-2) and to which no assignment has been made in the Allocation Table. Community stations will be authorized with an effective radiated peak power of not less than 7 db (5 kw) and not more than 13 db (20 kw) and with an antenna height of 500 feet above average terrain as determined by methods prescribed in the Standards of Good Engineering Practice Concerning Television Broadcast Stations. Co-channel community stations will not be assigned less than 140 miles apart, and adjacent channel community stations will not be assigned less than 60 miles apart.

2. Metropolitan Stations

a. Metropolitan stations are designed primarily to render service to a single metropolitan district or a principal city and to the surrounding rural area.

b. Except as provided in "5" below, metropolitan stations will be authorized with an effective radiated peak power lying between the maximum and minimum limits set forth in the table below with an antenna height of 500 feet above the average terrain, as determined by the methods prescribed in the Standards of Good Engineering Practice Concerning Television Broadcast Stations.

Channels	Minimum	Maximum
2-6	10 db (10 kw)	20 db (100 kw)
7-13	10 db (10 kw)	20 db (100 kw)
14-45	10 db (10 kw)	23 db (200 kw)

3. *Use of Antenna Heights other than 500 feet*—Where higher antenna heights are available, they should be used but in such cases the Commission will require a reduction in the effective radiated peak power so that interference caused to the Grade A service of adjacent and co-channel stations shall not be greater than that which would be caused by the maximum power recognized for a metropolitan or community station with antenna height of 500 feet above average terrain in accordance with the methods specified in Appendix B. Where it is shown that an antenna height of 500 feet is not available, the Commission may authorize the use

of a lower height antenna but will not permit an increase in radiated power in excess of the maximum listed above.

4. *Horizontal Increases in Power*—The Commission intends from time to time to consider horizontal increases in maximum power for all community and metropolitan stations.

5. *Wide Coverage Stations or Rural Stations*—The Commission proposes to modify Section 3.605 of the Rules and Regulations dealing with rural stations. The Commission intends to provide for the use of wide coverage stations located at high elevations consistent with other sections of the Rules and Regulations and the Allocation Table. The power height relation used in calculating the Allocation Table will be regarded as a "norm" and power or antenna heights greater than the Allocation Table will be authorized, provided the increase is beneficial to the Allocation Table and is consistent with the Priorities stated in Section III-A.

D. Service Areas of Television Broadcast Stations

1. Each television broadcast station shall render Grade A service, whenever technically feasible, but in no event less than Grade B service, to the entire community or the entire metropolitan district, and such entire community or metropolitan district shall constitute a station's basic service area.⁵ No television station will be authorized either before or after a hearing which, by reference to the methods set forth in Appendix B, does not render service as above specified and the engineering proposal of which precludes operation with maximum power consistent with the rules contained herein.

2. No station will be authorized either before or after a hearing, which, by reference to the methods set forth in Appendix B, will reduce the basic service area of an existing station (at its authorized site) or of a station provided for in the Allocation Table (at an assumed site in the geographical center of its community), operating with maximum power. Reduction of Grade C service area, or of Grade B or Grade A service areas beyond the basic service area described above, of an existing station (at its authorized site) or of a station provided for in the Allocation Table (at an assumed site in the geographical center of its community), operating with maximum power, will be permitted only if the loss in service does not violate any of the priorities set forth above and that the new service created is of a higher priority than the service area being reduced.

3. III-C above makes provision for both minimum and maximum power for the several classes of stations. Since television is a new service and the number of receivers in the hands of the public is relatively small, it is recognized that it may require several years for some stations to reach their maximum power. In order to make sure that the public will receive the maximum television service possible, the Allocation Table has been constructed on the basis of maximum power for each station. Any changes in the allocation plan will have to be based upon a showing that the allocation proposed will be able to utilize maximum power and without resulting in any reduction in the basic service area (as above defined) of existing stations (from their authorized site) or of stations specified in the Allocation Table (at an assumed site in the geographical center of the community) operating with maximum power.

4. Methods for describing service areas and interference are set forth in Appendix B. The methods therein described include the propagation of radio waves through the lower atmosphere only. These propagation charts are based on an extensive number of measurements made at various locations over a long period of time. It is recognized that these charts will have to

⁵In case of the metropolitan districts mentioned in III-A-2 above, the communities specifically mentioned in that paragraph shall not be part of the basic service area of stations located in the metropolitan district but shall be separate basic service areas of stations located in those communities.

⁴This Report was made public on June 8, 1949 (See Public Notice FCC 49-773). Copies of the Report are available on request.

be revised from time to time as more measurements are made and interested persons are encouraged to make as many measurements as possible and submit them to the Commission. The Commission is satisfied that on the basis of the data presently available to it the data underlying the propagation charts are sufficient to afford an adequate statistical basis of describing field intensities under average conditions, but it is expected that there may be substantial variations in individual areas. It is also realized that propagation to distances of the order of 500 to 1500 miles via the sporadic E layer and to distances beyond via the F2 layer may take place for small percentages of the time in certain of the channels. However, since such interference may occur over extremely large distances, it is not possible to protect stations against such interference unless operation on such channels were limited to one or at the best a few stations. In order to provide stations for the various communities, the Commission has determined that the overall public interest is better served by not protecting stations against this type of interference.

E. Directional Transmitting Antennas

1. With the exceptions noted in the footnote,⁶ the

⁶The two exceptions are WGAL-TV on Channel 4 in Lancaster, Pa., and WDEL-TV on Channel 7 in Wilmington, Del. Both of these stations were authorized under the original allocation plan with 1 kw power and are too close to other stations on the same channel to permit operation with maximum power on a non-directional basis. The Commission proposes to permit those stations to utilize directional antennas in order to permit them eventually to utilize increased power.

Allocation Table makes no provision as such for directional transmitting antennas and the Commission does not propose to make changes in the plan based upon the use of such antennas. However, it is recognized that a directional transmitting antenna may be useful in certain situations in order that a particular site may be utilized or overall service improved. Accordingly, directional transmitting antennas will be permitted in appropriate cases for use on channels contained in the Allocation Table.

2. The authorization of a directional antenna will not excuse compliance with the service area requirements set forth above nor will it be the basis for permitting reduction of basic service areas.

3. Since the wave-lengths involved in television are much shorter than in the case of standard broadcasting, it is evident that wires, towers, and other objects which may serve as reflecting surfaces have considerably larger dimensions in terms of wave-lengths in the television band as compared with the standard broadcast band and hence the problem of external reflections is considerably aggravated. Accordingly, nulls below a certain value become doubtful in their protective value since they may be counteracted by the external reflections. Based upon the best available data, the Commission is of the opinion that nulls deeper than minus 10 db as compared to the maximum value of radiation in any direction may not be practicable.

Appendix B

Proposals Regarding Field Intensities, Propagation, Station Separation, Service Areas

I. Specifications of Required Field Intensities

The required field intensities specified in Appendix A, Section III-B, were determined in accordance with the following assumptions and procedure:

A. Grade A Service—Required Field Intensities, in db above 1 microvolt per meter.

(a) To overcome receiver noise,

	63 mc	195 mc	600 mc ¹
(1) Thermal Noise (db) ²	7	7	7
(2) Receiver Noise Figure	12	12	15
(3) Peak Vis. Car./RMS Noise	30	30	30
(4) Trans. Line Loss ³	1	2	5
(5) Antenna Eff. Length ⁴	-3	6	8
(6) Local Field Intensity	47	57	65
(7) 90% Terrain Factor ⁵	11	11	15
(8) Median Field Int. ⁶ (db)	58	68	80

(b) To overcome local noise and interference,

	63 mc	195 mc	600 mc
Median Field Intensity (db)	74	77	80

(c) Required urban field intensities to overcome both (a) and (b),

	63 mc	195 mc	600 mc
Median Field Intensity (db)	74	77	80

¹For the purposes of preparing a table of allocations, the frequencies herein specified are to apply to the television channels as follows: 63 mc, channels 2-6; 195 mc, channels 7-13; 600 mc, channels 14-55.

²Reference level db above 1 uv across 300 ohms impedance.

³Transmission line is assumed to consist of 50 feet of RG 59 U coaxial cable for 63 and 195 mc and of 50 feet of twin-lead cable at 600 mc.

⁴The antenna is assumed to consist of a half-wave dipole at 63 and 195 mc and of a rhombic with 8 db gain at 600 mc.

⁵The terrain correction factors for 63 and 195 mc are taken from the curve R(L) and the factor for 600 mc taken from the curve r(L) of Figure 2 of the Ad Hoc Report.

⁶Time fading of the desired signal is not considered significant for grade A service. The median field intensity is equivalent to the field F'(50,50) specified in Appendix B, Section II-A.

For the purpose of estimating the required field intensities at the antenna, it has been assumed that half-wave dipoles connected to the set by 50 feet of RG 59U coaxial line are typical for 63 to 195 mc operation. In the frequency range near 600 mc, a small rhombic with 300 ohm line has been assumed. It is realized that it is neither desirable nor practical in some heavily built-up areas to meet these assumptions and that inside antennas will be used. If it is assumed that the inside antenna will have an effective length equal to that of a half-wave dipole and that the transmission line loss is negligible, the local field intensities required will be 46, 55 and 68 db above one microvolt per meter, respectively, for 63, 195 and 600 mc. However, the median field intensities required under these conditions cannot be stated with assurance, because the average terrain distributions which have been calculated from available measurements apply only to exterior conditions in suburban and rural areas. If the range of signal variation in building interiors is comparable to the exterior range, the 74 db median signal level (5000 microvolts per meter) specified to overcome local noise and interference in (b) would be adequate at 63 and 195 mc. There is some opinion, but no measurements, which indicate that the 74 db signal is adequate at 63 mc but not at 195 mc. In order to meet this opinion and to equalize the grade A service areas for equal powers which are indicated at 63 and 195 megacycles, the field intensity required for grade A service at 195 megacycles has been raised to 77 db. Until reliable data are available to indicate otherwise, the above median field intensities will be required within the principal city of the metropolitan area. Until experience indicates the practicability of operating indoor antennas at frequencies near 600 megacycles, only outdoor antennas will be assumed.

B. Grade B Service—Required Field Intensities, in db above 1 microvolt per meter.

(a) To overcome receiver noise,

	63 mc	195 mc	600 mc
(1) Thermal Noise (db)	7	7	7
(2) Receiver Noise Figure	12	12	15
(3) Peak Vis. Car./RMS Noise	30	30	30
(4) Trans. Line Loss	1	2	5
(5) Antenna Eff. Length	-3	6	8
(6) Local Field Intensity	47	57	65
(7) 70% Terrain Factor	4	4	6
(8) 90% Time Factor	3	3	3
(9) Median Field Intensity (db)	54	64	74

(b) To overcome local noise and interference,

	63 mc	195 mc	600 mc
Median Field Intensity (db)	68	71	74

(c) Required urban field intensities to overcome both (a) and (b),

	63 mc	195 mc	600 mc
Median Field Intensity (db)	68	71	74

The median field intensities for urban grade B service are 6 db lower than those for grade A service. This reduction is essentially a reduction from the desired quality of service at 90% of locations to 70% of locations in accordance with Appendix A, Section III-B-1.

C. Grade C Service—Rural Field Intensities, in db above 1 microvolt per meter, required to overcome receiver noise.

	63 mc	195 mc	600 mc
(1) Thermal Noise (db)	7	7	7
(2) Receiver Noise Figure	12	12	15
(3) Peak Vis. Car./RMS Noise	30	30	30
(4) Trans. Line Loss	1	2	5
(5) Antenna Effective Length [†]	-9	0	3
(6) Local Field Intensity	41	51	60
(7) 50% Terrain Factor	0	0	0
(8) 90% Time Fading Factor [*]	6	5	2
(9) Median Field Intensity (db)	47	56	62

D. Specification of Permissible Interference Ratios.

The permissible interference ratios specified in Appendix A, Section III-B, were determined in accordance with the following assumptions and procedure. The permissible cochannel desired to undesired station ratio available at the location of the receiving antenna was taken to be 40 db. The permissible adjacent channel ratio available at the receiving antenna location was taken as 6 db. In order to make the permissible ratios, which are in terms of the relative field intensities expected at 50% of receiver locations, available to the percentages of receiving locations specified for grades A and B service in Appendix A, Section III-B, the following terrain factors have been added:

(a) Grade A Service.

	Cochannel	Adjacent Channel
(1) Local Desired/Undesired Ratio	40	6
(2) 90% Terrain Factor r(L)	15	15
(3) 50% Location d/u Ratio	55 db	21 db

(b) Grade B Service.

	Cochannel	Adjacent Channel
(1) Local Desired/Undesired Ratio	40	6
(2) 70% Terrain Factor r(L)	6	6
(3) 50% Location d/u Ratio	46 db	12 db

(c) Grade C Service.

	Cochannel	Adjacent Channel
50% Location d/u Ratio	40 db	6 db

[†]Antennas with a 6 db gain compared to a dipole are assumed for 63 and 195 mc, and an antenna gain of 13 db for 600 mc.

^{*}The time fading factors decrease with increasing frequency because the grade C service radii decrease.

The terrain factors were taken from the curve r(L) of Figure 2 of the Ad Hoc Report for 90% and 70% of the receiver locations, respectively. Grade C service is specified for 50% of receiver locations, and no terrain factor is required. Permissible ratios which are 6 db higher for grade A service and 2 db higher for grade B service on channels 14 through 55, appear to be justifiable on the basis of present knowledge.

II. Propagation of Television Signals

For the purpose of predicting the propagation of television signals for the estimation of service and interference areas under the rules proposed in Part II of these proceedings, the following procedures have been observed, in accordance with the recommendations of the Ad Hoc Committee.

A. Prediction of Service Field Intensities.

The field intensities of the service field which will be available at any percentage of receiving locations for any percentage of the time may be described by the following relation:

$$(1) F'(L,T) = P' + F(50,50) + R(L) + R(T)$$

Where $F'(L,T)$ is the field intensity for L percent of the receiving locations and T percent of the time expressed in decibels above 1 microvolt per meter, P' is the radiated power in db above 1 kilowatt, $F(50,50)$ is the field intensity in decibels above 1 microvolt per meter for 50 percent of the locations and 50 percent of the time for a radiated power of one kilowatt, $R(L)$ is the terrain distribution factor for L percent of locations, and $R(T)$ is the time distribution factor.

The effective radiated power, P' , is expressed in decibels above 1 kilowatt radiated from a half-wave dipole and may be calculated by means of the following formula:

$$(2) P' = 10 \log_{10} P - P'' + G$$

In the above, P denotes the actual transmitter power delivered to the transmission line expressed in kilowatts, P'' denotes the transmission line and antenna power loss expressed in decibels, and G denotes the gain of the transmitting antenna array in the direction of the receiving location expressed in decibels relative to that of a half-wave dipole.

Appropriate values of $F(50,50)$ may be found in Figures 3, 4, 6 and 7 of the Report of the Ad Hoc Committee, Volume 1. Figure 3 is to be used for channels 2, 3 and 4, Figure 4 for channels 5 and 6, Figure 6 for channels 7 through 55, and Figure 7 for channels 2 through 55 for distances beyond 200 miles, in accordance with the procedure described below. The charts show the field intensities in db above one microvolt per meter for one kilowatt of effective radiated power to be expected at 50% of the receiving locations for 1%, 10% and 50% of the time, for antenna heights from 100 feet to 2,000 feet. The field intensities are based on an effective power of one kilowatt radiated from a half-wave dipole in free space, which produces an unattenuated field intensity at one mile of 103 db above one microvolt per meter (137.6 millivolts per meter). The antenna height to be used with these charts in any particular case is the equivalent height of the center of the radiating element above the average height of the profile between 2 and 10 miles from the transmitter along the desired radial. Where the resulting equivalent antenna height lies between the curves for given antenna heights, interpolation between the curves in proportion to the logarithm of the antenna height shall be used. Special consideration must be given to antenna heights in excess of 2,000 feet. Estimates of the field intensities to be obtained from antennas up to 5,000 feet in height are contained in Reference D to the Ad Hoc Report. It should be noted that the 5,000 foot curve was not endorsed by the Ad Hoc Committee.

For simplicity, the charts do not show the service fields for 90% and 99% of the time, but these fields lie below the 50% curve by the same amounts that the 10% and 1% curves, respectively, lie above the 50% fields. Thus, the time distribution factor R(T) for the 90% and 99% fields may be found by subtracting from the 50% fields the number of db by which the latter lies below the 10% and 1% fields, or:

$$(3) \quad F(50,90) = F(50,50) + R(T = 90) \\ = F(50,50) - [F(50,10) - F(50,50)]$$

$$(4) \quad F(50,99) = F(50,50) + R(T = 99) \\ = F(50,50) - [F(50,1) - F(50,50)]$$

For other values of T, use may be made of the relation $R(T) = R(T=1)k(T)$. The value of k(T) for any percentage of time T is given in Figure 2 of the Ad Hoc Report.

In order to determine the field intensity which will be exceeded at some percentage of the receiving locations other than 50%, use is also made of Figure 2. For channels 2 through 13, the curve labelled R(L) is to be used; for channels 14 through 55, the curve labelled r(L) is to be used. The departure from the 50% value in db, shown on the left scale, corresponding to the desired percentage of locations on the bottom scale is to be added to the field intensity in db above one microvolt per meter existing at 50% of locations.

For channels 2-13,

$$(5) \quad F(L,50) = F(50,50) + R(L)$$

For channels 14-55,

$$(6) \quad F(L,50) = F(50,50) + r(L)$$

Thus, the terrain factor for 90% of locations corresponds to -11 db for channels 2-13 and -15 db for channels 14-55, as shown in Appendix B I A (a) (7).

B. Prediction of Interference from One Undesired Station.

The percentage of receiving locations, L, at any given distance from a desired station and one undesired station at which an acceptable ratio, A, of desired-to-undesired signals is exceeded for T percent of the time may be determined from the following equation:

$$(7) \quad r(L) = A + P'u + Fu(50,50) - Fd(50,50) \\ - k(T) \sqrt{R^2d(1) + R^2u(1)}$$

The subscript d denotes values applicable to the desired signal and the subscript u denotes values applicable to the undesired signal. As explained above, the effective radiated powers of the desired and undesired stations P'd and P'u are expressed in db above one kilowatt radiated from a half-wave dipole. Fu(50,50) and Fd(50,50) are taken from the appropriate curve of Figures 3 through 7 of the Ad Hoc Report. Rd(1) and Ru(1) are the time distribution factors for 1% of the time for the desired and the undesired field intensities, respectively. These may be determined by subtracting the (50,50) field intensity from the F(50,1) field intensity indicated for the proper distances on the appropriate curves of Figures 3 through 7 of the Ad Hoc Report.

For channels 2 through 13, the percentage of locations at which the ratio A is exceeded may be read from the probability distribution, r(L), as a function of L in Figure 2 of the Ad Hoc Report. For channels 14-55, a new x(L) line is to be plotted on Figure 2, passing through the common intersection at 0 db and 50% of the locations and having a slope 1.4 times as great as the slope of r(L). x(L) will pass through the -21 db point at 90% of locations.

If the distance at which an acceptable ratio A is to be obtained at a given percentage of locations and for a given percentage of time T is to be determined rapidly, the solution using the above exact expression may be too laborious. A useful approximation is based on the fact that $\sqrt{R^2d(1) + R^2u(1)}$ approaches Ru(1) when Ru(1) is much larger than Rd(1). In Reference F it

is shown that the approximation gives values which are low by less than 3 db when $Ru(1) = 2.5Rd(1)$. This will always be the case in cochannel interference computations, and nearly always for adjacent channels, when considering service of the order of 90% of the time or 90% of the locations. This is tantamount to assuming for the purposes of rapid calculation that the desired signal is steady and equal to its median value, and that the undesired signal alone is variable.

This makes possible simple graphical methods of computing iso-service contours completely around the desired station. For example, at a point where Fd(50,50) is A decibels greater than Fu(50,1), the ratio A will be exceeded at 50 percent of locations and for 99 percent of time. Thus, the charts for the desired signal F(50,50) and the tropospheric charts F(50,1) and F(50,10) of Figures 3-7 can be used to determine the service contours for 99, 90 percent of the time, respectively, for 50 percent of the locations.

This approximate method can also be applied to the case where it is desired to locate the contour at which an acceptable ratio is exceeded for a percentage of the locations other than 50 percent, by subtracting from the ratio A in db the value of r(L) from Figure 2 corresponding to the percentage of locations for which it is desired to determine the service contour. For example, if it is desired to determine the contour at which the ratio A=40 db (100:1) will be exceeded at 90 percent of the locations for 90 percent of the time, the value (-15) db should be subtracted from the 40 db ratio, giving an adjusted ratio of 55 db. The desired contour is found to exist at the locus of points for which Fd(50,50) exceeds Fu(50,10) by the adjusted ratio of 55db, as taken from the appropriate figure of the Ad Hoc Report.

In the interest of expediting the allocations proceedings the Commission is making use of the charts published by the Ad Hoc Committee. Necessary charts in a form acceptable to the industry together with approved procedures for their use, will be included in the Standards at a later date.

III. Station Separations and Service Radii

The following tables of service radii and of required station separations have been computed by the methods described in the preceding section for the grades of service specified in Appendix A, Section III-B and for the powers provided in Appendix A, Section III-C.

SERVICE RADII IN MILES

Grade of Service	63 mc		195 mc		600 mc ^o			
	10 db (10 kw)	20 db (100 kw)	10 db (10 kw)	20 db (100 kw)	7 db (5 kw)	10 db (10 kw)	13 db (20 kw)	23 db (200 kw)
A	13	20	13	21	7	10	12	21
B	16	27	17	29	12	14	17	29
C	43	57	36	46	24	27	31	43

COCHANNEL STATION SEPARATIONS IN MILES

A	148	215	111	172	92	103	125	172
B	134	205	108	162	92	99	108	162
C	252	323	164	232	115	125	141	212

ADJACENT CHANNEL STATION SEPARATIONS IN MILES

A	50	75	50	73	36	43	49	73
B	50	78	51	78	33	40	46	78
C	105	141	84	109	53	66	75	102

^oThe service radii at 600 mc are for relatively smooth terrain. For relatively rough terrain such as that found in the vicinity of Washington, D. C., and New York City, an increase of about 10 db in power may be required to provide the same grade of service to the indicated radii.

The Commission has relied upon the above computations and others similarly prepared in accordance with foregoing definitions and methods as well as upon the illustrative studies contained in References E, G, and H of the Ad Hoc Report, in establishing the allocation set forth in Appendix C and in defining the separations for community stations appearing in Appendix A, Section III-C.

Appendix C

Suggested Allocations by States and Cities, VHF-UHF*

United States and Territories

Population figures are 1940 U. S. Census to nearest even figure.

Set forth is a proposed revision of Section 3.606 containing the table showing allocation of television channels to the various communities in the United States. In constructing the table, no change has been made in existing authorizations, with exception of the three stations mentioned in paragraphs 8, 9 and 10 of the Notice of Further Proposed Rule Making. In addition, all existing authorizations except WDEL-TV in Wilmington, Del., and WGAL-TV in Lancaster, Pa., have been considered on the basis of utilization of maximum power authorized for the class of station in question from their authorized sites. In all other cases, a site in the center of the community in question and maximum power of the station of the class in question have been assumed. An antenna height of 500 feet above average terrain was assumed in all cases.

The Commission has endeavored wherever possible to have a co-channel separation for Metropolitan stations on

the VHF band of 220 miles and adjacent channel separation of 110 miles. On the UHF channels it was endeavored to maintain a 200 mile co-channel spacing and a 100 mile adjacent channel spacing. In the case of the community channels which are provided for in the allocation plan, a co-channel separation of 140 miles and adjacent channel separation of 60 miles have been utilized.

The table showing the allocation for the various communities is shown on the following pages; channel assignments marked (c) indicate community channels 46 through 55:

*VHF channel numbers by frequencies: No. 2 (54-60 mc); 3 (60-66 mc); 4 (66-72 mc); 5 (76-82 mc); 6 (82-88 mc); 7 (174-180 mc); 8 (180-186 mc); 9 (186-192 mc); 10 (192-198 mc); 11 (198-204 mc); 12 (204-210 mc); 13 (210-216 mc).

Note: UHF channels, though numbered, will not be assigned specific frequencies until final rules and standards are adopted.

ALABAMA			ARIZONA—Continued			CALIFORNIA			
VHF Channel No.	UHF Channel No.	Pop. in Thousands	VHF Channel No.	UHF Channel No.	Pop. in Thousands	VHF Channel No.	UHF Channel No.	Pop. in Thousands	
Alexander City	—	17	Phoenix	2,4,5,8,12	15,17	121	Alturas	—	24
Andalusia	—	26	Prescott	—	23,25	6	Arcata	—	30
Auburn	—	33	Safford	—	36	2	Arroyo Grandé	—	32
Birmingham	4,6,13	408	St. Johns	—	38	1	Bakersfield	10	14,16
Brewton	—	15	San Simon	—	40	0.7	Banning	—	23
Clanton	—	27	Superior	—	42	4	Barstow	—	25
Decatur	—	41	Tombstone	—	29	0.8	Blythe	—	26
Demopolis	—	14	Tucson	3,6,7,10	14,16	37	Brawley	—	20
Dothan	—	45	Wickenburg	—	41	1	Bridgeport	—	43
Enterprise	—	39	Williams	—	30	3	Callpatria	—	28
Eufaula	3	—	Winslow	—	18,20	5	Calexico	—	22
Florence	—	43	Yuma	9,13	30,32,34	5	Chico	12	36
Gadsden	—	44					Coalinga	—	41
Greenville	—	43					Colton	—	39
Huntsville	—	26					Corona	—	35
Jasper	—	20					Crescent City	—	45
Mobile	5,8,11,13	115					Delano	—	38
Montgomery	7,10	94					Dinuba	—	29
Opelika	—	31					El Centro	—	18
Selma	—	30					Escondido	—	41
Sheffield	—	45					Eureka	—	14,16,28
Talladega	—	35					Fillmore	—	28
Tuscaloosa	—	23					Ft. Bragg	—	24
Troy	—	21					Fresno	8,12	15,17
							Grass Valley	—	19
							Hanford	—	19
							Hollister	—	20
							Indio	—	31
							Independence	—	33
							Inyokern	—	43
							Laguna Beach	—	33
							Lakeport	—	33
							Lancaster	—	45
							Lodi	—	21
							Lompoc	—	42
							Los Angeles	2,4,5,7,9,11,13	2,904
							Merced	—	24
							Modesto	—	26
							Mojave	—	20
							Monterey	—	18
							Mt. Shasta	—	23
							Napa	—	29
							Needles	—	24
							Oceanside	—	27
							Oroville	—	27
							Oxnard	—	22
							Pacific Grove	—	45

(Continued on next page)

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
CALIFORNIA—Continued			
Palm Springs	—	44	3
Paso Robles	—	25	3
Petaluma	—	23	8
Placerville	—	34	3
Porterville	—	31	6
Portola	—	41	2
Red Bluff	—	25	4
Redding	—	18,42	8
Redlands	—	29	14
Riverside	—	19,21	31
Sacramento	6,10	38,40	159
Salinas	—	30	12
San Bernardino	—	15,17	44
San Diego	3,6,8	14,16	256
San Francisco—			
Oakland	2,4,5,7,9,11	—	1,428
San Luis Obispo	—	21	9
San Jose	—	35,37,39	129
Santa Barbara	—	24,26	35
Santa Cruz	—	14,16	17
Santa Maria	—	44	9
Santa Paula	—	18	9
Santa Rosa	—	17	13
Scotia	—	37	1
Sonora	—	32	2
Stockton	—	42,44	79
Susanville	—	22	2
Taft	—	36	3
Trona	—	40	2
Tulare	—	23	8
Turlock	—	28	5
Ukiah	—	20	3
Ventura	—	30	13
Victorville	—	37	3
Visalia	—	27	9
Wasco	—	34	5
Watsonville	—	22	9
Weaverville	—	39	0.7
Westwood	—	45	5
Willits	—	43	2
Willows	—	31	2
Yreka	11,13	—	2
Yuba City	—	15	5

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
COLORADO			
Alamosa	12	31	6
Boulder	—	41,43	13
Burlington	—	15	1
Canon City	—	28	7
Cheyene Wells	—	39	0.7
Colo. Springs	—	20,24	37
Cortez	—	18	2
Craig	—	26	2
Del Norte	—	33	2
Delta	—	25	4
Denver	2,4,5,7,9	—	384
Durango	—	14	6
Ft. Collins	—	33,35	12
Ft. Morgan	—	25	5
Glenwood Spgs.	—	30,36	2
Grand Junction	—	15,17	12
Greeley	—	29,31	16
Gunnison	—	19	2
Hugo	—	36	1
La Junta	—	16	7
Lamar	—	19	4
Las Animas	—	14	3
Leadville	—	32	5
Limon	—	22	1
Longmont	—	45	7
Loveland	—	27	6
Meeker	—	42	1
Montrose	—	27	5
Oak Creek	—	34	2
Ouray	—	38	1
Pagosa Springs	—	16	2
Pueblo	3,6,8,10	—	62
Rocky Ford	—	42	8
Saguache	—	40	1

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
COLORADO—Continued			
Salida	—	44	5
San Luis	—	23	1
Silverton	—	29	1
Springfield	—	25	1
Steamboat	—	—	—
Springs	—	39	2
Sterling	—	34	7
Trinidad	—	18,21	13
Walden	—	37	0.6
Walsenburg	—	26	6
Wray	—	38	2
Yuma	—	17	2

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
CONNECTICUT			
Bridgeport	—	14,16	217
Hartford—			
New Britain	—	30,32,34	502
New Haven	6	20,22	308
Waterbury	—	24,26	145

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
DELAWARE			
Dover	—	47(c)	6
Wilmington ¹	7	30,32	189

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
DISTRICT OF COLUMBIA			
Washington	4,5,7,9	33	908

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
FLORIDA			
Apalachicola	—	44	3
Belle Glade—			
Chosen	—	26	4
Clearwater	—	43	10
Crestview	—	18	2
Cross City	—	24	2
Daytona Beach	—	32,34,36	23
DeLand	—	19	7
Everglades	—	40	0.6
Fort Lauderdale	—	30,32	18
Fort Myers	—	35,37	11
Fort Pierce	—	39	8
Gainesville	—	14,16	14
Hollywood	—	34	6
Jacksonville	2,4,5,8,10	—	173
Key West	—	19,21	13
Lake City	—	26	6
Lakeland	—	33	22
Lake Worth	—	28	7
Leesburg	—	27	5
Marianna	—	37	5
Melbourne	—	15	3
Miami	2,4,5,8,10,12	—	172
Ocala	—	38	9
Orlando	—	21,23,25	37
Palatka	—	40	7
Palm Beach	—	24	4
Panama City	—	14,16	12
Pensacola	—	20,22,24	37
Perry	—	22	3
Plant City	—	31	7
Quincy	—	19	5
Sebring	—	17	3
St. Augustine	—	42,44	12
St. Petersburg—			
Tampa	3,6,7,9,11,13	—	210
Sanford	—	29	10
Sarasota	—	20	11
Sulphur	—	—	—
Springs	—	45	5
Tallahassee	12	28	16
West Palm	—	—	—
Beach	—	14,16,18,22	34
Winter Haven	—	41	6

¹ See footnote Number 6 to Section III-E-1 in Appendix A which is part of the Notice of Further Proposed Rule Making herein.

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
GEORGIA			
Albany	—	42	19
Americus	—	20	9
Athens	—	21,23	221
Atlanta	2,5,8,11	32,34	302
Augusta	6,12	17	66
Bainbridge	9	—	6
Brunswick	—	37,39	15
Calro	6	—	5
Cartersville	—	39	6
Cedartown	—	19	9
Columbus	—	36,38,40	53
Cordele	13	—	8
Dalton	—	25	10
Dawson	—	25	4
Douglas	—	30	5
Dublin	—	43	8
Fitzgerald	—	27	7
Gainsville	—	15	10
Griffin	—	29	13
Jesup	—	35	3
La Grange	—	22,24	22
Macon	—	14,16,18	58
Milledgeville	—	26	7
Moultrie	—	15	10
Rome	—	42	26
Savannah	3,9,11	—	96
Statesboro	—	19	5
Thomasville	—	32,34	13
Thomson	—	41	3
Toccoa	—	27	5
Valdosta	—	17	16
Waycross	—	21,23	17

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
IDAHO			
Aberdeen	—	43	1
Arco	—	28	0.5
Blackfoot	—	33	4
Boise	2,4,5,7	—	26
Bonnors Ferry	—	31,33	1
Buhl	—	44	2
Burley	—	24	5
Caldwell	—	35,37	7
Cascade	—	18	1
Challis	—	26	0.6
Coeur d'Alene	9,12	41,43	10
Council	—	31	0.7
Driggs	—	39	1
Dubois	—	31	0.3
Gooding	—	22	3
Grangeville	—	45	2
Idaho Falls	3,6	19,21	15
Kellogg	—	—	—
Wardner	—	16	4
Ketchum	—	36	1
Lewiston	—	32,34	11
Mackay	—	38	0.8
Malad City	—	45	3
Montpeller	—	26	3
Moscow	—	21	6
Mountain	—	—	—
Home	—	39	1
Nampa	9,12	23,25	12
Orofino	—	36	2
Pocatello	8,10	35	18
Preston	—	15,17	4
St. Anthony	—	41	3
St. Maries	—	18	2
Salmon	—	15	2
Sandpoint	—	20,22	4
Shoshone	—	14	1
Soda Springs	—	37	1
Twin Falls	11,13	16	12
Wallace	—	39	4
Weiser	—	27,29	4

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
ILLINOIS			
Aurora	—	41,43	47
Bloomington	—	26	33
Calro	—	15	14

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
ILLINOIS—Continued			
Carthage	10	—	3
Centralia	—	24	16
Champaign	—	15	23
Chicago	2,4,5,7,9,11,13	—	3,397
Clinton	—	38	6
Danville	—	19	37
Decatur	—	34,36	59
Elgin	—	20	38
Galesburg	—	21	29
Harrisburg	—	32	11
Herrin	—	37	9
Jacksonville	—	23	20
Joliet	—	24	42
Kankakee	—	30	22
Kewanee	—	16	17
La Salle	—	33	13
Lincoln	—	44	13
Litchfield	—	29	7
Metropolis	—	22	6
Moline-Rock Island-Davenport	4,5	42	175
Mt. Carmel	—	35	7
Mt. Vernon	—	27	15
Peoria	6,12	31	105
Quincy	—	18,30	40
Rockford	—	27,29	85
Springfield	3	17	76
Sterling	—	35	11
Urbana	—	22	14
Vandalia	—	40	5
Waukegan	—	46(c)	34
INDIANA			
Anderson	—	27	42
Bedford	—	33	13
Bloomington	10	—	21
Columbus	—	43	12
Evansville	—	16,18,20	97
Fort Wayne	—	25,38	118
Gary	—	48(c)	112
Indianapolis	6,8,12	45	387
Kokomo	—	23	34
La Fayette	—	37	29
Logansport	—	21	20
Marion	—	18	27
Muncie	—	32	50
Richmond	—	41	35
Seymour	—	17	9
South Bend	—	40,42	101
Terre Haute	—	28,39	63
Tell City	3	—	5
Vincennes	—	14	18
IOWA			
Ames	4	—	13
Albia	—	34	5
Algona	10	—	5
Atlantic	—	32	6
Boone	—	25	12
Burlington	—	28	26
Carroll	—	40	5
Cedar Rapids	7,9	—	62
Centerville	—	26	8
Chariton	—	41	6
Charles City	12	—	9
Cherokee	—	38	7
Clarinda	—	23	5
Clinton	—	37	26
Creston	—	21	8
Davenport, Rock Island, Moline	4,5	42	175
Decorah	3	—	5
Des Moines	8,11,13	—	184
Dubuque	—	45	44
Fairfield	—	24	7
Fort Dodge	—	17	23
Fort Madison	—	14	14
Glenwood	—	28	5
Iowa City	2	—	17

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
IOWA—Continued			
Iowa Falls	—	33	4
Keokuk	—	32	15
Knoxville	—	43	7
Marshalltown	—	15	19
Mason City	—	39	27
Muscatine	—	40	18
Newton	—	29	10
Ottumwa	—	20,38	32
Red Oak	—	42	6
Shenandoah	—	16	7
Sioux City	2,5,9	—	82
Storm Lake	—	35	5
Waterloo-Cedar Falls	—	22,36	67
Webster City	—	19	7
KANSAS			
Anthony	—	39	3
Arkansas City	—	37	13
Atchison	—	18	13
Baxter Springs	—	38	5
Belleville	—	27	3
Clay Center	—	38	5
Coffeyville	—	44	17
Colby	—	26	2
Concordia	—	34	6
Dodge City	—	24,43	8
El Dorado	—	16	10
Emporia	—	21	13
Ft. Scott	—	32	11
Garden City	9,11	—	6
Goodland	—	28	3
Great Bend	5	14	9
Hays	—	22	6
Hutchinson	—	20	30
Iola	—	41	12
Junction City	8	—	9
Kansas City (see Kansas City, Mo.)	—	—	—
Kinsley	—	41,45	2
Larned	—	30	4
Lawrence	—	39	14
Liberal	—	38	4
Lindsborg	—	42	2
Manhattan	—	15	12
McPherson	—	28	1
Newton	—	31	11
Norton	—	36	3
Oberlin	—	33	2
Osawatomie	—	24	5
Osborne	—	17	2
Ottawa	—	26	10
Phillipsburg	—	44	2
Pittsburg	—	30	18
Pratt	—	18	7
Russell	—	32	5
Salina	—	40	21
Scott City	—	31	2
Sharon Springs	—	21	1
Syracuse	—	29	1
Topeka	11,13	—	68
Wellington	—	33	7
Winfield	—	35	10
Wichita	3,10,12	—	115
KENTUCKY			
Ashland (see Huntington, W. Va.)	—	—	—
Bowling Green	—	34	15
Corbin	—	45	8
Danville	—	38	7
Frankfort	—	15	11
Glasgow	—	40	6
Hazard	—	23	7
Henderson	—	41	13
Hopkinsville	—	36	12
Lexington	—	19	49
Louisville	5,9	29,31	434
Madisonville	—	25	8
Mayfield	—	17	9
Maysville	—	39	7
Middlesboro	—	41	12

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
KENTUCKY—Continued			
Murray	—	39	4
Owensboro	—	44	30
Paducah	12	—	34
Richmond	—	21	7
Somerset	—	35	6
Winchester	—	42	9
Vancleve	—	28	75
LOUISIANA			
Abbeville	—	28	7
Alexandria	5,11,13	—	27
Bastrop	—	23	7
Baton Rouge	—	43,45	35
Bogalusa	—	26	15
Crowley	—	17	10
De Ridder	—	29	4
Eunice	—	38	5
Hammond	—	14	6
Houma	—	24	9
Jennings	—	31	7
Lafayette	—	41	19
Lake Charles	—	23	21
Minden	—	14	7
Monroe	—	32,39	28
Natchitoches	—	24	7
New Iberia	—	34	14
New Orleans	2,4,6,7,10	—	540
Oakdale	—	19	4
Opelousas	—	15	9
Pineville	—	21	4
Ruston	—	16	7
Shreveport	3,10,12	—	112
Tallulah	—	30	6
Thibodaux	—	32	6
Winnfield	—	36	5
MAINE			
Augusta	8,10	19,21,23	19
Bangor - Old Town	5,12	36,42	37
Biddeford-Saco	—	14,16	28
Brunswick	—	44	7
Calais	2,7	14,16,18	5
Pt. Kent - St. Francis	8	15,17,19,21	6
Houlton	—	25,27,29	7
Lewiston - Auburn	—	28,30	58
Portland	6,13	—	106
Presque Isle	—	31,33,35	17
Waterville	—	32,34	16
MARYLAND			
Annapolis	—	49(c)	13
Baltimore	2,11,13	14,16	1,047
Cumberland	—	39,44	39
Hagerstown	—	35	33
Salisbury	—	43	13
Frederick	—	37	16
MASSACHUSETTS			
Barnstable - W. Yarmouth	—	37	8
Boston	2,4,5,7	—	771
Brockton	—	48(c)	62
Fall River - New Bedford	—	19,21,23	225
Lawrence-Lowell - Haverill	—	25,27	232
Pittsfield	—	28	50
Springfield - Holyoke	—	36,38	150
Worcester	—	43,45	194
MICHIGAN			
Alpena	—	39	13
Ann Arbor	—	37	30
Battle Creek	—	29	43

(Continued on next page)

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
MICHIGAN—Continued			
Benton Harbor	—	44	17
Cadillac	—	23	10
Cheboygan-Mackinaw City	4	—	6
Detroit	2,4,7	24,27	2,296
Escanaba	—	25	15
Flint	—	14,16,34	189
Gladstone	13	—	5
Grand Rapids	7,12	33,35	210
Hancock	—	16	6
Harbor Beach	—	38	2
Holland	—	26	15
Houghton	—	27	4
Iron Mountain	7,9	32,34	11
Iron River	—	14	4
Ironwood	—	30	13
Ishpeming	—	20	9
Jackson	—	20,22	50
Kalamazoo	3	15	77
Lansing	6	45	110
Ludington	—	30	9
Manistique	—	15	5
Manistee	—	27	9
Marquette	3,5,10	18	16
Midland	—	28	10
Muskegon	—	17,19	48
Petoskey	—	29,31	6
Pontiac	—	48(c)	67
Port Huron	—	46(c)	33
Rogers City	—	42	3
Saginaw-Bay City	—	18,21,32	153
Saulte Ste. Marie	8,10	14,16	16
Tawas City	—	25	1
Traverse City	—	41,43	14
West Branch	—	36	2

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
MINNESOTA			
Albert Lea	—	24	12
Alexandria	—	29	5
Austin	—	16	18
Bemidji	—	22	9
Brainerd	—	43	12
Chisholm	—	44	7
Crookston	—	20	7
Detroit Lakes	—	27	5
Duluth-Superior	3,6,8,10,12	—	136
(see also Superior, Wisconsin)			
Ely	—	18	7
Eveleth	—	37	7
Fairmont	—	26	7
Fairbault	—	21	15
Fergus Falls	—	38	11
Grand Rapids	—	26	5
Hastings	—	40	6
Hibbing	—	39,41	16
International Falls	—	14,16	6
Little Falls	—	25	6
Mankato	—	44	16
Marshall	—	20	5
Minneapolis-St. Paul	2,4,5,7,9,11,13	—	911
Montevideo	—	36	5
Moorhead (see Fargo, N. D.)			
New Ulm	—	28	9
Northfield	—	14	5
Owatonna	—	42	9
Pine City	—	31	2
Red Wing	—	18	10
Rochester	—	32,34	26
St. Cloud	—	17,19	24
Thief River Falls	—	24	6
Virginia	—	21	12
Wadena	—	32	3
Willmar	—	15	8
Winona	—	38	22
Worthington	—	23	6

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
MISSISSIPPI			
Aberdeen	—	15	5
Biloxi	—	31,33	17
Brookhaven	—	18	6
Canton	—	24	6
Clarksdale	—	29,31	12
Columbia	—	29	6
Columbus	—	25	14
Greenville	—	43,45	21
Greenwood	—	21	15
Grenada	—	17	6
Gulfport	—	21,23	15
Hattiesburg	—	40,42	21
Jackson	3,9,12	—	88
Laurel	—	16	21
Kosciusko	—	19	4
McComb	—	20,22	10
Macon	2	—	2
Meridian	—	36,38	35
Natchez	—	25,27	15
Pascagoula	—	28	6
Philadelphia	—	34	4
Picayune	—	44	5
Starkville	—	28	5
Tupelo	—	22	8
Vicksburg	—	35,37	24
West Point	—	32	6
Yazoo City	—	41	7

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
MISSOURI			
Cape Girardeau	—	45	19
Carrollton	—	40	4
Carthage	—	25	11
Chillicothe	—	44	8
Clinton	—	20	6
Columbia	—	15	18
De Soto	2	—	5
Flat River	—	31	5
Fulton	—	33	8
Hannibal	—	25	21
Hermitage	—	23	0.3
Jefferson City	6	43	24
Joplin	—	19,22	37
Kansas City	2,4,5,9	—	399
Lebanon	—	27	5
Lexington	—	31	5
Louisiana	—	39	5
Marshall	—	17	9
Maryville	—	30	6
Mexico	—	22	9
Moberly	—	36	13
Nevada	—	34	8
Poplar Bluff	—	21	11
Rolla	—	35	5
St. Joseph	—	35,37	76
St. Louis	4,5,7,9,11,13	—	816
Salem	—	14	3
Sedalia	—	29	20
Sikeston	—	26	8
Springfield	3,10,12	—	61
Van Buren	—	38	0.5
Washington	—	19	7
West Plains	—	41	4

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
MONTANA			
Anaconda	—	35,37	11
Baker	—	19	1
Big Timber	—	24	2
Billings	2,4,5,7	19,21	23
Bozeman	—	14,16	9
Broadus	—	29	0.6
Butte	2,4,5,7	33,40	37
Chester	—	30	0.5
Chinook	—	25	2
Chouteau	—	18	1
Circle	—	28	0.7
Cut Bank	—	43,45	3
Dillon	—	27	3
Ekalaka	—	26	0.7

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
MONTANA—Continued			
Forsyth	—	32,39	2
Fort Benton	—	36,38	2
Glasgow	—	18,20,22	4
Glendive	—	21	5
Great Falls	3,6,8	26,28	30
Hamilton	—	44	2
Harlowton	—	44	2
Havre	9,11	19,21,23	6
Hardin	—	41,43	2
Helena	10,12	—	15
Hysham	—	37	0.4
Jordan	—	30	0.7
Kalispell	—	15	8
Lewistown	—	17	6
Libby	—	35,37	2
Livingston	—	32,34	7
Malta	—	27	2
Miles City	3,6,10	14,16,24	7
Missoula	11,13	17,19	18
Paradise	—	42	0.35
Phillipsburg	—	29	1
Pientywood	—	29,31,44	2
Polson	—	27	2
Red Lodge	—	29	3
Roundup	—	35	3
Saco	—	45	0.5
Scobey	—	41	1
Shelby	—	14,16	6
Sidney	—	15,17	3
Stanford	—	15	1
Thompson Falls	—	25	0.7
Virginia City	—	45	0.4
Whitehall	—	22	1
White Sulphur Springs	—	20	1
Wibaux	—	40	0.6
Winifred	—	41	0.3
Winnett	—	42	0.4
Wolf Point	—	33	2

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
NEBRASKA			
Ainsworth	—	38	2
Alliance	—	15,37	6
Atkinson	—	34	1
Bayard	—	42	2
Beatrice	—	45	11
Bridgeport	—	40	2
Broken Bow	—	16	3
Columbus	—	26	8
Crawford	—	22	2
Fairbury	—	43	6
Falls City	—	33	6
Fremont	—	36	12
Gothenburg	—	14	1
Grand Island	—	35,37	19
Hastings	4	39,41	15
Holdrege	—	25	3
Kearney	—	21,23	10
Lexington	—	18	4
Lincoln	10,12	—	82
McCook	8,13	—	6
Nebraska City	—	14	7
Neligh	—	17	2
Norfolk	—	15	10
North Platte	2,5	—	12
Ogallala	—	24	3
Omaha	3,6,7	—	224
O'Neill	—	20	3
Ord	—	30	2
Scottsbluff	—	18,20	12
Seward	—	24	3
Sidney	—	32	3
Stanton	—	22	2
Superior	—	29	3
Valentine	—	28	2
Westpoint	—	44	3
York	—	19	5

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
NEVADA			
Austin	—	29	0.5
Battle Mountain	—	42	0.8
Boulder City	—	18,22	3
Caliente	—	28,30,43	1
Carson City	—	30	2
Elko	10	15,17,19	4
Ely	3,6	14,16,20	4
Eureka	—	40	0.6
Fallon	—	35	2
Gerloch	—	28	0.1
Goldfield	—	44	0.6
Henderson	—	27,32	7
Las Vegas	8,10,12	14,16,41,45	8
Lovelock	—	25	1
McDermitt	—	26	0.2
McGill	—	23,25	3
Mina	—	39	0.4
Mountain City	—	34	0.9
Overton	—	34,36	1
Palisade	—	45	0.1
Pioche	—	24,26	1
Reno	3,13	14,16	21
Sparks	—	37	5
Tonopah	—	18,21	2
Wells	—	41	0.8
Winnemucca	—	18,21	2
Yerington	—	23	1
NEW HAMPSHIRE			
Berlin	—	26	19
Concord	—	31,33	27
Laconia	—	35	13
Littleton-Bethlehem	—	40	5
Manchester	9	29	81
Portsmouth	—	39,41	14
NEW JERSEY			
Asbury Park	—	46(c)	15
Atlantic City	—	23,25,27	100
Newark	13	—	430
(see also New York City)			
New Brunswick	—	48(c)	38
Trenton	—	15,17,41	125
Vineland	—	39	8
NEW MEXICO			
Alamogordo	—	19,21	4
Albuquerque	2,4,5,7	—	35
Artesia	—	26,28	4
Belen	—	22,24	3
Bernalillo	—	20	2
Carlsbad	10	22,24	7
Carrizozo	—	42	1
Chama	—	43	0.7
Clayton	—	27	3
Clovis	12	14,16	10
Dawson	—	41	2
Deming	—	23,25	4
Farmington	—	21	2
Ft. Sumner	—	43	2
Gallup	3,10	17,19	7
Hachita	—	37	0.8
Hobbs	—	15,17	11
Hot Springs	—	31,33	3
Laguna	—	28	0.5
Las Cruces	—	27,29	8
Las Vegas	—	17	6
Lordsburg	—	43,45	3
Los Alamos	—	34	?
Lovington	—	30	2
Magdalena	—	35	1
Park View	—	36	5
Portales	—	18,20	0.8
Raton	—	35,37	8
Roswell	3,6,8	34,36	13
Roy	—	44	1
Santa Fe	9,11,13	30,32	20
Santa Rita	—	20	3
Santa Rosa	—	25	2

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
NEW MEXICO—Continued			
Silver City	12	18	5
Socorro	—	14,16	4
Taos	—	15	1
Tucumcari	—	29,31	6
Vaughn	—	45	1
Willard	—	39	0.5
NEW YORK			
Albany-Schenectady-Troy	4	42,44	432
Auburn	—	18	36
Batavia	—	36	17
Binghamton	12	23,25	145
Buffalo-Niagara Falls	2,4,7	27	857
Dunkirk	—	31	18
Elmira-Corning	—	14,16	61
Hornell	—	39	17
Ithaca	—	37	20
Jamestown	—	17	43
Malone	—	30	9
Massena	—	21	11
Middletown	—	35	22
New York City-Northeastern N. J.	2,4,5,7,9,11	—	11,691
(see also Newark, N. J.)			
Ogdensburg	—	34	16
Olean	—	19	22
Oneonta	—	27	12
Oswego	—	20	22
Plattsburg	—	32	16
Poughkeepsie	—	40	40
Rochester ²	5	22,32,44	412
Saranac Lake	—	39	7
Syracuse ³	3,8,10	—	258
Tupper Lake	—	19	5
Utica-Rome	13	33	197
Watertown	—	41,43	33
NORTH CAROLINA			
Ahoskie	—	39	2
Asheville	—	14,18	51
Belhaven	—	20	2
Charlotte	3,9,11	—	101
Durham	—	33,35	60
Elizabeth City	—	31	12
Fayetteville	—	38,40	17
Gastonia	—	42	21
Goldsboro	—	26	17
Greensboro	2	41,43,45	59
Greenville	—	36	13
Henderson	—	18	8
Hendersonville	—	20	8
Hickory	—	34	13
High Point	—	23,25	38
Jacksonville	—	22	1
Kannapolis	—	19	25
Kinston	—	42	15
Lenoir	—	36	8
Morehead City	—	45	4
New Bern	—	32	12
Raleigh	—	28,30	47
Rocky Mount	—	24	26
Salisbury	—	21	19
Shelby	—	44	14
Washington	—	34	9
Wilmington	5	14,16	33
Wilson	—	44	19
Winston-Salem	6,13	17	80
² See paragraphs 6, 7 and 9 of the Notice of Further Proposed Rule Making to which this appendix is attached.			
³ See paragraphs 6, 7 and 8 of the Notice of Proposed Rule Making to which this appendix is attached.			

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
NORTH DAKOTA			
Ashley	—	36	1
Bismarck	5,7,12	20,22	15
Bottineau	—	32	2
Bowman	—	43,45	1
Carrington	—	17	1
Cooperstown	—	28	1
Crosby	—	36,38	1
Devils Lake	—	19	6
Dickinson	2,4,9	—	6
Fargo	6,10,13	14,16,18	33
Ft. Yates	—	29	1
Grafton	—	26,30	4
Grand Forks	2,4,8	33,35,39	20
Harvey	—	44	2
Hettinger	—	32,34	1
Jamestown	—	25	9
Kenmare	—	30	2
Langdon	—	41,43	2
Larimore	—	45	1
Mandan	—	33,35,37	7
Minot	3,6,10	16,18	17
Napoleon	—	27	1
New Rockford	—	15	2
Oakes	—	40,42	2
Rolla	—	23	1
Rugby	—	21	2
Stanley	—	42	1
Stanton	—	14	4
Valley City	—	31	6
Wahpeton	—	34	4
Williston	8,11	23,25,27	6
OHIO			
Akron	—	25,36,38	349
Canton	—	32,34	200
Chillicothe	—	37	20
Cincinnati	4,7,11	22,24	789
Cleveland ⁴	4,5,8,11	40,42	1,214
Columbus	3,6,10	—	365
Dayton	5,13	14,16	271
Gallipolis	—	27	7
Hamilton-Middletown	2	34	112
Lima	—	28,30	44
Mansfield	—	21,23	37
Marion	—	33,35	30
Newark	—	29	31
Portsmouth	—	18,20	40
Sandusky-Fremont	—	17	25
Springfield	—	26,44	77
Steubenville	—	22	37
Toledo	13	39,43	341
Youngstown	—	14,16,18	372
Zanesville	—	15	37
OKLAHOMA			
Ada	—	20	15
Altus	—	16	9
Alva	—	23	5
Ardmore	—	32	17
Bartlesville	—	14	16
Beaver	—	36	1
Boise City	—	30	1
Chickasha	—	45	14
Clinton	—	31	7
Duncan	—	35	9
Durant	—	40	10
Elk City	—	14	5
El Reno	—	22	10
Enid	13	15	28
Frederick	—	27	5
Guthrie	—	24	10
Guymon	—	20	2
Hobart	—	25	2
⁴ See paragraphs 6, 7 and 10 of the Notice of Further Proposed Rule Making to which this Appendix C is attached.			

(Continued on next page)

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
OKLAHOMA—Continued			
Hugo	—	29	6
Lawton	10	18	18
McAlester	—	34	12
Miami	—	36	8
Muskogee	8	23	32
Norman	—	41	11
Okeene	—	29	4
Oklahoma City	4,7,9	—	221
Okmulgee	—	28	16
Ponca City	—	27	17
Seminole	—	43	12
Shattuck Jnct.	—	40	1
Shawnee	—	30	22
Stillwater	—	17	10
Tulsa	2,6,11	—	189
Woodward	—	45	5

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
OREGON			
Albany	—	25	6
Ashland	—	19,21	5
Astoria	—	26	10
Baker	—	16	9
Bend	—	28,35	10
Burns	—	21,42	3
Canyon City	—	14	0.3
Condon	—	22	1
Coquille	—	24,26	3
Corvallis	—	23	8
Enterprise	—	40	2
Eugene	—	14,16	21
Gold Beach	—	40	0.5
Grants Pass	—	36,38	6
Heppner	—	41,43	1
Hood River	—	36	3
Kinzus	—	18	0.8
Klamath Falls	2,4	32,34	16
La Grande	3,13	—	8
Lakeview	—	20,27,29	2
McMinnville	—	44	4
Madras	—	39	0.4
Marshfield (Coos Bay)	—	22,29	5
Medford	5,7	15,17	11
Newport	—	42	2
Ontario	—	20	4
Pendleton	—	24	9
Portland	3,6,8,10,12	17	406
Prineville	—	30	2
Redmond	—	45	2
Reedsport	—	18	1
Roseburg	—	31,33	5
Salem	—	32,34	31
Sprague River	—	41,43	6
The Dalles	—	27	6
Tillamook	—	19,21	3
Westfir	—	37	0.8

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
PENNSYLVANIA			
Altoona	—	15	114
DuBois	—	43	12
Easton-			
Allentown-			
Bethlehem	—	19,21	325
Emporium	—	33	4
Erie	12	45	134
Greensburg	—	48	17
Harrisburg	—	22,42	173
Hazleton	—	38	38
Johnstown	6,13	21	152
Lancaster ⁵	4	26,28	132
Lebanon	—	24	27
Lewistown	—	40	13
Meadville	—	47	19
New Castle	—	30	48
Philadelphia	3,6,10	44	2,899
Pittsburgh	3,9	24,26	1,994
Reading	—	34,36	175

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
PENNSYLVANIA—Continued			
Scranton-			
Wilkes-Barre	—	31,45	630
Uniontown	—	46	22
Williamsport	—	29	44
York	—	18,20	93

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
RHODE ISLAND			
Providence	11	15,17	712

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
SOUTH CAROLINA			
Anderson	—	33	19
Barnwell	—	25	2
Bennettsville	—	15	5
Charleston	2,8,13	28,30	71
Columbia	4,7,10	39	62
Florence	—	27	16
Georgetown	—	18	6
Greenville	—	38,40	35
Greenwood	—	31	13
Myrtle Beach	—	37	2
Orangeburg	—	45	11
Rock Hill	—	29	15
Seneca	—	35	2
Spartanburg	—	22,24	32
Sumter	—	32	16
Walterboro	—	34	3

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
SOUTH DAKOTA			
Aberdeen	3,9	26,30	17
Belle Fourche	—	20	3
Brookings	—	41,43,45	5
Buffalo	—	30	0.5
Chamberlain	—	23	2
Custer	—	16	2
Deadwood	—	35	4
Dupree	—	17	0.5
Edgemont	—	39,41	2
Gettysburg	—	19	1
Hot Springs	—	33	3
Huron	—	32,35	11
Lake Andes	—	27	0.8
Lead	—	27	8
Madison	—	37,39	5
Martin	—	31	1
McIntosh	—	24	0.6
Miller	—	15	1
Mitchell	4,8	—	11
Mobridge	—	39,41	3
Phillp	—	14	0.8
Pierre	6,10	—	1
Pine Ridge	—	43,45	2
Rapid City	7,12	—	14
Sioux Falls	11,13	14,16,18	41
Sisseton	—	44	2
Vermillion	—	31,33	3
Watertown	—	22,24	11
White River	—	21	0.6
Winner	—	42,44	2
Yankton	—	25,29	7

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
TENNESSEE			
Bristol	—	26	14
Chattanooga	3,9,12	—	193
Clarksville	—	42	12
Cleveland	—	30	11
Columbia	—	21	11
Cookeville	—	37	4
Dyersburg	—	30	10
Fayetteville	—	16	5
Harriman	—	17	6
Humboldt	—	35	5
Jackson	—	24	24
Johnson City	—	16	25
Knoxville	6,10,13	—	152
Lebanon	—	27	6
Lewisburg	—	29	4
Lexington	5	—	3
Memphis	4,6,8,10,13	—	332
Morristown	—	43	8
Murfreesboro	—	14	9

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
TENNESSEE—Continued			
Nashville	2,4,7,11	—	242
Paris	—	19	6
Pulaski	—	38	5
Shelbyville	—	31	7
Springfield	—	23	7
Tullahoma	—	33	5
Union City	—	28	7
Winchester	—	18	3

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
TEXAS			
Abilene	9	24	27
Alice	—	19	8
Alpine	12	—	4
Amarillo	2,4,5,7,10	—	53
Athens	—	41	5
Austin	—	26,28,30	106
Ballinger	—	36	4
Bay City	—	16,40	7
Beaumont-			
Port Arthur	4,6	26,33,39	139
Beeville	—	25	7
Big Spring	—	25	13
Borger	—	15	10
Brackettville	—	29	3
Brady	—	19	5
Breckenridge	—	17	6
Brenham	—	19	6
Brownfield	—	37	4
Brownsville	4,5,9	—	22
Brownwood	—	21	13
Bryan	—	14	12
Cameron	—	32	5
Canadian	—	28	2
Canyon	—	32	3
Center	—	40	3
Childress	—	19	6
Clarendon	—	26	2
Cleburne	—	44	11
Coleman	—	43	6
Colorado City	—	18	5
Corpus Christi	6,10	31,33	71
Cotulla	—	32	4
Crockett	—	22	5
Crystal City	—	24	7
Cuero	—	20	5
Dalhart	—	22	5
Dallas	4,8,12	—	377
Del Rio	—	18	13
Denton	—	36	11
Dumas	—	45	2
Eagle Lake	—	29	2
Eagle Pass	—	16	6
Edinburg	—	21	9
El Campo	—	38	4
Eldorado	—	33	2
El Paso	2,4,5,7,9	41,44	116
Falfurrias	—	23	6
Ft. Davis	—	14	1
Ft. Stockton	—	31	3
Ft. Worth	2,5,10	—	208
Fredericksburg	—	22	4
Galveston	—	21,24	72
Graham	—	15	5
Greenville	—	24	14
Gonzales	—	15	5
Hamilton	—	39	3
Hamlin	—	28	2
Harlingen	—	14	13
Haskell	—	30	3
Henrietta	—	23	2
Hereford	—	42	3
Hillsboro	—	25	8
Houston	2,8,11,13	—	510
Huntsville	—	17	5
Jacksonville	—	15	7
Jasper	9	—	3
Junction	—	27	2
Kermit	—	38	3

⁵ See footnote No. 6 to Section III-E-1 in Appendix A which is part of the notice of Further Proposed Rule Making herein.

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
TEXAS—Continued			
Kerrville	—	17,31	6
Kilgore	—	43	7
Kingsville	—	17	8
La Grange	—	43	3
Lamesa	—	41	6
Lampasas	—	35	3
Laredo	3,8	—	39
Liberty	—	44	3
Livingston	—	42	2
Littlefield	—	39	4
Longview	—	30	14
Lubbock	11,13	33,35	32
Lufkin	—	35	10
Marfa	—	20,25	4
Marshall	—	37	18
Mexia	—	34	6
McAllen	—	26	12
Midland	—	29	9
Mineola	—	21	3
Mineral Wells	—	42	6
Monahans	4	19	4
Mount Pleasant	—	33	5
Nacogdoches	—	28	8
Orange	—	18	7
Odessa	7	21	10
Ozona	—	45	2
Palestine	7	—	12
Paris	—	19	13
Pampa	—	17	19
Pearsall	—	34	3
Pecos	—	27	5
Perryton	—	34	2
Plainview	—	23	8
Presidio	—	16	1
Rankin	—	42	0.5
Rio Grande	—	29	3
Robstown	—	27	7
Rock Springs	—	20	1
Rosenberg	—	36	3
Sabinal	—	44	2
Sanderson	—	23	25
San Angelo	2,6	—	26
San Antonio	4,5,7,9,12	—	319
San Benito	—	34	10
San Diego	—	37	3
San Marcos	—	45	6
Shamrock	—	21	3
Seguin	—	41	7
Sherman	—	14	17
Seymour	—	34	3
Sierra Blanca	—	32	1
Snyder	—	22	4
Sonora	—	15	3
Spur	—	44	2
Stamford	—	20,40	5
Stephenville	—	29	5
Sterling City	—	16	1
Sulphur Springs	—	26	7
Sweetwater	12	14,32	10
Taylor	—	23	8
Temple	—	37	15
Terrell	—	38	19
Texarkana (see Arkansas)	—	—	—
Tyler	—	45	28
Uvalde	—	14	7
Van Horn	—	18	1
Vernon	—	38	9
Victoria	—	18	12
Waco	—	16,18	71
Waxahachie	—	31	9
Wichita Falls	3,6	—	45
Weslaco	—	42	7
UTAH			
Beaver	—	19	2
Brigham	—	42	6
Castle Dale	—	14	1
Cedar City	5	17	5
Duchesne	—	31	1
Ephraim	—	28	2

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
UTAH—Continued			
Escalante	—	25	1
Fillmore	—	37	2
Greenriver	—	43	0.5
Heber	—	16	3
Hurricane	—	21	2
Hyrum	—	20	2
Kanab	—	44	1
Lehi	—	44	3
Loa	—	45	0.4
Logan	—	30,32	12
Milford	—	32	1
Moab	—	20	1
Monticello	—	23	0.7
Nephi	—	18	3
Ogden	12	34,38,40	44
Panguitch	—	42	2
Parowan	—	15	1
Price	11,13	—	5
Provo	—	21,24	18
Richfield	—	22	4
St. George	—	38	4
Salina	—	35	2
Salt Lake City	2,4,5,7,9	—	204
Tooele	—	27	5
Vernal	—	33	2
VERMONT			
Brattleboro	—	18	10
Burlington	—	15,17	28
Montpelier	—	38	5
Newport	—	38	5
Rutland	—	37	17
St. Albans	—	24	8
VIRGINIA			
Charlottesville	—	32	19
Covington	—	29	6
Danville	—	37	33
Emporia	—	27	3
Fredericksburg	—	41,45	10
Harrisonburg	—	36	8
Lexington	—	42	4
Lynchburg	—	14,16	51
Martinsville	—	31	10
Norfolk-Portsmouth-News	4,10,12	25,29	191
Norton	—	32	4
Petersburg	—	21	31
Pulaski	—	39	9
Richmond	3,6,8	15,17,19	193
Roanoke	7,10	20,22	69
Staunton	—	34	13
Suffolk	—	23	11
Waynesboro	—	38	7
Winchester	—	25	12
WASHINGTON			
Aberdeen	—	22	19
Bellingham	—	21,23	29
Bremerton	—	39,41	15
Centralla	—	24	7
Chehalis	—	28	5
Colville	—	45	2
Colfax	—	28	3
Ellensburg	—	42	6
Ephrata	—	17	1
Everett	—	43,45	30
Goldendale	—	29	2
Grand Coulee	—	27	4
Kennewick	—	26	2
Longview	—	40	12
Metaline Falls	—	29	0.5
Moses Lake	—	44	0.3
Mt. Vernon	—	19	4
Olympia	—	18	13
Omak	—	25	3
Oroville	—	32	1
Pasco	—	19	4
Port Angeles	—	32,34	9

	VHF Channel No.	UHF Channel No.	Pop. in Thousands
WASHINGTON—Continued			
Pullman	—	30	4
Puyallup	—	20	8
Republic	—	40	0.9
Ritzville	—	23	2
Seattle	4,5,7,11	14,16	453
Sheldon	—	30	4
Spokane	2,4,5,7	—	141
Sunnyside	—	15	2
Tacoma	9,13	—	158
Vancouver	—	38	19
Walla Walla	6,8,10	38	18
Waterville	—	35	0.9
Wenatchee	—	37	12
Yakima	—	31,33	27
WEST VIRGINIA			
Beckley	4	—	13
Bluefield	—	15	21
Clarksburg	—	17	31
Charleston	8,12	30,40	68
Elkins	—	23	8
Fairmont	—	31	23
Hinton	—	24	6
Huntington-Ashland	5	25	79
Martinsburg	—	27	15
Montgomery	—	34	3
Parkersburg	—	43,45	30
Sutton	—	33	1
Weston	—	19	8
Wheeling	7	28,41	61
WISCONSIN			
Antigo	—	22	9
Appleton	—	28	28
Ashland	—	42	11
Beloit	—	18	25
Eau Claire	—	27,29	31
Fond du Lac	—	21	27
Green Bay	—	40,42	46
Hayward	—	36	6
Janesville	—	39	23
Kenosha-Racine	—	32,34,36	116
Ladysmith	—	45	4
La Crosse	—	41,43	43
Madison	—	14,23,25	67
Marshfield	—	35	10
Medford	—	15	2
Merrill	—	19	9
Milwaukee	3,6,8,10	—	587
Prairie du Chien	—	30	4
Rice Lake	—	23	6
Rhineland	—	39	9
Oshkosh	—	16,31	39
Shawano	—	44	6
Sheboygan	—	38	41
Sparta	—	17	6
Stevens Point	—	24,26	16
Superior-Duluth	3,6,8,10,12	—	136
Whitehall	—	20	1
Warsaw	—	37	27
Wisconsin Rapids	—	33	11
WYOMING			
Basin	—	38	1
Buffalo	—	22	2
Casper	3,6,8	24	18
Cheyenne	11,13	14,16	28
Cody	—	23,25	3
Douglas	—	36	2
Evanston	—	36	4
Gillette	—	40	2
Green River	—	41	3
Hanna	—	15	1

(Continued on next page)

	VHF	UHF	Pop.
WYOMING—Continued			
Jackson	—	44	1
Kemmerer	—	23	2
Lander	—	16	3
Laramie	—	19,21	11
Lusk	—	26	2
Midwest	—	32,34	1
Newcastle	—	23	2
Pinedale	—	14	0.6
Powell	—	27	2
Rawlins	—	17	6
Rock Springs	—	25	10
Riverton	10	18,20	3
Sheridan	9,11,13	15,17	11
Sundance	—	25	0.7
Superior	—	29	1

	VHF	UHF	Pop.
WYOMING—Continued			
Thermopolis	—	45	2
Torrington	—	44	2
Wheatland	—	28,30	2
Worland	—	31,33	3
U. S. TERRITORIES			
ALASKA			
Anchorage	2,7,11,13	—	3
Fairbanks	2,4,7,9,11,13	—	3
Juneau	3,8,10	—	6
Ketchikan	2,4,9	—	5
Seward	4,9	—	1

	VHF	UHF	Pop.
PUERTO RICO			
San Juan	7,9,11,13	—	169
Mayaguez	2,4	—	50
VIRGIN ISLANDS			
	3	—	25
HAWAIIAN ISLANDS			
Lihue Kauai	3,8,10,12	—	4
Honolulu, Oahu	2,4,7,9,11,13	—	179
Walluku Maui	3,8,10,12	—	7
Hilo, Hawaii	2,4,7,9,11,13	—	23

Appendix D Suggested Allocations for Canada, Mexico, Cuba

As pointed out in paragraph 6 of the Notice of Further Proposed Rule Making, the channel allocations for Canada, Mexico, and Cuba, are set forth only for illustrative pur-

poses and to show the effect on the proposed United States Allocation Table of assignments which might be made in Canada, Mexico and Cuba.

CANADA			
ALBERTA			
Calgary	2,4,10,12	14,16,18,27	80
Lacombe	8	29	2
Lethbridge	7	20,24	15
Medicine Hat	5	15,17	11
Red Deer	—	25	3
BRITISH COLUMBIA			
Chilliwack	12	38	4
Cranbrook	—	17	3
Fernie	—	21	3
Kamloops	4	42	5
Kelowna	13	36	5
Nelson	6	38	6
Penticton	—	18	5
Port Alberni	—	42	5
Prince Rupert	3,7	—	—
Trail	11	14	9
Vancouver-New Westminster	6,8,10	15,17,29,40,44	297
Vernon	2	42	5
Victoria	2	27,36	44
MANITOBA			
Brandon	5,9,11	37,40	17
Portage la Prairie	—	14	—
Winnipeg-St. Boniface	3,6,7,13	16,18,34,36,38	222
NEW BRUNSWICK			
Campbellton	12	18	7
Edmundston	10	37	7
Fredericton	9	20	10
Moncton	—	17	23
New Castle	—	38	4
St. John	4,6	26,28	52
St. Stephen	—	22	3
Sackville	8	19	2
Woodstock	—	40	4
NOVA SCOTIA			
Amherst	—	36	9
Antigonish	9	16	2
Bridgewater	10	33	3
Halifax	3,5,12	27,29,31,39	70
Kentville	—	15	4
Sydney	—	18,20	28
Truro	—	25	10
Windsor	—	23	3
Yarmouth	13	24	8

ONTARIO			
Belleville	—	28	16
Brantford-Simcoe	—	20	38
Brockville	—	45	11
Chatham	—	19	17
Cornwall	—	36	14
Fort Frances	5	28	6
Guelph-Kitchener-Galt	—	37	74
Halleybury	—	21	2
Hamilton	6	29,15	166
Kenora	9	19	8
Kingston	—	26	30
Kirkland Lake	3	16	20
London-St. Thomas	10	35	95
North Bay	2	27	16
Oshawa	—	24	29
Orillia Jctn.	3	14	20
Ottawa-Hull	7,9,11	14,16	155
Owen Sound	8	30	14
Pembroke	4	31	11
Peterborough	—	38	25
Port Arthur-Fort William	2,4	19,22,24	24
St. Catherine-Niagara Falls	—	34	51
Sarnia	—	44	19
Sault Ste. Marie	2,12	22	26
Stratford	—	23	17
Sudbury	5,7	23,25	32
Timmons	6	19	29
Toronto	9,11,13	42,40	667
Windsor	9	31,41	105
Wingham	—	33	2
Woodstock	—	26	12
PRINCE EDWARD ISLAND			
Charlottetown	13	14	15
Summerside	11	21	5
QUEBEC			
Amos	—	20	3
Chicoutimi	2,12	20	16
Granby	—	27	14
Hull-Ottawa	—	14,16	33
(See also Ottawa, Ontario)			
Jonquiere	—	22	14
Matane	—	14	5
Montreal	2,5,8,10,12	42,44	903
New Carlisle	2	16	—
Quebec	4,6,7,9,11	14,16	151
Riviere du Loup	5	26	9
Rimouski	3	23	7
Roberval	—	27	3

QUEBEC—Continued			
Rouyn	—	14	4
St. Hyacinthe-Drummondville	—	29	18
Ste. Anne de la Pocatiere	13	24	1
Shawinigan Falls	—	25	20
Sherbrooke	—	43,45	36
Sorel	—	18	12
Three Rivers	—	23	42
Val d'Or	—	18	—
SASKATCHEWAN			
Moose Jaw	4,7	14,16	21
North Battleford	12	22	5
Prince Albert	—	25	13
Regina	2,5,9	21,24,26,35	58
Saskatoon	6,8	15,20	43
Swift Current	—	28	16
Watrous	11	18	1
Yorkton	12	17	6
MEXICO			
Baja California			
Tijuana	10,12	—	—
Mexicali	11,7	—	—
Sonora			
Nogales	13	—	—
Hermosillo	2	—	—
Ciudad Obregon	3	—	—
Navojoa	5	—	—
Chihuahua			
Chihuahua	2	—	—
Hidalgo del Parral	3	—	—
Juarez	11,13	—	—
Coahuila			
Monclova	5	—	—
Saltillo	4	—	—
Nuevo Leon			
Monterrey	2,6,10,12	—	—
Tampaulipas			
Nuevo Laredo	11,13	—	—
Matamoros	7	—	—
CUBA			
(Provinces)			
Havana	3,6,7,9,11,13	—	—
Matanzas		—	—
Las Villas		—	—

Amendments and Corrections to
FCC PROPOSALS REGARDING VHF-UHF RULES, STANDARDS AND ALLOCATIONS

(Changes to be made in Supplement No. 64 & 65)

From FCC Report 49-1044 of July 28, 1949, plus other errors noted

Changes in Supplement No. 64

- Page 2 - Dates in paragraph 14(a) changed from Aug. 8, 1949 to Aug. 26, 1949.
- Page 3 - Dates in paragraph 14(b) changed from Aug. 19, 1949 to Sept. 12, 1949.
- Page 3 - Dates in paragraph 15(a) changed from Aug. 29, 1949 to Sept. 26, 1949.
- Page 5 - In Section III-C-2-b, change figure "5" to "3 and 5".
- Page 8 - In Section II-b-(7), change formula to read:

$$r(L) = A + P_u^i - P_d^i + F_u(50, 50) - F_d(50, 50) \\ - k(T) \sqrt{R_d^2(1) + R_u^2(1)}$$

- Page 11 - Alexandria, La., delete Channel 13.
- Page 11 - Shreveport, La., change Channel 12 to Channel 13.
- Page 12 - Marquette, Mich., change Channel 10 to Channel 11.
- Page 14 - Lawton, Okla., delete Channel 10.
- Page 15 - Montpelier, Vt., add vhf Channel 3. Delete uhf Channel 38.
add uhf Channels 20, 22. Change population figure to "8".
- Page 15 - Change Warsaw, Wis. to Wausau.

Note: Commission also makes following explanatory statement:

"There may be an implication in Appendix B of the above Notice (FCC 49-948) to persons not familiar with the Report of the Ad Hoc Committee that the propagation charts used for 600 mc (Channels 14-55) were based on recommendations of the Ad Hoc Committee. The work of the Ad Hoc Committee related solely to the vhf band. The reference in Appendix B to Figures 2, 6 and 7 of the Committee's Report for 600 mc field intensities represents an assumption made by the Commission because curves for this frequency were not available, and was without reference to the Ad Hoc Committee."

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Changes in Supplement No. 65

- Under Channel 10 - Delete Marquette, Mich. and Lawton, Okla.
- Under Channel 11 - Add Marquette, Mich.
- Under Channel 12 - Delete Shreveport, La.
- Under Channel 13 - Delete Alexandria, La. and add Shreveport, La.

19-in. TUBE IN THE FIRST NEW DuMONT: First new set in DuMont's upcoming new line is the Bradford, featuring that 19-in. short-necked, metal-coned picture tube we've been forecasting (Vol. 5:3,17,26,27). It's an Empire console with full FM band, containing 28 tubes, 6 rectifiers, 45rpm phono. Not yet priced, it succeeds 20-in. Club 20 (\$995), is DuMont's first big step toward lower-price appeal and new pitch toward popularizing larger picture via direct-view as against projection. Samples are on way to dealers. Full production (along with other new sets) will start from big new East Paterson plant when it opens Aug. 25 after annual vacation.

Shorter, stubbier, lighter tube may presage cessation of DuMont's 20-in. Some revolutionary claims are made for it and new circuit: Narrow-band amplifier (patent applied for) amplifies only .5 mc bandwidth on sync pulse without disturbing the picture. Images are said to be obtainable on half signal of previous receivers, thus affording superior fringe reception -- indeed, opening up new vistas for suburban and rural sales. New voltage stabilizing transformer keeps voltage at uniform level despite any line fluctuations. Shorter neck of picture tube and shorter beam throw make for sharper focus. New coating on tube face minimizes reflections from other light sources in a room. Plate-glass face affords 203 sq. in. of image (vs. 213 on 20-in.). Tube measures 21½-in., or about 7-in. shorter than 20-in., so that Bradford cabinet is only 24¼-in. deep (vs. 32-in. of Club 20).

NEWS NOTES ABOUT THE TV TRADE: New brand names on the TV scene: Universal, soon to be introduced by Electronic Controls Inc., which has moved to 4125 Chestnut St., Philadelphia; sets will be sold door to door...Ambassador, 12½-in. console at \$289 (including installation and guarantee) made by Tele King for big Gertz Dept. Store, Jamaica, L.I....Vision-Master, 16-in. table advertised in Chicago this week at \$249.77 by Goldblatt Bros. dept. store, made by Regal...Arvin, Noblitt-Sparks' first entries in TV field, 10-in. console at \$279.50, 12½-in. at \$329.50...Reported planning to enter TV set field with line of 10, 12, 16-in. models is American Television Inc. (U. A. Sanabria), maker of tubes and associated with radio training school; subsidiary will be called American Television Sales Inc.

Crosley has shipped samples of 7-in. portable (Vol. 5:23) to sell for \$179.95; it's luggage type, leatherette, has 21 tubes, 2 rectifiers, weighs about 38 lb....Philharmonic's 16-in. set promised at "under \$300" turns out to be table model at \$269.50, console, \$299.50...Motorola has doubled floor space of Chicago TV plant, set up new 600-ft. conveyor to produce more than 500 sets per 8-hour day, expects to turn out 250,000 this year, reports sales first 1949 quarter thrice those of same 1948 period.

Heavy layoffs at Colonial plant in Buffalo, effective to Sept. 15, are seen arguing later than Oct. 1 for its new line of Sylvania brand TVs (Vol. 5:26); currently, plant is in July 8-25 vacation shutdown...Having laid off some 400 Altoona plant employes July 1 (Vol. 5:26), Sylvania has decided to close it down altogether; it makes receiving tubes...Rauland (Zenith) has 16-in. metal-coned tube, 19½-in. long, and is supposed to have 12½-in. metal-coned tube, too...GE won't put out sets with its new 8½-in. metal-coned tube (Vol. 5:11) until next year, officials say, but tube itself is supposed to be on market soon.

Illustrating depths of TV dumping: Big Davega chain in New York on Thursday advertised \$150 cut on 21 sets with 16-in.; they turned out to be Tele-tone's \$449.50 job, with 21 tubes, 1 rectifier, and customers were offered terms of 10% down and 2 years to pay the \$299 advertised price...Earlier, Davega had sale of \$169.95 Tele-tone and \$189.95 Motorola 7-in. models at \$99.95, with terms; they sold out in few hours...And in Washington, Friday, these were some 7-in. table models advertised: Admiral \$84.98, Belmont \$84.98, Hallicrafters \$94.75, Philco \$97.50, Motorola \$99 -- all about half original list.

Sounding board on FCC's attitude towards ownership of TV stations by movie producers involved in anti-trust litigation will be hearing ordered on Warner Bros. application to buy Dorothy Thackrey's west coast radio properties, including KLAC-TV, Los Angeles (Vol. 5:16). Anti-trust angle is specific issue in hearing, no date set yet. Deal for purchase is probably sunk, since contract called for FCC approval of transfer by Aug. 1.

Real all-industry movie front on theater TV seems in the works after Thursday's SMPE New York City meeting. Subcommittee is now at work preparing draft of answer to FCC's "put up or shut up" request for action out of movie industry (Vol. 5:27). On technical side, 30-odd attendees heard Dr. Alfred Goldsmith, consultant, point out that theaters can get high definition color TV, whereas telecasters probably won't in foreseeable future.

TV will draw abreast top 10 radio shows in terms of New York City audience this October, predicts DuMont network director Mortimer Loewi. He figures this by looking at rate of change during 1948. In January 1948, TV had only 3.3% of audience during hours top 10 were on, and latter combined had 48.1%. Year later, TV had 18.5%, while top 10 had 59.7%. By October, however, he sees each with 28%. By January 1952, he says, TV would have 55.8% while radio's 10 best had only 12%. But economics of situation will become apparent to advertisers even before then, he ventures, and they'll desert radio for TV, accelerating shift.

TV's role in movie business slump of 15-20% is small but specifically noted by *New York Times* correspondents in survey of 24 key cities carried July 10. Examples: Washington, "TV acknowledged a major competitive factor." Chicago, "Managers blame . . . growing unemployment and TV competition." Minneapolis, "'Shopping' by the public and increasing interest in TV held responsible." In other cities, opinion is divided or TV's effect is "inconsiderable." Among these—New York, Detroit, Oklahoma City. In still others, TV isn't even mentioned as factor: Philadelphia, Boston, Charlotte, New Orleans, Dallas, Albuquerque, Salt Lake City, San Francisco. July 11 *New Yorker* had a cute, but unfair (to moviemens), cartoon showing harassed movie producers around table hearing one member say: "What about a whispering campaign? The flicker and herringbone play hob with the eyesight..."

Talent's claim of "invasion of privacy" when Hollywood's KLAC-TV telecast water show last fall, by arrangement with promoters, was thrown out this week by Judge Wm. McKesson in Superior Court. American Guild of Variety Artists claimed swimmers had contracted for grandstand audience only, asked damages. Court held burden was on talent to make pre-arrangement, swimmers having taken part in public performance without any reservation of rights.

Suspensions of licenses, or even revocations after third offense, would be penalties imposed on any broadcaster for charging political parties or candidates for office higher rates than those regularly charged for other broadcasts, except that they must pay for cancellations, etc. Bill (S. 2254) was introduced July 13 by Senator McGrath (R.I.), who also happens to be chairman of Democratic National Committee. Several Senators are up in arms over alleged practice and Sen. McGrath said, "We don't propose to tolerate this nickel-grabbing business."

TV set makers are urged to include FM in all receivers, in resolution of NAB board, which also resolved FCC be asked to protect Area 2 FM stations to 50 uv/m contours, giving greater coverage. In projected NAB reorganization, FM Dept. is eliminated as such; it's covered by new Audio Division.

The Psychological Corp., 522 Fifth Ave., New York City, reporting on survey it made in May, interviewing 10,000 householders throughout the country, disclosed 601 with TV sets, leaving 94% without. Makes of sets were broken down into following percentages: RCA 21%, Philco 16.6, Admiral 9, GE 6.7, Motorola 5.8, DuMont 5.5, Emerson 3.3, Crosley 2.8, Zenith 2.2, Hallicrafters 1.9, Magnavox 1.7, Stromberg-Carlson 1.5, Tele-tone 1.5, Transvision 1.3, Pilot 0.8, Fada 0.8, others 8.8, don't know 8.8.

Trade personnel: Sylvania's new sales executives for forthcoming TV receiver line announced as John K. McDonough, promoted to director of sales; C. K. Bagg, ex-Newell-Emmett, sales mgr.; Bernard O. Holsinger, ex-Wurlitzer, advertising-sales promotion mgr. . . . Admiral's Washington area distribution now in hands of Mid-Atlantic Appliances Inc., so ex-mgr. Leo Lisee becomes Admiral's regional mgr. for Washington-Richmond-Norfolk . . . G. E. (Rex) Rand new RCA broadcast equipment sales chief in Atlanta . . . Frank A. Hinners, ex-Air King, new engineering v.p. of Jewel Radio.

New TV set figures as of July 1, as reported for: Washington 51,000, up 3,000 from June 1; St. Louis 35,000, up 2,900 (31,300 residential); Milwaukee 28,447, up 1,709 (26,668 residential); Syracuse 5,344, up 1,144; Baltimore 66,769, up 3,638; Boston 105,111, up 9,367 (100,428 residential); Providence 11,748, up 1,748; Los Angeles 153,581, up 13,181; Cleveland 64,487, up 5,391 (60,108 residential).

Intra-Video Inc., Sol Sagall president, making master antenna systems for apartment houses, hotels, etc., is offering 299,000 shares at \$1 each, which will enable it to take over Intra-Video Corp. of America and be left with \$209,150 working capital. John P. White & Co., New York, is underwriter. Sagall also announces 5 new directors: H. J. Mahnken, director, Hat Corp. of America; Colin Ives, Handelman & Ives, attorneys; Ralph Evans, Chapman, Evans & Delahanty, architects; John R. Pople, v.p. WOR and president TBA; John Orr Young.

"Monopoly" in radio is beginning to exercise House Judiciary subcommittee (Vol. 5:23) which this week heard lawyer Morris Ernst complain that phone company discriminates against smaller broadcasters in line-leasing policy. Chairman Celler (D-N. Y.) says that isn't all, that they'll look into "many grave offenses." NAB counsel Don Petty is expected to appear before committee July 29 and others, possibly network spokesmen, may be called.

Competition between CBS color and RCA monochrome is going strong in industrial TV field. Both have used their systems to televise surgery (Vol. 5:8,22-25). Now RCA reports success of its system in jet engine testing by Wright Aeronautical Corp., which has also used CBS's equipment (Vol. 5:25).

Ralph L. Clark has asked Rosel Hyde, acting FCC chairman, to withdraw his name as candidate for chief engineer, so the long-vacant position (Vol. 5:5,8,11,20,22) won't be filled until after Comrs. Coy and Walker return from Europe (former Aug. 19, latter July 25).

Atlantic City Boardwalk Fair, in Ambassador Hotel, from July 11-Sept. 12 is showing TV programs from Philadelphia on 6x8-ft. screen, using RCA TLS-86 projection equipment and special antennas.

Sentinel Radio Corp. reports net sales for fiscal year ended March 31 were \$6,078,633, profit \$16,306 (5¢ per share) vs. \$6,543,083 sales and \$140,263 loss for same period preceding year.

General Instrument Corp. reports net loss of \$187,840 for quarter ending May 31 vs. \$15,807 profit for same 1948 and \$300,047 for same 1947 periods.

Proposed VHF Allocations by Channels

Derived from Appendices C and D, Suggested Allocations for U. S., Canada, Mexico and Cuba

As contained in FCC's Proposals Regarding VHF-UHF Rules, Standards and Allocations by Cities
 (FCC Report 49-948, July 11, 1949)

Full text of proposals published by *Television Digest* as Supplement No. 64

Asterisks (*) Indicate Channel Already Occupied or CP Granted (See TV Directory No. 8)

NOTE: Proposed UHF Allocation Table by Channels will be published at later date.

CHANNEL NO. 2 (54-60 mc)

Phoenix, Ariz.
 Little Rock, Ark.
 *Los Angeles, Cal.
 San Francisco
 -Oakland, Cal.
 Denver, Colo.
 *Jacksonville, Fla.
 Miami, Fla.
 *Atlanta, Ga.
 Boise, Ida.
 Chicago, Ill.
 Iowa City, Iowa
 Sioux City, Iowa
 New Orleans, La.
 Calais, Me.
 *Baltimore, Md.
 *Boston, Mass.
 *Detroit, Mich.
 Minneapolis
 -St. Paul, Minn.
 Macon, Miss.
 De Soto, Mo.
 Kansas City, Mo.
 Billings, Mont.
 Butte, Mont.
 North Platte, Neb.
 Albuquerque, N. M.
 Buffalo
 -Niagara Falls, N. Y.
 *New York City
 -Northeastern N. J.
 *Greensboro, N. C.
 Dickinson, N. D.
 Grand Forks, N. D.
 Hamilton
 -Middletown, O.
 Tulsa, Okla.
 Klamath Falls, Ore.
 Charleston, S. C.
 Nashville, Tenn.
 Amarillo, Tex.
 El Paso, Tex.
 Ft. Worth, Tex.
 *Houston, Tex.
 San Angelo, Tex.
 Salt Lake City, Utah
 Spokane, Wash.
 Anchorage, Alaska
 Fairbanks, Alaska
 Ketchikan, Alaska
 Mayaguez, Puerto Rico
 Honolulu, Hawaii
 Hilo, Hawaii

Calgary, Alta.
 Vernon, B. C.
 Victoria, B. C.
 North Bay, Ont.
 Port Arthur
 -Ft. William, Ont.
 Sault Ste. Marie, Ont.
 Chicoutimi, Que.
 Montreal, Que.
 New Carlisle, Que.
 Regina, Sask.
 Hermosillo, Mexico
 Chihuahua, Mexico
 Monterrey, Mexico

CHANNEL NO. 3 (60-66 mc)

Eufaula, Ala.
 Tucson, Ariz.
 San Diego, Cal.
 Pueblo, Colo.
 St. Petersburg
 -Tampa, Fla.
 Savannah, Ga.
 Idaho Falls, Ida.
 Springfield, Ill.
 Tell City, Ind.
 Decorah, Iowa
 Wichita, Kan.
 Shreveport, La.
 *Kalamazoo, Mich.
 Marquette, Mich.
 Duluth
 -Superior, Minn.
 Jackson, Miss.
 Springfield, Mo.
 Great Falls, Mont.
 Miles City, Mont.
 *Omaha, Neb.
 Ely, Nev.
 Reno, Nev.
 Gallup, N. M.
 Roswell, N. M.
 *Syracuse, N. Y.¹
 *Charlotte, N. C.
 Minot, N. D.
 *Columbus, O.
 La Grande, Ore.

¹ CP holder WSYR-TV, Syracuse, now assigned to channel No. 5, but FCC proposes to change it to Channel No. 3 (see pages 1-2 Supp. No. 64).

*Portland, Ore.
 *Philadelphia, Pa.
 *Pittsburgh, Pa.
 Aberdeen, S. D.
 Chattanooga, Tenn.
 Laredo, Tex.
 Wichita Falls, Tex.
 Montpelier, Vt.
 Richmond, Va.
 *Milwaukee, Wis.
 Casper, Wyo.
 Juneau, Alaska
 Virgin Islands
 Lihue, Hawaii
 Walluku, Hawaii
 Prince Rupert, B. C.
 Winnipeg
 -St. Boniface, Man.
 Halifax, N. S.
 Kirkland Lake, Ont.
 Orilla Jctn., Ont.
 Rimouski, Que.
 Obregon, Mexico
 Hidalgo del Parral,
 Mexico
 Havana, Cuba
 Matanzas, Cuba
 Las Villas, Cuba

CHANNEL NO. 4 (66-72 mc)

*Birmingham, Ala.
 Phoenix, Ariz.
 *Los Angeles, Cal.
 *San Francisco
 -Oakland, Cal.
 Denver, Colo.
 *Washington, D. C.
 *Jacksonville, Fla.
 *Miami, Fla.
 Boise, Ida.
 *Chicago, Ill.
 *Moline-Rock Island
 -Davenport, Ill.
 *Ames, Iowa.
 *New Orleans, La.
 *Boston, Mass.
 Cheboygan
 -Mackinaw City, Mich.
 *Detroit, Mich.
 *Minneapolis
 -St. Paul, Minn.
 *Kansas City, Mo.
 St. Louis, Mo.
 Billings, Mont.
 Butte, Mont.
 Hastings, Neb.
 *Albuquerque, N. M.
 *Albany
 -Schenectady
 Miami, Fla.
 -Troy, N. Y.
 *Buffalo
 -Niagara Falls, N. Y.
 *New York City
 -Northeastern N. J.
 Dickinson, N. D.
 Grand Forks, N. D.
 *Cincinnati, O.
 *Cleveland, O.
 *Oklahoma City, Okla.
 Klamath Falls, Ore.
 *Lancaster, Pa.
 Columbia, S. C.
 Mitchell, S. D.
 *Memphis, Tenn.
 *Nashville, Tenn.
 Amarillo, Tex.
 Beaumont
 -Port Arthur, Tex.
 Brownsville, Tex.
 *Dallas, Tex.
 El Paso, Tex.
 Monahans, Tex.
 *San Antonio, Tex.
 *Salt Lake City, Utah
 *Norfolk-Portsmouth
 -Newport News, Va.
 Seattle, Wash.
 Spokane, Wash.
 Beckley, W. Va.
 Fairbanks, Alaska
 Ketchikan, Alaska
 Seward, Alaska
 Mayaguez, Puerto Rico
 Honolulu, Hawaii
 Hilo, Hawaii
 Calgary, Alta.
 Kamloops, B. C.
 St. John, N. B.
 Pembroke, Ont.
 Port Arthur
 -Ft. William, Ont.
 Quebec, Que.
 Moose Jaw, Sask.
 Saltillo, Mexico

CHANNEL NO. 5 (76-82 mc)

Mobile, Ala.
 *Phoenix, Ariz.
 Little Rock, Ark.
 *Los Angeles, Cal.
 *San Francisco
 -Oakland, Cal.
 Denver, Colo.
 *Washington, D. C.
 Jacksonville, Fla.
 *Atlanta, Ga.
 Boise, Ida.
 *Chicago, Ill.
 *Moline-Rock Island
 -Davenport, Ill.
 Sioux City, Iowa
 Great Bend, Kan.
 *Louisville, Ky.
 Alexandria, La.
 Bangor-Old Town, Me.
 Boston, Mass.
 Marquette, Mich.
 *Minneapolis
 -St. Paul, Minn.
 Kansas City, Mo.
 *St. Louis, Mo.
 Billings, Mont.
 Butte, Mont.
 North Platte, Neb.
 Albuquerque, N. M.
 *New York City
 -Northeastern N. J.
 *Rochester, N. Y.²
 *Syracuse, N. Y.³
 Wilmington, N. C.
 Bismarck, N. D.
 *Cleveland, O.
 *Dayton, O.
 Medford, Ore.
 Lexington, Tenn.

² Station WHAM-TV, Rochester, now assigned to Channel No. 6, but FCC proposes to change it to Channel No. 5 (see page 2, Supp. No. 64).

³ CP-holder WSYR-TV, Syracuse, now assigned to Channel No. 5, but FCC proposes to change it to Channel No. 3 (see pages 1-2, Supp. No. 64).

Amarillo, Tex.
Brownsville, Tex.
El Paso, Tex.
*Fort Worth, Tex.
*San Antonio, Tex.
Cedar City, Utah
*Salt Lake City, Utah
*Seattle, Wash.
Spokane, Wash.
*Huntington
-Ashland, W. Va.

Medicine Hat, Alta.
Brandon, Man.
Halifax, N. S.
Fort Frances, Ont.
Sudbury, Ont.
Montreal, Que.
Riviere du Loup, Que.
Regina, Sask.

Navojoa, Mexico.
Monclova, Mexico

CHANNEL NO. 6
(82-88 mc)

Birmingham, Ala.
Kingman, Ariz.
Tucson, Ariz.
Texarkana, Ark.
Sacramento, Cal.
San Diego, Cal.
Pueblo, Colo.
*New Haven, Conn.
St. Petersburg
-Tampa, Fla.
Augusta, Ga.
Calro, Ga.
Idaho Falls, Ida.
*Peoria, Ill.
*Indianapolis, Ind.
*New Orleans, La.
Portland, Me.
*Lansing, Mich.
Duluth
-Superior, Minn.
Jefferson City, Mo.
Great Falls, Mont.
Miles City, Mont.
*Omaha, Neb.
Ely, Nev.
Roswell, N. M.
*Rochester, N. Y.⁴
Winston-Salem, N. C.
Fargo, N. D.
Minot, N. D.
*Columbus, O.
*Tulsa, Okla.
Portland, Ore.
Johnstown, Pa.
*Philadelphia, Pa.
Pierre, S. D.
Knoxville, Tenn.
Memphis, Tenn.
Beaumont
-Port Arthur, Tex.
Corpus Christi, Tex.
San Angelo, Tex.
Wichita Falls, Tex.
*Richmond, Va.
Walla Walla, Wash.
Milwaukee, Wis.
Casper, Wyo.

Nelson, B. C.
Vancouver-New
Westminster, B. C.

⁴ Station WHAM-TV, Rochester, now assigned to Channel No. 6, but FCC proposes to change it to Channel No. 5 (see page 2, Supp. No. 64).

Winnipeg
-St. Boniface, Man.
St. John, N. B.
Hamilton, Ont.
Timmons, Ont.
Quebec, Que.
Saskatoon, Sask.

Monterrey, Mexico

Havana, Cuba
Matanzas, Cuba
Las Villas, Cuba

CHANNEL NO. 7
(174-180 mc)

Montgomery, Ala.
Tucson, Ariz.
Little Rock, Ark.
*Los Angeles, Cal.
*San Francisco
-Oakland, Cal.
Denver, Colo.
*Wilmington, Del.
*Washington, D. C.
*St. Petersburg
-Tampa, Fla.
Boise, Idaho
*Chicago, Ill.
Cedar Rapids, Ia.
*New Orleans, La.
Calais, Me.
*Boston, Mass.
*Detroit, Mich.
*Grand Rapids, Mich.
Iron Mountain, Mich.
Minneapolis
-St. Paul, Minn.
St. Louis, Mo.
Billings, Mont.
Butte, Mont.
Omaha, Neb.
Albuquerque, N. M.
Buffalo
-Niagara Falls, N. Y.
*New York City
-Northeastern N. J.
Bismarck, N. D.
*Cincinnati, O.
Oklahoma City, Okla.
Medford, Ore.
Columbia, S. C.
Rapid City, S. D.
Nashville, Tenn.
Amarillo, Tex.
El Paso, Tex.
Odessa, Tex.
Palestine, Tex.
San Antonio, Tex.
Salt Lake City, Utah
Roanoke, Va.
Seattle, Wash.
Spokane, Wash.
Wheeling, W. Va.

Anchorage, Alaska
Fairbanks, Alaska.

San Juan, P. R.

Honolulu, Hawaii
Hilo, Hawaii

Lethbridge, Alta.
Prince Rupert, B. C.
Winnipeg
-St. Boniface, Man.
Ottawa-Hull, Ont.
Sudbury, Ont.
Quebec, Que.
Moose Jaw, Sask.

Mexicall, Mexico
Matamoros, Mexico

Havana, Cuba
Matanzas, Cuba
Las Villas, Cuba

CHANNEL NO. 8
(180-186 mc)

Mobile, Ala.
Phoenix, Ariz.
Fresno, Cal.
*San Diego, Cal.
Pueblo, Colo.
Jacksonville, Fla.
Miami, Fla.
*Atlanta, Ga.
Pocatello, Ida.
Indianapolis, Ind.
Des Moines, Iowa
Junction City, Kan.
Augusta, Me.
Ft. Kent
-St. Francis, Me.
Sault Ste. Marie, Mich.
Duluth
-Superior, Minn.
Great Falls, Mont.
McCook, Neb.
Las Vegas, Nev.
Roswell, N. M.
*Syracuse, N. Y.
Grand Forks, N. D.
Williston, N. D.
Cleveland, Ohio.
Muskogee, Okla.
Portland, Ore.
Charleston, S. C.
Mitchell, S. D.
Memphis, Tenn.
*Dallas, Tex.
Houston, Tex.
Laredo, Tex.
Richmond, Va.
Walla Walla, Wash.
Charleston, W. Va.
Milwaukee, Wis.
Casper, Wyo.

Juneau, Alaska
Lihue, Hawaii
Wailuku, Hawaii
Lacombe, Alta.

Vancouver-New
Westminster, B. C.
Sackville, N. B.
Owen Sound, Ont.
Montreal, Que.
Saskatoon, Sask.

CHANNEL NO. 9
(186-192 mc)

Flagstaff, Ariz.
Yuma, Ariz.
*Los Angeles, Cal.
San Francisco
-Oakland, Cal.
Denver, Colo.
*Washington, D. C.
St. Petersburg
-Tampa, Fla.
Bainbridge, Ga.
Savannah, Ga.
Coeur d'Alene, Ida.
Nampa, Ida.
*Chicago, Ill.
Cedar Rapids, Iowa
Sioux City, Iowa
Garden City, Kan.
*Louisville, Ky.
Iron Mountain, Mich.
*Minneapolis
-St. Paul, Minn.
Jackson, Miss.
Kansas City, Mo.
St. Louis, Mo.
Havre, Mont.
Manchester, N. H.
Sante Fe, N. M.

*New York City
-Northeastern N. J.
Charlotte, N. C.
Dickinson, N. D.
*Cleveland, O.⁵
Oklahoma City, Okla.
Pittsburgh, Pa.
Aberdeen, S. D.
Chattanooga, Tenn.
Abilene, Tex.
Brownsville, Tex.
El Paso, Tex.
Jasper, Tex.
San Antonio, Tex.
Salt Lake City, Utah
Tacoma, Wash.
Sheridan, Wyo.

Fairbanks, Alaska
Ketchikan, Alaska
Seward, Alaska

San Juan, Puerto Rico

Honolulu, Hawaii
Hilo, Hawaii

Brandon, Man.
Fredericton, N. B.
Antigonish, N. S.
Kenora, Ont.
Ottawa-Hull, Ont.
Toronto, Ont.
Windsor, Ont.
Quebec, Que.
Regina, Sask.

Havana, Cuba
Matanzas, Cuba
Las Villas, Cuba

CHANNEL NO. 10
(192-198 mc)

Montgomery, Ala.
Tucson, Ariz.
Bakersfield, Cal.
Sacramento, Cal.
Pueblo, Colo.
Jacksonville, Fla.
Miami, Fla.
Pocatello, Ida.
Carthage, Ill.
*Bloomington, Ind.
Algona, Iowa.
Wichita, Kan.
New Orleans, La.
Shreveport, La.
Augusta, Me.
Marquette, Mich.
Sault Ste. Marie, Mich.
Duluth
-Superior, Minn.
Springfield, Mo.
Helena, Mont.
Miles City, Mont.
Lincoln, Neb.
Elko, Nev.
Las Vegas, Nev.
Carlsbad, N. M.
Gallup, N. M.
Syracuse, N. Y.
Fargo, N. D.
Minot, N. D.
*Columbus, O.
Lawton, Okla.
Portland, Ore.
*Philadelphia, Pa.
Columbia, S. C.
Pierre, S. D.

⁵ CP-holder WXEL, Cleveland, now assigned to Channel No. 9, but FCC proposes to change it to Channel No. 11 (see page 2, Supp. No. 64).

Knoxville, Tenn.
Memphis, Tenn.
Amarillo, Tex.
Corpus Christi, Tex.
Fort Worth, Tex.
Norfolk-Portsmouth
-Newport News, Va.
Roanoke, Va.
Walla Walla, Wash.
Milwaukee, Wis.
Riverton, Wyo.

Juneau, Alaska

Lihue, Hawaii
Wailuku, Hawaii

Calgary, Alta.
Vancouver-New
Westminster, B. C.
Edmundston, N. B.
Bridgewater, N. S.
London
-St. Thomas, Ont.
Montreal, Que.

Tijuana, Mexico
Monterrey, Mexico

CHANNEL NO. 11
(198-204 mc)

Mobile, Ala.
Flagstaff, Ariz.
Little Rock, Ark.
*Los Angeles, Cal.
San Francisco
-Oakland, Cal.
Yreka, Cal.
St. Petersburg
-Tampa, Fla.
Atlanta, Ga.
Savannah, Ga.
Twin Falls, Ida.
Chicago, Ill.
Des Moines, Iowa
Garden City, Kan.
Topeka, Kan.
Alexandria, La.
*Baltimore, Md.
Minneapolis
-St. Paul, Minn.
St. Louis, Mo.
Havre, Mont.
Missoula, Mont.
Sante Fe, N. M.
*New York City
-Northeastern N. J.
Charlotte, N. C.
Williston, N. D.
*Cincinnati, O.
*Cleveland, O.⁶
Tulsa, Okla.
*Providence, R. I.
Sioux Falls, S. D.
Nashville, Tenn.
Houston, Tex.
Lubbock, Tex.
Price, Utah
Seattle, Wash.
Cheyenne, Wyo.
Sheridan, Wyo.

Anchorage, Alaska
Fairbanks, Alaska

San Juan, Puerto Rico

Honolulu, Hawaii
Hilo, Hawaii

⁶ CP-holder WXEL, Cleveland, now assigned to Channel No. 9, but FCC proposes to change it to Channel No. 11 (see page 2, Supp. No. 64).

Trall, B. C.
 Brandon, Man.
 Ottawa-Hull, Ont.
 Toronto, Ont.
 Summerside, P. E. I.
 Quebec, Que.
 Watrous, Sask.
 Mexicali, Mexico
 Juarez, Mexico
 Nuevo Laredo, Mex.
 Havana, Cuba
 Matanzas, Cuba
 Las Villas, Cuba

CHANNEL NO. 12
 (204-210 mc)

Phoenix, Ariz.
 Chico, Cal.
 Fresno, Cal.
 Alamosa, Colo.
 Miami, Fla.
 Tallahassee, Fla.
 Augusta, Ga.
 Coeur d'Alene, Ida.
 Nampa, Ida.
 Peoria, Ill.
 Indianapolis, Ind.

Charles City, Iowa
 Wichita, Kan.
 Paducah, Ky.
 Shreveport, La.
 Bangor
 -Old Town, Me.
 Grand Rapids, Mich.
 Duluth
 -Superior, Minn.
 Jackson, Miss.
 Springfield, Mo.
 Helena, Mont.
 Lincoln, Neb.
 Las Vegas, Nev.
 Clovis, N. M.
 Silver City, N. M.
 *Binghamton, N. Y.
 Bismarck, N. D.
 Portland, Ore.
 *Erie, Pa.
 Rapid City, S. D.
 Chattanooga, Tenn.
 Alpine, Tex.
 Dallas, Tex.
 San Antonio, Tex.
 Sweetwater, Tex.
 Ogden, Utah
 Norfolk-Portsmouth
 -Newport News, Va.

Charleston, W. Va.
 Lihue, Hawaii
 Walluku, Hawaii
 Calgary, Alta.
 Chilliwack, B. C.
 Campbellton, N. B.
 Halifax, N. S.
 Sault Ste. Marie, Ont.
 Chicoutimi, Que.
 Montreal, Que.
 North Battleford, Sask.
 Yorkton, Sask.
 Tijuana, Mexico
 Monterrey, Mexico

CHANNEL NO. 13
 (210-216 mc)

*Birmingham, Ala.
 Mobile, Ala.
 Yuma, Ariz.
 *Los Angeles, Cal.
 Yreka, Cal.
 St. Petersburg
 -Tampa, Fla.
 Cordele, Ga.

Twin Falls, Ida.
 Chicago, Ill.
 Des Moines, Iowa
 Topeka, Kan.
 Alexandria, La.
 Portland, Me.
 *Baltimore, Md.
 Gladstone, Mich.
 Minneapolis
 -St. Paul, Minn.
 St. Louis, Mo.
 Missoula, Mont.
 McCook, Neb.
 Reno, Nev.
 *Newark, N. J.
 Sante Fe, N. M.
 *Utica
 -Rome, N. Y.
 Winston-Salem, N. C.
 Fargo, N. D.
 *Dayton, O.
 *Toledo, O.
 Enid, Okla.
 La Grande, Ore.
 *Johnstown, Pa.
 Charleston, S. C.
 Sioux Falls, S. D.
 Knoxville, Tenn.
 Memphis, Tenn.

Houston, Tex.
 Lubbock, Tex.
 Price, Utah
 Tacoma, Wash.
 Cheyenne, Wyo.
 Sheridan, Wyo.
 Anchorage, Alaska
 Fairbanks, Alaska
 San Juan, Puerto Rico
 Honolulu, Hawaii
 Hilo, Hawaii
 Kelowna, B. C.
 Winnipeg
 -St. Boniface, Man.
 Yarmouth, N. S.
 Toronto, Ont.
 Charlottetown, P.E.I.
 Ste. Anne de la
 Pocatiere, Que.
 Nogales, Mexico
 Juarez, Mexico
 Nuevo Laredo, Mex.
 Havana, Cuba
 Matanzas, Cuba
 Las Villas, Cuba } 1 Ch.

NOTES

NOTES ON PHILCO, DuMONT, RCA, ET AL: Timed for big trade show and convention of National Assn of Music Merchants in New York's Hotel New Yorker next week, July 25-28, you'll get the dope on new models of Philco, DuMont and the other TV set makers who haven't yet revealed their new lines. In fact, Philco is holding own distributors' convention July 25-26 at the Waldorf-Astoria, meanwhile guarding its "comeback bombshells" with such unusual secrecy that all we can piece together are a few hints and logical conjectures.

As for RCA's new line, it won't break until sometime between Aug. 1-10--but it's common knowledge that it will include new 10, 12 (for first time) and 16-in. models, all same chassis; also some projections. Also, that RCA will make big pitch for "poor man's market" with 10-in. metal-cabinet table model, priced around \$200.

Philco and staff have really stayed clammed up about new line. That it will feature lower prices, is virtual certainty. But, technically, Philco is supposed to have something hot. We're told company has enlisted every available bit of manpower for big push behind new sets, even drawing upon top men of its non-TV departments. There's been talk about "wave guide theory" and "tuning stubs", leading to strong suspicion of built-in antennas or greater sensitivity, or both. Also bruted is at least a provision for uhf (push-button or gadget), now that FCC has formally blessed new bands. "Semi-official" are reports Philco will cut down its dealerships, that it won't let "every Tom, Dick and Price-Cutter" carry its line henceforth.

Whatever Philco's pitch, its executives know they're on the spot facing distributors who've been, as one big one put it, "stranded for months at a time with the wrong merchandise or none at all." But, reflecting loyalty of Philco's strong merchandising organization, he added, "They'll come through, you can bet on that."

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DuMont's new line can be divulged now, as it will be shown at NAMM, though there may be some added models later in fall. First there's the 19-in. Bradford, described last week (Vol. 5:29), price now disclosed as \$725. But long-expected entries in lower price field will be 12½-in. Rumson table model at \$329.50, Sheffield console at \$379.50 -- successors to \$425 Chatham and \$525 Meadowbrook, respectively. Expanded picture is 85 sq. in.; circuit contains 24 tubes, 5 rectifiers, 6-in. speaker in Rumson, 10-in. in Sheffield. Then there's the 15-in. Sussex console at \$545, with 27 tubes, 6 rectifiers, 12-in. speaker, 132 sq. in. expanded pictures. Like the Bradford, the Sussex attains new high in sensitivity, contains same narrow band sync amplifier and new line voltage stabilizing amplifier. It has no counterpart in DuMont's earlier lines. All DuMont sets continue all-band FM.

On Wednesday, DuMont will run hourly buses from the New Yorker to its big new E. Paterson plant for dealer-distributor inspections. Distributor meeting is scheduled that afternoon.

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There will be so many exhibitors at NAMM show, that seven floors of New Yorker Hotel have been reserved and show will spill over to adjoining Manhattan Center. Preliminarily, here are some news notes from the set makers:

GE denies published reports it's introducing new sets incorporating uhf tuners and/or an adapter to sell for \$50. "Of course, we're working on uhf -- we'll all have to, in view of FCC's plans," said a spokesman, "but we haven't a thing out of the labs yet." GE has no new line on tap besides that recently announced (Vol. 5:27) -- but it will show first GE 16-in. table model, with new chassis, at NAMM, listing for \$495 with table.

Magnavox added 3 more 16-in. sets to line, which already includes Brittany console at \$595 (Vol. 5:26). New ones announced in New York Friday are Constella-

tion table at \$399.50; Contemporary in mahogany and blonde and Normandy in natural finish, both \$495, latter a sort of "corner cupboard." All have expanded picture (148 sq. in.), 27 tubes.

Brunswick, in addition to its 16-in. TV console at \$695, has one in black lacquer at \$745...International Television Corp., whose 16-in. was originally announced at \$349 (Vol. 5:24,26), now advertises 16-in. console direct to dealers at \$267, chassis only at \$149.50...Major Television Corp. has "postponed" set-making to concentrate on tubes; it's exclusive contract distributor of the hand-blown 12½ and 16-in. tubes processed in Warren Kessler plant, claims 6 set makers have contracted for them...Despite previous reports, Remler Co. Ltd., San Francisco, tells us it has no plans to produce TV equipment this calendar year.

Noblitt-Sparks Arvin Division, newcomer to TV field (Vol. 5:24), plans first consumer announcements Aug. 15, will hit Chicago market first and then spread. Meanwhile, its specs on 10-in. Challenger models show 22 tubes, 2 rectifiers, \$249.50 table, \$279.50 console; line also will include 12½-in. console at \$329.50, 16-in. console \$399.50...Two more newcomers to field, both Los Angeles: Mercury Television & Radio Corp., 3105 Wilshire Blvd., subsidiary of Pacific Cabinet & Radio Co., Van Nuys, Cal., reported selling to private brands already but out with 12-in. models to sell in \$300-\$400 range. Lewis Tel-Rad Corp., 829 N. Highland Ave., which this week advertised Unit-Matic Family Circle 12½-in. table model at \$239.50, said to be product of Cal-Best Engineering Co., Los Angeles.

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Notes about merchandisers: "Unloading" is apparently in diminuendo, though stores are still advertising fantastic bargains (half prices or better on name brands, usually to-be-discontinued models). More often than not the ads turn out to be mere "come on" because store has only one or 2 such models...Westinghouse this week promulgated policy, retroactive to July 1, whereby its distributors and dealers are protected for 60 days against any price cuts on current models -- its measure of combating "indiscriminate price-slashing"...In Philadelphia Inquirer full page ads Wednesday, Lit Dept Store advertised choice of Emerson's Model 608 console (16-in. direct-view) or Model 609 Protelgram projection at \$399.50, down exactly \$200 from list -- and cuts caught even Emerson topkicks by surprise...Biggest RCA distributor Bruno-New York offered 10-in. purchasers, during July-August, 90-day RCA service contract at \$22.50, extensible to year for balance of \$37.50...Macy's New York offered 2 tickets to "South Pacific" to any purchaser of Westinghouse's new 10-in. \$239.95 table or \$299.95 console...Muntz TV moving into Washington market next week.

For purpose of group buying, dozen New York area retailers have formed Metropolitan Associated Radio, Television & Appliance Dealers Inc., 70 Pine St., Louis Basis, director...Distributors say railroads are squawking against CR tubes contained in TV set shipments, want them packaged and shipped separately; manufacturers objecting, say they're suffering very little breakage.

TV TRADE'S 'INVENTORY RECESSION': Recent shifts from seller's to buyer's market, in most other hard goods as well as radio and TV, has the economic pundits inventing all sorts of terminology. Best we've heard, applicable to TV market, is "inventory recession." That about tells all. But by any name, it still spells poor business. Public is slow to buy despite fact that current unloading of TV-radio inventory is affording some incredible bargains. We heard it well stated thus, "It's as though the customer was offered new autos, 1948 and 1949 models and nothing wrong with them, at half or third off -- and still hesitates."

Just the same, optimism seems to be the prevalent note, at least in the higher reaches of the TV trade. True, there's fear new FCC allocations, new channels, renewed talk about color, will again raise doubts -- but there's also confidence that fall will bring back best TV shows, many new programs, more telecasting stations, to give market its needed hypo. Said Avco v.p. W. A. Blee at Chicago Furniture Mart last week:

"We have the biggest bunch of scared business men since 1933...Excess inventories will be liquidated by the end of the year, and industry will know and be able

to plan its labor costs. The business fat will be squeezed out by then, and public cannot put off Christmas buying after Dec. 25 for lower prices or any other reason."

Motorola president Paul V. Galvin, in letter to stockholders July 15, takes cognizance of current "recession in the general economy of our country" but asserts: "We do not see, however, from our point of vantage, anything resembling a deep or a lasting depression, but rather a time of healthy adjustment in industry followed by a leveling off period." Another top TV executive tells us, "I'm bullish as hell about fall and winter -- things really look good." Summer slump he attributed to fact people simply aren't staying indoors to watch TV. As for price-cutting, he said there's not much more left to be squeezed; bottom has been reached. Still another leading set maker, calling present market "ticklish," noted: "Installations are running better than sales to dealers. In other words, dealers are selling more than they're buying. Everybody's unloading, but actually the TV situation isn't much different from the normal seasonal slumps we've always had in radio."

Significant buyer survey released by Federal Reserve Board in Washington recently, analyzed from early-1949 U of Michigan consumer interviews, highlighted fact that twice as many "spending units" plan to buy TVs this year as did buy in 1948 -- though only 3.7% intended to buy radios compared with 9.6% who bought last year. Survey was distinctly bullish about home, automobile, furniture, appliance sales prospects ("if prices are right").

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July inevitably will be low production month for TV, with most factories shut down 2-3 weeks for annual vacations. But June RMA figures will show output holding fairly steady. Figures aren't ready yet, though first week ran about 32,000 sets, second week 42,000, third 40,500 -- indicating well over 150,000 for month -- which would assure at least 1,000,000 for first 6 months (Vol. 5:26). RCA Victor's Allen B. Mills, general sales manager for home instruments, speaking to National Appliance & Radio Dealers Assn. in New York July 11, said last 6 months of 1949 "may well produce 1,500,000 TVs" and forecast that in early 1950s TV will represent greater dollar volume than any other major electrical appliance.

PROTELGRAM CUT, PICTURE TUBES TOO: In effort to bring projection TV within competitive reach, North American Philips on Aug. 1 will reduce price of its Protelgram unit about 25% -- down to \$75, complete except for image screen, with slight variations for type of corrector plates and size of focus coil. At same time, it's reducing price of 2½-in. 3MT4 projection tube to set manufacturers from \$24.78 to slightly under \$20.

Cuts will enable Protelgram licensees, it's said, to offer projection sets in about same price ranges as 16-in. direct view consoles. Licensees are Ansley, Brunswick, Emerson, Fada, Fisher, Pilot, Scott, Stewart-Warner, International.

Note: Not only are Philips and licensees wedded to projection idea, but others (notably RCA), insist projection has big future, make claims that big pictures it affords are equal or superior to direct-view -- claims which other major set makers like Admiral and DuMont reject. Fact is, projection, though finding favor among some of best engineers, haven't been selling in quantity -- attributed by its advocates primarily to price, by its detractors to inferiority to direct view. RMA figures show postwar cumulative total of less than 40,000 projections out of more than 1,800,000 TV sets of all kinds, with diminishing projection output in recent months (see monthly figures, p. 66, TV Directory No. 8).

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Tending to stabilize TV manufacturers' cost position, is apparent completion of cycle of picture tube price reductions. More cuts may come, of course, the big tube makers being perturbed lest small ones further undercut market. There are no less than 30 tube manufacturers (see TV Directory No. 8) and an inevitable struggle for existence is foreseen in shrunken market. Bellwether RCA lists these manufacturers' prices now in effect: 7-in., \$12; 10-in., \$19.95; 12-in., \$28.95; 16-in., \$41. Distributors' prices are \$13.50, \$22, \$31.85, \$44.70, respectively. List prices are \$22.50, \$36.75, \$53, \$74.50, respectively. Sylvania, GE run about same.

Reports won't down that big record makers— notably Columbia, Decca, RCA—are conferring secretly to find way out of phono record chaos and that agreement has been reached, in principle, that each will make all three types: 78, 33 1/3, 45 rpm. This week big Capitol Records, Hollywood, announced it will produce its classical catalog on LP (33 1/3); it had already added RCA's 45 rpm for popular, which will be continued along with conventional 78rpm. Only classicals, including September release of Telefunken issues, will go on LP. Observed the *New York Herald Tribune* in July 21 editorial welcoming "signs of harmony" it discerns now in phono field: "The whole silly business of the varying speeds should never have been allowed to start, but now that it is here the public at least ought to be allowed to act as disk jockey and pick the winner."

Admiral achieved another record sales and earnings during first 6 months of 1949—sales totaling \$53,110,504, up 94% over \$27,386,344 for same 1948 period; net profit \$3,155,689 (\$3.16 per share) comparing with \$1,237,297 (\$1.24) same period last year. Admiral's second quarter sales were \$29,597,308 vs. \$15,382,176 same period last year; profits \$1,619,472 (\$1.62) vs. \$706,887 (71¢).

Motorola's sales first 6 months of 1949, all divisions, totaled \$33,815,000, up 25.6% from same 1948 period's \$26,918,000, president Paul Galvin reports. Profit figures aren't ready yet. He noted that Motorola "ranks with the first 5 TV manufacturing companies [who account for] approximately two-thirds of all the TV sets produced."

A television set in every room (except the kitchen) is the theme of Abraham & Straus midsummer showing of new fall furniture, featuring arm chairs that swivel, table tops that turn, castor sofa beds with upholstered arm and head supports, nests of armless rocking chairs, and a "Sightmirror Teleset" that doubles as a mirror over the dining room buffet as well as the bedroom dressing table. New York exhibit won big editorial writeups July 21 in both *Times* and *Herald Tribune*.

Diathermy interference to TV, to which there's no easy solution, is subject of FCC proposed rule-making (FCC Notice 49-993, Docket 9386) intended to clarify who's required to protect whom. Net effect of new proposal is to relieve diathermy operators of burden of satisfying complaints from TV set owners as long as they operate properly on assigned 27.12 mc, even though this frequency falls right in receiver IF band. RMA subcommittee has worked on problem for some time, recommended new IF frequency of about 41 mc. where less interference is expected. Aug. 29 is date by which comments on new rule are to be filed.

Tenant must get written permission of landlord to install TV antenna, Kings County (N. Y.) Supreme Court Justice Wm. T. Powers ruled last week. Unless appealed, ruling is law for whole of New York State. Justice Powers went on to say landlord's attitude was "unfortunate," asserted that if housing situation didn't favor them they'd be "anxious and willing to provide such amenities as would insure comfortable and enjoyable use . . . of the rented premises." He urged landlords to provide master antennas.

To combat fears of eye damage from watching TV. Starrett Television Corp. is promoting a "Bureau of Television Optical Standards" as non-profit institute empowered to authorize seal of commendation to be affixed to acceptable receivers. Starrett's campaign includes full-page ads in trade papers.

Charlotte Observer ran 40-page special section July 14 on occasion of WBTV's debut following day. Newspaper with local distributors' association sponsored big TV exhibit and show in Armory, report 2,750 sets in area.

FCC's rigid prohibition of musical background when slides or test pattern are telecast (Vol. 5:26) works unnecessary hardship on whole TV industry, both TBA and NAB claimed in detailed letters to Commission this week. They hope to sway FCC with these arguments: (a) Single tone is both technically inadequate and psychologically annoying for proper receiver repairs and demonstrations. (b) Musical bridge is virtual necessity to preserve programming continuity, provide economical fill-in during troubles with remotes. (c) Most stations now program well over minimum amount, aren't relying on music to compete with aural stations. Note: Prime mover in successful campaign to put the restrictions on TV stations was Everett Dillard, NAB board member and FM-only station operator, who dubs it "one-legged TV."

McFarland bill (S. 1973) to streamline FCC procedure (Vol. 5:23-25) was reported by Senate Interstate & Foreign Commerce Committee this week and is given fairly good chance of getting through Senate this session. However, acting chairman Sadowski (D-Mich.) of House Interstate & Foreign Commerce Committee says he doesn't see how his group can possibly find time to get into bill, give it full hearings and act on it this session. Bill as reported is substantially the original McFarland Bill, but puts these additional halts on FCC: (1) General counsel, chief accountant and engineer, their assistants, FCC secretary, and commissioners' legal assistants can't practice before FCC for year after leaving. As in original bill, commissioners wouldn't be able to practice for balance of terms for which they were appointed. (2) Commission must report promptly to Congress on reasons for delays in acting upon any non-hearing cases pending over 3 months, hearing cases pending over 6 months.

Most ambitious TV educational program to date will get tryout beginning July 30 when Navy's Special Devices Center, Port Washington, Long Island, originates pilot and airman training courses to be broadcast by New York's WNBT, Philadelphia's WPTZ, Washington's WNBW. Courses will be aimed at classes of Naval Air Reserve conducted at Floyd Bennett Field, Willow Grove, Anacostia, in respective cities. Series will cover 8 weeks, 9:30-10:30 a.m. Saturdays and Sundays, can be picked up by public. TV-trained students will be compared with classes getting either "live" instruction or kine-recordings of telecasts. Experiment is under direction of Capt. J. R. Ruhsenberger, head of the Long Island Center, and will be weighed by Dr. Robert T. Rock Jr., head of Fordham U psychology dept., supervisor of the TV evaluation program.

NBC's Merrill Mueller in London, faced by British newsreel combine's boycott of TV filming of first Prince Charles pictures, simply sent telegram to Princess Elizabeth herself explaining that millions of American viewers would be denied pleasure of seeing her son in motion on their home screens, that newsreel industry was using a method of commercializing a member of the Royal Family (supposedly forbidden) to squeeze out another industry. Result: "Misunderstanding" quickly corrected, and U. S. televiewers saw lots of the bonnie prince.

In daily radio-TV program listings, *Chicago Tribune* starting Sept. 6 will carry paid listings in same style and same type—so that sponsor can more fully describe program. It will sell not less than 2 nor more than 14 lines, continuing to carry old listings also. Other newspapers are expected to follow suit. Note: *Tribune* purchase of *Washington Times-Herald* announced this week.

"Swapping Shows and Saving Money" (Vol. 4:26), method whereby Baltimore's WMAR-TV and Washington's WMAL-TV pick each others signals out of the air and save on line charges, has matured to extent that at least 16 hours (7 sponsored) are exchanged weekly.