

WAVES CARRY PICTURE, VOICE

Television Tests Carried on In Experiment Station in Chicago

CHICAGO (AP)—Development of television to the point where it is hoped home reproducers may be available here in December is indicated in experiments now under way.

U. S. Sanabria, young experimenter who has spent several years in an effort to improve transmission of light, and Prof. L. F. Garner believe they have made progress which warrants a brighter outlook as to the time when television will begin to approach practicability.

Working in the laboratories of the Western Television corporation, which operates in conjunction with WBO, broadcast station and W3XAO, short wave plant, they have used two wave-lengths, the broadcast channel of 52.6 meters for voice and 146 meters for pictures, as the easiest way to synchronize sound and light.

Their progress has led Clem Wade, president of the corporation, to express the belief that the reproducing apparatus they have designed for the home will be ready before the end of the year. He said it could be attached to any broadcast receiver, which is used to pick up the voice on a loudspeaker. It also brings in pictures on the short wave of 146 meters and reproduces them on a screen in the front of the cabinet.

The size of the picture received, the engineers said, ranged from an inch and a half square up to about eight by 12 inches. They have copied pictures up to 21 inches square, but so far these have not been practicable.

The screen is mounted on an adjustable extension arm, so that it can be moved back and forth in front of the lens to change the size of the received image. The reproducer has the usual scanning disk, with a spiral of holes; a motor to drive the disk, a neon glow lamp and a lens.

Observers have reported that the pictures transmitted approach the clarity of good newspaper pictures, with little if any distortion. The experimenters have transmitted from the studio pictures ranging from closeups to full length, including ballet dancers, quartets, an eight-piece orchestra and amateur boxers.

The engineers said the width of their television band, generally considered 100 kilocycles for good detail, occupies less than half that space because of a specially designed scanner.

Current Radio Programs From Portland

KOIN
319 Meters, 940 Kcys.
PORTLAND, OREGON
12 to 1 p. m.—Portland Theatre orchestra.
1 to 2 p. m.—Gospel service and orchestra.
2 to 3 p. m.—CBS chain program.
3 to 4 p. m.—String ensemble.
4 to 5 p. m.—CBS chain program.
5 to 6 p. m.—Benson Hotel orchestra.
6 to 7 p. m.—Benson Hotel orchestra.
7 to 8 p. m.—First Church of Christ, Scientist.
8 to 9 p. m.—Orchestral concert.
9 to 10 p. m.—Warner Stone's orchestra.
10 to 11 p. m.—

KGW
483.6 Meters, 620 Kcys.
PORTLAND, OREGON
7 to 8 a. m.—"Be Merry With Sperry," KPO.
8 to 9 a. m.—Happy Time.
9 to 10 a. m.—News.
10 to 11 a. m.—The Town Crier.
11 to 12 noon—Church service.
12 to 1 p. m.—Catholic Truth.
1 to 2 p. m.—NBC.
2 to 3 p. m.—Dental talk.
3 to 4 p. m.—NBC.
4 to 5 p. m.—Book chat.
5 to 6 p. m.—NBC.
6 to 7 p. m.—NBC.
7 to 8 p. m.—NBC.
8 to 9 p. m.—NBC.
9 to 10 p. m.—NBC.
10 to 11 p. m.—NBC.
11 to 12 midnight—Fox Hollywood organ.

KPO
440.9 Meters, 680 Kcys.
SAN FRANCISCO
9 to 9:45 a. m.—Sabbath and the Clarks.
9:45 to 10:45 a. m.—Interdenominational and nonsectarian church service.
10:45 to 11:30 a. m.—KPO Salon Orchestra.
11:30 to 12:15 p. m.—Afternoon musical by Edna Waldrop with Gretchen Brendel, contralto.
12:15 to 1 p. m.—Football broadcast, St. Mary's vs. Olympic club, Kesar Stadium.
1 to 2 p. m.—Bill Gavin.

Bliven's RADIO COLUMN

You can't play dance music, Harry. Tune in the radio on some jazz. It's a good thing!

Get a Silver Radio
BLIVEN RADIO SHOP
461 NO. FRONT ST.
PHONE 9

Radio Brings in Recipes



With the Majestic All-Electric radio close to the kitchen no housewife need worry about getting new recipes. Just pick them out of the air every morning as these two Portland housewives are doing.

5:15 to 8 p. m.—NBC.
8:30 to 9 p. m.—Rudy Selger and his Fairmont Hotel Concert Orchestra.
9 to 10 p. m.—Aunt Betty's orchestra, with Eva Gruninger Atkinson, contralto.
10 to 11:15 p. m.—News digest, "Scotty" Mortland.
10:15 to 10:30 p. m.—Narrative organ recital, Theodore Strong.

KGW
378.5 Meters, 790 Kcys.
OAKLAND, CALIFORNIA
11 to 12 noon—Grace Cathedral service.
12 to 1 p. m.—National Youth Conference.
1 to 2:30 p. m.—Dr. S. Parkes Cadman, Cathedral Hour.
2:30 to 3:30 p. m.—Philadelphia Symphony Orchestra.
3 to 4 p. m.—Afternoon concert.
4 to 5:45 p. m.—Gracie LaFarge, lyric soprano; Annabella Jones Rose, contralto; Carrie Jones Tye, concert pianist.
5:45 to 6:15 p. m.—Studio program.
6:15 to 8 p. m.—"The Pilgrims' A Little Journey."
8 to 9 p. m.—"The Reader's Guide."
9 to 9:30 p. m.—Stanley Ben's Little Symphony, Hotel Whitcomb, San Francisco.

KOMO
325.9 Meters, 920 Kcys.
SEATTLE, WASHINGTON
10 a. m.—Intern. Bible Students' Assn.
11 a. m.—Lucile Johnson, piano; Vera Ona Sociolofsky, soprano.
11:15 a. m.—Plymouth Congregational church.
1 p. m. to 4 p. m.—NBC.
5 p. m.—Agnes Skarvedt and Hayden.
5:15 to 7:45 p. m.—NBC.
8 p. m.—First Church of Christ, Scientist.
9 p. m.—Studio program.
9:30 p. m.—Francisco Longo's Philharmonic Orchestra.
10:30 to 11 p. m.—Musical ensemble.

MONDAY PROGRAM
KGW
483.6 Meters, 620 Kcys.
PORTLAND, OREGON
7 to 8 a. m.—"Be Merry With Sperry," KPO.
8 to 9 a. m.—Happy Time.
9 to 10 a. m.—News.
10 to 11 a. m.—The Town Crier.
11 to 12 noon—Church service.
12 to 1 p. m.—Catholic Truth.
1 to 2 p. m.—NBC.
2 to 3 p. m.—Dental talk.
3 to 4 p. m.—NBC.
4 to 5 p. m.—Book chat.
5 to 6 p. m.—NBC.
6 to 7 p. m.—NBC.
7 to 8 p. m.—NBC.
8 to 9 p. m.—NBC.
9 to 10 p. m.—NBC.
10 to 11 p. m.—NBC.
11 to 12 midnight—Fox Hollywood organ.

KOIN
319 Meters, 940 Kcys.
PORTLAND, OREGON
8 to 9 a. m.—Household Twins.
9 to 9:30 a. m.—Organ recital.
9:30 to 10:45 a. m.—Town Topics.
10:45 to 11:45 a. m.—Vocal program.
11 to 12 noon—Lanchon concert.
12 to 1 p. m.—Billy's Hawaiians.
1 to 1:30 p. m.—Orchestra.
1:30 to 2 p. m.—Orchestra.
2 to 2:15 p. m.—Inspirational speaker.
2:15 to 3 p. m.—Orchestra and string trio.
3 to 4 p. m.—News items and music.
4 to 5:30 p. m.—String ensemble.
5:30 to 6 p. m.—Orchestra.

KGW
483.6 Meters, 620 Kcys.
PORTLAND, OREGON
7 to 8 a. m.—"Be Merry With Sperry," KPO.
8 to 9 a. m.—Happy Time.
9 to 10 a. m.—News.
10 to 11 a. m.—The Town Crier.
11 to 12 noon—Church service.
12 to 1 p. m.—Catholic Truth.
1 to 2 p. m.—NBC.
2 to 3 p. m.—Dental talk.
3 to 4 p. m.—NBC.
4 to 5 p. m.—Book chat.
5 to 6 p. m.—NBC.
6 to 7 p. m.—NBC.
7 to 8 p. m.—NBC.
8 to 9 p. m.—NBC.
9 to 10 p. m.—NBC.
10 to 11 p. m.—NBC.
11 to 12 midnight—Fox Hollywood organ.

WE HAVE IT!
The new **PHILCO** Balanced-Unit Radio
This superb NEUTRODYNE-PLUS LOWBOY only \$159
Screen Grid \$150.00
With Tubes
Cabinet finished in genuine walnut with bird's-eye maple and Oriental walnut panels. Genuine ELECTRO-Dynamic Speaker, built-in Acoustic Equalizers, and balanced to use TWO of the wonderful new 245 power tubes, push-pull.

Free Home Demonstration!
Yes, we will deliver this magnificent Philco Lowboy to your home on free demonstration. No obligation—no red tape—and EASY PAYMENTS, if you decide to buy.
Call or phone us today. Other models from \$72.00 to \$215.00

H.L. Stiff Furniture Co.
COMPLETE HOUSE FURNISHERS
Be sure to hear the new Philco before you buy any radio

BROADCASTS TO TELL MARKETS

KGW and KOAC Radio Stations Plan Daily Information Service

Five daily broadcasts of market information are contemplated during November, three from KOAC, the radio station of the Oregon State Agricultural college, and two from KGW, the radio station of the Portland Oregonian. The manuscripts for these broadcasts are prepared principally from information supplied by the Bureau of Agricultural Economics of the United States Department of Agriculture by leased wire, by telephone and by mail. Additional information is obtained from the United States Departments of Agriculture and Commerce, the Oregon State College Departments of Agriculture and Commerce, county agricultural agents, extension specialists, farm economics co-operators, and other sources deemed most reliable.

A general report of the current day's markets at Portland is broadcast at 1:00 p. m., daily, except on Sundays and holidays. This report contains market information on cattle, sheep and hogs at North Portland, the various fruits and vegetables being marketed by Oregon farmers at the East Alder street market in Portland, the egg and poultry markets, dairy product quotations, cash and future wheat quotations, and wholesale quotations at Portland for feed grain, hay and millfeeds.

At 2:55 p. m., during the heavy movement of apples, onions, celery and cauliflower, a report is broadcast giving information about carlot shipments, shipping point and terminal markets for these commodities. The market reports from KOAC deal especially with the markets of importance in the carlot movement of Oregon farm products. Key shipping points and terminal markets have been selected according to the various commodities and the trend of the markets at these points are commented upon regularly, with supplemental information from other markets occasionally.

At 12:45 a summary of spot market information received by leased wire during the forenoon of the same day is broadcast. At 4:30 a brief market flash summarizing spot market leased wire reports received during the afternoon will be given. At 6:45 a more complete report of spot market information received by leased wire during the afternoon, supplemented by weekly and monthly

7 to 7:30 p. m.—Dinner concert.
7 to 7:30 p. m.—Benson Hotel Orchestra.
7:30 to 8 p. m.—Orchestra.
8 to 9 p. m.—Orchestra and string ensemble.
9 to 10 p. m.—Vocal program.
10 to 11:30 p. m.—McElroy's Oregonians.

KPO
440.9 Meters, 680 Kcys.
SAN FRANCISCO
7 to 8 a. m.—Health exercises.
8 to 9 a. m.—Happy Time.
9:30 to 10 a. m.—Dobbie's Daily Chat.
10 to 10:30 a. m.—Helpful Hints for Housewives.
10:30 to 11:30 a. m.—NBC.
11:30 to 11:45 a. m.—Art talk by Helen G. Barker.
11:45 to 12:05 p. m.—Time, scripture, weather and announcements.
12:05 to 1 p. m.—Aeolian Trio.
1 to 1:30 p. m.—Jerry Jermaine.
1:30 to 2 p. m.—Ann Warner's Home Chats.
2 to 2:30 p. m.—The Aeolian Trio.
2:30 to 3 p. m.—School broadcast, Paul Pittman.
3 to 3:30 p. m.—NBC.
3:30 to 3:45 p. m.—U. S. Dept. of Commerce talk.
3:45 to 4 p. m.—Calif. State G. of C. talk.
4 to 5 p. m.—The Eventful Hour with Den Thompson.
5 to 5:50 p. m.—Children's Hour.
5:50 to 6 p. m.—News digest with "Scotty" Mortland.
6 to 6:30 p. m.—Studio program.
6:30 to 9 p. m.—NBC.
9 to 10 p. m.—KPO Concert Orchestra.
10 to 12 midnight—Studio program.

KGW
483.6 Meters, 620 Kcys.
PORTLAND, OREGON
7 to 8 a. m.—"Be Merry With Sperry," KPO.
8 to 9 a. m.—Happy Time.
9 to 10 a. m.—News.
10 to 11 a. m.—The Town Crier.
11 to 12 noon—Church service.
12 to 1 p. m.—Catholic Truth.
1 to 2 p. m.—NBC.
2 to 3 p. m.—Dental talk.
3 to 4 p. m.—NBC.
4 to 5 p. m.—Book chat.
5 to 6 p. m.—NBC.
6 to 7 p. m.—NBC.
7 to 8 p. m.—NBC.
8 to 9 p. m.—NBC.
9 to 10 p. m.—NBC.
10 to 11 p. m.—NBC.
11 to 12 midnight—Fox Hollywood organ.

KGW
483.6 Meters, 620 Kcys.
PORTLAND, OREGON
7 to 8 a. m.—"Be Merry With Sperry," KPO.
8 to 9 a. m.—Happy Time.
9 to 10 a. m.—News.
10 to 11 a. m.—The Town Crier.
11 to 12 noon—Church service.
12 to 1 p. m.—Catholic Truth.
1 to 2 p. m.—NBC.
2 to 3 p. m.—Dental talk.
3 to 4 p. m.—NBC.
4 to 5 p. m.—Book chat.
5 to 6 p. m.—NBC.
6 to 7 p. m.—NBC.
7 to 8 p. m.—NBC.
8 to 9 p. m.—NBC.
9 to 10 p. m.—NBC.
10 to 11 p. m.—NBC.
11 to 12 midnight—Fox Hollywood organ.

KGW
483.6 Meters, 620 Kcys.
PORTLAND, OREGON
7 to 8 a. m.—"Be Merry With Sperry," KPO.
8 to 9 a. m.—Happy Time.
9 to 10 a. m.—News.
10 to 11 a. m.—The Town Crier.
11 to 12 noon—Church service.
12 to 1 p. m.—Catholic Truth.
1 to 2 p. m.—NBC.
2 to 3 p. m.—Dental talk.
3 to 4 p. m.—NBC.
4 to 5 p. m.—Book chat.
5 to 6 p. m.—NBC.
6 to 7 p. m.—NBC.
7 to 8 p. m.—NBC.
8 to 9 p. m.—NBC.
9 to 10 p. m.—NBC.
10 to 11 p. m.—NBC.
11 to 12 midnight—Fox Hollywood organ.

Square Deal Hardware Co.
220 N. Com'l St. Telephone 1650
We have a good line of second-hand radios
IF IT ISN'T SCREEN-GRID, IT'S AN OLD-STYLE SET

Leopold Stokowski, an Outstanding Radio Attraction of the Season



HERE L. L. Edcom, noted illustrator, shows the leader of the Philadelphia Orchestra. It is made by means of a Lindeum Print, a Modern Revival of an Ancient Art. Stokowski's Radio Concerts, Given Under the Sponsorship of Philco, Radio Makers, Over a Nationwide Network of 52 Stations, Has Attracted to the Famed Conductor Praise From Music Lovers in Every City of the Country.

market reviews and agricultural situation and outlook reports will be broadcast.

Women Ask Education Via Radio

NEW YORK — (AP)—Better education via the radio is the goal of a six months' study by a federal commission. The 16 members, appointed by President Hoover, are devising ways and means of making the tireless school room more attractive and beneficial to each

member of the family. Two of the commissioners are women. Like other appointees, they were named because of their outstanding accomplishments in educational research. One is Miss Alice Kieth, educational director of RCA, while the other is Mrs. Helen Howell Moorhead of the Foreign Policy association, in which she is radio assistant to James G. McDonald, chairman.

Both have had several years' experience in radio instruction. An educational director of RCA, Miss Kieth has been chiefly concerned with programs in music appreciation for school children. She is a graduate of the University of Wisconsin and for three years was supervisor of music appreciation in the Cleveland schools.

RADIO TUBES AND ACCESSORIES NEED CHECKING FREQUENTLY

THE RADIO DOCTOR
Call 3647 150 So. Liberty St.

STOKOWSKI IS REAL MODERN

Conservatives' Ire Aroused By Nov. 3 Philco Broadcast Program

Leopold Stokowski, conductor of the Philadelphia Orchestra, and a newcomer to radio, has camps of music lovers, the fundawakened to war those rival mentalists and the moderns. Ever since his first broadcast when he announced that his program of Nov. 3 would include numbers by that modern writer of music, Stravinsky, the storm of favorable and unfavorable criticism has been noted. Stokowski, swamped with letters of appreciation from radio fans who heard him on October 9, defends his course as do many newspaper and individual critics. Others declare that it is nothing less than a sacrilege for a conductor like Stokowski and his nationally famed orchestra to wander outside the tried and true classical field for his program and to include modern music over which controversy still rages.

Mrs. Moorhead is acquainted with the methods of teaching adults in international relations. She is a graduate of Bryn Mawr and has done considerable educational research work.

MURDERER EXECUTED

COLUMBIA, Ohio, Nov. 2. — (AP)—Arthur J. Maul, convicted slayer of William H. Grubbs, Akron policeman, was electrocuted at Ohio penitentiary tonight. Maul went to the death chair at 7:30 and was pronounced dead at 7:33 p. m.

TARIFF TRUCE SOUGHT

GENEVA, Nov. 2. — (AP)—The League of Nations' move for tariff truce advanced a stage today with the publication of a draft convention as the basis for negotiations at a conference proposed for early next year.

Read the Classified Ads.

CROSLLEY
Screen Grid Radio
TONE TESTED!
For many years, engineers have measured the tone-fidelity of radio sets by charts and curves in the laboratory. Now Crosley, Jr., has carried his search for finer tone quality a step beyond the laboratory—A STEP FURTHER THAN RADIO HAS EVER GONE BEFORE!
Crosley radio is now regularly subjected to the expert tone scrutiny of America's famous musical artists... Erenf Zimbalist, Edith Mason, Alma Gluck, George Gerwin and others. For this purpose, Crosley receiving sets are placed in the homes of these artists in all parts of the country. Programs are broadcast. Crosley radio sets receive them. The artists "listen in." They comment, advise, give Crosley engineers the invaluable benefit of their opinion...
UNDER THEIR GUIDANCE IMPROVEMENTS ARE CONSTANTLY BEING MADE IN CROSLLEY SETS.
Thus the tone quality of Crosley Radio is developed to win the approval of the most discriminating ears. Thus is achieved a marvelous richness, fullness and naturalness of tone that mechanical tests alone could never attain. This beautiful tone, developed to the highest technical degree in the laboratory, then "ear tested" by America's foremost artists, is EXCLUSIVE with Crosley.
The comparison of this new "tone tested" Crosley is truly amazing when it comes to distance, selectivity and tone quality.
CROSLLEY "TONE TESTED" RECEIVERS AT
Radio Headquarters
Phone 1161 Salem, Oregon 275 So. High St.

ATWATER KENT SCREEN-GRID RADIO

Selective as a needle's point!

Results you can't get with old-style tubes!

THIS very evening, in your own home, you can have the greatest radio yet produced—and pay no more—perhaps a lot less—than for sets offering none of the startling new features of the new Atwater Kent Screen-Grid.

Three stations within a step part of an inch on your dial—instantly separated!

Yes, sir! At last you can have a radio that radio engineers had almost despaired of ever achieving—a radio of *selectivity*—the goal of the laboratory's dreams—and you can have it in your home right now!

And remember, along with this phenomenal selectivity you get every other better thing that Atwater Kent Screen-Grid Radio offers. Here! TODAY!

Beautiful Cabinet Models \$169.00 and up

Price complete with tubes \$151 and up

ATWATER KENT SCREEN-GRID RADIO

C.S. Hamilton FURNITURE CO.
340 Court St.

Bliven's RADIO COLUMN
You can't play dance music, Harry. Tune in the radio on some jazz. It's a good thing!

Get a Silver Radio
BLIVEN RADIO SHOP
461 NO. FRONT ST.
PHONE 9