1760 N STREET, N. W.

FLY DEMANDS HEARING

FCC Chairman James Lawrence Fly Thursday released the following letter to the Select Committee to Investigate the Federal Communications Commission:

"In the record of hearings on yesterday, Congressman

Cox made the following statement:
"'Mr. Fly, the Chairman of the Federal Communications Commission has, according to press reports, been insisting that the Commission be given opportunity to put its position on record as regards complaints made against it. You will recall we had Mr. Fly up here about ten days ago and he refused to talk. So the Committee has called you (Commissioner Craven).'

"I am not conscious of ever having had an opportunity to testify before your Committee on any of the various matters coming within the scope of the resolution adopted by the Congress to investigate the Commission. On my one brief appearance before the Committee I was called upon to produce one file of the Board of War Communi-

"I cannot but reiterate the importance of the full Committee giving to me and the Commission a prompt hearing on the charges which the Committee has made public. I stand ready at any time to appear before the Committee, and I again want to urge that I be given this full and complete opportunity to be heard at an early date. I shall await your advises.

Sincerely yours,

JAMES LAWRENCE FLY.

Petrillo

The War Labor Board, it is reported, has accepted jurisdiction in the Petrillo transcription ban case. A tri-partite panel is to be appointed to investigate the entire situation after which the WLB will decide whether to order the musicians to make recordings or not.

LEGISLATIVE COMMITTEE

The NAB legislative committee met in Washington on Wednesday (July 21), to review developments which have taken place since its last meeting. A thorough discussion of the White-Wheeler bill and the prospective hearings on that measure, which Senator Wheeler has announced will be held shortly after the reconvening of Congress, was had. The Holmes bill was also reviewed and discussions were held regarding the possibility of hearings before the House Interstate and Foreign Commerce Committee on that measure. A report was made on the developments which have occurred in the hearings before the House Select Committee investigating the Federal Communications Commission. It was the concensus of the Committee that district

meetings be held in as many districts as possible in the very near future in order that broadcasters may develop satisfactory plans for contacting members of Congress to inform them regarding radio matters and the need for an examination of the present radio law. Following luncheon, a brief discussion of future plans took place.

The following were present: Don S. Elias, Nathan Lord, Clair McCollough, Joseph Ream, Frank M. Russell, G. Richard Shafto, James D. Shouse, James W. Woodruff, Jr., Ed Yocum, Neville Miller, Chairman, C. E. Arney, Jr.,

Secretary.

NATIONAL ENTERTAINMENT GROUP ORGANIZED; SWINGS INTO ACTION

Dennis Named to Key Committees

The National Entertainment Industry Council in a twoday meeting in the Waldorf-Astoria hotel in New York City this month completed formal welding of 45 organizations into NEIC and named a coordinating committee of 25 persons to carry on all routine and administrative work between meetings of the council.

C. E. Arney, Jr., and Walt Dennis represented NAB at the sessions. Dennis, who was named on the nominating committee, also is the representative for the Advertising

Federation of America.

The NEIC adopted a three-point national program:

- 1. Immediate establishment of a national pool of entertainers to be used in filling requests for any and all entertainment to be used in war or other activities locally, regionally, nationally or internationally.
- 2. Education of the nation to the fact that the entertainment industry is an industry and should be recognized as such and not as a collection of people who commit crimes against morals and who earn fabulous salaries.
- 3. Set up a list of 15 major projects to be undertaken in the interest of the war work and morale building.

At the first meeting of the coordinating committee Tuesday, July 20, Dennis was named to the NEIC permanent finance committee and an administrative budget of \$12,500 was approved. Funds will be raised by contributions from the supporting organizations.

Broadcast Advertising

MEET THE NEW SALES MANAGERS EXECUTIVE CHAIRMAN

Dietrich Dirks, of KTRI, newly appointed chairman of the sales managers executive committee, is a real pioneer in the field of broadcasting, having spent 17 years in station operation and sales direction.

Born on a farm in Auburn, Nebr., Dee was educated in (Continued on page 326)



Neville Miller, President

C. E. Arney, Jr., Secretary-Treasurer

Lewis H. Avery, Director of Broadcast Advertising; Walter L. Dennis, Chief, News Bureau; Willard D. Egolf, Assistant to the President; Howard S. Frazier, Director of Engineering; Joseph L. Miller, Director of Labor Relations; Paul F. Peter, Director of Research; Arthur C. Stringer, Director of Promotion.

BROADCAST ADVERTISING

(Continued from page 325)

the public schools of Hildreth, later attending the college of business administration of the University of Nebraska. Following his graduation, he returned for one year of postgraduate work in business administration. During his undergraduate days at Nebraska, he spent considerable time with the Lyceum and Chautauqua circuits, getting his first experience with "showmanship."

Appointed program director of KFAB in 1926, he was jumped to vice president and general manager of the Central States Broadcasting Co., operators of KFAB, KFOR and KOIL, in 1928. He continued in that capacity until 1936, when, in association with the Sioux City Tribune Co., he became half-owner and manager of the Sioux City Broadcasting Co., operator of KTRI.

During his service in various fields of broadcasting, he has been active in association affairs, having served in several capacities and for the last two years as a member of the sales managers executive committee.

He is married and has a two-year old son.

FOR DISTINGUISHED SERVICE

Few chairmen of the sales managers executive committee, in the seven-year history of that group, have served with the distinction or attained the objectives which have marked the tenure of John M. Outler, Jr., of WSB., retiring chairman.

Famed throughout the industry as a raconteur of distinguished ability, Johnny combined a rare sense of humor with unusual executive direction to carry the work of the sales managers group to new heights of accomplishment and to open new roads for exploration by this group.

As a member of the committee that recomended to the NAB board of directors the creation of a Retail Promotion Plan and the appointment of a special committee to carry this project forward, he has given unlimited time and exceptional abilities to the prosecution of this effort.

During the district meeting tour in the fall of 1942, Johnny talked at the meetings in Pinehurst, Atlanta, Nashville, Des Moines, Chicago, Indianapolis and Columbus in support of the plan and in solicitation of pledges. Except for the late arrival of a train, he would also have appeared at the meeting in Minneapolis.

At his suggestion, the retiring sales managers committee recommended to the incoming group a study and presentation, comparable to the one now nearing completion for the retail field, to be directed to the automotive industry. This project has been enthusiastically endorsed by the press of the broadcasting industry and viewed with special alarm by the trade papers of other media.

Symbolic of the appreciation of the industry for his services was the rousing cheer that greeted the motion of

Arthur Hull Hayes of WABC, at the conclusion of the sales managers meeting in Chicago on April 26, 1943, that Johnny be given a rising vote of thanks for his leadership and inspiration. Fortunately, he will continue to serve on the committee during the 1943-44 term.

Special thanks, too, are due J. Leonard Reinsch, general manager of WSB, for assuming Johnny's duties as commercial manager from time to time in order to permit his participation in industry activities. This generous attitude on the part of Mr. Reinsch has been in no small measure responsible for the achievements of the sales managers group during the past year.

ANOTHER DEPARTMENT STORE MAKES RADIO ADVERTISING PAY

"Stores Can Make Radio Advertising Pay" is the intriguing title of an article that appeared in the May issue of *Department Store Economist*. Through the courtesy of that publication, a reprint of the article is enclosed with this issue of the "NAB Reports."

As you read the article, you will find it analyzes in unusual detail the problems a department store faces in the use of broadcast advertising. You will find some real "meat and potatoes" in this searching description of the experiences of J. N. Adams & Company—the largest department store in Buffalo, N. Y.

There are several references to Herbert C. Rice of the Buffalo Broadcasting Corporation, who is a member of the NAB program managers executive committee and, obviously, as the article indicates, very commercially minded. Undoubtedly the program manager at your station will also be interested in this article.

Like all recent releases of the department of broadcast advertising, this reprint has been prepared on $8\frac{1}{2} \times 11$ inch paper, with three-hole punching, so that it can be included in your copy of "A Manual of Radio Advertising." And, again, plenty of additional copies are available for your use. A note will bring as many as you want.

RETAIL PLAN PREVIEW ENTHUSIASTICALLY RECEIVED

"It far exceeded my expectations," declared Gene L. Cagle of KFJZ, following a preview of the Retail Promotion Plan at a joint meeting of the retail promotion and the sales managers executive committees in New York on Thursday, July 15, 1943.

John E. Surrick of WFIL, a guest at the preview as a member of the sales managers executive committee, summed up the consensus when he said: "I knew it was going to be good because of the amount of thought and work that has been devoted to it—but I didn't know it was going to be that good." Without exception, those who witnessed the preview unanimously agreed that the Retail Promotion Plan tells the most complete and convincing story of broadcasting as an advertising medium that has ever been told.

Following the preview, the committee discussed the proposed itinerary of the master showings of the plan, reviewed the budget for the project and authorized the final production of the presentation using sound motion pictures, animated slide film and charts. During the discussion of the itinerary, a tentative world premiere was set for Washington, D. C., early in October.

Production of the five "How to Do It" booklets will begin immediately. These supplement and implement the sales story of the presentation, bringing it down to numerous outstanding case histories and pointing the specific application of broadcast advertising to individual retailers' problems.

At the conclusion of the luncheon on the second day of the meeting, the committee voted unanimous appreciation of the superb direction and organization of the study and presentation by Sheldon R. Coons, counsel to the committee. It also moved a rising vote of thanks to Paul W. Morency, chairman, Walter Johnson and Lewis H.

Avery for their untiring work on the project.

With one exception, all members of the retail promotion committee were present at the preview. In addition to Chairman Morency, these included: Robert E. Bausman, WISH; Gene L. Cagle, KFJZ; Dietrich Dirks, KTRI; Kenneth K. Hackathorn, WHK-WCLE; Arthur Hull Hayes, CBS; Walter Johnson, WTIC; C. L. McCarthy, KQW; James V. McConnell, NBC; John M. Outler, Jr., WSB; Oliver Runchey, KOL.

The meeting was also attended by C. K. Beaver of KARK; Sam H. Bennett of KMBC and John E. Surrick of WFIL, members of the sales managers executive committee who are not also members of the retail promotion

committee.

Three members of the advisory committee of promotion executives, appointed by Chairman Morency to assist in the production and presentation of the plan, were also present: M. F. Allison of WLW-WSAI; Charles B. Brown of NBC and John J. Hade of WJZ.

Several guests of the committee were also present at the preview, including: Neville Miller, president, NAB; C. E. Arney, Jr., secretary-treasurer, NAB; Robert H. Leding of the Sheldon R. Coons organization; R. S. Evans and Gordon Miller of the Jam Handy Organization; Dr. Paul S. Lazarsfeld, director of the office of radio research, Columbia University; Charles F. Phillips of WFBL and C. Robert Thompson of WBEN.

REPORT ON NAB ACCOUNTING COMMITTEE MEETING

The NAB accounting committee held its first meeting since its membership was appointed following the NAB War Conference. The meeting was held in Washington with Chairman H. K. Carpenter of WHK, Cleveland, presiding. Members present were: Messrs. John B. Conley, WOWO, Fort Wayne; Charles C. Leonard, WAVE, Louisville; Harry F. McKeon, NBC, New York; Jess Swicegood, WKPT, Kingsport; Lloyd C. Thomas, KGFW, Kearney. Samuel R. Dean of CBS, New York was unable to attend. Paul F. Peter, the committee secretary and Mrs. Helen H. Schaefer, his assistant, represented NAB. J. Harold Ryan, Chairman of the broadcast sub-committee of the advisory committee on government questionnaires attended as a guest.

Mr. Ryan told of the functions of his committee and its

decision to confer with the FCC on certain questionnaires and forms sent to stations prior to their formal submission to the Bureau of the Budget for approval. The purpose of such conference is to establish a better understanding between the industry and the FCC concerning the Commission's gathering of information. Mr. Ryan called upon the accounting committee to review the FCC annual financial and employee data form used for reporting the year 1942. He also asked that the committee review any other Commission forms which it felt should be included in such discussions with the Commission.

The committee reviewed the FCC financial and employee data form and is submitting its recommendations for revision to Mr. Ryan's committee. The accounting committee also discussed the program and transmitter log requirements of the Commission and the forms employed for reporting changes in stock ownership of stations. The committee reviewed the NAB program log recommendation which was prepared by the accounting committee in 1940. It was decided to make minor revisions necessitated by certain changes in FCC rules and regulations and submit the revised recommendation to Mr. Ryan's committee for inclusion in discussions with the FCC.

The committee decided to review the NAB accounting manual to ascertain whether revision is necessary to increase its usefulness; first, as to its contribution to station accounting as a management tool; second, its contribution to stations in producing information required by the FCC; and third, its assistance to stations in tax matters. To accomplish this work, a sub-committee was appointed consisting of Mr. Leonard, Mr. McKeon, Mr. Conley and Mr. Dean, who are to review the accounting manual in detail and recommend revisions.

The committee received a complete file of the work done by previous committees in an effort to evolve a recommended invoice form as requested by the American Association of Advertising Agencies. A complete review of the file resulted in the instruction of the secretary to prepare a revised report which can be used for consultation with the 4A's.

No date was set for the next meeting. However, there will undoubtedly be a meeting called early in the fall.

RED CROSS NEEDS HELP! YOU CAN FURNISH IT

Fighting on the battle fronts around the globe has already placed new burdens on the American Red Cross and the Red Cross must have help.

This was made known at a conference recently held at

We Need Your Help

Much of the down-to-earth selling power of the Retail Promotion Plan depends upon an analysis of the present use of broadcast advertising by department stores and leading retail establishments. To help the Committee and Sheldon R. Coons to include the most complete analysis possible, won't you please do two things today:

- 1. Fill out and return the Statistical Questionnaire on page two of the folder mailed you on May 27, 1943.
- 2. Write a letter immediately, telling in your own words and in your own way, some of your recent experiences with retail advertising.

Your co-operation will be of genuine benefit in the preparation of the presentation.

NAB between Neville Miller and Messrs. Brown, Bowen and Ruthrauff of the Red Cross headquarters staff.

Broadly speaking the Red Cross has a three-way health plan as follows:

- 1. Recruitment of registered nurses for duty with the armed forces.
- 2. Recruitment of 200,000 volunteer nurse's aides to work in over 2,000 civilian and military hospitals in the United States. These nurse's aides help bridge the gap left by registered nurses going overseas.
- 3. Recruitment of 500,000 people to take simple Red Cross home nursing instruction so that they may be prepared to give simple medical care at home until the services of a doctor may be secured.

F. Bourne Ruthrauff, chief, radio section, explained that the Red Cross had been given a quota of 2,500 registered nurses monthly, 2,000 for the Army and 500 for the Navy. This is a total of 30,000 registered nurses for the next twelve months.

Already 30,000 registered nurses are serving in the Army Nurse Corps. They are on duty in 537 stations in the United States and in 35 countries outside the U.S.

More than 4,000 nurses are serving in the Navy Nurse Corps, on duty in 212 U.S. stations and in 27 foreign countries.

Promotion in each of the three categories listed above is in order. Before long the Red Cross hopes to provide chapters with a variety of material for offering to stations. To make certain that the situation is understood, here are the facts:

Army and Navy quotas were reached in March. But in April there was a slight drop; and a drop was 50 per cent in May. June figures are showing a similar decrease.

The Army Nurse Corps reports that is is now 1,400 short of estimated needs while the Navy Nurse Corps reports that its constantly maintained reserve has been exhausted and that all nurses who have taken their oaths of office have been assigned.

OREGON STATE BROADCASTERS MEET: HEAR SPENCE, PENGRA

Oregon State Broadcasters Association met this month in a joint session with the Washington Broadcasters Association in Portland with Henry Spence, KXRO, and Marshall Pengra, KRNR, as principal speakers.

Spence told the broadcasters the history of the recent Supreme Court decision and the White-Wheeler legislation as well as analyzed the present need for legislation, the difference between the network rules and the unrestricted powers now established.

The broadcasters agreed to contact their congressmen while they are on recess.

Pengra reported on the work of the small market stations committee and the meeting resolved against the discriminating aspects of the Bankhead bill (\$30,000,000 for newspaper ads-none for radio), against OWI for allowing newspapers to sell space for War Bond advertising while radio is prohibited from doing this, and to have NAB hire a staff director representing small stations.

The following persons attended:

James Murphy, KIT; Carl Haymond, KMO; Dick Dunning, KFPY; Charles Chatterton, KWLK; Bob Chandler, United Press; Art Morey, KWJJ; Lee Bishop, KMED; Chester Duncan, KOIN-KALE; Chet Wheeler, KWIL; Joe Chytil, KELA, and Bob Brister, KELA.

Frank Loggan, KBND; Kessler Cannon, KBND; O. A. Runchey, KOL; Hal Wilson, KXL; Allen Miller, KOAC; Harry Buckendahl, KOIN-KALE; Mark Knight, Associated Press; Luke L. Roberts, KOIN-KALE; H. M. Swartwood, Jr., KOIN-KALE; Ted Kooreman, KALE; Harry

Spence, KXRO; Marshal Pengra, KRNR; "Q" Cox, KGW-KEX; Homer Welch, KGW-KEX; Arden X. Pangborn, KGW-KEX; H. B. Read, KSLM; Tom Olsen, KGY, and C. W. Myers, KOIN-KALE.

Mrs. M. E. Gilmore, KBPS; Ben E. Stone, KOOS; Dave Foster, KGW-KEX; Barney Kenworthy, KODL; J. Kendall, KODL; Grant Feikert, KOAC; Johnny Carpenter, KOIN-KALE; Lester Spillane, FCC; Kenneth Clark, FCC; Ted W. Cooke, KOIN-KALE, and James McLoughlin, Keating Studios. lin, Keating Studios.

NO DISCRIMINATION SAYS MARITIME COMMISSION

An NAB member station advises that a local U.S. employment office and a government contractor have stated that the Maritime Commission has advised that while it is allowing reimbursement for newspaper ads, it will not reimburse advertisers for radio expenditures.

The matter has been taken up with the public relations division of the Maritime Commission and the NAB has been assured there is no such rule. Any advertising expenditure of a legitimate character, whether made with radio or newspaper, will receive the same consideration at the hands of the Maritime Commission.

LISTENER GROUPS WIN PRIZE IN MINNESOTA

A study of day time programs has been made recently by members of the Minnesota Radio Council, under the direction of Mrs. George B. Palmer, regional director of listener activities for the area. The listeners were organized into teams with specific periods each day assigned for listening. Each member was required to listen five days a week. Written daily reports with personal data as well were made. The promotion was developed by Mrs. Palmer to raise money for the Minnesota Federation's Nursing Scholarship Fund. Knox Reeves Advertising Agency worked out the details and checked the findings.

At the close of the test, the sum of \$250.00 was given to Mrs. Palmer for the scholarship fund. This meant that the listeners did a research job without remuneration except to the club war project. The agency was well pleased with the results. As Mrs. Palmer stated in the letter giving general instructions:

". . . it is not our job to tell professionals how to write and produce shows, but we can contribute very materially as a group in giving agencies and sponsors some idea as to what we like best and so help them to give us what we want.

BATTERY PRODUCTION UP; SEARS WILL NOT LIST

Production of farm radio batteries at present is about equal or a little better than in the second quarter when, according to WPB, 1,350,000 packs were produced.

One of the "big three" battery manufacturers said Thursday that corn starch was giving them more trouble than any other material entering into battery construction.

The mail order house of Sears, Roebuck and Co. has decided not to list farm radio batteries in forthcoming fall catalogs not yet printed. The company will, however, accept delivery of their regular quota of batteries from suppliers. Because catalog readers assume that all articles listed therein are instantly available for purchase, the company will be able to eliminate considerable letter writing. Manufacturers actually are doing a good job of dividing their output on the basis of past purchases. No outlet for batteries receives more batteries than have been handled in the past.

Reproduced below is a letter to the Hon. James F. Byrnes, director, Office of War Mobilization, from the former director of WPB's consumers durable goods division which handles radio batteries. The director, Edwin P. Felt, is no longer in this post. His letter, dated July 8, was mailed to Neville Miller, NAB president, with an attachment from Mr. Byrnes.

"We have received a letter from the National Association of Broadcasters addressed to you under date of June 17, 1943. This letter which we are returning to you, refers to the shortage of farm radio batteries.

"In order to conserve zinc in accordance with the provisions of M-11-b, Order L-71, as issued October 2, 1942, entirely eliminated the production of portable radio batteries and restricted the production of farm radio batteries to approximately 60% of pre-war production. During the winter months, the production of military batteries was such that some manufacturers could not even make this quota and we suffered a very serious shortage of batteries for farmers who have no other source of power.

"The situation became so serious that in March of this year steps were taken to determine if additional zinc was available for use in radio batteries. Although the Zinc division had been under pressure to conserve even more of that metal, they could see the unfortunate results of our severe limitation on farm radio batteries and allowed sufficient additional zinc for the period from March 20th to June 30th, 1943, to enable manufacturers to operate at capacity. At the present time additional zinc has not yet been provided for third quarter capacity operations but we are working on this and hope that nothing will interfere with our program. Capacity operation will provide approximately twice as many batteries as the

previous program.
"Mr Miller mentions that 'farm battery production continues insufficient to balance consumption, let alone overtake the accumulated deficit.' Unless military requirements are larger than anticipated, or unless the labor situation becomes more critical, we have every hope of producing enough batteries to keep up the consumption and provide a small surplus to overtake the deficit. However it is obvious that we are unable to get more batteries than the capacity of the industry will allow. Most of the factories are working at least two shifts; we are doing everything we can to induce other battery manufacturers, who previously had a very small radio battery production, to re-arrange their facilities for increased production of

this item.

"We believe that the demand for farm radio batteries is greater today than at any time since the advent of the electric-powered radio. Due to increased rural purchasing power many battery radios were sold during 1941 and 1942 and, in addition, farmers are in a better position to buy replacement batteries. Also, listener interest in newscasts, war programs, etc., has increased and no doubt the curtailment of gasoline has contributed generally to the increased use of radio.

"There are no less than 3,200,000 farmers who depend on dry batteries for their radios and we believe it of prime importance to provide them with between 1½ and 2 sets of batteries a year. At the present capacity of the industry, we can provide about 1% batteries a year, if materials are made available for this production."

SHEPHERD NOW HEADS WAYS

G. O. Shepherd, former manager of WORD, has been appointed general manager of WAYS, according to the Inter-City Advertising Company and Harold H. Thoms.

Mr. Shepherd has also been manager of WWNC. He is well known in national radio circles and among Southern broadcasters.

WKBN WAR PROMOTION

Station WKBN has sent its promotion booklet "Radio at War" to NAB and it is an outstanding job in the opinion of headquarters. Done in color with tasteful halftones and make-up, the booklet contains the full story of the station's war work.

Considerable space, in fact the entire first half of the booklet, is devoted to the overall picture of radio in the war nationally and internationally. A catalogue of complete military insignia and rank also is included.

KVOO SOLVES PROBLEM OF AD LIB DANGERS ON SHOWS

Station KVOO has posted the following circular in prominent places in its studios and waiting room to help in eliminating dangers of improper release of information over the air during guest, quiz or audience participation appearances:

Caution

In the interest of national security, the more than 900 radio stations making up the American System of Broadcasting are operating in these war times under a code of voluntary self-censorship. We wish to call to your attention the following phases of information which might give aid and comfort to the enemy, and request that you keep them in mind and refrain from mentioning any of them while you are on the air:

Weather conditions, past, present, or future.

Information regarding the type, strength, or movement of units of our armed forces,

Information regarding types or movements of ships, convoys, or planes,

Information regarding the location or description of fortifications of air installations,

Any information on production plants, secret designs, statistics, or transportation of war materials,

Any information about the movements of the President of the United States.

We also request that you refrain from acknowledging any requests or making any dedications of musical numbers or other broadcast material.

Please do not repeat on the air any unconfirmed reports

We will appreciate your co-operation in helping us maintain the excellent record the broadcasters have attained in their part in the war effort. Thank you.

> RADIO STATION KVOO

> > (Signed) WM. B. WAY, General Manager.

Any station which has issued a circular upon this subject is invited to send it to NAB.

JOHN COWLES RESIGNS

John Cowles, special assistant to E. R. Stettinius, Jr., Lend-Lease administrator, has resigned his post to return to private life as president of the Minneapolis Star-Journal and Tribune. Mr. Cowles had been connected with the government department since January, 1943. He is also co-owner of stations KSO and KRNT.

NEW GUIDE FOR USE OF RECORDINGS ISSUED

New Tools For Learning, an association which functions in cooperation with the American Council on Education, has issued a new booklet titled "Recordings-for Classrooms and Discussion Groups."

This is a guide for teachers, students and group leaders prepared by the Recordings Division, of the New York

University Film Library, for use with recordings of the University of Chicago Round Table broadcasts of last August (1942) on the Post-war World.

Copies are 15¢ each and they may be obtained from the New York University Film Library, New York City.

CANADIAN SETS NEAR 2,000,000

The radio division of the Canadian Government sold 1,728,000 private radio receiving licenses during the year ended last March, an increase of six per cent, according to the Department of Commerce.

Sales in Toronto of 604,981 licenses topped all other Provinces. Licenses sold in Quebec totalled 400,902; British Columbia, 138,191; Alberta, 122,498; Saskatchewan, 122,304; and Manitoba 104,304.

Note to Radio Jobbers

Attention of radio jobbers was called today to the fact that they may apply for relief to the War Production Board on form PD-470 (WPB-1161) listing frozen stocks of copper wire mill products by amounts, sizes and types which cannot be sold in accordance with CMP regulation 4. It should be pointed out that in the event an application should be approved by WPB, copper wire sold under such authorization cannot be replaced in stock.

FEDERAL COMMUNICATIONS COMMISSION

FTC MAKES SECRET ANALYSIS

In connection with its regular routine survey of radio and periodical advertising, the Federal Trade Commission recently made special analyses of advertisements dealing with war related subjects and reported to the Office of Censorship, the WPB and OPA. The analyses were not made public, but were for the respective federal agencies alone.

'FALSE!' SAYS FLY

In response to public charges made yesterday by Counsel for the Cox Committee, Chairman James Lawrence Fly of the Federal Communications Commission today made the following statement:

The Cox Committee publicly asserted on yesterday that the Commission's Foreign Broadcast Monitoring System had sent 31 employees to the North Africa Area; and that except for a few of these, these employees had been transferred to North Africa by Chairman Fly without clearance with the Commission. The statements are false.

In the first place, the Commission has never had more than a total of fifteen persons connected with its work there. All of them were assigned to the Psychological Warfare Branch of the Army in North Africa. For that matter, the Commission has had no other employees there

in any capacity.

Of the 15, only five are regular employees of the Commission and their transfer to North Africa was authorized by the full Commission in meeting assembled. The remaining ten were people who were living in the area and who were recruited locally to assist temporarily in the clerical and other detailed work connected with the monitoring unit. They were paid at rates ranging from \$10 to \$100 per month. These local people were hired by the Commission's staff in North Africa and the Psychological Warfare Branch of the Army through the good offices of the Department of State.

'NOT TRUE!' JETT SAYS

In response to public charges made this morning by Counsel for the Cox Committee, E. K. Jett, chief engineer of the Federal Communications Commission, made the following statement:

"The Cox Committee stated that most of the work performed by the Radio Intelligence Division had been published, thereby leaving the inference that the activities of the Radio Intelligence Division are not secure. This is not true. During the past three years this Division has received nearly 10,000 complaints regarding unlicensed amateurs, unlicensed broadcasts, subversive operations, and miscellaneous matters. More than 3,000 such complaints have been received from the FBI, and approximately 850 from the Army, and 800 from the Navy and Coast Guard. The local police have filed more than 1,000 complaints, and more than 2,000 have been received from the general public. All of these cases have been investigated, with the result that the Radio Intelligence Division of the Commission located 345 unlicensed stations. Except in a very few instances when matter was no longer confidential, no pub-

licity whatsoever has been given to this work.
"The Radio Intelligence Division has always enjoyed the cooperation of the Army, Navy, FBI, and other agencies which it serves. While the work of this Division is devoted primarily to policing the ether to guard against possible Fifth Column radio activities and to assist in reducing interference to radio communications, it has, nevertheless, been possible with the facilities at hand to perform work for all agencies of the government which required monitoring service. It should be observed that only a small percentage of the work of the Radio Intelligence Division has been done for the armed forces and that such work is done only when the Commission is specifically requested to undertake particular projects."

FLY CITES PRAISE FOR FBIS

In connection with proceedings before the Cox Committee, Chairman James Lawrence Fly today stated:

"Today it was charged before the Cox Committee that the Commission's Foreign Broadcast Intelligence Service (FBIS) is not performing a valuable function. To meet this charge the Commission tendered the Cox Committee 20 letters received from War Agencies using FBIS material, giving an appraisal of its value. The Committee refused to accept the letters for the record.

"They bear the signatures of such persons as General Strong and General Lee of the Military Intelligence Division, Rear Admiral Turner of the Office of Naval Operations; Elmer Davis, Nelson Rockefeller, Coordinator of Inter-American Affairs, Breckinridge Long, Assistant Secretary of State, and John Winant, American Ambassador to England.

"These letters show the great value and importance of FBIS work.

"Thus the War Department finds FBIS reports contain 'very valuable information' and are 'of substantial value from a military standpoint' and 'strongly recommends that the Service's coverage be extended.

"The Navy Department considers that the service rendered is 'well adapted to its needs' and 'extremely useful and important'; and that the material received has 'considerable value in sometimes giving inadvertent notice of operations.'

"The Director of the Office of War Information says 'Your service (FBIS) constitutes a major source of information on what is happening in Germany, Italy and occupied countries' and 'without the service supplied by the FBIS, the OWI could not function.'

"The Department of State reports that the FBIS is 'a most valuable addition to our foreign intelligence' and our Ambassador to England asks that the Service be furnished to the 'Embassy, American armed services and missions attached to the Embassy' so that the Embassy 'could swiftly and adequately inform Army, air and Navy services here (in England) in any period of active operations when enemy radio reports might prove vitally

important.'
"The Coordinator of Inter-American Affairs reports that 'every phase' of the Service's work 'has been of great

assistance to us.

"Of particular importance, in view of the almost complete drying up of ordinary sources of news from Japan and Japanese occupied territories, is the information obtained from radio broadcasts. The Office of Strategic Services says that 'without the monitoring service of the F.C.C. our knowledge of current events in Japan would be meager' and that the various reports of FBIS are found 'indispensable' to the work of its Far Eastern Section. Similarly the Far Eastern Division of the Board of Economic Warfare makes 'very extensive use of the economic information' provided by FBIS.

"Both OSS and BEW urge 'it is vital to the war effort'

that FBIS expand operations to ensure greater coverage

of Japanese broadcasts.

"It will be noted that in one particular, the information obtained by FBIS is of direct importance to every soldier's family. Broadcasts by Axis stations frequently mention American prisoners of war. The War Department has asked that any such information be promptly forwarded to it as it is necessary in order that the American public, particularly the next of kin of American nationals in the hands of the enemy, may be properly advised."

FEDERAL COMMUNICATIONS COMMISSION DOCKET

HEARING

The following broadcast hearing is scheduled to be heard before the Commission during the week beginning Monday, July 26th. It is subject to change.

Wednesday, July 28

KMTR-KMTR Radio Corporation, Los Angeles, Calif.-Renewal of license, 570 kc., 1 KW, unlimited.

FEDERAL COMMUNICATIONS COMMISSION ACTION

APPLICATIONS GRANTED

WGST—Georgia School of Technology, Atlanta, Ga.—Granted extension of temporary license for a period of 30 days.

WTAW-Agricultural and Mechanical College of Texas, College Station, Tex.—Granted modification of license (B3-ML-1166) to increase hours of operation from specified hours dividing use of frequency 1150 kc. with Station KTBC, to

full daytime operation on same frequency.

KTBC—State Capital Broadcasting Assn., Inc., Austin, Tex.— Granted modification of license (B3-ML-1168) to change frequency assignment from 1150 kc. to 590 kc., increase hours of operation from specified to full time, operation to be with 1 KW power daytime, 250 watts nighttime; granted subject to future requirements.

KHUB-Luther E. Gibson, Watsonville, Calif.-Granted renewal of license (B5-R-916) subject to the express condition "that this action is without prejudice to the application to the licensee of any report, rule or regulation which may

result from the proceedings under Order No. 79."

KICD—Iowa Great Lakes Broadcasting Co., Spencer, Iowa.—
Granted modification of license (B4-ML-1158) to move main studio to transmitter location, approximately .8 mile outside city limits of Spencer, Iowa.

WBBZ-Adelaide Lillian Carrell, Executrix of Estate of Charles Lewis Carrell, deceased, Ponca City, Okla.; WBBZ-Adelaide Lillian Carrell, Ponca City, Okla.—Granted consent to assignment of the license for Station WBBZ from Adelaide Lillian Carrell, executrix of the estate of her husband, Charles Lewis Carrell, deceased, to herself in her individual capacity (B3-AL-371). Granted renewal of license upon a regular basis (B3-R-572).

DESIGNATED FOR HEARING

WJBW-Charles C. Carlson, New Orleans, La.-Designated for hearing application for renewal of license of Station WJBW.

LICENSE RENEWALS

Granted renewal of following licenses for the period beginning August 1, 1943, and ending not later than August 1, 1945:

KOBH, Rapid City, S. D.; KONO, San Antonio, Tex.; KWYO, Sheridan, Wyo.; WAGF, Dothan, Ala.; WSLB, Ogdensburg, N. Y.; KENO, Las Vegas, Nevada.

KGFW-Central Nebraska Broadcasting Corp., Kearney, Nebr.-Granted renewal of license for the period ending no later than June 1, 1945 (B4-R-703).

MISCELLANEOUS

KTKN-Edwin A. Kraft, Ketchikan, Alaska.-Granted authority to install new automatic frequency control equipment (B-F-253).

KEHJ-WDAY, Inc., Fargo, N. D.-Cancelled relay broadcast license authorization, in accordance with written request of

licensee (B4-BRE-202).

KMTR-KMTR Radio Corp., Los Angeles, Calif.-Adopted order granted petition for reconsideration and grant of its application for renewal of license, heretofore designated for hearing; application for renewal of license (B5-R-17) granted. (Docket No. 6437)
W83C—WHFC, Inc., Chicago, Ill.—Placed in pending file appli-

cation for modification of construction permit (B4-MPH-116) for move of transmitter and studio location, changes in antenna system, change in type of transmitter and ex-

tension of commencement and completion dates. W731—Associated Broadcasters, Inc., Indianapolis, Ind.—Denied petition for authority to install available equipment for operation on a temporary basis until materials required to complete construction, as originally contemplated, become available; placed in pending file application for modification of permit for new high frequency station (B4-PH-122).

APPLICATIONS FILED AT FCC

1380 Kilocycles

WSYB—Philip Weiss, trading as Philip Weiss Music Co., Rutland, Vt.—Authority to determine operating power by direct measurement of antenna power.

1240 Kilocycles

WBBL-Grace Covenant Presbyterian Church, M. A. Sitton, Agent, Richmond, Va.—Authority to determine operating power by direct measurement of antenna power.

930 Kilocycles

WKY-WKY Radiophone Company, Oklahoma City, Okla.-Modification of construction permit (B3-P-3114 as modified, which authorized installation of directional antenna for night use, move of transmitter and increase in power) for extension of completion date from 7-20-43 to 1-20-44.

710 Kilocycles

KIRO—Queen City Broadcasting Co., Seattle, Wash.—Authority to determine operating power by direct measurement of antenna power.

MISCELLANEOUS APPLICATIONS

NEW-Columbia Broadcasting System, Inc., Brentwood, L. I., N. Y.—Construction permit for a new International Broadcast Station to be operated on 6060, 6120, 6170, 9650, 11830, 15270, 17830, 21520 and 21570 kc., 50 KW power and unlimited hours of operation except share time on all frequencies with WCRC, WCBX and WCDA; also share time on 6060 kc. with KWID and KWIX; use 6120 kc. by special authorization.

NEW—KTRH Broadcasting Co., Portable-Mobile, area of Houston, Texas.—Construction permit for a new relay broadcast station to be operated on 1606, 2074, 2102, 2758 kc., power of 50 watts, A3 emission, to be used with Station

KTRH.

NEW—Pensacola Broadcasting Co., Portable-Mobile, area of Pensacola, Fla.—Construction permit for a new relay broadcast station to be operated on 31220, 35620, 37020 and 39260 kc., power of 15 watts, A3 emission, to be operated with Standard Station WCOA.

NEW—Columbia Broadcasting System, Inc., New York, N. Y.— Extension of authority to transmit programs to CFRB and CKAC and other stations under the control of the Canadian Broadcasting Corp. for the period 9-15-43 to 9-15-44.

W9XMB—The Moody Bible Institute of Chicago, Chicago, Ill.— Modification of construction permit (B4-PST-4 as modified, which authorized construction of a new ST broadcast station) for extension of completion date from 8-16-43 to 11-16-43.

FEDERAL TRADE COMMISSION DOCKET

COMPLAINTS

The Federal Trade Commission has alleged unfair competition against the following firms. The respondents will be given an opportunity to show cause why cease and desist orders should not be issued against them.

Ex-Lax, Inc., 423 Atlantic Ave., Brooklyn, the The Joseph Katz Co., Baltimore advertising agency, are charged in a complaint with disseminating advertisements which misrepresent the therapeutic properties of a medicinal preparation designated "Ex-Lax" and which fail to reveal the harmful consequences that may result from use of the preparation. The Joseph Katz Co. prepares advertising material for Ex-Lax. (5007)

Kay-Sherman Luggage Company, et al.—A complaint issued charges Max L. Kizelstein and Leon Sherman, trading as Kay-Sherman Luggage Co., 3 West 46th St., New York, retailers of luggage, with misrepresenting to the purchasing public that they are wholesalers and sell their merchandise at wholesale prices, (5008)

Los Angeles Pharmacal Co., et al.—Dissemination of false advertisements in connection with the sale of medicinal preparations is alleged in a complaint against Robert Salazar, trading as Los Angeles Pharmacal Co. and Hidalgo Pharmacy, 204 North Main St., Los Angeles. The respondent sells the preparations under the names "Pulmotol," "Femovita," "Renatone Pills," sometimes known as "Runaton," and "Stomavita," and advertises them in the Spanish language in newspapers and periodicals and by radio continuities. (5006)

National Secretaries' Association, 1005 Grand Ave., Kansas City, Mo., and its officers and executives, are charged in a complaint with misrepresentation in the sale of books entitled "Better Letters-Lessons in English" and "Better Letters-Quiz Book," designed for use by secretaries, and "Webster's Encyclopedic Dictionary." The officers and executives of the Association are H. Robinson Shepherd, president, who resides in Leavenworth, Kans.; and Ruth Hostetler, secretary; Hilary A. Bufton, manager and treasurer, and George Turner, sales manager, who have their place of business at the Kansas City address. (5003)

Tru-Health Garments Corp., 25 West 26th St., New York. is charged in a complaint with misrepresentation in the sale of shoulder braces and body belts designated "Tru-Health," advertised as being capable of preventing and correcting malformations and malpositions of the body. (5004)

Watts-Wagner Co., Inc.—A complaint has been issued charging Watts-Wagner Co., Inc., 109 West 64th St., New York, and its officers, Allen P. Wagner and William W. Wagner, with misrepresentation in the sale of a compound designated "Prema-Weld," recommended by the respondents for use in repairing water jackets, cylinders, or other metal parts of machinery. (5005)

STIPULATIONS

No stipulations were issued by the Commission during the past week.

CEASE AND DESIST ORDERS

The Commission issued the following cease and desist orders last week:

American Rug and Carpet Co., Inc., 105 Madison Ave., New York, has been ordered to discontinue representing that certain of the domestic rugs it sells are Oriental rugs. (4499)

Cement Institute and 75 member corporations who produce and distribute more than three-fourths of the portland cement manufactured in this country, and their officials and agents, have been ordered to cease and desist from engaging in or continuing any combination or conspiracy to sell cement at prices arrived at by use of their multiple basing-point delivered-price system. The Commission finds that the respondents' practices constitute unfair methods of competition in violation of the Federal Trade Commission Act and their delivered-price system results in discrimination in price among their respective customers, in violation of the Robinson-Patman Act. (3167)

Dearborn Supply Co., 2350 Clybourn Ave., Chicago, engaged in the manufacture and sale of a cosmetic designated "Mercolized Wax Cream," is ordered to cease and desist from the dissemination of advertisements that fail to reveal the harmful consequences that may result from the indiscriminate use of the preparation. (3593)

Progress Tailoring Co., trading as J. C. Field & Son, and four of its subsidiaries, all of Chicago, and their officers and agents have been ordered to cease and desist from certain representations in connection with the sale of men's clothing. The respondent subsidiaries are Stone-Field Corp., W. Z. Gibson, Inc., Pioneer Tailoring Co., and Certified Tailoring Co. (3747)

Rhode Island Plush Mills, Inc., 1112 River St., Woonsocket, R. I., has been ordered to cease and desist from misbranding textile fabrics in violation of the Federal Trade Commission Act and the Wool Products Labeling Act. (4881)

The National Association of Broadcasters

1760 N STREET, N. W. * * * * * * WASHINGTON 6, D. C.

No. 7

SPECIAL INFORMATION BULLETIN

July 23, 1943

Labor Transcriptions

Transcriptions offered to stations at commercial rates by the United Automobile Workers and CIO necessitates consideration of the NAB Code of Ethics, with respect to the following provisions:

Controversial Public Issues

"As part of their public service, networks and stations shall provide time for the presentation of public questions including those of controversial nature. Such time shall be allotted with due regard to all the other elements of balanced program schedules and to the degree of public interest in the questions to be presented. Broadcasters shall use their best efforts to allot such time with fairness to all elements in a given controversy.

"Time for the presentation of controversial issues shall not be sold, except for political broadcasts. There are three fundamental reasons for this refusal to sell time for public discussion and, in its stead, providing time for it without charge. First, it is a public duty of broadcasters to bring such discussion to the radio audience regardless of the willingness of others to pay for it. Second, should time be sold for the discussion of controversial issues, it would have to be sold, in fairness, to all with the ability and desire to buy at any given time. Consequently, all possibility of regulating the amount of discussion on the air in proportion to other elements of properly balanced programming or of allotting the available periods with due regard to listener interest in the topics to be discussed would be surrendered. Third, and by far the most important, should time be sold for the discussion of controversial public issues and for the propagation of the views of individuals or groups, a powerful public forum would inevitably gravitate almost wholly into the hands of those with the greater means to buy it.

"The political broadcasts excepted above are any broadcasts in connection with a political campaign in behalf of or against the candidacy of a legally qualified candidate for nomination or election to public office, or in behalf of or against a public proposal which is subject to ballot. This exception is made because at certain times the contending parties want to use and are entitled to use more time than broadcasters could possibly afford to give away.

"Nothing in the prohibition against selling time for the presentation of controversial issues shall be interpreted as barring sponsorship of the public forum type of program when such a program is regularly presented as a series of fair-sided discussions of public issues and when control of the fairness of the program rests wholly with the broadcasting station or network."

Manifestly any movement to influence public opinion on the subject of the actions of Congress is not "broadcasts in connection with a political campaign in behalf of or against the candidacy of a legally qualified candidate for nomination or election to public office, or in behalf of or against a public proposal which is subject to ballot." Therefore broadcasts of this nature should not be classed as political under the Code, nor should they be presented on paid time.

Station management should accept the responsibility of considering this matter as a controversial issue and allot time to both sides or schedule it on a public forum broadcast, if consistent with the public interest.

WILLARD D. EGOLF,
Assistant to the President and
Acting Secretary to the Code
Compliance Committee

The National Association of Broadcasters

1760 N STREET, N. W. * * * * * * WASHINGTON 6, D. C.

No. 8

SPECIAL INFORMATION BULLETIN

Sept. 3, 1943

United States Radio, War and Post-War

By Paul Hollister

(Vice President, Columbia Broadcasting System)

(This speech was given by Mr. Hollister before the St. Louis Advertising Club and contains information which may be of use to station managers in their public relations work.)

The safe guide to the direction of post-war radio is a projection of the trends and techniques of the past and present. The intelligent layman's guess is likely to be as accurate as the research professional's, provided the layman accepts the potentials and limitations of finite radio engineering, and the professional researcher accepts the no less realistic but far less finite potentials and limitations of human nature, human relations and consumer reactions.

So your reporter in this series of post-war weather forecasts will not do much flapping around in prediction of specific facilities and services which radio will provide after the war has ended. To be sure, television (still around that corner) is within easy reach of production and actual broadcasting . . . but it will not serve widely unless it provides a form of entertainment, of instruction, of cultural and spiritual resort equivalent in quality at least to the standard of service provided by the invisible air today. logical community of interest seems to be appearing over the horizon between the industry that knows best how to make pictures and the industry that knows best how to broadcast sound waves. Again, it is self-evident that another contrivance, called "radar," will serve the mass public in many and interesting ways—ways which cannot be described without telling the present enemy a lot of things he'd like to know about how radar is seeking him out and knocking him off. It ought not to take very long to put on the market improvements likewise in receiving sets of all sorts. Any engineer in radio can tell you some pretty sensational stories about other superhuman mechanisms that will perfect the services of broadcasting. Your speaker today is no engineer. He is no prophet. Instead of the road of forecast, marked "Passable But Unsafe," he chooses the conventional graded highway in spite of occasional signs reading "Beware of Falling Rocks." He asks you simply to look back down the long steep grade up which radio has come so far, to observe the gradings and turns, and to guess with him what the general direction of radio's further progress upward may be.

Asks 'Modern' Radio Law

Constructive changes . . . that is, changes in the interest of most of the people, will not come abruptly. Restrictive changes, in the disinterest of the majority of the public, may come unwarned at any time through the capricious application of bureaucratic power, and further restriction of that freedom of speech upon which press and radio base inseparably and wholly. Let us assume that such lightning will not strike, though that is certainly an optimistic assumption until Congress passes a modern and equitable radio law. Let us concern ourselves not at all with the electrical gadgets under cover today. Let's take a glimpse of that path that radio has come to date.

Remember that public-serving radio, serving most of the people most of the time, is only about 20 years old. In that short span some 31,000,000 American families have come to depend enormously upon the 900 free radio stations and upon the American "fair-bargain" method of adver-

tising goods and services over those stations so profitably as to furnish a fabulous daily total of entertainment, instruction and culture without "admission fee" to all who care to listen in our nation. In 20 years American free enterprise has built a radio system which cannot be degraded to the position of mouthpiece for any administration, any pressure group. During those same 20 years there broke upon our people the greatest of all wars in the history of our self-preservation, and for the first time there was ready for instant use a means of communication to all the people.

Less than 24 hours after the Japanese attack on Pearl Harbor, President Roosevelt spoke not only to the assembled Houses and the press and the representatives of the foreign nations, but to some 63,000,000 rank-and-file American listeners. He was heard abroad, too. He was heard in Berlin and Rome and Tokio. The next evening he spoke again from the White House and some 70 million Americans listened. Thus within a couple of days of actual war, the people of our nation got their marching orders from the heard voice of their commander-in-chief. And from that voice the peoples of the world knew exactly where the United States of America stood.

No Radio 'Retooling' Necessary

From the moment the first news flashes from Pearl Harbor broke into that Sunday radio program on December 7, 1941, the full force of American radio swung into war action. No retooling was necessary. There isn't much question that radio's swift distribution of every flicker of developing war news made the American people the best-informed, as well as the largest, company of freemen on earth concerning the immediate fortunes and hazards of their country suddenly plunged into war.

Now at the risk of trying your patience with numbers, I propose to make that statement specific . . . for upon its proof will base your own easy projection of where radio is to go when peace comes. I shall now report to you certain war-time accomplishments of radio broadcasting, as these accomplishments are reflected from the records of a single network (CBS).

This report will take us from Pearl Harbor Day down through March 30, 1943 (the latest date of summary record), and it will go outside the CBS records to cite certain totals of joint accomplishment in radio by the Advertising Council and the Radio Division of the Office of War

Information. The only reason why the records of all four major networks are not included is because they are not available to this reporter. The totals run up by the single network which I shall recite are impressive enough alone; they are typical, I believe, of the pattern of activity followed on the other three networks; let their moral, therefore, be multiplied by four.

To the least of the 900-odd stations in the United States, radio volunteered, and to the least of the thousands of national and local advertisers using radio, their services were instantly placed at the disposal of the single common cause.

They sprayed the air morning, noon and night with a volume and variety of war information which no nation before had ever received in such proportion to its diverse and gigantic need. Quality and finesse and subtlety had to stand aside for quantity, for when a dam breaks it is common sense to block the flood before you try to purify the water upstream. No use to quibble now, or any time in the future, unless you're an academic historian, a professional dilletante, or a disgruntled politician, as to whether there was during those first months of radio, too much, or too little, on the air, for the average shocked mind to absorb and to react to.

Radio Converts National Mood

One result is plain: never before had the *mood* of so large a democracy been so swiftly converted to a war footing, pointed in the direction of its most effective volunteer war behavior, or stimulated to project its volunteer tradition to greater result.

Out of the fog of mobilization, certain forces began to loom clear: (1) In government the departments and usable agencies most directly concerned with war, and with total civilian support of it based on the complete dissemination of essential war information. (2) In civilian life, the 900-odd radio stations who provide 31,000,000 of the 34,000,000 homes in America with constant free radio-listening of all sorts. (3) In civilian life too, the thousands of manufacturers and stores and services who alone implement the radio industry with the funds for providing broadcasting. The major problem became (and it is today much the same problem multiplied) one simply of collecting the information, sorting it, putting it into the best form to broadcast, persuading the network or station or advertiser to pay for it and putting it out on the air . . . and thus getting the information to the people.

The Office of Facts and Figures took over the Herculean job of bringing some sort of orderly flow into this torrent. The Office of War Information took over from the OFF, improved on its methods, staffed it with people somewhat more seasoned to their technical tasks (in its domestic radio division in particular) and produced a strikingly heavy and smooth flow of traffic in clearing the information output of 30 separate Government agencies (and two quasi-governmental agencies, the National War Fund and the Red Cross) to the total of the people.

Now to bring that flow down to realistic figures, let us see how war information of all sorts actually went to the American people over the CBS network alone during the period December 7, 1941, to March 31, 1943—a total of 480 war days.

CBS Is Active

CBS broadcast during that period a total of 11,880 programs containing war matter.

These 11,880 separate programs treated 16,055 war "items."

These 11,880 CBS programs used 2,165 hours 42 minutes of radio time, donated wholly by the network or the advertiser.

In addition to these 11,880 programs, CBS broadcast 6,221 programs of war *news*.

The grand total of war broadcasts of this single network, therefore, was (during this period), 18,101; they treated of 22,276 war items; they used 3,349 hours 39 minutes of broadcasting time, for which Government paid not one penny.

Of these 18,101 war programs, 9,272 were bought and paid for and volunteered to the wareffort by advertisers.

The remaining 8,829 war programs were bought and paid for and volunteered by the network . . . that is, they were sustaining programs.

Now to sharpen the focus of the effect of this upon the morale of the American people, let us take a cross-section . . . an average day . . . during this period, on this one network:

During an average, typical day . . .

12 times the audience heard a sustaining warprogram.

22 times the audience heard a war program volunteered by an advertiser.

8 times the audience heard also a sustaining war *news* program.

5 times the audience heard also a sponsored war *news* program.

Thus ...

47 times a day the radio audience of this single network heard war information.

What's more, the total of war information broadcast during an average CBS day was 37.6% of the entire broadcasting clock of the day.

Exclusive of war *news*, 91 different major war topics were treated in the subject matter of the program itself during the first 480 days of the war. In addition, seventy war topics were handled via straight war announcements. In all, CBS broadcasts aided 99 mutually exclusive major war campaigns during this period.

No man who has the faintest knowledge of the dependence of the American public upon radio, and who knows that the average family listening reflects that dependence by using its radio over 4 hours a day, can sneer at the power that radio has used with self-discipline and forthright patriotism since we went to war. It is important to bear in mind that the OFF and the OWI have never deviated from their basic policy of guided voluntary effort. It is equally important to recognize that the voluntary response was forthcoming to a degree no prophet could have foretold.

Now let us open the diaphram of our lens so as to get a picture, if we can, of the combined war effort of *all* the networks and *all* the individual stations, as those records come off the diary of the Office of War Information.

OWI receives its broadcastable material from 32 government agencies. It sorts this inflow into eight classes, or eight different methods of most suitable *treatment*. Out of OWI, to the networks and stations and agencies and advertisers, these eight great "pipe-lines" carry the war information to the radio transmitters, where it is broadcast incessantly to all America.

Public Gets the Low-Down

Through this "processing and clearing" technique, the U. S. radio public receives (according to the circulation estimates of the OWI itself) during each average week:

74,450 station war-information broadcasts.

It is the OWI's reasonable calculation that these broadcasts amass a total of Listener-Impressions each week amounting to 474,800,000.

Huge as that figure is, if you divide it by total population, it provides no more than the exposure of the total of the American people about four times a week to a war message. Maybe it's not "too much," but really little after all. This is a 7-day war, isn't it? I haven't heard that the men in uniform get three days off each week.

The plan for sorting and clearing this mass of war information is the joint development of the OWI and the Advertising Council; it isn't any more complex than an International Business Machine, but like that machine it sorts out, adds up, and works. Here's a typical week's schedule broadcasting during March, 1943; the estimate of Listener-Impressions is OWI's own, and it must be noted that the OWI confesses that "these figures cannot possibly take into account the spontaneous efforts by commercial programs which we cannot always trace." But look at that typical week:

165,320,000	(Listener
154,960,000	Impressions)
132,750,000	
94,820,000	
44,960,000	
44,960,000	
-, , -	
9,530,000	
2,910,000	
	154,960,000 132,750,000 94,820,000 44,960,000

The mass of voluntary war-information broadcasting adds up to a large sum of hard money.

87 Millions Donated

"Broadcasting" (the magazine) on March 29, 1943, estimated the time volunteered by networks, stations and advertisers to programs cleared through OWI, at \$71,570,000 at card rates and best discounts; the talent donated at \$15,330,000; the total contribution for a single year of war broadcasting under the OWI-Council plan of clearance at \$86,900,000.

The actual out-of-pocket is considerably more than that figure today. One little item in the calculation worth noting is that the total of U. S. radio stations were estimated to broadcast 400,000 quarter-hour Government transcriptions in a year . . . an out-of-pocket of some \$7,740,000 for those stations themselves.

It is impossible to do more than hit the high spots of results. The intangibles are brilliantly apparent to everyone who has the eyes to observe. But some of the tangibles are unusual.

The radio campaign on Victory Gardens helped raise the decision-to-plant from 48% (1942) to 59% in 1943 (about 2 million families).

A concentration on V-letters increased the processing 116% in 3 weeks.

Fat-and-grease collections went up, under radio advocacy, from 3,016,338 pounds in August, 1942, to 7,273,016 pounds in March, 1943.

The Coast Guard says that the applications for reserve officers' training rose 40% following the radio network time allotted the service.

Prentiss Brown called the radio broadcasting of point-rationing "an outstanding job." Norman Davis says the 1943 Red Cross Drive was "successful due to the splendid cooperation of radio and other media."

A Victory Food Special drive on cheese moved cheese "into the millions of pounds," according to the administrator. In fuel oil (Mr. Ickes testifying), in War Bonds (Mr. Morgenthau speaking), in Community War Chest Mobilization (Mr. Tom Smith on the stand), the witnesses all confirm the force voluntary radio added to the solution of an emergency. Radio in a few months trebled the number of citizens who believed that gasoline and mileage rationing was necessary. Radio discouraged Christmas travel so thoroughly that Mr. Eastman said radio averted a railroad breakdown.

The Army and the CAA wanted glider pilots, and a 2-weeks' radio campaign got 30,000 grade-A candidates. . . . In a 10-day radio campaign, 92% of the country was convinced that a Victory Tax was not only tolerable, but did so without drawing down the sale of War Bonds. Shoe rationing had to be kept so secret that the OWI called it "the oyster campaign" . . . but when it was announced it was announced by Sunday radio . . . the stores were closed. When they opened Monday morning, radio had averted stampedes and chiselling.

Red Cross Recruitment Booms

The Red Cross needed 3,000 nurses a month, and in 3 weeks of radio enrollments went up 100%. The Office of Defense Health and Welfare needed student nurses, and the radio industry and the advertisers of the country got 23,972 applicants, of whom 19,000 were eligible. In the spring, radio urged immediate though unseasonable coal purchase, and deliveries went up 70%. The CAA wanted non-combat pilots, and though every previous recruiting effort had failed, radio got them 104,000 new applications. Recruitment of war workers at U. S. Employment Services gained 21% in January over the previous months . . . under skillful radio exposition. And so on. . . .

The short paragraph of "results" is a flea-bite on the total. The total, no mind, no set of adding machines, can encompass. But a good deal of what radio has done . . . through voluntary effort all down the line, mind you . . . can be sensed by everyone here as he goes about his daily life. It is apparent, it is plain as day, in the attitude of every real patriot you know . . . every clamorous, impatient, let's-go, common-sensible, self-confident American citizen who has forced himself to think this thing through despite his indifference to "being told," his jealous grip on the right of free speech, his resentment of coercion of all sorts.

Someone said one night, pre-war, in the presence of a great general of the old Army, "We're a peaceful nation." "Peaceful, hell," said the General officer, "we are a damn war-like nation! Step on our toes or shut our mouth or try to order us around without showing us how and why, and look out!" Radio, I think, has helped to "show us how and why." Not all we want to know, by a long shot, but it is possible that we could talk so much that we might tell the enemy something of aid and comfort.

And radio hasn't told us unpleasant things in the manner we all like best, either. But figures like those I have recited, and they are indeed fragmentary, cannot be construed as apology by any but the mischievous. They stand on their own bottom. It would at least be equitable if the experts who want to tyrannize the radio structure, or to sand its machinery, could stand so securely on their own record of performance.

We Have Just a Glimpse

Now we've had a glimpse . . . and I repeat it is only a fractional glimpse of the impact of radio upon a people at war. We have had no glimpse at all of the steady daily service provided to take people to churches-of-the-air by the millions, to pour out to them the music of half a dozen firstrate symphony orchestras, to carry to the total electorate with rigid impartiality both sides of all controversial questions, to invite the mass of the American public to attend regular schools of the air, and to provide the mass of the public with a daily bill-of-fare of outright entertainment the like of which has never been offered to any people on earth. But all those services went forward, pursued with extra skill and extra zeal by the broadcasters who knew that it's just twice as important to support the human mind and spirit in wartime as in peacetime. We have not time to glimpse the short-wave operation which has presented the American viewpoint to the world, nor to glimpse the job that has been done to shortwave special entertainment to our men in the field all over the world.

On the train last Tuesday I met a Marine corporal, a kid, from Indianapolis, and on his sleeve was a patch marked Guadalcanal. "Get any radio?" I asked. "Sure, sure." "What's best?" "Well, I guess that 'Command Performance.' One of the boys got a little receiver and man, we sure didn't miss that one!" "How many listen at a time?" "Oh," he said, "many as could git within hearing. Not less than three or four hundred. And boy, I want to tell you, when they played that Star-Spangled Banner you see plenty of 'em crying right into their whiskers. It shore does something to you."

What Is Ahead?

I could stand here till the war ends reciting facts and figures. I won't. I'll take a long running guess ahead, and look out for falling rocks.

Radio hasn't begun to start to commence to approach its horizon. It's going to help rip the sides off the colleges and universities, so the folks outside who support them can see and hear what's going on inside them, and apply it to their own lives, and receive a *quid pro quo* for their contributions, especially to the endowed and private institutions and laboratories.

Radio can be a major force in a renaissance of reliance upon religion. Radio has already learned ways to translate academic book-larnin' into audible forms and dimensions more "graphic," therefore more memorable, than the printed page. Radio can do things the press cannot, just as the press can do things radio cannot . . . and the sooner the sophomores in both industries throw away their brass knuckles and accept the nobility of joint responsibility which is inherent in their community of interest, the better.

Radio can continue to fashion, out of a nation of human beings who find it a little hard to carry a tune even in a bathtub, a nation of real musicians . . . as radio has already begun to do. These are a very few of the things radio can do, if (and only if) the American people wish it. Radio can collect and disseminate live news from here to Singapore and back, it can acquaint people with each other as no other medium short of physical travel can do. If you want radio postwar to help heal the world radio is ready . . . and there will be new techniques as forward of today's as today's are forward of the programming you heard on your crystal set back in 1923.

Radio Creates Demand

It is pretty generally agreed that if we are to adopt a national policy of low-priced productive abundance after the war . . . and there is no other policy conceivable if this country is to go on a free democracy . . . it will base on full employment, at a wage which will buy the lowpriced abundance that can be produced only by full employment. This implies a volume distribution of goods and services which makes the prewar consumption look palid by comparison. But before there can be consumption (even granted money in the pocket) there must be demand. Radio has already proven its power in creating demand. It can create new demand for Kishlar's food and Irwin's plastic and Bowes' glass and Dunn's railroads as well as for Miller and Proeser's ideas.

The price level of radio itself to the distributor must not exclude the small distributor of goods and services. Radio, from the start, has been challenged to produce programs which would certainly follow, preferably the veering tastes of the public; the challenge is greater today, and will be greater tomorrow. After all, nothing in the world causes the average radio-owning family to spend an average of four or five hours a day listening except that the average programming is wanted.

Radio broadcasting as a producing industry is itself deeply interested in turning out a product demanded, because it is "better for less," by most people; the radio industry is wholly selfish in intending not only to serve as a medium for sustained employment in the other productive plants and systems of our economy, but in its own plant as well. For two years past CBS has been studying post-war; CBS has no "package plan" to solve the world's ailments. But when the whistles blow, this network of ours, and every other network, and every station that is of no network but that is somewhere serving its community with its best possible product . . . they'll all be there doing their best to adjust to the new order as they adjusted that Sunday afternoon December 7, 1941.

Now, gentlemen, thank you for your patience. Add up your own guess. It's the correct, or 64-dollar, answer. Now let the rocks fall where they may.

National Association of Broadcasters

1760 N STREET, N. W. * * * * * * WASHINGTON 6, D. C.

July 23, 1943

SWAP BULLETIN

No. 39

ENGINEERS MAKE GOOD

The ingenuity of the nation's broadcast engineers and the cooperative helpfulness which they have demonstrated through the medium of the Swap Bulletin are responsible for the industry's present high rate of technical efficiency. What they have done is almost like pulling themselves up by their own boot straps.

Please keep on listing your WILL SELL and your WILL BUY items. Check your stock today. Then send the information to SWAP BULLETIN, National Association of Broadcasters, 1760 N Street, N. W., Washington 6, D. C.

WILL SELL

For sale by Myron C. Schoonmaker, Jr., Apartment 32, 645 Academy St., New York, N. Y.

4 WE 100 watt trans. tubes, type 276-A. Unused and in new cond. Tubes in original cartons. Price, \$40.00 for all 4.

For sale by Elwin B. Dell, Kalskag, Alaska

2 RK-28 tubes. 7 years old but used short time. In excellent cond., \$20.00 each.

1 Thordarson T-15P19 trans., pri. 115 or 230 v., sec. 2950 or 2365 each of which is center tapped. Good cond., \$25.00.

Prices F.O.B. Kalskag, Alaska.

For sale by F. M. Brown, 239 Alameda St., Klamath Falls, Oreg.

Model 301 Weston Black Bakelite cases.

- 1 100 ma DC
- 3 1 ma DC (new)
- 1 1.5 ma DC
- 1 10 ma DC
- 1 300 ma DC
- 1 50 ma DC
- 1 10 amp DC
- 1 3-0-3 amp DC
- 1 100 micro amp DC (new)

- 1 125 micro amp DC
- 1 250 v. DC 1000 ohms per v.
- 1 200-0-200 micro amps DC
- 1 300 micro amps DC fast movement with
- 1 mill scale
- 1 300 micro amps DC fast movement with TU scale (no thermocouple).

Model 476 Weston Black Bakelite Cases

- 1 8 v. AC
- 1 5 v. AC
- 1 250 v. AC
- 1 25 ma AC
- 1 250 ma AC
- 1 150 v. AC (metal case).
- 1 Model 425 Thermo Galvanometer.

Model 643 Weston Black Bakelite Cases

- 1 1 mill DC (new) knife edge pointer.
- 1 200 micro amps (new) knife edge pointer.
- Perfect cond. Price, catalog list price less
- 25%, F.O.B. Klamath Falls.

For sale by KROD, El Paso, Texas

1 RCA cutter Float Stabilizer.

Mi-4888 for use with 72-B recording head.

Address E. P. Talbott, chief engineer.

For sale by Adelbert Dreesen, Mansfield Center, Conn.

Western Electric Co. material:

No. 100-F terminal block.

No. 39-W terminal block.

No. 82-C repeat coil.

No. two 76-A repeat coils.

No. 8-A repeat coils, 2.

No. 215-A relay with 18-B socket, 2

No. 2 type switchboard lamps, 100.

Strip of 20 heat coils and lighting arresters.

No. 206-AH relay.

No. 118-AN relay, 8

No. 186-A relay

No. 118-B relay

No. B-10 relay

No. O-C condensers, 10 mounted on rack mtg. strip.

P.B.X. jack and lamp panel for 10 trunks and 40 lines.

No. 13 lamp sockets, 30

jacks three circuit with other contacts—30

No. 5T four diget counter

Magneto desk phone

Wall dial phone

No. 554-C telephone wall box.

The following are mounted on a standard $3\frac{1}{2}$ " rack panel:

B-151 relay, 2 type E relays, flat resistors 19-DR, 19-KW, 19-DU, 10-N, 19-N, 2 of each. R-131 relays strip of 10 for rack mtg. with can cover.

214 relays strip of 10 for rack mtg. with can cover.

149-T relays strip of 8 for rack mtg. with can cover.

139 terminal blocks—5 on rack mtg. strip.

2 strips of 24 jacks for rack mtg.

1 strip of 48 jacks for rack mtg.

514-A panel with 0-100 milamp, 0-10 milamps, 0-4 amps, meters for standard rack mtg.

555-W loud speaking receivers, 3

518-B volume indicator, rack panel mtg.

200-A output panel.

241-A patch cords.

KS-5258 motor with 709B motor control

Common battery P.B.X. switchboard, 20 lines, 10 trunks, 10 cord circuits.

Amplifiers:

41-A, 42-A, 43-A, 17-B, 8-B, 90B.

22-A horn with double throat.

D. C. supply:

Delta Electric Co., Cambridge, Mass., No. 1008.

110 a.c. to 15v. 9a. pure d.c.

Standard 3 section rack 6 ft. high, WE drilling nonsync—F.D.—managers announcing switching panel, relay mic. control.

\$500 for the lot or make offer on individual items wanted.

For sale by Timothy P. Galvin, Receiver, 5231 S. Hohman Ave., Hammond, Indiana, on July 27, 1943, and from day to day thereafter, the following assets of the Hammond-Calumet Broadcasting Corp. (formerly Station WJWC). Bona-fide bids on the entire list as a package solicited.

1 WE Model 355-E-1 five kilowatt broadcast trans., freq. 550 to 1600 KC. AC operated—220 v.—3 phase—50/60 cycles. Comp. with set of tubes—1520 KC crystal—interlocking switches—tube cooling system—3 WE 7-5 K.W. plate trans.—WE retard coil—insulators and miscellaneous fittings.

1 WE Model 110A program amplifier comp. with set of tubes.

1 GR Model 731 modulation monitor comp. with set of tubes.

1 RCA Model AA-4194B monitoring amplifier comp. with set of tubes.

1 Doolittle Model FD-1A freq. monitor comp.

1 Doolittle crystal oscillator unity for trans.

2 3-inch channel iron racks—20½" x 68½" —mounting jacks, patchcord, terminal strips, telephone type switches, monitoring speaker, etc.

1 Box miscellaneous variable condensers, coils, etc.

2 Lehigh 200 foot steel self-supporting square slightly tapered 4-leg insulated vertical radiators, each mounted on four base insulators. Each lighted with 4 sidelights and 1 flashing electric top beacon.

2 Tower lighting cabinets, containing fusing, choke coil, H & B relay, isolation trans., 2 large condensers, Square D safety switch, etc.

2 Tower tuning cabinets, containing 2 tuning coils, 2 variable condensers, 2 R. F. ammeters, etc.

2 Mole-Richardson flood lamps comp. with G.E. bulbs.

500 feet used co-axial transmission line—11/4" diam. copper tubing outside shield and 3/8" diam. copper tubing conductor.

1 Part roll stranded messenger cable (new).

1 Spool 5/16" steel stranded hoist cable (used).

100 feet Collins co-axial cable (new).

10,000 feet #10 solid copper insulated wire.
3500 feet #12 solid copper insulated wire.
375 feet triple conductor BX cable.
5000 feet heavy solid copper insulated wire.

5000 feet heavy solid copper insulated wire.

1 Part roll double strand lead-in wire.

1 Ohio DC/AC motor generator.

New Tubes

3	Type 2	212	E	3	Type	287	A
2	Type 3	310	A	15	Type	258	В

Used Tubes

4	Type	343	A	7 7	Type	315	A
9	Type	295	A	2 7	Гуре	212	\mathbf{E}
1	Type	310	A	5 7	Гуре	271	Α
4	Type	287	A	1 7	Type	242	\mathbf{C}
10	Type	258	В				

Cornell Dubilier Mica Condensers

8	PI 316-51	(20,000	v.),	.00015 MFD
4	PI 262-51	(20,000	v.),	.0008 MFD
1	PI 252-51	(10.000	v.).	.001 MFD

Type GI Sangamo Mica Condensers

1 6000 v., .0001 MFD

1 6000 v., .000375 MFD

2 6000 v., .0002 MFD

Western Electric Filter Condensers

9 No. D-96887, 3500 v., 1 MFD

Aerovox Condensers

1 Type 3009, 3000 v., 2 MFD

2 Type 2009, 2000 v., 2 MFD

1 Type 1509, 1500 v., 4 MFD

1 Type 1009, 1000 v., 2 MFD

1 Type 608, 600 v., 2 MFD

1 Type 2505, 2500 v., 2 MFD

Eimac Vacuum Condensers

1 VC, 12 MFD 1 VC, 25 MFD 1 VC, 10 MFD 1 VC, 50 MFD

CD—Type 86—Mica Condensers

9 12500 v., .001 MFD 4 7000 v., .001 MFD 1 12500 v., .002 MFD 2 7000 v., .005 MFD

2 12500 v., .0005 MFD 1 5000 v., .001 MFD

Miscellaneous Small Mica Condensers

4 Sangamo, .0005 MFD

15 Sangamo, .005 MFD

1 Sangamo, .00007 MFD

2 Sangamo, .001 MFD

1 Sangamo, .00035 MFD

1 Sangamo, .00004 MFD

1 Sangamo, .000125 MFD

4 Sangamo, .00025 MFD

5 Aerovox, .02 MFD

8 Dubilier, .001 MFD

1 Dubilier, .005 MFD

1 Dubilier, .0001 MFD

Ohmite Resistors

6 No. 2005, 100 Ohm, non-inductive.

5 No. 2011, 1000 Ohm, non-inductive.

2 No. 2003, 25 Ohm.

1 No. 2004, 50 Ohm.

3 No. 1169, 30000 Ohm, Dividohm.

3 No. 1361, 500 Ohm, 200 Watt Dividohm.

1 No. 1362, 1000 Ohm, 200 Watt Dividohm.

2 No. 0961, 500 Ohm, 100 Watt Dividohm.

Fuses

9 2500 v., 3 amp. 9 250 v., 60 amp.

1 2500 v., 1 amp. 7/250 v., 40 amp.

1 250 v., 45 amp.

For sale by Irving Megeff, 1429 Carroll St., Brooklyn, N. Y.

2 WE 100 watt pentode tubes, type 332A, new, \$45.00 each.

2 WE 284D tubes, new, \$15.00 each.

2 WE 304B tubes, new, \$10.00 each.

1 Hytron HY69 tube, \$3.00.

6 Triad, 6D5 tubes, new, \$1.00 each.

4 RCA, 1612 tubes, new, \$3.25 each.

1 RCA, 1620 tube, new, \$2.50.

2 RCA 6Ag7, new, \$2.30.

3 GE 1853 tubes, new, \$1.50 each.

1 Janette type C13 110 DC to 110 AC .3 KVA converter, \$35.00.

1 Parmetal type CA104 cabinet in original wrapping, \$6.00.

1 Parmetal type CA100 cabinet in original wrapping, \$3.00.

1 Parmetal type CA105 cabinet in original wrapping, \$7.00.

1 Green Flyer 33-1/3 turntable motor, \$8.00.

1 National PW dial, new, \$12.50.

WILL BUY

Wanted by Northern Broadcasting and Publishing Limited, Toronto, Ontario.

5 kw or 1 kw trans. Interested in balance equip. necessary for complete station.

Wanted by KOCA, Kilgore, Texas

- a. 500 ft., single conductor, shielded and rubber covered microphone cable.
- b. 1000 ft. of speaker or lamp cord, or any combination of the two to make up-the 1000 ft. Pieces as short as 15 ft. will be accepted toward the total. Please give description and price of what you have.

Wanted by WMRC, Greenville, South Carolina

Crosley facsimile printer. Will pay cash or trade. Address George Tate, chief engineer.

Wanted by WSGN, Birmingham, Ala.

1 or 2 Uni-directional microphones.

Wanted by WJLD, Bessemer, Ala.

250 watt broadcast trans., any make or model, in good cond. Also audio equip., freq. and modulation monitors. Address C. M. Callicott, 1523 Arlington Avenue, Bessemer, Ala.

Wanted by WKMO, Kokomo, Ind.

1 lateral pickup head for RCA type 70-C turntable.

Wanted by WFTC, Kinston, N. C.

Late model 3" oscilloscope, Hickok preferred. 4 base insulators for 200 ft. self-supporting tower.

Wanted by WHLN, Harlan, Kentucky

One half wave 1450 kilocycles tower, any type, comp. with guys and insulators and lighting system.

Wanted by WTOL, Toledo, Ohio

Good used RCA type AZ-4217-2 pickup head. Address J. Sheehan, Chief Engineer.

Wanted by WEDC, Chicago, Ill.

- 1 Aerovox mod. 95 LC checker OR
- 1 Solar mod. CE capacitor "EAM-ETER" OR
- 1 C-D mod. "BF 50" capacitor analyzer. Address Chester Lewicki, Chief Engineer.