

in the three years RCA-Victor television instruments have been field tested in New York. "Our distributor and key dealer service men now have a good working knowledge of the receivers and are qualified to set up, install, adjust and demonstrate them after having satisfactorily completed an intensive practical course of study," Mr. Cahill said.

TELEVISION COURSE TO BE CONDUCTED BY WIXAL

BOSTON, Mass.: Short Wave Station WIXAL is conducting a course in "Television" which begins May 15, with rebroadcasts on Fridays. Each lecture lasts a full hour on the air and covers a complete subject, and the entire weekly series enables radio listeners to gain a working knowledge of television.

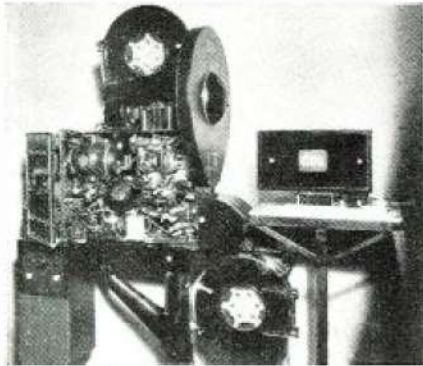
"While the course is simplified for the layman, it will contain many helpful hints for the servicemen and dealers who may shortly be called upon to install Television sets," said Walter S. Lemmon, Founder and President of the World Wide Broadcasting Foundation of Boston.



owner of Station WIXAL. The Foundation is a non-profit educational institution and has prepared a complete printed text with diagrams and illustrations to help the listeners follow the instructor at Boston, Dr. C. Davis Belcher, a well-known Radio Engineer, conducts the course. The Practical Television series is broadcast each Monday evening at 8 p.m., EST, on wavelengths of 6.04 and 11.73 megacycles. The lectures are repeated by electrical transcription at 11:30 p.m., EST, and again each Friday at 4 p.m., EST, over wavelengths of 11.79 and 15.13 megacycles.

CBS ADOPTS REVOLUTIONARY TYPE TELEVISION FILM SCANNER

NEW YORK, N. Y.: Dr. Peter Goldmark, chief television engineer for the Columbia Broadcasting System, has developed a new type of film scanner which will be placed in operation as



soon as the CBS station atop the Chrysler Building is completed.

The principle upon which the revolutionary new scanner works is, of course, a great deal different from that of the standard motion picture projector. In the latter a strip of film is made to pass between a light source and a lens in a continuous series of rapid jerks so that 24 separate photographs or frames can be scanned per second while they are at rest. This is necessary because the eye would see only a shifting mélange of light and shade if the celluloid were kept in continuous motion.

It is not desirable to do this in scanning pictures for television, first because for such purposes the film must be scanned at the rate of 60 frames per second to eliminate flicker, and second because stop-motion scanning requires a great deal of light, causes much wear on the film and necessitates a great number of expensive moving optical parts.

Dr. Goldmark and his staff of engineers solved the difficult problem by making the film pass

(More S & S News on page 49)

The VIDEO Reporter

by SAMUEL KAUFMAN

WELL, folks, the lid's off! Television is here at long last!

True, the initial program service is limited to the New York area, but the important thing is that the video ball is rolling at last and, like a snowball, is growing larger and larger as it speeds along. A new industry has been born and it is off to a grand start.

It was anticipated for a considerable time that television would be launched at the time of the opening of the New York World's Fair. But few persons could have guessed that the commercial beginning of the video art would be on as big a scale as it turned out to be.

Most important news of all was to find the bigger manufacturers ready to offer lines. Several smaller set makers did valuable pioneering in kits of parts as well as assembled

receivers but the immediate entrance of the "big fellows" gave television a powerful promotional push that impressed the public with the obvious fact that the video art is no mere novelty and is actually a great entertainment medium that is here to stay.

OUTSTANDING feature of the new television lines is the acceptance by manufacturers of the thought that all-wave sound equipment should be included in the same instrument as the video apparatus. This is a natural combination and the decision to do this right at the outset of the commercial start of television was a smart thing.

Another trend that several manufacturers are grasping is the inclusion of an "add-on" unit, a small video attachment that converts any a.c. sound receiver into a television set. RCA, General Electric and other makers are merchandising such attachments which make possible the conversion of a radio set into a sight-and-sound receiver at a cost of less than \$200.

RCA launched its television receiver line on the day it dedicated its building at the New York World's Fair. A battery of fifteen television consoles was lined up in the RCA Building and members of the press witnessed the proceedings at the Fair Grounds in seated comfort. The program, lasting nearly an hour, served the double purpose of introducing the RCA line and giving look-and-listeners an idea of what kind of programs they might expect after the commercial launching of the new industry, which has since taken place.

Images of 5, 9 and 12-inch diameter size are available on RCA models and, of course, the prices increase along with the picture dimensions.

TELEVISION at the Fair is featured by RCA and General Electric. The G. E. line, incidentally, is similar to the RCA offerings, including direct-viewing as well as mirror-lid image screens in an "add-on" attachment and complete console models. Undoubtedly, a lot of other radio manufacturers will be represented with television displays at the Fair—notably Crosley.

THE first "official" television broadcast took place from the Fair grounds on the opening day. My impression was that I was more comfortable in the armchair and privacy of a room than I would have been in the midst of the great throngs I saw on the receiver screen.

This brings to mind an old problem that was once raised by radio: Will television hurt the box-office?

My guess is that it won't. Television will develop its own form of entertainment quite apart from the types offered by the stage and screen. It's a human trait to witness things in person. But, if you can't, television is certainly the next best thing.

THINGS are coming along fast at CBS, and it is certain that they won't be caught napping on video progress. Gilbert Seldes, television program director, recently made a speedy trip to and from London to observe how the Alexander Palace transmissions were coming along. Columbia also announced the appointment of Leonard H. Hole, former director of the program service department, as manager of television operations.

Mr. Seldes had the following to say of British television: "England is far advanced in the matter of television production technique. But each country must develop its own methods, material and style of production. It is only background technique which remains universal. I have already laid out considerable American program material to which this technique will be applied."

TELEVISION kits have been enjoying a brisk sale in the New York area. It seems that the old-timers who are repeating the home assembly and wiring jobs they learned in their youth when radio, too, was young, were quick to take up the idea of putting their own video sets together. And this group was supplemented by a new crop of youngsters who were fascinated by the thought of putting the receiver together with their own hands. The kit-makers have devised ingenious instruction sheets which enable even the least technical of person to

(More Video Reporter on page 44)



Starting the regular television programs, with David Sarnoff, RCA's Pres.

Within Earshot

(Continued from page 4)

from the manufacturer even if he is not running any sort of legitimate radio business at all. All was OK until the jobbers found out that they were being squeezed. Such a situation is hardly fair to the real jobber who has an enormous overhead and employs many people. His territory should be protected and he should not be made to go into competition with the pseudo-"jobber" who wants a discount mostly so that he, personally, can buy cheaper. If this is not corrected—and it should be by the manufacturers themselves—the profits of the whole system will be lowered, as will the standards of the trade. It must inevitably result in lower wages for the employees and lower returns for the manufacturer, forcing him to abandon any contemplated improvements or expansions. In other words, the condition is one which is unhealthy, and the sooner it can be eliminated the better it will be for all concerned.

* * *

WE are often asked, "Why can't we make a go of our ham club? Can you give us some advice?" Well, ham clubs depend on the mutual interest of the members to keep them going. With ham radio having as its keystone the rugged individuality of the members, it is hard for them to have any common meeting ground other than "radio." Unfortunately, this subject is not one which can be debated over and over again each and every night "on the air" and leave anything over for the club meeting. Hence interest lags, and finally the club "folds."

The only suggestion that we can offer for making a success of a ham club is to arrange for interesting and not-so-often heard speakers for the meetings. That will keep the men together. Next we urge that every club take an active part in national ham affairs by joining the A.R.R.L. and fighting for the betterment of hamdom. Affiliation with the Army Amateur Radio System or the Naval Radio Reserve are also two good moves. Association with the local R.L., police, aviation, and broadcasters are all public-minded activities that will serve to mold your club firmly. Finally there are outings, dances, hamfests, picnics and the whole gamut of social "shindigs" that are infallible aides to club life. Try any one or all, and see if they can't help. Anyway, don't be discouraged.

AND that about winds up our stint for the month. We are anxious to hear from readers on the contents of R.N. Do you like the streamlined presentation? Your suggestions are earnestly solicited in an effort to give you the best doggone radio magazine possible. If you want to see some type of article in print, let us know. We aim to please.—K.A.K.

-50-

What's New in Radio

(Continued from page 20)

The Hammarlund Manufacturing Co., Inc., 424-438 West 33rd Street, New York City, announce a new 100 watt transmitter with band switching, in kit form. This kit features four-stage band switching in an extremely compact form. It operates on all bands from 80 to 10 Meters, inclusive, and embodies the latest principles of constructions and design. The exciter portion is built around a box-like chassis measuring only 17" long x 2 3/4" high x 3 1/2" deep. The four 6L6 tubes, as well as the four fixed tuned exciter tanks are built along the rear edge rather than on the top, as is the usual practice. Band switching is accomplished by breaking the cathode circuits of the stages not being used and by connecting the link output circuit to the proper doubler stage. When the transmitter is completed, there are only two tuning controls to operate. All other adjustments are made when the transmitter is put into operation and then requires no further attention.

-50-

R. N. Seal of Acceptance

(Continued from page 24)

Seals previously awarded:
Consolidated Wire & Associated Corp. No. 100.0
Supreme Instruments Corp. No. 101.00-101.9
Triplett Electrical Instrument Co. No. 103.0-103.3
American Phenolic Corporation. No. 104.0-104.2
Solar Manufacturing Corp. No. 105.0-105.1
American Lava Corporation. No. 106.0
Electronic Manufacturing Engineers. No. 108.0
National Union Radio Corporation. No. 109.0
J. W. Miller Company. No. 110.0

-50-

The Video Reporter

(Continued from page 36)

put a set together if he faithfully follows the step-by-step instructions.

PHILCO, who previously showed television sets to dealers, will launch its line publicly in June. There have been reports that Philco has "something different" and this is borne out in the recent statement of Sayre M. Ramsdell which, in part, follows:

"These receivers will be entirely new in performance, appearance and developments. They will represent a marked advance in television, embodying improvements as yet unannounced.

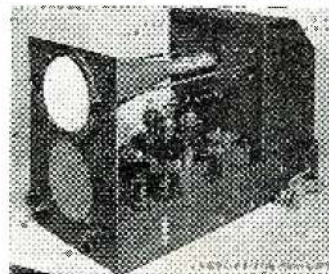
"Television receivers will be sold to the public through radio dealers, whose experience and facilities, from both a merchandising and technical standpoint, make them an ideal medium on a nationwide basis. Television receivers can be sold on such a nationwide basis, but, as yet, television broadcasting cannot follow them and is limited to a handful of metropolitan centers. Television as an industry must wait for the broadcasters."

NEWSPAPER radio sections in the metropolitan area are giving unusually large space to technical television news. The newness of the art makes every advancement of general interest and editors were quick to sense the public's eagerness for such information.

One newspaper—*The New York Sun*—has featured a constructional series based on the *Andrea* kit. It appeared in four weekly parts and the response—judging by crowds which came—was tremendous.

ARE television prices too high? That's the question people are asking in New York. Just think back to radio's early days and you'll agree that they're not too high. At least not for the present stage of the game. Undoubtedly, prices will come down

READY FOR YOU NOW!



THE MEISSNER \$139⁵⁰ TELEVISION KIT

Complete with 5" Video Tube
Walnut cabinet, \$20 extra
Assemble It Yourself
and Know It Will Work
PRACTICAL... COMPLETE... SAFE
BACKED BY THE MEISSNER GUARANTEE

SPECIAL FEATURES:

- Black & White reproduction.
- Sound & Video in one unit.
- Extreme flexibility.
- Shock-proof design, 100% safe.
- RCA Licensed.
- Walnut Cabinet available at slight additional cost.

Also a complete line of Amateur Receivers: National, Hammarlund, RME & Hallieraiters. Also, Amateur Radio Parts. 4 hour shipping service.

TIME PAYMENTS AVAILABLE ON TELEVISION KIT & AMATEUR RECEIVERS. WRITE FOR DETAILS.

Send for free BIG catalog & Bulletin just off the press.

NEWARK ELECTRIC COMPANY, Dept. RN
323 West Madison Street
Chicago, Illinois



PERMEABILITY TUNING IS HERE

SEND FOR
Free Book!

Q CONTROL
TRADE-MARK

ALADDIN RADIO INDUSTRIES, INC.
466 WEST SUPERIOR STREET
DEPT. N.
CHICAGO, ILLINOIS

Licensed under
one or more of the
following Johnson
Laboratories, Inc.
patents:

1 940 228
1 978 600
1 982 689
1 982 690
2 013 626
2 051 012
2 113 603

Other patents issued
and pending.

with a mass public demand for receivers. And, judging by the high-quality of receivers and the excellent program service, it won't take long to interest the masses. Already, major manufacturers are heavily exploiting their wares. Full-page announcements have been appearing in New York newspapers. Department stores and radio dealers are featuring demonstrations. Best of all, television is getting word-of-mouth advertising that is most desirable, particularly because it is so favorable.

The ideal New York host is the fellow with a television set. You can bet your hat on that.

Twenty-five hours of programs a week are

BRUSH

• BJ HEADPHONES

Communications type — light-weight, durable aluminum case — phones encased in molded rubber jackets — good ear seal.



Write for your Brush Catalog today.

THE BRUSH DEVELOPMENT CO.
3312 Perkins Ave. Cleveland, Ohio

HOW TO LEARN CODE

Whether you wish to enter radio as a career or merely add another valuable and fascinating accomplishment to your achievements, the All Electric Master Teleplex Code Teaching Machine will show you how. Teleplex records your sending in visible dots and dashes on a specially prepared waxed paper tape and then sends back to you at its rate. It does not merely show you code, it is code. No experience needed. While not designated as standard equipment, Teleplex is used at many U.S. Army Posts, Naval Training Stations as well as by the American Tel. & Tel. Co. Also by practically every private school in the U.S. teaching code; a full many foreign governments. We furnish you complete course, including practice messages, the All Electric Master Teleplex, plus a free 750 m. l. service on a MONEY BACK GUARANTEE. Low cost. Easy terms. Without obligation write for booklet "RNT."



TELEPLEX CO. 67-69-PACK PLACE New York City
In Canada write: CANADIAN ELECTRONIC INST., TORONTO, ONT.



UNIVERSAL 15MM. "Streamliner"
Highest quality sound pickup for p. a. recording and amateur. Crystal or dynamic in any impedance. Modern in design. Incl. 100 ft. flex tube, screw plug and 25 ft. cable. In De Luxe package. At your jobber's now.
UNIVERSAL MICROPHONE CO., LTD.
424 Warren Lane Inglewood, Calif.



EVERYTHING IN RADIO!
A COMPLETE SOURCE FOR YOUR RADIO NEEDS
Our immense stock of radio sets, parts and supplies enables you to purchase your entire needs on one order. You will find all your Nationally Known Favorites in this big book which is FREE for the asking. Practically every order is shipped the same day it is received.
WRITE FOR BIG NEW CATALOG
BURSTEIN-APPLEBEE CO.
1012-14 McGee St. - Kansas City, Mo.

RADIO ENGINEERING, broadcasting, aviation and police radio, servicing, marine and Morse telegraphy taught thoroughly. 48 weeks' engineering course equivalent to three years' college radio work. School established 1874. All expenses low. Catalog free.
DODGE'S INSTITUTE, Oak St., Valparaiso, Ind.

offered by NBC. Much of this total is devoted to film subjects. Such transmissions are largely for dealer demonstrations, but the choicer evening hours have excellent entertainment features, offering no repetition of program fare.

Service Man's Experiences (Continued from page 24)

man, and that I frequently out-patiented Job in carrying some of the poorer members along with their payments. It's the truth—there's something about those people that makes you want to help them—something that tells you it's all right to deliver a repair without walking out of the house with a signed due bill in your pocket.

Good old Firp! My cup runneth over!

QRD? (Continued from page 30)

studying for 2nd class CW. Just what I think of the prospects for radio ops. . . . I mean good ops. Think by the time I get ticket will be able to do at least 40 wpm on mill. I started on this thing so will continue but wud like straight dope . . . MV. Ans.: There's always room for a good man in any profession but would truthfully suggest that you do more studying on material and equipment. Good men in this field are much scarcer. But gud luk, OM.

WE note with much pleasure CTU-MARDIV's report that shipping has improved in the last few weeks. They state a number of shipping lines, under contract to them, have placed their laid up ships into active service. Men are being lined up for duty on the vessels to be placed in the cruised services now. So it looks like some of the boys will begin eating regularly again. And good luck, sez we. So with 73 . . . ge . . . GY.

High Fidelity Remote (Continued from page 29)

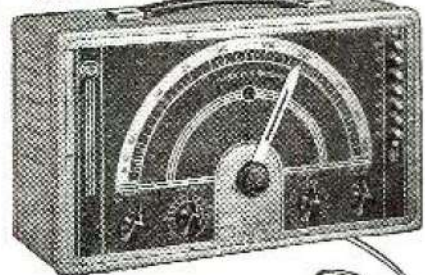
small mica by-pass condensers keep this frequency out of the audio section and out of the 25L6 oscillator as shown. Volume control is provided by a half-megohm potentiometer which also acts as the load for the diode section of the 75 tube. The automatic volume control voltage is also taken from here after suitable decoupling with the one-tenth megohm resistor.

All leads should be as short and direct as possible, with a conscious attempt to keep the transmitting oscillator (25L6) parts and wires away from the rest. This really becomes important at only one frequency (provided 1575 kc. has been chosen) and that is when the unit is tuned to a broadcast signal of 1120 kilocycles. At this frequency the 6A7 oscillator, since it runs 455 kc. higher than the signal, will beat if proper care is not taken.

In the set-up shown, the primary of the r.f. coil with the series mica condenser has been chosen to act as a trap at this frequency of 1575 kilocycles. If the constants of the parts used to build the unit do not stack up in this fashion, an ordinary wave trap (coil and condenser in parallel) can be added to the primary circuit.

When the unit has been completely

NEW RCA BEAT FREQUENCY OSCILLATOR



Stock No. 154

Features Big, Easy-Reading Dial, Wide Frequency Range, RCA Metal Tubes, and Tapped Output Transformer



Here's an instrument designed for the service man—in both performance and in price! It's the new RCA Beat Frequency Oscillator which provides a variable frequency source of alternating current voltage from 30 to 15,000 cycles.

This instrument is ideal for testing loudspeakers, cabinet rattles, PA systems and for running fidelity curves on radio receivers.

Check These Specifications
Power rating—110-120 V, 50-60 cycles, 35 watts AC; Fuse protection—1.0 ampere; Output frequency—30-15,000 cycles (± 1 db from 30 to 10,000 cycles, -2 db at 15,000 cycles); Output voltage—Open circuit, 37.5 volts; 5,000 ohm load, 25 volts; 500 ohm load, 7.5 volts; 250 ohm load, 5.2 volts. Power output—125 milliwatts; Hum level—(approx.) -60 db below maximum output; Distortion—less than 5% rms over entire range. Radiotrons—RCA 6J7 . . . fixed rf oscillator; RCA 6J7 . . . variable oscillator; RCA 6CS . . . detector; RCA 6J5 . . . output amplifier; RCA 5W4 . . . rectifier. Dimensions—9 1/2" x 13 3/4" x 6 1/2", weight 15 lbs.
Comes with snap handle for easy carrying. Further information may be obtained from all RCA Parts Distributors or by writing to the address below.

Over 335 million RCA radio tubes have been purchased by radio users . . . in tubes, as in parts and test equipment, it pays to go RCA All the Way.
RCA invites you to visit its booth at the National Radio Parts Show, Hotel Stevens, Chicago, June 14-17.

