

W.CAD KFDY WSUI WIXAL WBAA WNAD WILL WOI. U  
WIKAR WHAZ KF KU KUSD WTAW.  
W.CAL WSAJ WEW W CAT KFJM.  
WRUF KOAC KSAC KWSC WESG WHA WOSU

# EDUCATIONAL



# STATIONS



# EDUCATIONAL RADIO STATIONS

» » » A Pictorial Review

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New York City

1936

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# CONTENTS

	PAGE
Foreword .....	5
<i>Institution</i>	<i>Radio Station</i>
Purdue University .....	WBAA .....
St. Lawrence University .....	WCAD .....
St. Olaf College .....	WCAL .....
South Dakota State School of Mines .....	WCAT .....
Cornell University .....	WESG .....
St. Louis University .....	WEW .....
University of Wisconsin .....	WHA .....
Rensselaer Polytechnic Institute .....	WHAZ .....
University of Illinois .....	WILL .....
Michigan State College .....	WKAR .....
University of Minnesota .....	WLB .....
University of Oklahoma .....	WNAD .....
Iowa State College of Agriculture .....	WOI .....
Ohio State University .....	WOSU .....
University of Florida .....	WRUF .....
Grove City College .....	WSAJ .....
State University of Iowa .....	WSUI .....
World Wide Broadcasting Foundation .....	WIXAL .....
South Dakota State College .....	KFDY .....
University of North Dakota .....	KFJM .....
University of Kansas .....	KFKU .....
Oregon State Agricultural College .....	KOAC .....
Kansas State College of Agriculture .....	KSAC .....
University of South Dakota .....	KUSD .....
State College of Washington .....	KWSC .....



## FOREWORD

THAT the present widespread development of commercial radio in the United States was pioneered by research, experiment and demonstration of our colleges and universities is a fact not properly appreciated by the people of the United States. In the early twenties there were nearly 100 university and college radio stations on the air. If you will pause at the entrance to the impressive University of Wisconsin studios, you will see some of the grandfathers of tubes now used by radio transmitters all over the United States; indeed, all over the world. These tubes were built in 1916 and 1917 by University of Wisconsin engineers long before KDKA made its epochal broadcasts. Through research the University of Wisconsin and other centers contributed greatly to the building of the radio service now available to the American people.

Many institutions found radio an expensive luxury. The advent of commercial advertising and network service gave commercial stations advantages with which educational stations found it difficult to compete. Depression forced many universities to sell their stations or give up their licenses.

So greatly have educational stations been overshadowed by commercially owned stations that there has been a disposition in some quarters to think of them as belonging, like the dinosaur, to the past. That such an assumption is contrary to the facts will be clear to any one who reads this brochure, which is a pictorial and factual summary of the present very lively state of educational broadcasting stations. It will be news to many that educational stations are growing in power and influence. It will astonish others to find that universities and colleges are setting aside larger and larger budgets for radio program service.

The need for a summary which should show the renaissance of educational broadcasting stations in this country became apparent at the annual meeting of the National Association of Educational Broadcasters, held at Madison, Wisconsin, August 18, 1936. Reports presented from various stations revealed that the tide had turned; that educational broadcasting stations were making remarkable progress. So pronounced was this upturn in their fortunes that the National Committee on Education by Radio accepted the invitation of the National Association of Educational Broadcasters to prepare a brochure reporting this significant development. The information and illustrations contained in this booklet were received as a result of a questionnaire sent to principal educational radio stations. The document has been prepared for the printer with the cooperation of the Educational Radio Project, Office of Education, United States Department of the Interior.

Readers will find in the following pages evidence that our institutions of higher learning are continuing their research and experimentation in radio. They find that these institutions are also rendering an educational service to the areas they serve. Here will be found reports of research in use of radio for hurricane protection, for television, for dissemination of child study information, for the organization of listening groups, and other pioneer activities. The record of existing educational radio stations affords evidence that they are providing and will provide in a greater measure a valuable service in the application of radio to the advancement of education and science.

ARTHUR G. CRANE,  
*President, University of Wyoming,*  
*Chairman, National Committee on Education by Radio*



**WBAA**  
PURDUE UNIVERSITY  
LAFAYETTE, INDIANA



**S**TATION WBAA, an educational, non-commercial broadcasting station owned and operated by Purdue University, is the oldest licensed radio station now operating in the state of Indiana.

Radio activities at Purdue University date back to 1910, when experimental work on code equipment was undertaken by a number of students and staff members of the School of Electrical Engineering. Class instruction in radio was started at Purdue University in the autumn of 1918, when the Signal Corps of the U. S. Army placed valuable equipment at the disposal of the University for class and experimental use. In 1919 the code radio station 9YB was licensed for operation on 300, 200 and 75 meters.

WBAA is on the air five hours daily except Sunday, with a total of 1,248 hours per year. It broadcasts 105 programs each week presenting 67 different features (some features are broadcast daily, some three or two times a week). . . . Broadcast time is divided as follows: Education, 45 per cent; entertainment, 25 per cent; service, 30 per cent. (This includes markets, agriculture, forums, news, and civic programs.) . . . Annual appropriation, \$4,800. . . . Advance in power: Original power assignment April 4, 1922, 200 watts; 1924, 500 watts; 1934, 1,000 watts.

WBAA employs forty student workers and three part-time workers.

<b>FREQUENCY:</b>	890 kilocycles
<b>TIME:</b>	Has shared time with WILL. (WILL to go on 580 kilocycles about December 1.)
<b>POWER:</b>	Daytime: 1,000 watts    Night: 500 watts
<b>FOUNDED:</b>	(Licensed) April 4, 1922
<b>VALUE OF PLANT:</b>	\$20,000
<b>PROGRAMS PER YEAR:</b>	3,320
<b>AUDIENCE:</b>	A thesis study during the past year on radio listening by rural people indicates WBAA to be the second most-listened-to station in Indiana. Mail indicates a large listening group. More accurate statistics to be secured this year.



### **Educational Broadcasts**

WBAA is making important contributions to the State of Indiana through its educational broadcasts. Educational features may be classed under two headings: broadcasts for general adult education and broadcasts suitable for use in the public school classrooms. Many of the educational programs can be used for both purposes.

Adult educational broadcasts include actual broadcasts from classrooms of the University. These features are fifty minutes in length and give listeners an opportunity to sit in on regular class work, through the medium of radio.

Since the autumn of 1935, Arsenal Technical Schools of Indianapolis and WBAA have cooperated in the broadcast of special features timed and integrated with the subject matter of courses offered in the high school. First program consisted of "Digest of the News" given once each week and received by the entire student body of the Arsenal Technical Schools.

### **Television**

Purdue University is now presenting television programs regularly. The University is an important center for study and experimentation in this important coming development. It is the only United States institution of higher learning with an experimental license to frequencies which permit the presentation of television programs. To date televised programs presented have used motion pictures as their chief source of material to be disseminated.

### **Conference**

On December 5, 1936, radio leaders from Indiana as well as from other parts of the country assembled at Purdue University for the Indiana Radio Conference held under direction of Station WBAA and the University radio committee.

Purpose: To bring together representatives of civic organizations, public schools, commercial and institutional broadcasters to consider problems of mutual interest, to foster closer cooperation for the improvement of radio participation and for more effective use of radio facilities.

Among those who participated were C. E. Menser, National Broadcasting Company; S. Howard Evans, University of Wisconsin; Joseph Wright, station manager Station WILL; and William D. Boutwell, Director of the Educational Radio Project, United States Office of Education.

### **University Radio Committee and Staff**

W. A. Knapp	Chairman
C. E. Harding	Legal Relations and License
Clarence E. Dammon	Program Production and Announcers
A. P. Stewart	Music
John W. Hammond	Operating Engineer
C. B. Aiken	Technical Adviser
T. R. Johnston	Agriculture and Publicity
R. R. Townsley	Technical Assistant
Cecil M. Siegfried	Studio Secretary

*Professor T. K. Noss, Department of Education, Purdue University, conducts a class in Sociology before a microphone. Thousands of students outside the classroom are also listening.*



# WCAD

ST. LAWRENCE UNIVERSITY  
CANTON, NEW YORK

FREQUENCY:	1,220 kilocycles
POWER:	Daytime: 500 watts
VALUE OF PLANT:	\$30,000
PROGRAMS PER YEAR:	500
AUDIENCE:	One hundred fifteen requests for booklet received as a result of a ten-minute broadcast.

**S**TATION WCAD is on the air at an average of two hours each day. It broadcasts from nine to ten programs each week and has an average of 500 programs a year. . . . Broadcast time is divided as follows: Education, 40 per cent; entertainment, 50 per cent; service, 10 per cent. The types of programs and percentages of time devoted to each are: Music, 50 per cent; speaking, 45 per cent; dramatics, 5 per cent. . . . Outstanding programs are: (1) Canadian American Conference, June 17-22, 1935; (2) Annual Commencement Exercises; (3) Charter Day Exercises; (4) Dedication of Chemistry Building by Madam Curie. . . . Annual appropriation; \$5,000. . . . Plans for extension: "Under a new plan adopted this fall we are encouraging students to take part as much as possible."

## Cooperating Agencies

Clarkson College of Technology  
State Normal School  
Crane Institute of Music  
New York State School of Agriculture  
County Home Bureau  
Various 4H Clubs  
Farm Bureau  
Girl Scouts of America  
American Association of University Women

## THE RADIO'S TECHNIQUE TAUGHT

(From *New York Times*, December 22, 1935)

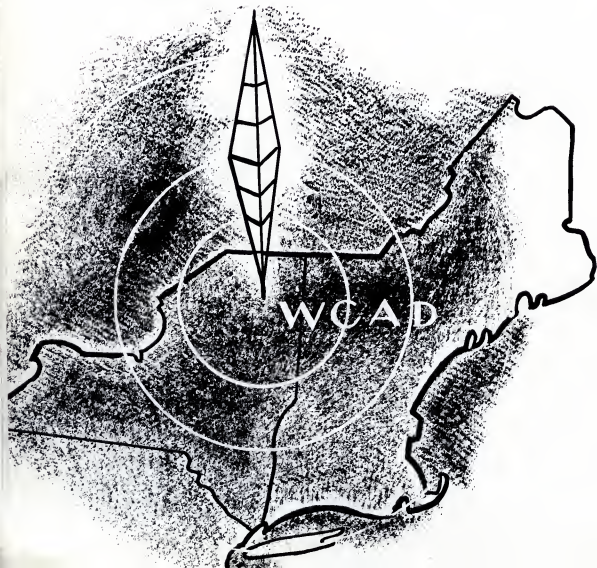
At St. Lawrence University students participate in every phase of radio broadcasting. The University's own radio station is used as a classroom to train students and develop radio technique.

Radio at St. Lawrence is not listed as a regular course of study. But it does provide an outlet for latent talents, and students, aside from a natural interest in radio as a pure feature of entertainment, are encouraged to try their hands—and voices—at the microphone under the direction of Harold Bergman, who has been in charge of the station for several years.

"Students, of course, are carefully selected for our university radio work," Mr. Bergman explains. "They must have the knack of meeting people and be able to talk with them about topics of wide public interest. They should be reasonably conversant with politics, science, and foreign affairs."

The matter of diction and speech, while essential in commercial radio, is not looked upon as a paramount requirement at St. Lawrence. "When we find a student who possesses the other qualifications, we are satisfied that we can instill the feeling and ability for correct speech," says Mr. Bergman.

One of the original 250-watt transmitters of the station is now being used in the physics laboratory for experimental and educational purposes. It is one item in a great mass of technical equipment being used to familiarize St. Lawrence students with the multiple problems and perplexities of a modern broadcasting studio.



FREQUENCY:	1,250 kilocycles shared with eight other stations: WAAM, WGCP, WNEW, WODA, WDSU, WLB, WTCN, WCOL, KFOX
TIME:	Divided with WLB and WTCN
POWER:	Daytime: 2,500 watts    Night: 1,000 watts
FOUNDED:	1921
VALUE OF PLANT:	\$25,000
PROGRAMS PER YEAR:	1,300
AUDIENCE:	Audience response can be measured by the fact that the free-will contributions to the station amount to an average of \$100 weekly.

# WCAL

ST. OLAF COLLEGE  
NORTHFIELD, MINNESOTA

THE station broadcasts about nine hours a week, a total of 468 hours per year. . . . Staff consists of ten members: one full-time, five part-time and four student workers. . . . Station produces twenty-five programs each week. It devotes 83 per cent of its time to education and the remainder to entertainment. Programs may be classified into the following groups: Music, 39 per cent; speaking, 55 per cent; religious services, time and weather reports, etc., 6 per cent. . . . Some outstanding programs of WCAL are: Divine Services, Vespers, Time Signals from Goodsell Observatory, Choral Hour, Book Talks, Political Science Series, and "A Pause with the Poets". . . . WCAL has made its facilities available to political parties, Legion Auxiliary, Boy and Girl Scouts, American Legion, Northfield Chamber of Commerce and the Public Schools of Minnesota. . . . Annual appropriation is \$2,500. The station is supported also by free-will contributions from listeners. . . . Dependent upon the change of the station's wave-length by the Commission, WCAL is planning for extensive improvements. The application of WCAL for increase of power and change of frequency was granted on October 21.

#### LATEST NEWS FROM WCAL

"A Radio Guild is being organized. It is hoped that this Guild will contribute effectively to educational radio, and I shall be glad to let you know a little later what the Guild is actually doing. As you know, the formation of a Radio Guild was one of the projects which I worked on in the New York University Workshop, and I am intensely interested in seeing how things work out practically."

—Miss Ruth Willard in a letter to the  
U. S. Office of Education.

#### "A Window for the College"

WCAL has become a window through which the fathers and mothers can look and see how their sons and daughters live at college.

The Sunday morning services in the Norwegian language have found a distinct place in the religious life of the Minnesota people. Many letters of appreciation have been received, especially from the old, the sick and the shut-ins. This, in the opinion of the directors, is one of the greatest services the station is rendering today.

#### WCAL Staff

Martin Hegland, Director; A. O. Lee, Business Manager; H. R. Skifter, Operator; Gerhard Rasmussen, Vesper Services; J. Arndt Bergh, Director, WCAL Orchestra; George W. Spohn, Book Talks; P. M. Glasoe, Choral Hour.



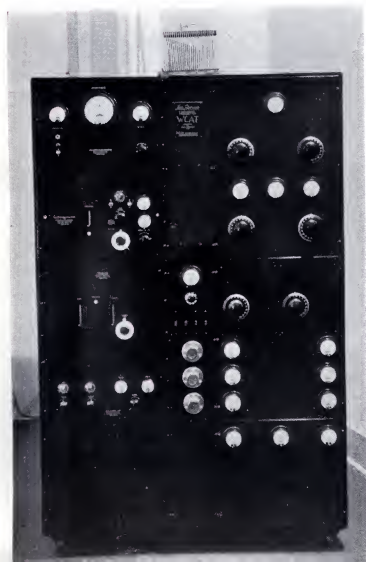
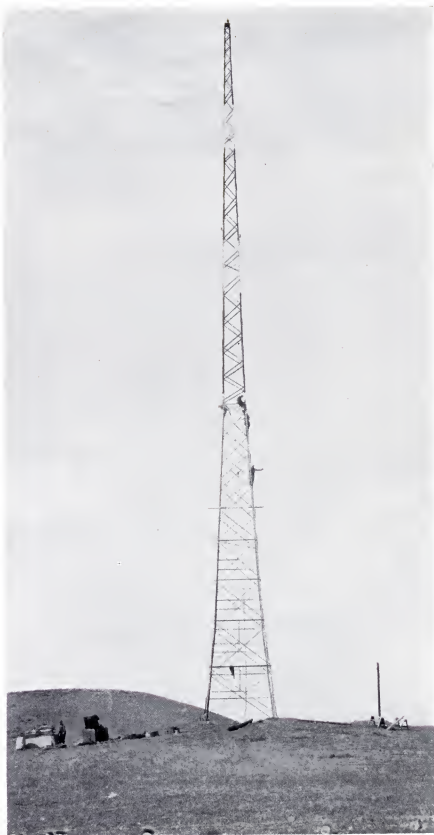


# WCAT

SOUTH DAKOTA COLLEGE OF MINES  
RAPID CITY, SOUTH DAKOTA

**W**ORK is progressing rapidly on the construction of new facilities for Radio Station WCAT. The new Ideco quarter-wave Vertical Radiator, which has a height of 204 feet, is fully completed with the exception of laying 21,000 feet of copper wire for ground radials. A new amplification system has been installed and a General Radio Modulation Monitor type 731-A.

The studio, which has been located in the First Building, is to be abandoned and the home of WCAT will be in the new auditorium, where a sound-proofed studio is being constructed and an acoustically treated room is available for large



FREQUENCY :	1,200 kilocycles
POWER :	Daytime: 100 watts
ON THE AIR :	One hour daily except Sunday
STAFF :	Three part time workers
PROGRAMS :	In most cases originated by the faculty of the College. Deal with timely subjects.

*WCAT transmitter at South Dakota School of Mines.*

orchestra and band broadcasts. An announcer's booth, a transmission room, and a control room will be located on the second floor of the Auditorium. The wall construction of these rooms is of transite with rock wool, as required for acoustical correction. Leading off studio A is an observation and reception room equipped with several lounge chairs. WCAT expects to be on the air with new equipment January 1, 1937.

Two very popular programs have been added this year. These programs, consisting of talks on stamp-collecting and a ground course in aviation, have definite educational value.

### BACKGROUND

The South Dakota School of Mines was established by Territorial Legislature of Dakota, March 7, 1885. The enabling act providing for the division of Dakota Territory and admitting South Dakota and North Dakota to statehood in 1889, gave to the School of Mines 40,000 acres of South Dakota land. The lands furnish some funds for the work of the institution, but the chief income, out-

side of the student fees, is provided through biennial appropriation by the State Legislature.

The second building, the mining and metallurgical laboratory completed early in 1888, the front portion of the third building known as the administration building was erected in 1901, and to this in 1902 a rear wing was added. At the close of the World War, two frame buildings, erected in connection with the training of soldiers, were retained for temporary use. An engineering building to house the departments of Civil Engineering, Electrical Engineering, Physics and Mathematics was completed during the school year 1921-22. A new central heating plant was completed during 1921. A gymnasium-auditorium building constructed during the early part of the year 1928 is the last addition to the Campus.

The School of Mines is under the direction of the Regents of Education. The Regents, five in number, appointed by the Governor and confirmed by the Senate, have a control of the various public institutions of learning maintained wholly or in part by the State as State Institutions.



# WESG

CORNELL UNIVERSITY  
ITHACA, NEW YORK

FREQUENCY:	850 kilocycles
TIME:	Shared with WWL, New Orleans
POWER:	Daytime: 1,000 watts    Night: 1,000 watts
FOUNDED:	1909
PROGRAMS PER YEAR:	12,633
AUDIENCE:	7,828 responses to free gift offer, January, 1936. (21 announcements of sixty seconds each.)

**S**TATION WESG broadcast time is divided as follows: Education 50 per cent and entertainment 50 per cent. . . . The types of programs and percentage of time devoted to each are: Music, 70 per cent; speaking, 10 per cent; dramatics, 2 per cent; miscellaneous, 18 per cent. . . . This station produces seventy programs per week. . . . About one hundred twenty-five talks are broadcast each month during the daily noon farm program. . . . During November, 1935, over two thousand letters were received at the College of Agriculture as a result of radio programs. On the average, each of these letters asked for two or more bulletins published by the College, and in addition many requested specific information on farm problems. . . . WESG supplies material and continuity for about 65 presentations a day over 25 cooperating stations.

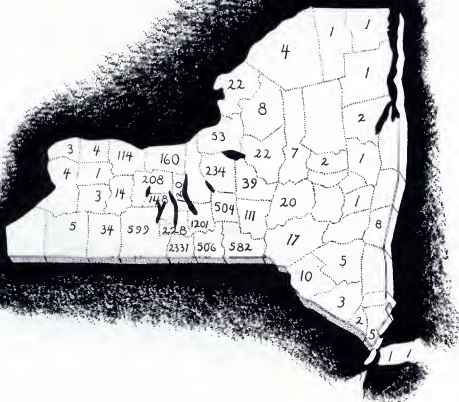
## EXTENSION OF RADIO BROADCASTING

Radio broadcasting at Cornell University is, to a large extent, an activity of the Colleges of Agriculture and Home Economics. Broadcasting is primarily for extension purposes, although the schools use some of the services in connection with class instruction.

Says Director Taylor: "I should urge you to note that broadcasting from WESG is but a small part of our educational radio activities, although it involves the broadcasting of from 1,500 to 1,800 items per year. We have, for example:

"(1) *Syndicate Service to 25 New York State Stations.*—In this syndicate, Cornell University issues from three to seven items a day on current agricultural and home economics topics. These syndicated items are distributed to the 25 stations weekly by mail, first-class postage or special delivery, depending on the value of the speed element in getting them before the public. In addition, in case of emergency, there is a direct teletype conference hook-up from this office to ten stations which are so located that they may be heard in all parts of the State.

"(2) *County Agent Broadcasts.*—Most of the extension agents in this State broadcast regularly. Regional groups of agricultural agents, home demonstration agents, and 4-H club agents, present programs cooperatively on local stations."



Map indicates territorial coverage of WESG as revealed by letters received from one serial feature presented twice daily (daylight hours) over a period of seven weeks. Figures show actual number of individual returns.



FREQUENCY:	760 kilocycles
POWER:	Daytime: 1,000 watts
FOUNDED:	April 26, 1921
VALUE OF PLANT:	\$15,000
AUDIENCE:	About one hundred letters or so a day are received by WEW.
PROGRAMS PER YEAR:	13,200

# WEW

ST. LOUIS UNIVERSITY  
ST. LOUIS, MISSOURI

**S**TATION WEW is on the air nine hours per day with a total of 3,000 hours a year. The station broadcasts 255 programs each week and receives 49 programs from outside sources. . . . Broadcasting time is devoted as follows: Education, 45 per cent; entertainment, 55 per cent. . . . Programs may be classified as follows: Music, 55 per cent; speaking, 20 per cent; dramatics, 5 per cent; miscellaneous, including sports, public events, etc., 20 per cent. . . . Annual appropriation: \$8,000.

Station WEW's staff consists of twenty-five members: five full-time workers, eight part-time workers and twelve student workers. . . . Has increased its power as follows: 1921—50 watts; 1922—1,000 watts (daytime).

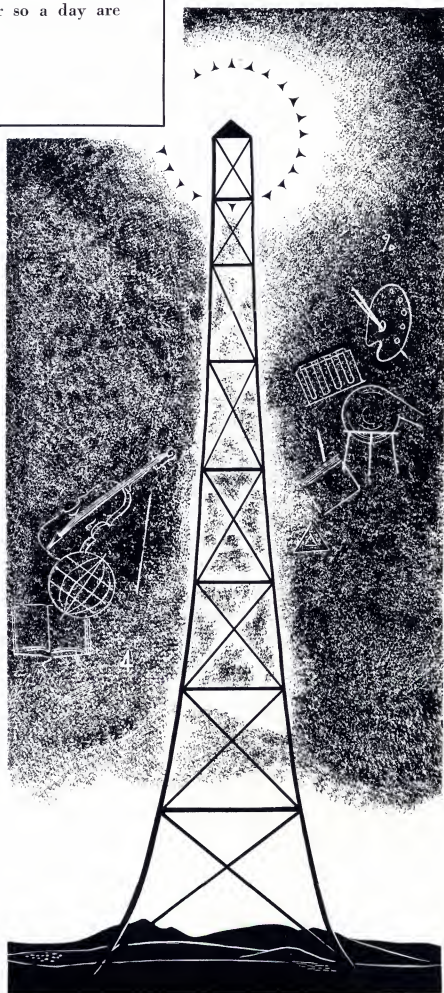
### LATEST NEWS FROM WEW

"The University of the Air" has added to its educational features "The Social Order Forum," treating of the problems discussed in St. Louis University class rooms and now projected to the radio audience. In the scope of social problems the subjects prove varied and interesting, whether the talk be on "The Menace of Communism" or "Education in Marriage."

In connection with the social problems of the day, the St. Louis University School of Law presents two weekly programs considering the constitutional aspects of social legislation. These programs are prepared by senior students under the direction of their professor.

"The Editorial Page of the Air" featured at the noon hour brings the latest news with reflective comment. It is a program designed for the noon hour, short but thought provoking.

"Moments with the Masters," a daily program of symphony and concert music, continues to bring pleasure to those who appreciate classical music, and who are unable to find it elsewhere on the local programs during the week. This program has gained indubitable popularity.





# WHA

STATE OF WISCONSIN  
MADISON, WISCONSIN

*Wayne Claxton with studio class in "Creative Art" on the Wisconsin School of the Air, Station WHA, Madison, Wisconsin.*



**S**TATION WHA is on the air, on an average, 9 hours a day or a total of 2,799 hours per year. . . . Originates 114 programs each week. It devotes 62 per cent of its time to education and 38 per cent to entertainment. Music 40 per cent, speaking 55 per cent, dramatics 4 per cent and news-service 1 per cent. . . . Annual appropriation: \$20,000. . . . WHA is adding one studio and five offices. It is also experimenting in organized group listening, school broadcasting and adult education.

Station WHA is owned by the State of Wisconsin

and operated through the University in Madison. WHA is not only "America's oldest educational Radio Station" but also antedates the commercial stations known as pioneers in the field.

WHA is entirely non-commercial. It has never sold a penny's worth of time and so does not compete for a share of the available advertising revenue.

The objective of the State of Wisconsin in developing its own radio system is expressed by Dr. Glenn Frank, President of the State University.

## "America's Oldest Educational Radio Station"

FREQUENCY:	940 kilocycles, shared with 5 other stations: WCSH, WAAF, WAVE, WDAY, KOIN.
TIME:	Undivided; limited to daytime.
POWER:	Daytime: 5,000 watts    Night: none.
FOUNDED:	1917
VALUE OF PLANT:	\$50,000.00.
PROGRAMS PER YEAR:	5,909
AUDIENCE:	There is a steady increase in mail regarding programs. 16,000 course enrollment in Wisconsin College of the Air. 40,000 weekly listeners to Wisconsin School of the Air. Homemakers data requested from 60 counties and 4 other states.

He said: "In WLBL and WHA stations, Wisconsin is perfecting agencies through which her departments of state can maintain intimate contact with and seek to serve the people of Wisconsin."

### *Wisconsin School of the Air*

The Wisconsin School of the Air is recognized as an outstanding example of the use of radio by a state to give additional educational opportunities to its schools. These supplementary programs are used in the classroom under the direction of the teacher. They enrich the experience of the children by making available to all schools talents which might otherwise be denied them.

Wisconsin School of the Air began its broadcasting in 1931 with ten weekly programs for grade-school use, under the supervision of H. B. McCarty, who organized the project.

Educators have been quick to see the advantages of using these supplementary broadcasts in the schoolrooms. Teachers in the WHA area reported more than 23,000 student listeners each week to the programs of the Wisconsin School of the Air (first semester, 1932-33). In 1934-35 the number was in excess of 40,000 known listeners.

### *Wisconsin College of the Air*

The Wisconsin College of the Air is an immediate step in providing educational opportunities for the vast numbers of boys and girls of high school age (14-20) who are out of school and unable to find employment. Hundreds of adults and many high school classes listen also. Ten carefully organized courses are offered weekly in agriculture, general science, social science, home economics and the cultural subjects of art, music and literature. This project started in the fall of 1933 greatly enlarges the scope of several educational agencies of Wisconsin. It was organized by Harold A. Engel.



H. B. McCarty, WHA program director

### *For Farmers*

Agricultural interests are served in several ways by WHA. The daily farm programs arranged by the College of Agriculture are timely and meet the particular needs of Wisconsin farmers. Agricultural institutes are conducted by radio, and important conferences are broadcast for those who cannot attend in person. Youth organizations hold regular radio rallies.

For many years the farm programs were the backbone of the State's radio activities. It may safely be said that agricultural workers sensed the potentialities of radio and used them effectively before any other department in the University through the years since 1920.

Fields in which courses of instruction have been given over the air for adults are letter writing, typewriting, public speaking, Spanish, music compositions, music appreciation, American literature, economics and aeronautics. Public acceptance and reaction has warranted the extension of educational features on the adult level. This has been hampered by the inability of the stations to operate during evening hours.



Lounge in Radio Hall, home of WHA. Frieze at top depicts oldest evidence of communications in the State—petroglyphs reproduced from cave-walls and left by prehistoric dwellers in the area.

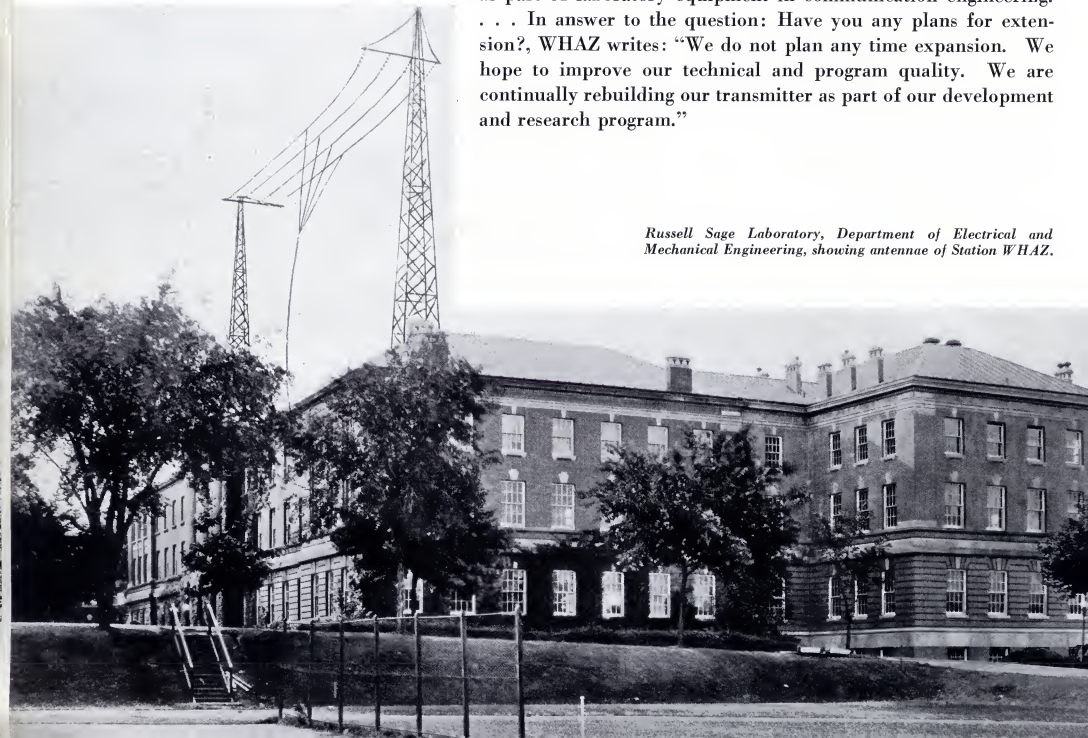
# WHAZ

RENSELAER  
POLYTECHNIC INSTITUTE  
TROY, NEW YORK

FREQUENCY:	1,300 kilocycles shared with three other stations: WEVD, WBBR, WFAB
TIME:	Shared with other stations as follows: WEVD—4/10; WBBR—2/7; WFAB—2/7; WHAZ—5/100
POWER:	Daytime: 500 watts      Night: 500 watts
FOUNDED:	June 1922
VALUE OF PLANT:	\$29,000
PROGRAMS PER YEAR:	About forty-four five-hour programs
AUDIENCE:	Favorable response can be measured by telephone calls, mail and conversation with listeners

**S**TATION WHAZ is on the air Mondays only, for six hours, a total of about 220 hours per year. . . . Originates three programs each week, two quarter-hour programs and one half-hour program. It devotes 15 per cent of its time to education and 85 per cent to entertainment. Programs may be classified as follows: Music, 60 per cent; speaking, 20 per cent; dramatics, 10 per cent; news-service, 10 per cent. . . . WHAZ has made its facilities available to all local civic, educational and religious agencies. . . . Annual appropriation: None. Station maintained as part of laboratory equipment in communication engineering. . . . In answer to the question: Have you any plans for extension?, WHAZ writes: "We do not plan any time expansion. We hope to improve our technical and program quality. We are continually rebuilding our transmitter as part of our development and research program."

*Russell Sage Laboratory, Department of Electrical and Mechanical Engineering, showing antennae of Station WHAZ.*





### *Some Outstanding Programs of WHAZ Are*

- 15-minute faculty talks
- 15-minute round table discussions
- Dance Orchestra—Campus Serenaders (students)
- Symphony Orchestra (students)
- Glee Club (students)
- Student Band
- Dramatic Club (students)

### *Staff*

Consists of fourteen members. Six of these are part-time workers and eight are student workers. W. J. Williams is director.

\* \* \*

WHAZ was the first college radio station regularly licensed for broadcasting in this country and has been regularly in operation, following experimental work in radio at the Institute, since 1914.

Many improvements have been made during the last decade. Short-wave experiments have frequently been carried on.

Last year the students' Radio Club was awarded a certificate of membership in the W.A.C. Club, signifying that it had successfully "Worked All Continents."

\* \* \*

Here is a brief description of some of WHAZ radio equipment:

### *Antennas*

The broadcasting antenna is a four-wire flat top antenna suspended from two towers. In front of this is a short vertical expanding cage antenna used for wave lengths below 100 meters. The two towers are equipped with windlasses so that other forms of aeriels can be quickly substituted when required for experimental purposes. The geographical location of the radiating system has proved to be unusually good. This is

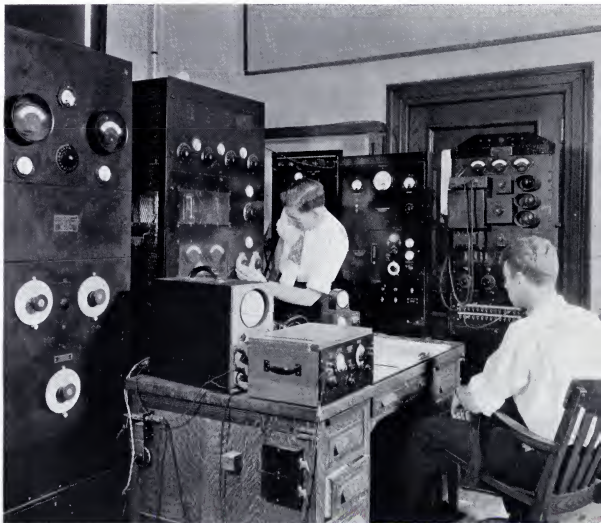
probably due to the fact that the Sage Laboratory is located on the crest of a steep hill which overlooks the valley of the Hudson River. The towers are far above all obstacles, and from the top one can obtain a clear view for many miles in every direction.

### *Studio*

WHAZ studio has received special acoustical treatment. The ceiling is covered with a very thick layer of felt. One inch below this felt, suspended from the ceiling, is a perforated oil cloth covering. Sound waves passing through the holes in the oil cloth are quickly absorbed by the felt. The floor is covered with a heavily padded carpet. The treatment given the walls was unique when the studio was designed, although it has since been adopted by a number of other stations. The heavy curtains of friar cloth are movable, thus permitting acoustical research and also allowing the studio director a means of varying the reverberation produced by the walls for different kinds of musical selections.

### *Operating Rooms*

Adjoining the studio is the operating room. This room contains the transmitting, receiving, and recording apparatus used in both studio telephony and radio telegraphy.



*WHAZ operating room*

# WILL

“Where Illini Labor and Learn”

UNIVERSITY OF ILLINOIS

URBANA, ILLINOIS

FREQUENCY:	890 kilocycles shared with KFNE, KUSD, and WBAA. Will change to 580 kilocycles, 1,000 watts day only about December 15
POWER:	Daytime: 1,000 watts Night: 250 watts
TIME:	Shared with KFNE and KUSD
FOUNDED:	October, 1921
VALUE OF PLANT:	\$85,000 at commercial replacement value. \$25,000 in additional improvements now being completed
PROGRAMS PER YEAR:	2,709
AUDIENCE:	Frequent letters are received from individuals, although the station does not ask for such response, nor does it offer free material

**S**TATION WILL is on the air from six to eight hours per day, a total of 1,600 hours per year. This station operates daily except Sunday. . . . Beginning December 15, the station will operate from 8:00 a.m. to local sunset. . . . Broadcasts about 130 programs per week, devoting 80 per cent of its time to education and 20 per cent to entertainment. These programs comprise the following types: Music, 40 per cent; speaking, 49 per cent; dramatics, 1 per cent; news-service, 10 per cent. . . . Annual appropriation: \$12,334. This figure does not include any charges for power, rent, telephones, etc., since all such items

are absorbed by the University. . . . Plans for extension: WILL is planning to change its frequency to 580 kilocycles and operate on a full-day schedule. “With expansion of operating time will come expansion of programs.”

### *Outstanding Programs of WILL are*

- Parent-Teacher Forum
- Rural Life Review
- Concert Band
- Seeing Illinois
- Theatre Chats
- Language Lessons (French and Spanish)
- Markets and Agricultural Topics
- Music of the Masters
- Great Events in Science
- Public School Concerts and State-wide Band Rehearsals

### *Staff of WILL*

Josef F. Wright, Director; Frank E. Schooley, Assistant to Director; Arthur E. Cohen, Director of Music; C. C. Wiley, Parent-Teacher Forum Chairman; Willis E. Phillips, Chief Engineer.



*Portable pickup equipment of WILL*



*Josef F. Wright, director of WILL. Mr. Wright is a former president of National Association of Educational Broadcasters.*

### HIGHLIGHTS IN THE HISTORY OF WILL

- 1911 University of Illinois granted experimental license to operate a transmitter. Frequency: ranging from 300 to 360 meters. Call letters: 9XJ.
- 1922 University granted broadcast license. Frequency: 834 kilocycles. Power: 400 watts. Call letters: WRM.
- 1923 Station's power increased to 500 watts.
- 1926 University accepts gift of Boetious H. Sullivan, Chicago, including 1,000 watt transmitter and tower, studios and equipment. Station was placed on 1,100 kilocycles frequency and given permission to use 1,000 watts power.
- 1928 WILL call letters assigned.
- 1936 Ground broken for new antenna system and transmitter building. Board of trustees appropriated \$25,000 to carry out improvements.

### Cooperating Agencies

WILL has made its facilities available to the following agencies:

- Illinois Congress of Parents and Teachers
- Illinois Department of Public Welfare
- Illinois State Highway Police, Sheriffs, and Police Officers
- Public Schools of the State
- Illinois Junior Academy of Science
- Illinois Department of Public Health
- The Daily Illini—student newspaper
- Illinois Secretary of State's Office
- Agricultural Organizations
- United States Department of the Treasury
- A.A.A., W.P.A. and Resettlement Administrations
- Champaign Public Library

*WILL Sinfonietta conducted by Arthur Cohen, director of music for WILL.*

### Service to the State

Station WILL is the only State-owned radio station in Illinois and the only strictly educational station in the State. It belongs to the people of Illinois and is supported, as is the University, through taxation.

The University is the center of much of the State's educational progress. Numerous state conventions and various organizations are held on the campus each year. It is likewise the center of many high school activities. The Annual High School Principals and Teachers Conference, the Annual State High School Band Contest, the Annual State High School Orchestra Contest, the Annual State Basketball Tournament, the Annual State High School Track and Field Meet, and other such events, all occur on the University campus.

In addition to the Agricultural Experiment Station and the Engineering Experiment Station, there is maintained at the University a Bureau of Business Research, a Bureau of Educational Research, a Bureau of Community Planning, the State Natural History Survey, the State Water Survey, the State Geological Survey, and the Illinois Historical Survey.

The only radio service available to all of these agencies is Station WILL.

Station WILL has, in the staff of the College of Agriculture alone, a corps of 190 specialists, each an authority in his own field and each with facts and information of value and importance to farmers, home-makers, and citizens in general. Many of these specialists are constantly traveling about the State giving lectures and demonstrations, but their teaching is extended manifold as they use the facilities of WILL.

University programs, in general, are not purely entertainment, but are rich with talent whether the broadcast is educational or entertaining. Entertainment is offered on the University programs because it is a belief of those in authority that it is the duty of a radio station to present a varied program for the convenience or necessity of the listening public, a public that is responsible for the University. Programs contain information and factual material sought by the people of the State and of definite value to them. No station in the State has as direct and immediate access to these facts as has WILL.







**WKAR**

MICHIGAN STATE COLLEGE  
EAST LANSING, MICHIGAN

FREQUENCY:	850 kilocycles shared with four other stations: WWL, WESG, KWKH, KIEV
TIME:	Operates on full daylight assignment
POWER:	Daytime: 1,000 watts
FOUNDED:	August 18, 1922
VALUE OF PLANT:	\$40,000 or more
PROGRAMS PER YEAR:	Approximately 3,500
AUDIENCE:	WKAR receives an average of fifteen letters per day requesting information and material mentioned in the broadcasts. There was an enrollment of well over 1,000 in courses offered over the radio. (15 courses were offered last season.) Verbal reports from many visitors during Farmers Week and other large gatherings indicate favorable response.

**T**HIS year WKAR is on the air nine hours a day—the largest schedule ever attempted. Total number of broadcast hours from October 1, 1935, to June 15, 1936, was 1,004 hours and 49 minutes. . . . WKAR originates approximately 100 programs a week. It devotes 48 per cent of its time strictly to education and 52 per cent to entertainment, including news reports, music appreciation, etc. Its programs may be classified as follows: Music, 39 per cent; speaking, 48 per cent; dramatics, 1 per cent; miscellaneous, 12 per cent. . . . WKAR has made its facilities available to seven Departments of State Government last season, including the Governor, Department of State, Department of Agriculture and the Department of Public Instruction.

WKAR has also extended its facilities to the Michigan Farm Bureau Federation, the Michigan Grange and to fourteen high school musical organizations. . . . Annual appropriation: \$12,000. . . . Has increased its power as follows: July 24, 1924, 500 watts; 1927, 1,000 watts.

#### *Plans for Extension*

“WKAR plans to further increase its service to Michigan by the addition of new courses of study designed for those who wish to continue their interest in education and for those who have had no opportunity to attend an institution of higher learning; by presenting as much as possible in the way of factual information of interesting nature which will open the field of thought along new channels; also by broadcasting as many meetings and events held on the campus as possible.”

#### *Some Outstanding Programs of WKAR*

- Farm Service Hour—Daily since 1924
- Criminology—from the classroom, three classes per week
- Geography in the News
- History in the Making
- Business Writing—course from studio—weekly half-hour lessons
- Home Economics
- Governor's Hour—presenting the Governor of Michigan each week
- Biology for High Schools—supplementing the high school biology courses
- Forum Discussion
- Michigan History by State Historical Commission



### **“Good Will”**

WKAR is now rendering a service creating good will and cooperation between the College and the people of Michigan.

The broadcasting facilities have steadily improved, making possible service for larger areas. Cooperation with departments of State Government and other agencies has resulted in a widening field of influence.

Following the national trend in educational broadcasting, WKAR began to offer courses of study by radio in the fall of 1935. The total of students in radio courses for the fall and spring terms was 907. Fourteen courses are offered in all. In the Michigan State College of the Air there was no attempt to give examinations or to record grades. The radio student was considered as an auditor to derive such benefits as he would work for at home.

### **New Equipment**

Last year a complete Presto recording equipment was purchased for the radio station by the Agricultural Extension Division. This equipment has already proved of great value in checking the work of announcers and speakers. Recordings have also been made of the band and other organizations. It is hoped that this equipment will provide an opportunity to record talks by members of the Agricultural staff to be sent to other broadcasting stations for their use, thus enlarging the scope of this phase of extension work.

### **Time Signals**

By special permission of the Naval Observatory Broadcasting Station at Arlington, Virginia, WKAR is now presenting the Arlington time signals as a regular feature each day. The signals, which are the most authentic available, are received at WKAR by means of short wave radio and are rebroadcast over the station transmitter.

### **Staff**

Robert Coleman, Director of WKAR; Jack Parker, Assistant Production Manager; Robert Ritter, Announcer; Donald Hittle, Announcer; William Gladden, Announcer; Russell Lyon, Announcer; Harry Wisner, Sports Announcer; Norris Grover, Technician; Linn Towsley, Operator; John Blakeslee, Operator; John Isatala, Operator.

*Chief announcer, Jack D. Parker (right) interviewing a visitor at Home Coming Football game.*

### **Michigan State College of the Air**

The splendid reception accorded the courses presented in the Michigan State College of the Air last season indicated that such broadcasts have a distinct place on the programs of WKAR. Accordingly, six courses are being offered for the fall term for those listeners who wish to continue their interest in education.

### **“Understanding the Child”**

Of special interest to mothers is the series “Understanding the Child,” which is presented on the first Monday of each month at 3:00 p.m. This series is arranged for listening groups in the Home Economics Extension Division.

*—From WKAR Bulletin for October, 1936.*



*Robert J. Coleman, director of WKAR*



# WLB

UNIVERSITY OF MINNESOTA  
MINNEAPOLIS, MINNESOTA

FREQUENCY: 1,250 kilocycles

POWER: 1,000 watts

FOUNDED: 1925

PROGRAMS PER YEAR: About 900

OUTSTANDING PROGRAMS: "Everyday English," "Current Poetry," "Mother's Hour," "State Forum," "Vocational Guidance."

AUDIENCE: Comprises students, farmers, housewives and others. Hundreds of letters are received regularly from listeners in all parts of the State.

## WLB, WCAL Granted New Dial Location

Notification by FCC Not  
Final Until  
30 Days

Change Will Increase  
Weekly Time to  
27 Hours

The Federal Communications Commission yesterday notified WLB, University of Minnesota radio station, and WCAL, the station of St. Olaf college, that a new radio frequency of 760 cycles has been granted. The award of the will not be after a firm key to

**FROM THE MINNESOTA DAILY  
October 22, 1936**

...has been granted by the FCC. Permission was also received to increase power from the present 1,000 watts to 5,000 watts. Broadcasting time was changed from irregular hours divided between day and evening to full daytime coverage running from sunrise to sunset and varying throughout the year according to those phenomena.

**WLB Will Triple Time**  
Under the new setup the time will be divided with the University using two-thirds of the time and St. Olaf one-third.

This will triple the time used by WLB. Under the old arrangement at 1,250 kilocycles WLB had only 9 hours a week. The minimum at 760 kilocycles will be in the neighborhood of 27 hours.

St. Olaf will also receive more (Continued on Page 6)

"Although the past years have seen a marked decrease in the number of radio stations owned or operated by educational institutions, during the biennium the University has made increased use of its station WLB in presenting constructive programs. Unhindered by considerations that restrict the preparation of programs at commercial stations, the University has sought to utilize the talent represented in its own staff in broadcasting cultural and informative material.

"Through the radio channel the University possesses a valuable means of enhancing its service to citizens of the State, and of bringing to their attention the vast body of material that its scholars in all fields are discovering. This year, in a series of fifteen political and economic talks, current problems were analyzed by staff authorities, and in another series, twenty members of the faculty discussed for high school seniors and parents and high school principals, the problems of vocational guidance. The station has also been used to supplement the work of the extension specialists of the Department of Agriculture. During the grasshopper plagues and the "drouth," specialists established contact with the farmers through WLB and the various features of the AAA have been fully presented by the station. The broadcast of the all-university convocation exercises at 11:30 o'clock each Thursday morning of the academic year, for which guest speakers of distinction come at the campus, also began during the biennium."

—From the biennial report of the President, University of Minnesota, 1934.

MINNESOTA DAILY

## WLB, WCAL Get New Dial Location

(Continued from page 1)

hours under the new plan. Mr. Price said, concerning the change, "The University is pleased to have been granted the new frequency, assuming final action is taken after the 30-day protest period, because it will give WLB greater power, resulting in far better coverage; a flexibility of program because of the greater number of hours and regular hours throughout the week, and will provide the first real opportunity we have had to do an educational job by radio."

To Reach Entire State  
Mr. Price explained that the change depended on the frequency—the lower the frequency, the better the coverage.

**FROM THE MINNESOTA DAILY  
October 22, 1936**

...of the new frequency will make plans for utilizing the time in the new program," Mr. Price said. "Utilization of a minimum amount of time is required by the FCC when a frequency is granted."

Price also said that broadcasting equipment would have to be increased, as the FCC demands that in case of a change, equipment must conform to the latest federal regulations.

He will present a program to the Board of Regents containing changes necessary for operation of the new station when final action is taken.

Under the previous setup, WLB and WCAL divided their time on the air with WTCN on a frequency of 1,250 kilocycles. Now WTCN will have the full daytime coverage at 1,250 kilocycles.

Dr. Bryng Bryngelson, director of the speech clinic, will also have Membership Restricted students who took work

FREQUENCY:	1,010 kilocycles shared with other stations	
TIME:	Divided between stations by agreement each year. At present sharing time with KGGF, Coffeyville, Kansas	
POWER:	Daytime: 1,000 watts	Night: 1,000 watts
FOUNDED:	September, 1921	
VALUE OF PLANT:	\$85,000	
PROGRAMS PER YEAR:	About 1,350	
AUDIENCE:	Letters received from 30 states and 5 foreign countries last year. Many requests for copies of lectures and programs from many counties in Oklahoma. Thirty-five plays were entered in a contest conducted by the station.	

# WNAD

**"The Voice of Soonerland"**  
UNIVERSITY OF OKLAHOMA  
NORMAN, OKLAHOMA

**S**TATION WNAD is on the air four days each week during the school year. It broadcasts 13 regular hours weekly and about 400 hours per year. . . . Staff consists of 22 members: one full-time worker, four part-time and 17 student workers. . . . This station broadcasts about 45 programs weekly. It devotes 95 per cent of its time to education and 5 per cent to entertainment. Programs comprise the following types: Music, 50 per cent; speaking, 33 per cent; dramatics, 10 per cent; miscellaneous, 7 per cent.

During the coming year WNAD plans to add ten new educational features and to establish remote control studios in several senior colleges in Oklahoma. . . . Annual appropriation: \$7,700.

### *A \$65,000 Home*

From a 10-watt station in the basement of a Norman residence in 1922, WNAD, University of Oklahoma broadcasting station, now operating with 1,000 watts, has become one of the largest non-commercial stations in the country.

On September of this year WNAD moved from its present studio into a new \$65,000 home in the tower of the Union Building. The new station has three sound-proof studios—the best that radio engineering can build—new amplifiers, and other equipment.



### *New Programs*

But technical progress is not the only achievement of WNAD. Under the direction of T. M. Beard, Director, many new programs have been added this year. These include academic courses by members of the University faculty, and fine art recitals. To its remote control program begun last year have been added four yearly concerts of the University symphony orchestra, a program of dramatic readings sponsored by Thalian, honorary reading organization, and programs from other colleges.

In keeping with the educational policy of the station, a music appreciation program is broadcast 30 minutes bi-weekly. Records of various operas and symphonies are played and discussed. Music lessons, designed for high school reception, are offered as a fifteen-minute daily feature.

Daily book reviews and dramatic sketches were also added, as well as a weekly series of lectures by students in the college of engineering which were designed to explain the various trends of engineering to the layman.





# WOI

STATE COLLEGE  
OF  
A. & M. ARTS  
AMES, IOWA

FREQUENCY:	640 kilocycles, shared with KFI, WHKC, and XFG in Mexico City.
POWER:	Daytime: 5,000 watts    Night: none
FOUNDED:	1921 as 9YI. Licensed in 1922 as WOI
VALUE OF PLANT:	\$75,000
PROGRAMS PER YEAR:	6,650

**S**TATION WOI is on the air from 8 to 12 hours a day, a total of 2,949 hours during 1935. . . . Produces 133 programs per week. It devotes 50 per cent of its time to education and the remainder to entertainment. The programs may be classified as follows: Music, 30 per cent; speaking, 35 per cent; dramatics, 2 per cent; news and reports, 33 per cent. . . . Annual appropriation: \$18,500. . . . Plans for extension include air conditioning of studio and erection of vertical antenna.

## News

WOI is now presenting a complete news service to its listeners throughout Iowa and neighboring States. It has the service of the United Press News wire with a printer which furnishes the station news service from 7:00 a.m. to 3:00 p.m. In addition to three periods of news summaries about

10 or 15 minutes in length, the station flashes "news of the hour on the hour" in a brief period which corresponds to headlines in a newspaper. WOI finds this valuable service not only furnishes the listeners with news but serves as an audience builder for the program that immediately follows these brief news flashes.

## Service

Almost immediately upon its inception, the station inaugurated a schedule of service reports consisting of weather forecasts and livestock market news.

The importance of the station's market news service was recognized and augmented when, in 1926, the United States Department of Agriculture installed a leased wire office to supply a comprehensive service of livestock market information. This service, together with a program of music, dramatics, talks, athletics, and the like, has given the station a distinctive program which is appealing to an ever-increasing group of listeners.

## Outstanding Programs

- Music Appreciation
- Market Service
- The Viking Accordion Band
- Homemaker's Half-Hour
- Masterwork Series (Opera)
- Book Reading Program
- Athletic Events
- Matins Service (Religious)
- Grinnell Hour (Music)
- Library Service

Miss Ruth Galvin, whose radio book reviews enjoy a wide popularity among listeners.





*W. I. Griffith, director WOI, is a former president of The National Association of Educational Broadcasters.*

**CHRONOLOGICAL ORDER OF INSTALLATIONS AND IMPROVEMENTS OF WOI**

1913		9Y1	Amateur Station E. E. Dept. of I. S. C.
1921	Nov. 21	9Y1	375 meters; 100 watts.
1922	April	WOI	Call assigned by Dept. of Commerce. 360 meters for program. 485 meters for government and weather reports.
1923	December	WOI	500 watts.
1924	November	WOI	500 watts; New Composite transmitter.
1925	August	WOI	750 watts.
1926	January	WOI	750 watts; 1,110 kilocycles.
1927	January	WOI	5,000 watts; 1,110 kilocycles.
1927	June	WOI	5,000 watts; 1,130 kilocycles.
1928	November	WOI	3,500 watts; 560 k.c.; Divided daylight with KFEQ.
1928	July	WOI	5,000 watts; 560 k.c.
1929	November	WOI	5,000 watts; 640 k.c.; daylight hours only.

**Proof**

A flattering proof of the station's following was received recently when a nationally known radio magazine conducted a contest to determine the most popular station in each State. In Iowa, WOI took first place in competition with several excellent independent and chain stations. This station is making every effort to keep equipment and program fully abreast of the times.

**"Super-Power"**

Iowa State College was actively engaged in the radio field for many years before the advent of commercial broadcasting. The Electrical Engineering Department, under Professor F. A. Fish, maintained a highly efficient amateur station operating under the call letters 9Y1. This station was in operation prior to 1914. The 240 cycle note of the synchronous spark transmitter was well known throughout the Middlewest before the beginning of voice transmission.

When the practicality of broadcasting was demonstrated, the Department began work on a 50-watt "super-power" outfit, which was later increased to 100 watts. With this power the transmitter first went on the air the evening of November 21, 1921. In April, 1922, the call WOI was assigned to the station.

Constant expansion brought a demand for additional room and power. By 1925 WOI had far outgrown its original function as an experiment of the Electrical Engineering Department. The station was reorganized as a part of the Iowa State College and operated from funds supplied by the Agricultural Extension Service and from general College funds. In 1926 the entire station was placed under the direction of Professor W. I. Griffith.

**Staff**

The staff consists of 12 members; four are full-time workers, two are part-time workers and six are student workers.



*A. G. Woolfries, announcer of WOI, has been with the station since it first began operation in 1922.*

# WOSU

OHIO STATE UNIVERSITY

COLUMBUS, OHIO

**S**TATION WOSU is on the air about six hours per day, approximately 1,600 hours per year. . . . Originates 90 programs each week. It devotes about 80 per cent of its time to education and the remainder to entertainment. Programs can be classified as follows: Music, 25 per cent; speaking, 60 per cent; dramatics, 5 per cent; miscellaneous, 10 per cent. . . . WOSU has

made its facilities available to 46 cooperating organizations in Ohio, to forty additional organizations outside Ohio and to other educational institutions. . . . Annual appropriation: \$22,000, plus special appropriations as needed. . . . The University Architect is now preparing plans for new studios. WOSU also plans an extension of the Radio Junior College instructional program, making courses of University level available to radio listeners. . . . Has increased its power as follows: 1922—500 watts; 1927—750 watts; 1932—1,000 watts (daytime).

## Staff

The staff consists of 12 members—seven full-time workers and five-part time workers. Approximately 40 people are also employed under three WPA projects.



## RADIO JUNIOR COLLEGE AND WORK SHOP

*From the New York Times, April 12, 1936.*

Ohio State University, a pioneer among the educational institutions that have extended their influence by the aid of the radio, reports success with two new departures in this field.

The first was the establishment, during the depression, of a radio Junior College conducted in cooperation with the Ohio Emergency School Administration. The University provides the radio station, instructors from the regular faculty and working facilities. The Federal Agency provided clerical and field workers drawn from the ranks of the unemployed.

In two years the Junior College has offered forty-three courses for the benefit of listeners unable to attend the University. In all more than seven thousand students have enrolled for these radio courses. Each quarter about fifteen hundred students have registered for an average of one and one-half courses each.

Sixty-five per cent of radio students have been found to live in urban areas and the rest in rural districts. In twenty-five counties of Ohio the interest has been sufficiently great to justify the employment by the Emergency School Administration, of local teachers to aid the students with their work.

Six of the courses are broadcast from the classroom. Students in the classroom seem to benefit in that with a thought to the larger radio "class" the instructor gives more time to the preparation of their discussions and also invite outside authorities to come before the class and the microphone.

Professor Lloyd A. Cook, broadcasting his class in social problems, found that radio enabled him to give his course to five hundred besides the seventy in the classroom. The daily stream of mail showed that his audience included taxi drivers, housewives, farmers and college graduates.

The second departure at the University is a radio "work shop." Fifty students now spend considerable of their spare time at the radio station helping to "dress up" educational programs so that they may no longer be considered dull and also getting practical experience in other phases of radio work. One of the students conducts a weekly program, "Around Your Ohio," which each Friday night honors some Ohio county or city. The history, natural resources and achievements of residents are presented in dramatic fashion.

No credit is offered for work in the "work shop," but it is thought probable that some kind of curriculum will soon be set up for those interested in radio as a calling.



Pioneering in educational radio, Ohio State University instructors have prepared syllabi for listeners of the Radio Junior College. This material includes:

*Syllabus for Spanish* by W. S. Hendrix; *Social Ethics* by Dr. J. A. Leighton; *Sociology* by Dr. L. A. Cooke; *Geography* by Dr. Roderick Peattle; *Home Canning* prepared by the School of Home Economics; *Fundamentals of Business* prepared by the Department of Accounting.

Probably unique is the RADIO TEACHER'S HANDBOOK prepared for the Ohio Emergency Junior College. The following brief extracts from this handbook show that a new teaching art is in the making:

*"Arrange for study and listening centers.*

"Visit the local librarians in libraries of your county. Try to arrange with each to set aside a room for use of the WOSU Emergency Radio Junior College students as a study or listening room. The librarians should be interested, because the service offered should promote the circulation of books.

*"Arrange for installation of radio equipment in the centers.*

"Perhaps the library, the school, the church, or the home will loan a radio for use of the students. If the libraries or schools or churches do not have radio equipment which can be loaned, then you

FREQUENCY:	570 kilocycles, shared with nine other stations: KGKO, KMTR, KVI, WKBN, WMCA, WNAX, WSYR, WSYU, WWNC
TIME:	Shares time with WKBN, Youngstown, Ohio
POWER:	Daytime: 1,000 watts      Night: 750 watts
FOUNDED:	1922 as WEAO
VALUE OF PLANT:	\$60,000. Equipment is valued at \$5,000
AUDIENCE:	Mail response has been received from 88 counties in Ohio. The mail also indicates that there are many regular listeners in all adjoining states and the Province of Ontario.

and your County Chairman might seek help from local radio dealers. They may be willing to loan demonstrators to you. *This has been done in several counties in previous years.* If a local dealer responds to your request, see that he gets newspaper publicity for his interest.

*"Organize discussion groups to meet weekly or oftener.*

"You should plan weekly discussion groups to include all students within range of your central study center. If you find that you cannot personally conduct discussions, you might assign the work of Chairman of Discussion to some able student, or to an alumnus of the Ohio State University. Announcements of discussion meetings may be sent by you to each of your students by mail.

"Perhaps you may wish to organize several such discussion groups in your county. These can be arranged to meet at the various study centers."

### *Some Outstanding Programs of WOSU Are*

- Radio Junior College
- Class-room Broadcasts
- Department of Music Concerts
- Home Economics Program
- College of Agriculture
- WOSU Players
- Sports Broadcast
- WPA Orchestra
- College of Education Lecture Series
- State Departments Lecture Series



*William R. Parker teaches Shakespearean Drama, one of the most popular courses ever broadcast from WOSU.*



# WRUF

"The Voice of Florida"

UNIVERSITY OF FLORIDA

GAINESVILLE, FLORIDA

**S**TATION WRUF operates daily throughout the year. It is on the air on an average of twelve hours and fifty-four minutes per day or 4,705 hours and 45 minutes per year. . . . Devotes 38.06 per cent of its time to education and 61.94 per cent to entertainment. . . . Programs may be classified as follows: Entertainment, 59.07 per cent; educational, 31.39 per cent; religious, 2.5 per cent; agricultural, 6.67 per cent; sheriff and police reports, .37 per cent. . . . Annual appropriation: \$32,600.

## *Outstanding Programs of WRUF are*

Florida Farm Hour  
Associated Press News Bulletin Service  
Music Appreciation and Hour with the Masters  
Orange Grove String Band  
Variety Musical Parade  
Evening Reverie  
Sports—including all University football games  
Educational Hour  
Student Broadcasts  
(The scripts of one of WRUF's most successful programs, "Symphony Hall," a series devoted to the recorded works of our great orchestras, can be obtained from the Script Exchange Service, Office of Education, Washington, D. C.)



## *Advance in Power*

October 6, 1928 — 1,480 kilocycles; 5,000 watts; unlimited time.

November 15, 1929—830 kilocycles; 5,000 watts; limited time, sign-off sundown Denver.

## *Staff*

Garland Powell, Director; George Walsh, Assistant Director.

Mr. Daniel Riss, a former CCC enrollee, member of the producing unit of the Office of Education's Educational Radio Project, is announcer for WRUF.

WRUF has thirty members on its staff, excluding the NYA student help. Eight of these are full-time workers, eleven part-time and eleven are student workers.

FREQUENCY:	830 kilocycles. Three other stations use this frequency: KOA, Denver; WHDH, Boston; WEEY, Reading, Penna.
TIME:	Divided with KOA
POWER:	Daytime: 5,000 watts    Night: 5,000 watts
FOUNDED:	August, 1928
VALUE OF PLANT:	\$90,000
AUDIENCE:	A recent check showed 5,000 pupils listening to the Music Appreciation Hour. The mailing list for the Florida Farm Hour contains 401 names of Florida residents.

**Director Powell writes—**

There is not a commercial station in the State of Florida that covers the territory that WRUF covers while on the air. Nor is there a station in the State that either financially or otherwise can give the educational features and the vast amount of information concerning State University or Federal Government activities.

1. It disseminates information about Florida.

2. It presents farm and other agricultural information to farmers and growers, as well as market reports, sheriff and police reports, United States weather information, etc.

3. It supplies road information to tourists, or to those who contemplate trips to Florida.

4. It brings information and emergency reports from the Federal Government to the people.

5. It brings the people of Florida educational features from the University, information of world events, broadcasts of athletic games and meets, messages of prominent national and international figures and entertainment not covered by other radio stations in the State.



*Major Garland Powell, director of WRUF*

6. WRUF is a laboratory for students desiring technical or program experience in radio art. During the worst days of the depression, when thousands of experienced radio people were jobless, WRUF students who had finished their University course and who had gained their radio experience at WRUF were more successful in obtaining positions than any other similarly trained groups.

WRUF has built up an educational program that has given it a place among the leading educational stations of the Nation. We have been informed by authorities who

are in position to know that we maintain a standard above that required by the Federal Government. We have received recognition by national organizations cooperating with State agencies. In our Engineering Department we are preparing to carry on research and experimental work in conjunction with the United States Government. The Federal Government feels that where it is helping a State in research work, to protect the people of that State from calamities such as bad storms and damage to crops by frosts, the State should assume a proportionate share of the expense.

# WSAJ

GROVE CITY COLLEGE  
GROVE CITY, PENNSYLVANIA



FREQUENCY:	1,310 kilocycles.
POWER:	100 watts.
FOUNDED:	1922
ON THE AIR:	Three hours each week.
PROGRAMS:	Athletic events, musical recitals, college debates and college plays.
TALENT:	Largely from the student body.

Station WSAJ has just completed the modernization of its transmitter. This was to meet fully the requirements of good engineering practice for safety, for complete shielding, pure carrier wave and modulation monitor control.

The acting director is H. W. Harmon.

# WSUI

STATE UNIVERSITY OF IOWA  
IOWA CITY, IOWA

FREQUENCY:	880 kilocycles
POWER:	Daytime: 1,000 watts    Night: 500 watts
FOUNDED:	1919
VALUE OF PLANT:	\$94,000
PROGRAMS PER YEAR:	8,592
AUDIENCE:	Listeners in the State of Iowa and in station service area with special programs for child study clubs, high school students, and organized listening groups. Mail response indicates an increase in audience

**S**TATION WSUI is on the air twelve hours each day, with a total of 3,536 hours per year. It broadcasts 138 programs per week and uses on an average of 398 persons to participate in these programs. . . . Staff consists of twenty-two members. They include four full-time workers, approximately ten part-time workers and eight student workers. . . . Broadcast time is divided as follows: Education, 62.5 per cent; the remainder to entertainment. The types of programs and percentages of time devoted to each are: Music, 37.1 per cent; speaking, 59.4 per cent; and dramatics, 3.5 per cent. . . . Annual appropriation: \$10,000. . . . WSUI power was increased as follows: 1922—100 watts, 1923—500 watts, 1935—1,000 watts. . . . Plan for extension of service during the coming year includes "increase of power, improved equipment and improved program."

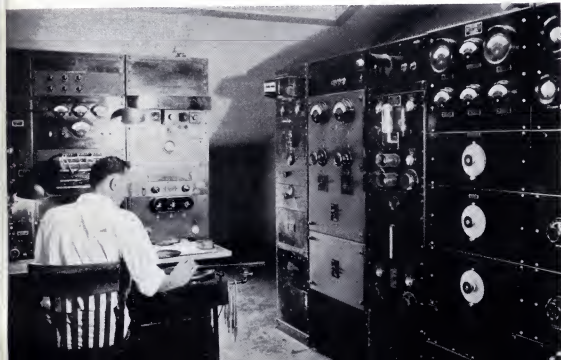
The University of Iowa broadcast its first radio program during the year 1919 under the call letters 9YA. Call letters WSUI were assigned

when broadcasting stations were licensed. Improvements have been made in equipment until the present transmitter follows the latest engineering practice, incorporating direct crystal control of frequency with high percentage modulation and a power output of 500 watts. The newest type of condenser microphones is used in both studio and remote control broadcasting.

The transmitting equipment and the Old Gold Studio occupy a suite of rooms on the third floor of the Engineering Building, one of the most imposing on the campus. The aerial towers which support the antenna two hundred feet above ground are also located on the Engineering Building. The Memorial Union Studio and station offices occupy a suite of rooms on the main floor of the Iowa Memorial Union, and from this studio the majority of musical programs are broadcast. All university buildings as well as local hotels and theaters are equipped for broadcasting, also the Iowa Stadium and the Field House, where all important athletic events are held.

### *WSUI Staff*

Dr. Bruce E. Mahan, Chairman Radio Board; Carl Menzer, Director-Announcer; Pearl Bennett Broxam, Program Director; Prof. H. Clay Harshbarger, Production Manager; Vergil Taey, Staff Announcer; Ralph Deal, Assistant Announcer; Ella Ethel Jewell, Studio Hostess; Berneice Langdon, Secretary; John Ebert, Chief Operator; Ralph Schuessler, Assistant Operator; Robert Mitchell, Assistant Operator.



*Portion of transmitting equipment of Station WSUI.*





*WSUI Reception Room, Iowa Memorial Union*

### **Ten Outstanding Programs Are**

College of the Air—within the classroom, from the studio, speech clinic

Radio Child Study Club

University Public Events—Lectures, Concerts, Vespers, Sports

News—Daily news events

Classical Music and Illustrated Chats

Great Speeches in American History

Radio Aids for High Schools

The Children's Hour

Forensic Forum

Programs by and for State Organizations

### **Cooperating Agencies**

Station WSUI has made its broadcasting facilities available to:

Iowa Federation of Women's Clubs

Iowa Congress of Parents and Teachers

Iowa League of Women Voters

Iowa Tuberculosis Association

American Legion Auxiliary

Federated Business and Professional Women Clubs

Daughters of the American Revolution

Iowa Junior Academy of Science

\* \* \*

### **UNIVERSITY OF IOWA COLLEGE OF THE AIR**

The University of Iowa was a pioneer in presenting college courses on the air both from the classroom and from the studio. For the second semester of the current academic year (1936-1937), both types of courses will be broadcast from Station WSUI, and in addition many other educational features will be included on the program.

### **RADIO CHILD STUDY CLUB**

*Fifth Year, 1936-1937*

In an effort to supply up-to-date materials direct from child development centers and to aid communities in organizing study groups, the Iowa Child Welfare Research Station, in cooperation with the child development departments of Iowa State College at Ames and Iowa State Teachers College at Cedar Falls, announces the Radio Child Study Club courses for 1936-1937.

Four courses are offered—one concerned with the family, one with preschool children, one with school-age children, and one with adolescents.

### **GROUP PLAN**

Ten or more parents may organize a study group and enroll in the Radio Child Study Club, choosing a leader who will report the names and addresses of the leader and members to the Iowa Child Welfare Research station, University of Iowa, Iowa City, or to radio station WOI, Ames, Iowa. At the time of enrollment, each group should signify in which course it is interested. There is no charge for group enrollment.

Each leader is supplied in advance with a copy of the talk, a list of carefully selected reading references, and a problem for discussion at the time of the broadcast. The group is given an opportunity to work out a suggested solution to the problem. A report form is also provided for this purpose, to be returned to the Iowa Child Welfare Research Station at Iowa City. These reports are assembled and discussed over the radio at the next broadcast in each course.

—From *University of Iowa Extension Bulletin 1935-1936*.



*Stanton Memorial Campanile*

# WIXAL

**"Dedicated to Enlightenment?"**

BOSTON, MASSACHUSETTS

FREQUENCY: 6.04 Mc. 11.79 Mc. 15.25 Mc. 21.46 Mc.  
POWER: Daytime: 10,000 watts Night: 10,000 watts  
FOUNDED: 1928  
AUDIENCE:

*Boston Transcript* says: (August 10, 1936):  
"The 'fan' mail has grown enormously. Letters are received from South Africa, Syria, Palestine, India and a great many from western Europe, particularly the British Isles."

ONE hundred per cent of the station's broadcast time is devoted directly or indirectly to education. There are regular programs on music, languages, art, literature, drama, sciences, world affairs, peace. . . . Staff consists of 18 members. Six of these are full-time workers; eight are part-time workers; four are student workers. . . . Some outstanding programs of WIXAL are: (1) Modern Radio, (2) Basic English, (3) The World's Week in Review, (4) Better English, (5) Sciencecasts, (6) The Musical Review.

### *Plan for Extension*

Continuous expansion of special services to each country of the world is the goal of WIXAL. . . . Has increased power from 5,000 watts in 1931 to 10,000 watts.

STATION WIXAL is a short wave station with a world-wide range. It is operated only for the education and entertainment of its listeners on a non-profit basis.

When Walter S. Lemmon, inventor and present president of the Foundation, conceived the idea of a non-commercial station, he interested the humanity division of the Rockefeller Foundation to assist in the Program work, but otherwise the broadcasting and maintenance of the station depends upon donations from its friends. A nominal service fee is charged for mailing out programs which are arranged a month in advance.

The station, now in its second year, occupies three rooms on the fifth floor of the University Club, Trinity Place, Boston. During the month of August, 1936, its generating equipment was improved and its power stepped up. Four wave lengths are available to the station.

During the Harvard tercentenary celebration, daily broadcasts were heard over WIXAL in which one of the greatest arrays of intellectual talent ever assembled from all parts of the world took part. Such distinguished names as Sir Arthur Eddington, who came from England for the purpose, Dr. Albert Einstein, Dr. Niels Bohr, and Dr. Robert A. Milliken represented the science group.

WIXAL does more than present educational programs to five continents. It fosters international good-will.

*Elizabeth L. Calhoun (left) musical consultant to WIXAL conferring on plans for musical instruction courses with Walter S. Lemmon, radio engineer, who is founder and president of the World Wide Broadcasting Foundation.*



## COMMITTEES OF EXPERTS

### *Program Committee*

Kirtley F. Mather, Department of Geology, Harvard University, Chairman, Academic Committee; L. Rex Miller, International journalist, lecturer, Chairman, World Affairs Committee.

### *Section Committee*

Sciences: Loring Andrews, Harvard College Observatory

Art: Alon Bement, Director for ten years National Alliance of Art and Industry

English: George Sneath, Boston University

Languages: Carleton Wheeler, Tufts College

### *Education Committee*

The education committee of the Board of Trustees includes William M. Lewis, president, Lafayette College; Harlow Shapley, director, Harvard College Observatory; and Walter S. Lemmon, founder and president of the Foundation.

Specialists in various fields supervise all programs. Thus people in the remote corners of the earth are enabled to hear the most outstanding authorities on world affairs, literature, science, art, music, etc.

“A WORLD wide radio station disseminating education without the taint of propaganda, animated entirely by international friendliness and good will, might be considered an impossible ideal. But it is not, for the idea actually is in practice. It is Station WIXAL in Boston, owned by the World Wide Broadcasting Corporation, which sent out its first regular program series in December, 1934, and this year is widening and deepening its scope in the fields of adult education and world peace.”

—*Weekly Magazine Section,*  
*The Christian Science Monitor, Boston.*

Mr. Lemmon is shown in front  
of the WIXAL transmitter.

## Comments from

### WIXAL LISTENERS—1936

*Port-of-Spain, Trinidad, British West Indies*—“I wish I were sufficiently versed to give adequate expression of the debt of gratitude thousands, like myself, feel toward you.”

*28 Miles NW of Corvo, Azores*—“Received your programs all the way from the English Channel to Aruba, D.W.L., and on our return. . . . The news is the best of all ‘news’ broadcasts.”

*Corner Brook, Newfoundland* — “Picture father, mother and eight children listening to you miles away. We trust that Station WIXAL long continues to remain on the air as one of our favorite radio friends.”

*Kilmallock, Ireland*—“It may be of interest if I told you that I listen in to your station frequently, and find it one of the best that comes to us here from America.”

*Yanceys Mill, Virginia*—“I am writing to my parents in the Netherlands so they can also enjoy your ‘sane, keen, kindly’ views of the news.”

*Stockholm, Sweden*—“I thank you so very much for your enjoyable program.”

*Shetland Isles, Scotland*—“I appreciate the news items very much and think they are well balanced, which is a great thing in these days of unlimited propaganda of all shades.”





# KFDY

STATE COLLEGE  
BROOKINGS, SOUTH DAKOTA

FREQUENCY:	780 kilocycles, which it shares with eleven other stations
POWER:	Daytime: 1,000 watts    Night: 1,000 watts
FOUNDED:	April 23, 1923
VALUE OF PLANT:	\$5,000
PROGRAMS PER YEAR:	About 3,000 fifteen-minute broadcasts
AUDIENCE:	Mail response came from 52 South Dakota counties and from seven other States.

**S**TATION KFDY is on the air  $1\frac{1}{2}$  hours per day—468 hours per year. . . . Staff consists of five members, two students and three part-time workers. . . . This station produces about 39 programs each week. It devotes about 70 per cent of its time to education and 30 per cent to entertainment. Programs embrace the following types: Music, 40 per cent; speaking, 40 per cent; dramatics, 10 per cent; miscellaneous, 10 per cent. . . . During the coming year KFDY expects to maintain its present high standard for equipment,

move to new studios, if possible, and improve its programs. . . . Power has been increased as follows: April 23, 1923—100 watts; August 9, 1926—500 watts; March 9, 1928—1,000 watts. Annual appropriation: about \$3,000.

### *Cooperating Agencies*

Community clubs, Parent Teacher Association, Resettlement Administration, Federal Land Bank, High Schools, Grade Schools, Soil Conservation Service, South Dakota Education Association, National Parks and others.



*Beverly Gunnison, student of South Dakota State College, is a regular performer at the piano over KFDY.*



### *Ten Outstanding Programs of KFDY Are*

Weekly Soil Conservation Broadcasts  
"Agricultural Question Box"  
4-H Club Weekly Broadcast  
Home Management Specialist  
Home Extension Agent Leader  
"Play Awhile"  
Nutrition Specialist  
"In the Day's News"  
Weekly Organ Broadcasts  
"Vocational Problems"

### *The Director of KFDY Writes—*

KFDY, the South Dakota State College radio station, has kept pace with other radio stations in South Dakota in improving both programs and facilities. It is ranked today as one of the three best equipped stations in South Dakota from a technical standpoint. Its programs are a daily feature in thousands of homes over the State. Even though the station is on the air only from 12:30 to 2 p.m. each day, people of the State have acquired the habit of tuning to KFDY every day at 12:30 to get the latest markets, agricultural and home information, and news of South Dakota State College.

From its small beginning in a "hole-in-the-wall" studio "sound-proofed" with green burlap drapes, and with its transmitter on a small balcony in one corner of an engineering laboratory, KFDY, in thirteen years has grown to the point where its still-new studios on the top floor of the new Lincoln Memorial Library will probably soon have to be abandoned for larger quarters. A more convenient location with studios large enough to broadcast bands, glee clubs and dramatics, without having to pick them up by remote control from some auditorium is an objective KFDY is planning. The transmitter is now housed in a large separate room in the engineering building on the State College campus and is a source of pride for the institution. KFDY picks up programs from seven different "remote" points on the State College campus.

New equipment planned for KFDY includes a recording outfit to make electrical transcriptions of some of KFDY's best programs for use by other stations in the State.



*D. B. Doner, South Dakota State College registrar, broadcasting his weekly "Vocational Problems" feature over KFDY.*



*J. G. Hutton, associate professor of astronomy at South Dakota State College, broadcasting his weekly "Soil Science" program.*



*H. S. Hepner, instructor in journalism, is on the air with his "In the Day's News" program.*

# KFJM

UNIVERSITY OF NORTH DAKOTA  
GRAND FORKS, NORTH DAKOTA

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

**WESTERN UNION**

NEWCOMB CARLTON  
CHAIRMAN OF THE BOARD

J. C. WILLYER  
FIRST VICE-PRESIDENT

R. B. WHITE  
PRESIDENT

1229-R

SIGNS

DL = Day Letter  
NM = Night Message  
NL = Night Letter  
LC = Deferred Cable  
NLT = Cable Night Letter  
Ship Radiogram

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at 708 14th St., N. W., Washington, D. C.

CA1187 NPR COLLECT=GRANDFORKS NDAK NOV 10

WILLIAM DOW BOUTWELL=  
OFFICE OF EDUCATION DEPT OF INTERIOR WASHDC=  
SCHOOL MAINTAINS MODERN STUDIO ON CAMPUS FROM WHICH 15 TO  
20 PROGRAMS ARE BROADCAST WEEKLY STOP A UNIVERSITY  
COMMITTEE DECIDES GENERAL POLICIES OF EDUCATIONAL  
BROADCASTS AND EMPLOYS PART TIME STUDENT PROGRAM ARRANGER  
STOP SCHOOL OF ENGINEERING UNDER PROF D R JENKINS OPERATES  
AND MAINTAINS THE TRANSMITTER STOP BUSINESS AND PROGRAM  
OFFICE AND MODERN SUITE OF STUDIOS MAINTAINED IN FIRST  
NATIONAL BANK BUILDING STATION DOES COMMERCIAL  
BROADCASTING AND AGGRESSIVE PROGRAM POLICY CREATES LARGE  
FOLLOWING AND RESULTS IN DEMAND FOR TIME FROM ADVERTISERS  
PICTURES COMING UNDERSIGNED NOT DIRECTOR BUT MANAGER=  
DALTON LEMASURIER.

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

FREQUENCY:	1,410 kilocycles
POWER:	Daytime: 1,000 watts    Night: 500 watts
ON THE AIR:	KFJM is on the air 12 hours daily. Much of this time is sold commercially
STAFF:	Consists of 7 part-time workers
RADIO COMMITTEE:	Elroy W. Bollinger David R. Jenkins John L. Hundley H. C. Dowland Jason Quist, Radio Program Director.

# KFKU

UNIVERSITY OF KANSAS  
LAWRENCE, KANSAS

*If You Cannot Come to the University, Let the University Come to You.*

## THE UNIVERSITY OF KANSAS NEWSLETTER

Published weekly by the University of Kansas. Admitted as second class matter at the postoffice at Lawrence, Kansas, May 31, 1919, under the act of August 24, 1912. This number edited by HAROLD G. INGHAM, Director Extension Division.

VOL. XXXIV

LAWRENCE, KANSAS, JANUARY 26, 1935

NO. 19

**T**HIS station is on the air three quarters of an hour each day and averages 18 programs each week. . . . Broadcast time is divided as follows: Education 95 per cent and entertainment 5 per cent. The types of programs and percentages of time devoted to each are: Music, 20 per cent; speaking, 65 per cent; dramatics, 15 per cent. . . . KFKU has made available its facilities to local public schools and many church organizations. . . . Annual appropriation: \$3,500. Part-time services of members of regular faculty and administrative staff are contributed as an addition to this budget. . . . KFKU power was increased as follows: 1924—500 watts; June, 1934—1,000 watts; 1935—5,000 watts daytime—1,000 watts night. . . . Recently installed are (1) Universal recorder and (2) R. C. A. velocity microphone.

### *Some Outstanding Programs Are*

Language Lessons (German, French, Spanish)  
Series of informative talks on Kansas  
Music Appreciation Period  
P.T.A. Talks on Problems of the Growing Child  
Health Through the Ages  
Study of Shakespeare  
News Bulletin  
Book Reviews  
Scrapbook and Athletic Interviews

### Program Notes

Included in the KFKU programs for the spring semester are the Elementary Spanish Lessons, a Tuesday and Thursday feature at 2:30 p.m., presented by Mr. Clarence Chrisman, instructor in Spanish. The Spanish lessons will be of particular interest to members of the various organizations planning international conventions at Mexico City this summer.

Those high school classes in biology and general science who have been following the "Studies of Living Things," by Dr. Ernest E. Bayles each Wednesday at 2:45 p.m. will be glad to know that the series will be continued throughout the spring semester at the same period. "The Art of Teaching," companion program at 6:15 p.m. on alternate Wednesdays, will also be continued. Teachers who have not used these programs and who are interested in securing details of the programs may write KFKU for complete information.

FREQUENCY:	1220 kilocycles
TIME:	Shared with Station WREN. Station KFKU has limited time on the air, about one hour
POWER:	Daytime: 5,000 watts      Night: 1,000 watts
FOUNDED:	Fall of 1924
PROGRAMS PER YEAR:	621 for 1935-36
AUDIENCE:	Requests for station's detailed program schedule had increased thirty-three per cent this year.

# KOAC

OREGON STATE SYSTEM OF HIGHER EDUCATION  
CORVALLIS, OREGON

*The cast and orchestra of KOAC  
present "Half Hour in Good  
Taste."*



**T**HIS station is on the air 12 hours per day, a total of 3,546 hours during the year 1935-1936. . . . The staff consists of seven full-time workers, two part-time workers and six student workers, a total of fifteen members. . . . Originates 110 (8-hour schedule) and 189 (12-hour schedule) programs per week. It devotes 45.5 per cent of its time to education and 54.5 per cent to entertainment. Its programs may be classified as follows: Music, 49.8 per cent; speaking, 44.2 per cent; dramatics, 3 per cent; miscellaneous, 3 per cent. . . . Annual appropriation: \$20,000. . . . KOAC is planning to establish remote studios on the University of Oregon campus at Eugene, Oregon.

## KOAC Staff

Alfred Powers, Dean and Director of General Extension; Luke L. Roberts, Manager; Cyrus R. Briggs, Director of Agricultural Programs; Zelta F. Rosenwald, Director of Women's Programs; James M. Morris, Announcer; Lincoln Miller, Announcer.

## KOAC Progress

KOAC reports rapid growth in its listening audience. The increase for 1935-36 is shown by the radio clubs organized throughout the State. Reaching a new high of 56 clubs, with a total enrollment of 664 women, these organizations tuned in each Tuesday afternoon for lectures centering around the theme, "Is My Child Growing Up?" Through the medium of transcriptions made at KOAC the lectures were used by several of Oregon's smaller stations in remote parts of the State. KOAC is operated as an important unit of the extension division of Oregon's State System of Higher Education.

## Some Outstanding Programs of KOAC Are

KOAC School of the Air  
The Homemaker Hours  
The Farm Hours  
United Press News Periods  
We Write a Story  
The Citizen and His School  
The World in Review  
Continuing Education, AAUW  
Municipal Affairs  
Discovering New Meanings in Everyday Art



FREQUENCY:	550 kilocycles which KOAC shares with seven other stations: KFDY, KFUO, KFJR, KSD, WDEV, WGR, WKRC.
TIME:	KOAC does not share time with other stations.
POWER:	Daytime: 1,000 watts    Night: 1,000 watts
FOUNDED:	January, 1922
VALUE OF PLANT:	\$36,000
PROGRAMS PER YEAR:	8,800 (1935-1936)
AUDIENCE:	An average of 37,684 publications are mailed to listeners every year. One series of programs alone brought in 1,650 responses. Registered listening groups up to 700 members listen to such programs as "Discovering New Meanings in Everyday Art" and "Continuing Education."

Luke L. Roberts, manager of KOAC



# KSAC

COLLEGE OF AGRICULTURE  
AND APPLIED SCIENCES  
MANHATTAN, KANSAS

FREQUENCY:	580 kilocycles, shared with 5 other stations: KMJ, WCHS, WDBO, WIBW, WTAG
TIME:	Divided with WIBW
POWER:	Daytime: 1,000 watts    Night: 500 watts
FOUNDED:	February 11, 1924
VALUE OF PLANT:	\$15,795.63
PROGRAMS PER YEAR:	2,184
AUDIENCE:	KSAC receives an average of 50 fan letters monthly. According to a survey of the radio audience made in August, 1935, there were 95,630 families in farms and towns listening regularly or fairly regularly to the various programs sponsored by the station, and 203,- 370 families listening occasionally or infre- quently.

**S**TATION KSAC is on the air  $3\frac{1}{2}$  hours per day, 5 days weekly, and 3 hours on Saturday. Including special broadcasts, this station is on the air 1,170 hours per year. . . . Originates forty-two programs each week. It devotes 95 per cent of its time to education and 5 per cent to entertainment. . . . Programs can be classified as follows: Music, 15 per cent; speaking, 70 per cent; dramatics, 10 per cent; miscellaneous, 5 per cent. . . . Annual appropriation: \$3,500. . . . Increase in power has been as follows: December 1, 1924—500 watts; November 15, 1929—1,000 watts (daytime), 500 watts (night).

### *Some Outstanding Programs of KSAC Are*

Health Period  
College News and Sports Service  
Housewives' Half Hour  
Farm Hour  
Farm Business Half-Hour  
College of the Air  
Weekly 4-H Club Hour  
This Week in History  
Music Appreciation  
International and National Affairs

### *From KSAC Bulletins, October, 1936*

Radio Station KSAC frequently deviates from its prearranged schedule to bring to you special, worthwhile features from the campus.

The educational work of Station KSAC is widely recognized in one way and another. A former program director of the station is vice-president of the Columbia Broadcasting System; a former assistant announcer is with the Radio Service, United States Department of Agriculture; students who have taken the radio courses and participated in the broadcasting are working for commercial stations; KSAC broadcasters are frequently heard from other stations; the station staff will assist with a program in October which will be broadcast by the National Broadcasting Company; and last but not least, mail received at the station indicates that the people of Kansas appreciate these "different" programs.

New features listed in these printed program bulletins this year are "Your College Speaks," a program directed by the vice-president of Kansas State College, Dr. S. A. Nock; "Home Town News," which is presented by the journalism department class in radio writing; the special talks by L. E. Call, dean of the division of agriculture, the first Friday of each month on the Farm Hour; broadcasts by the Kansas State College band during the second semester, and others.

Part of the KSAC staff in action. Left to right: Edward Hayes, student assistant, M. L. DuMars, Pauline Compton and J. N. Scheel, assistant announcers.



# KUSD

UNIVERSITY OF SOUTH DAKOTA  
VERMILLION, SOUTH DAKOTA

FREQUENCY:	890 kilocycles, shared with ten other stations: CJIC, KARK, KFNF, KFPY, WBAA, WGST, WILL, WJAR, WMMN, XEW.
TIME:	Shared with two other stations. Allotted 1/8 time.
POWER:	500 watts, daytime and night
FOUNDED:	May 1922 as WEAJ
VALUE OF PLANT:	\$75,000
PROGRAMS PER YEAR:	335
AUDIENCE:	250,000

**S**TATION KUSD broadcasts regularly 2 hours on Mondays, Wednesdays and Fridays, and 1 hour on Sundays, Tuesdays, and Thursdays. Station also puts on the air all important University games, debates, musical recitals and contests. Total hours per year, 350. . . . Nearly all KUSD programs are produced by members of the University. Station devotes 75 per cent of its time to education and 25 per cent to entertainment. Programs may be classified as follows: Music, 30 per cent; speaking or reading, 50 per cent; dramatics, 10 per cent; sports, 10 per cent. . . . KUSD cooperates with all public service organizations and will give time for practically any program of general interest, provided the program is well presented. . . . KUSD has increased its power as follows: 1922—50 watts; 1924—100 watts; 1927—250 watts; 1928—500 watts.

Support contributed by various departments and divisions of the University. About \$2,500 per year.

### *Director B. B. Brackett writes—*

"Like a large number of other early, educational broadcasting stations KUSD was for nearly ten years practically a one-man station. One man had to do nearly everything connected with the station, with little help except what could be secured voluntarily from students of physics and engineering. With practically no funds to use and no relief from other full time duties this one man had to plan equipment, construct parts, adapt apparatus made for other uses, borrow whenever possible, and thus assemble the

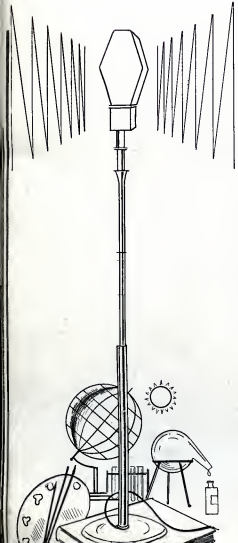
best transmitter possible under these conditions. Then he often had to personally operate this makeshift transmitter, and announce at the same time. He had to plan programs, and not infrequently produce a considerable part of the program himself.

"However, the most significant development here in recent years is the increased interest in nearly all departments and divisions of the University that now contribute to the programs of KUSD and also help in other ways. Interest is shown by individual members of the instructional force and the student-body, in making parts of programs assigned to them of real interest and of intrinsic value."

## FROM THE PROGRAM LISTINGS OF KUSD 1936-1937

### Evening Lectures

1. "Your Health," by members of the faculty of the school of medicine. Dean J. C. Ohlmacher, Professor H. V. Atkinson, Professor C. A. Hunter, Professor C. M. MacFall, Professor E. H. Shaw, Jr.
2. "Current Governmental Problems," W. O. Farber, Assistant Professor of Government.
3. "General Trends in English Literature," Genevieve J. Blair, Associate Professor of English.
4. "The Culture and Contribution of the Old Greek Race," A. L. Keith, Professor of Latin and Greek.
5. "History and Development of Banking and Financial Institutions in the United States," J. P. Jones, Assistant Professor of Economics.
6. "Contemporary World Problems," by members of the faculty of the department of history: Professor H. S. Schell, Professor Carl Christol, Assistant Professor C. G. Beckwith, Instructor Robert G. Dunbar.
7. "Modern Zoology," E. P. Churchill, Professor of Zoology.
8. "The Theory and Practice of Art," Howard W. Joyner, Assistant Professor of Art.
9. "Money and Banking," E. S. Sparks, Dean of the School of Business Administration.
10. "American Industry," H. E. Brookman, Associate Professor of Applied Sciences.



FREQUENCY:	1,220 kilocycles, shared with six other stations: KFKU, KTW, WCAD, WCAE, WDAE, WNAC.
TIME:	Shared with KTW, WKSC—2/3 of time; KTW—1/3
POWER:	Daytime: 5,000 watts    Night: 1,000 watts
FOUNDED:	1923
VALUE OF PLANT:	\$18,000
PROGRAMS PER YEAR:	8,328
AUDIENCE:	During the school year KWSC receives from ten to seventy-five letters daily.

# KWSC

STATE COLLEGE  
PULLMAN, WASHINGTON

**S**TATION KWSC is on the air daily except Sunday. From October 1 to May 31 the station broadcasts 11½ hours a day; from June 1 to September 30, 4 hours. . . . Staff consists of ten members: one director, one full-time worker, three part-time workers and five student workers. . . . The station originates from 80 to 240 programs per week. It devotes two-thirds of its time to education and the remaining one-third to entertainment. . . . Programs may be classified as follows: Music, 25 per cent; talks, 40 per cent; dramatics, 15 per cent; news and reports, 20 per cent. . . . Some outstanding programs are: (1) Farmer's Daily Program, (2) Homemakers' Program, (3) Love, Live and Laugh, (4) Scientific Progress, (5) The American Political Scene. . . . KWSC has made its facilities available to State schools, churches and P.T.A. groups. . . . Annual appropriation: \$3,500. . . . KWSC plans to increase its power for daytime broadcasting.

KWSC has increased its power as follows: 1923 — 1,000 watts; 1936 — 5,000 watts (daytime), 1,000 watts (night).

## MUSIC AND EDUCATION

"While its educational programs have music numbers interspersed through them, the nature of the music is of a high order and worthy of being sponsored by a college of the rank of this one, (State College of Washington)". Armstrong Perry in *Radio in Education*, published by the Payne Fund, New York.

### *From a KWSC Newsletter*

"For the coming semester KWSC has enlarged its high school service. As a result of suggestions received from a number of high school superintendents, new programs have been added to be presented from 3:00 to 4:00 o'clock, a time set aside by many schools as an "Activity Hour."

"Each Wednesday at 3:00 o'clock, members of the English department will broadcast fifteen minutes of information concerning that which is worth looking for in the novel, short story, essay, biography, poem, and other literary forms. Immediately following, Robert U. Nelson, instructor in music theory, will present a half-hour broadcast in appreciation of great music. Science News, a script sent to us through the courtesy of the National Committee on Education by Radio, will complete the hour. This feature tells of the latest developments in every field of science.

"On Fridays the hour will begin with a discussion by members of the department of Fine Arts and will deal with the appreciation of art."



Marian Haydan, Dorothy Carr, Janet Sourwine, Eulalie Blair (left to right) of the "College Crowd" program.





# EDUCATIONAL RADIO STATIONS

DAYTIME POWER  
NIGHT TIME POWER

KOVAC  
CORVALLIS  
KMSC  
PULLMAN

WNAD  
NORMAN

WTAW  
CHIEFS STATION

KEFKU  
LAWRENCE

WIEW  
ST. LOUIS

WMLL  
URBANA

WBLAA  
WOLSU  
LAFAYETTE  
COLUMBUS

WRUF  
GAINESVILLE

WCAAT  
RAPID CITY  
KFBDY  
BROOKINGS  
KUSDS  
VERMILION  
AMES  
WOL  
MADISON  
WHA  
MADISON  
WKLAR  
EAST LANSING

KSBAC  
MANHATTAN

WSUI  
IOWA CITY

WBLAA  
WOLSU  
LAFAYETTE  
COLUMBUS

WSAU  
GROVE CITY

WELSC  
ELMHRA

WAD  
GANTON

WMAZ  
PROY

WIKAL  
BOSTON

KFJM  
GRAND FORKS

WKLAR  
EAST LANSING

WAD  
GANTON

WMAZ  
PROY

WIKAL  
BOSTON

1000  
W

5000  
W

5000  
W

5000  
W

5000  
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10,000  
W

10,000  
W

5000  
W

5000  
W



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